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southern end and extend north to Ontario Avenue. A portion of the proposed district is located on the eastern edge of the Project Study Area.

#### Historic Parkways

The RMP is not listed as a New York State Designated Scenic Byway nor is it listed in, or eligible for the National Register of Historic Places. The RMP is more than 50 years old and was recently evaluated for National Register eligibility. In coordination with the NY SHPO, it was determined in 2015 that the RMP does not retain enough of its original integrity to make it eligible for listing.

#### Archaeological Resources

Ground-disturbing construction activities which represent the Project's direct effect will be generally restricted to Whirlpool Street, Third Street and areas west of Whirlpool Street to the Niagara Gorge, approximately 76 acres. The removal of almost two miles of the RMP and the adjacent Robert Moses Parkway Trail between Main Street and Findlay Drive, the reconstruction and relocation of Whirlpool Street and the construction of paved multi-use trails in previously undisturbed areas are the primary activities which have the potential to affect prehistoric/pre-contact and historic archaeological sites. Thus, archaeological sensitivity was estimated for the directly affected areas only, and is based on the presence of known sites, topography and environment, the extent and severity of previous disturbance, and, for historic period sensitivity, the presence of map documented structures (MDSs). MDSs are buildings depicted on historic maps but that no longer exist (see figures in **Appendix G.1**). Early structures that are still standing may have important archaeological components, but they are not MDSs.

With regard to the reconstruction of Whirlpool Street, if the depth of disturbance resulting from the reconstruction does not exceed the original construction depth, there should be no concerns regarding that part of the Project. If the vertical APE exceeds the present disturbance, measures may need to be taken based on consultation and may include construction monitoring.

Based on the results of the Phase 1A Cultural Resources Survey, a Phase 1B survey was designed and conducted in mid-March 2016 in order to assess impacts to potential archaeologically-sensitive areas where construction is proposed to occur. Areas investigated in this regard include:

- Areas along Whirlpool Street where the road is proposed to be realigned to the west near the north end of the Project;
- Areas where construction of the multi-use trail system is proposed;
- Areas adjacent to the RMP where the viaduct is proposed to be removed; and
- Areas on or near Aquarium of Niagara property.

The Phase 1B investigation encompassed 184 shovel test pits across eight survey study areas totaling 4.4 acres. Further discussion regarding the Phase 1B Survey and the results of that investigation is provided below under the section on Impacts and Mitigation. The complete Phase 1B survey report is provided in **Appendix G.2 – Phase 1B Cultural Resources Investigation**.



### Native American Involvement

In accordance with the American Indian Religious Freedom Act of 1978 (amended 1994), the Project is being advanced such that it 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 ceremonial and traditional rights.

The proposed Project does not lie within Federal, Tribal, or Indian-owned property. Therefore, the Archaeological Resources Protection Act of 1979 does not apply. Furthermore, conformance with this Act is covered in the Section 106 Process.

### Section 106 Consultation

As discussed above, there are a number of historic properties that are listed in, or eligible for listing in the National Register of Historic Places located within the Project Study Area and, more importantly, within or immediately adjacent to the APE.

Thus, as part of the preliminary engineering and design approval processes, consultation with the NY SHPO<sup>1</sup> is required under Section 106 procedures and under Section 14.09 of the State Historic Preservation Act. Project consultation was initiated on August 3, 2015 and the Phase 1A report was submitted for NY SHPO review on August 18, 2015. At NY SHPO's request, a separate Phase 1B report was subsequently submitted via the CRIS database system for NY SHPO review on April 22, 2016. Written consultation received from NY SHPO during the course of this study is included in **Appendix G.3 – Section 106 Finding Documentation.**

It should also be noted that Section 106 Consultation Meetings with invited Consulting Parties have also been conducted for the Project. In this regard, the following tribes have been contacted and invited to participate: the Seneca Nation of Indians, the Tuscarora Nation, the Tonawanda Band of Seneca Indians and the Seneca-Cayuga Tribe of Oklahoma. A Section 106 Consultation Meeting with representatives from these Tribal Nations was held on March 16, 2016. In addition, a separate Section 106 Consultation Meeting with individuals and representatives of local organizations having interest in the relationship of the proposed Project to local historic resources was held on March 16, 2016. Further details about both of these meetings, including meeting summaries, presentation materials, topics discussed, invitation and follow-up letters sent and comments received, are provided in **Section 1.7.4 in Chapter 1** and in **Appendix G.4 – Consulting Parties Consultation & Correspondence.**

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<sup>1</sup> The New York State Office of Parks, Recreation, and Historic Preservation (referred to as "State Parks" in this document), Division for Historic Preservation serves as the "SHPO" in New York State under the requirements of Section 106 of the National Historic Preservation Act of 1966 for projects undertaken, funded, or permitted by federal agencies (in this Project, FHWA). For projects undertaken, funded, or permitted by New York State agencies (in this Project, State Parks), this Division serves similar roles under Section 14.09 of the New York State Historic Preservation Act.



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### ***Impacts and Mitigation***

Impacts to historic and archaeological properties are presented below according to the type of properties within the Project Study Area (i.e., National Historic Landmarks and State/National Register-Listed Properties; State/National Register-Eligible Properties; State/National Register-Eligible Bridges; Potential or Recommended State/National Register-Eligible Properties; and Archaeological Resources. A subset of that full list of historic and archaeological properties within the Project Study Area that have been identified as being on or eligible for the State/National Register and are also within or directly adjacent to the APE are also summarized in **Table 4-10**. This table also includes information regarding locations, year built, key character-defining elements/aspects of each property and proposed changes to each property as a result of the No-Build and Build Alternatives related to this Project. The locations of the properties listed in **Table 4-10** are also presented graphically in **Figures 4-12a and 4-12b**.

#### National Historic Landmarks and State/National Register Listed Properties

- The only Project construction within the Niagara Reservation National Historic Landmark would be physical removal of the RMP roadway, physical removal of the pedestrian bridge between the Niagara Gorge Discovery Center and the adjacent Aquarium of Niagara property, and the physical removal of a negligible area of pavement along the Niagara Falls Bridge Commission's existing access road below the Rainbow Bridge due to redesign to accommodate a new connecting ramp to Main Street. Further, much of this area has already been significantly disturbed by initial construction activities related to a previously-proposed site for a new State Parks Police Station. Following significant excavation of the area and exposure of historic period foundations, the construction project was cancelled and the area restored before relocating the project to a site between the RMP and Whirlpool Street that is currently under construction. Overall, the Niagara Reservation would experience an increase of 5.94 acres of contiguous green space and improved public access for pedestrians and bicyclists. Therefore, the impact of the proposed Project would be primarily positive.
- No land would be used from the Old Customs House property which abuts the APE, and it is anticipated that the proposed improvements to Whirlpool Street would not adversely affect this historic property. Removal of the current RMP viaduct in this area would actually have a positive visual effect on this resource, and would partially restore the historic setting.
- Four contributing resources in the Chilton Avenue-Orchard Parkway Historic District have associated property adjacent to the APE and the proposed road reconstruction of Whirlpool Street (i.e., 605 Chilton Avenue, 614 Chilton Avenue, 609 Orchard Parkway [Henry Wasnide House] and 620 Orchard Parkway [Herman Hain House]), although none of these properties actually front on Whirlpool Street. Landscape features for these contributing resources generally include grassy strips, granite curbing, sections of lawn, and concrete sidewalks. Since construction would occur entirely within the present right-of-way and areas west, these properties would not be directly or visually affected by the proposed Project.

**Table 4-10 – Summary of Anticipated Effects of Alternatives to S/NRHP-Listed and S/NRHP-Eligible Properties within the APE**

Property/ District Within the APE	S/NRHP No. (if listed) or “Eligible”	Address or General Location	Year or Period Built	Keys Character-Defining Elements/Aspects of Property/District	Anticipated Effects Under Each Alternative	
					No Build Alternative	Build Alternative
Niagara Reservation	90NR01961 (also listed as National Historic Landmark)	Extends along Niagara Gorge, Niagara Falls and Niagara River in Niagara Falls, NY	1885	Designed by Frederick Law Olmsted; Nation’s oldest state park; 16 contributing resources within the Reservation, none of which are located in or near the APE; Architectural resources in the APE portion of the Reservation (i.e., Niagara Gorge Discovery Center and Niagara Gorge Trail information and Public Restroom) are less than 50 years old and not included in CRIS. This area of the park was historically the main industrial locus in the City of Niagara Falls and was part of the Olmsted design. It is part of the NHL because it is within the reservation boundaries which were used as the NHL boundary.	Expressway components of the RMP and Robert Moses Parkway Trail would continue to traverse the northern end of the Reservation, thereby physically restricting public access to and from neighborhoods to the east, as well as pedestrians and bicyclists to only two locations (i.e., Main Street / Rainbow Boulevard at the south end of the Project and at the pedestrian bridge between the Niagara Gorge Discovery Center and the adjacent Aquarium of Niagara). This portion of the Reservation was recently and significantly disturbed by the aborted construction of a State Parks police station at a previously-proposed site along the Gorge rim, as well as the new site for the State Parks police station between the RMP and Whirlpool Street (2 <sup>nd</sup> Street), now under construction.	Removal of all pavement and components of the RMP and Robert Moses Parkway Trail in the northern portion of the Reservation; removal of the pedestrian bridge between the Niagara Gorge Discovery Center and the adjacent Aquarium of Niagara property; currently paved areas would be restored with grass, trees and/or native vegetation. Removal of existing pavement and natural restoration of reclaimed land would result in an increase of 5.94 acres of contiguous green space within the property; several 13-ft-wide multi-use paths to accommodate bicyclists and pedestrians, as well as several narrower connecting paths would be constructed and would provide unlimited public access to pedestrians and bicyclists.
Aquarium of Niagara	Eligible	701 Whirlpool Street, Niagara Falls, NY	1965	The Aquarium of Niagara is historically significant for its association with innovative aquarium technology that manufactured synthetic sea water for aquariums. The Aquarium of Niagara is also a good example of Mid-Century Modern design, which was popularized during a thirty-year period from post-WWII through the mid-1970s.	Aquarium property would continue to be physically separated from the Niagara Gorge rim and adjacent recreational properties by Whirlpool Street, the pump station access road and the RMP on the west and Third Street on the east.	Removal of the closed section of Whirlpool Street, the pump station access road and the RMP on the west side of the property; Reconstruction of Third Street adjacent to the east side of the property; Construction of a new access road to the NFWB sewage pumping station across an already disturbed portion of the property near

Property/ District Within the APE	S/NRHP No. (if listed) or "Eligible"	Address or General Location	Year or Period Built	Keys Character-Defining Elements/Aspects of Property/District	Anticipated Effects Under Each Alternative	
					No Build Alternative	Build Alternative
Chilton Avenue- Orchard Parkway Historic District	10NR06119	Portions of Chilton Avenue and Orchard Parkway between Whirlpool and Main streets.	Late 19 <sup>th</sup> and early 20 <sup>th</sup> centuries	Late Victorian: Queen Anne, Tudor revival and Craftsman. The district consists of 103 contributing and 36 non-contributing buildings.	The district would not be affected by the No Build Alternative.	existing parking and access drives; Aquarium property would be directly and seamlessly connected to nearby Niagara Gorge Discovery Center and Niagara Reservation. The net effect would be positive for access as well as the property's setting.  The reconstruction of Whirlpool Street would neither directly nor indirectly affect the district. None of the buildings in the district front Whirlpool Street.
Old Customs House	90NR01962	2245 Whirlpool Street, Niagara Falls, NY	1863	The Old Customs House is the oldest federal building in the City of Niagara Falls and the oldest extant resource associated with this historically important Whirlpool Land Port of Entry. It is architecturally and historically significant under NHRP criteria A and C.	The Customs House would continue to be adjacent to, and in the shadow of the RMP high-level viaduct that passes over the Whirlpool Bridge Plaza, a condition that already affects the visual environment and historic setting of this resource. The building has been renovated / restored and incorporated into the newly-built train station and is no longer a free-standing intact building.	No physical impact to the Customs House would occur as a result of the Project; Removal of the current RMP viaduct in this area would result in a positive visual effect on this resource, and would partially restore its historic setting.

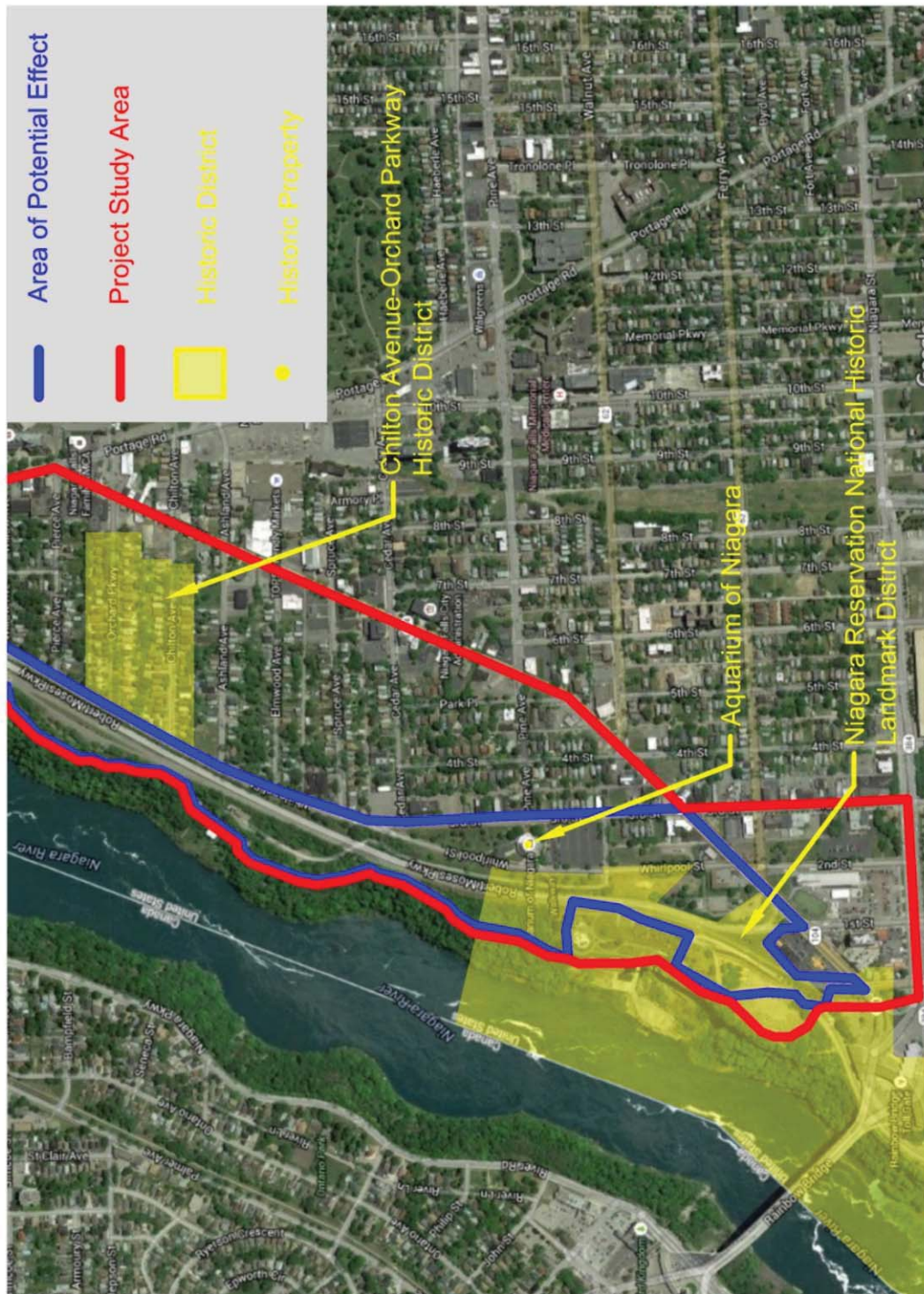


Property/ District Within the APE	S/NRHP No. (if listed) or "Eligible"	Address or General Location	Year or Period Built	Keys Character-Defining Elements/Aspects of Property/District	Anticipated Effects Under Each Alternative	
					No Build Alternative	Build Alternative
Michigan Central Railroad Bridge (out of service; owned by the City of Niagara Falls, Ontario)	Eligible	Crosses Lower Niagara River/Niagara Gorge west of Whirlpool Street, between Bath and Ontario Avenues, Niagara Falls, NY	1924-1925	Currently known as Canadian Pacific Railway Bridge; a steel arch bridge spanning the Niagara Gorge between Niagara Falls, Ontario, and Niagara Falls, New York; designed by William Perry Taylor, Chief Engineer J.L. Delming, and Norwegian consulting engineer Olaf Hoff; bridge no longer in use and tracks have been removed.	The existing abandoned bridge is anticipated to continue to exist.	No direct or indirect impact associated with the proposed Project. Removal of the RMP overpass/viaduct would partially restore the historic setting of the bridge, resulting in a positive effect. Potential for future overlook feature, subject to agreements with current owner.
Whirlpool Rapids Bridge	Eligible	Crosses Lower Niagara River/Niagara Gorge west of Whirlpool Street, between Bath and Ontario Avenues, Niagara Falls, NY	1897	A double-decked, two-hinged, riveted, spandrel-braced, arch-type bridge; 1,080 feet long with a 47.5-foot two-lane roadway; the main span is 547 feet with a rise of 115 feet; the structure consists of riveted girders and I-beams with limestone abutments; Vehicular traffic is carried on the lower deck, which is flanked by cantilevered sidewalk; Upper deck carries one set of railroad tracks currently used by Amtrak and Conrail; On the American side, the bridge rests on the stone abutment of the 1855 suspension bridge; Architecturally significant under NRHP Criterion C as an example of an early steel arch bridge which possesses good integrity and for its association with prominent bridge designer Leffert L. Buck.	The existing bridge is anticipated to continue to exist and to be used for vehicular and rail traffic.	No direct or indirect impact associated with the proposed Project. Removal of the RMP viaduct would partially restore the historic setting of the bridge, resulting in a positive effect.

Figure 4-12a – National Register-Listed and National Register-Eligible Historic Resources Within and Adjacent to the Southern Portion of the Area of Potential Effect



Figure 4-12b – National Register-Listed and National Register-Eligible Historic Resources Within and Adjacent to the Northern Portion of the Area of Potential Effect







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- The Park Place Historic District is principally a residential district built up between 1885 and 1928. The western boundary of the district coincides with the eastern boundaries of parcels lining the east side of Third Street, and therefore, does not directly abut Third Street or the APE. The Project would not directly or indirectly affect the district.
  - Both the former Niagara Falls Public Library-Carnegie Building and the James G. Marshall House are well outside of the area that may be directly affected by the proposed Project. In addition, neither property would indirectly be affected by the Project.

#### State/National Register-Eligible Properties

A total of 41 individual State/National Register Eligible historic resources are within the Project Study Area. None of these previously-determined State/National Register-Eligible resources have associated property in the area west of Whirlpool Street. Although these resources have been identified to be within the Project Study Area, it is anticipated that the Project's activities would not have the potential to adversely affect any of the currently identified historic properties and therefore, are not within the Area of Potential Effect (APE) pursuant to Section 106. The undertaking should not alter, directly or indirectly, any of the characteristics that qualify the properties for inclusion on the State/National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association.

#### State/National Register-Eligible Bridges

Two State/National Register-Eligible bridges that currently cross the viaduct section of the RMP and the Niagara Gorge (i.e., Michigan Central Railroad Bridge and Whirlpool Rapids Bridge) would not experience any direct or indirect adverse impact as a result of the proposed Project. In fact, removal of the RMP viaduct would result in a positive visual effect to both bridges, and would partially restore their historic settings.

#### Potential or Recommended State/National Register-Eligible Properties

The Phase 1A survey identified 26 individual properties and one historic district as potential State/National Register-Eligible properties. No Project construction is proposed near the recommended Upper Main Street Historic District. The proposed Project would not have any direct or visual effects on resources in the potential historic district. Of the 26 potential individually eligible properties, only the Aquarium of Niagara at 701 Whirlpool Street is within the Area of Potential Effect, as it is adjacent to the proposed construction area (i.e., removal of the closed section of Whirlpool Street, removal of the RMP and the pedestrian bridge to the Niagara Gorge Discovery Center, reconstruction of Third Street adjacent to the east side of the property and construction of a new access road to the NFWB sewage pumping station across an already-disturbed portion of the property near an existing parking area and access driveway). It is not expected that the proposed construction adjacent to or across the parcel would adversely affect the Aquarium in any manner and, in fact, the net effect would be positive in terms of improved accessibility (i.e., providing direct and seamless connection to the nearby Niagara Gorge Discovery Center) and the property's setting.



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### SHPO Consultation on Effects to Historic Resources

On March 9, 2016, NY SHPO concurred in writing that “there are no concerns with potential impacts to above ground historic resources” (see **Appendix G.3**). It was also recommended that “construction protection plans be put in place to protect historic resources within 90 feet of the proposed construction activity.” This correspondence also indicated that only Historic/Cultural resources were being addressed in the letter, and that separate consultation regarding archaeology would follow once the archaeological studies are completed (see section immediately below). A subsequent letter from NY SHPO dated May 26, 2016 concurred with the findings of the Section 106 Finding Documentation prepared by NYSDOT on May 3, 2016 stating that “the proposed project will have No Adverse Effect upon historic resources provided that construction protection plans are put in place for all historic resources within 90 feet of construction” (see **Appendix G.3** for both the Finding Documentation and the NY SHPO concurrence letter). It should be noted that such construction protection plans will be put in place, as requested.

Following the receipt of NY SHPO’s May 26, 2016 letter, NYSDOT submitted a letter to FHWA on July 12, 2016 requesting concurrence that the project will have No Adverse Effect on historic properties. FHWA responded the same day indicating its concurrence that there will be No Adverse Effect on cultural resources eligible for, or listed on the National Register. Both letters are included in **Appendix G.3**.

### Archaeological Resources

There are a number of known archaeological sites within or adjacent to the Project Study Area, primarily in the vicinity of the Rainbow and Whirlpool bridges. A Phase 1B survey of sensitive areas along Whirlpool Street, as well as other areas between Whirlpool Street / Third Street and the Niagara Gorge rim was conducted in mid-March 2016. Details of the Phase 1B survey conducted and the results of the survey are provided in **Appendix G.2**.

In summary, of the eight areas shovel tested as part of the Phase 1B survey, moderate numbers of historical artifacts were found scattered across six of them. However, the testing revealed that these six areas have been significantly disturbed during previous episodes of construction and demolition. Because of this fact, as well as the fact that no intact deposits of cultural materials were identified in any of these areas, the artifacts have no context and possess no archaeological value. The investigation at the remaining two survey areas revealed they had been significantly, if not entirely, disturbed during the original construction of the RMP. No pre-contact-period (prehistoric) artifacts were found at either of these areas, nor were any pre-contact or historical period features of any kind identified.

For these reasons, the Project is not anticipated to have any effect on archaeological resources that are potentially eligible for listing in the State/National Register and no further archaeological investigations are recommended within the APE. It should be noted that FHWA received a letter dated April 25, 2016 from NY SHPO stating that “SHPO understands that no archaeological sites were identified, and we have no further archaeology concerns with this undertaking” (see **Appendix G.3**). In the event that archaeological resources are encountered during construction, the applicability of further consultation with NY SHPO will be determined and implemented, as appropriate.



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## Section 4(f) Compliance

A Section 4(f) Evaluation pursuant to the requirements of the Department of Transportation Act of 1966 is included as **Chapter 6** of this document. These requirements apply to any transportation project that results in the use of publicly-owned parks, recreation areas, and wildlife and waterfowl refuges, as well as publicly or privately owned significant historic properties. Details of the proposed “use” of such properties and the applicability of Section 4(f) to these properties with regard to the proposed Project are discussed in the Section 4(f) Evaluation.

### **4.4.12. Parks and Recreational Resources**

#### ***Existing Conditions***

The following is a brief description of the parks and recreational resources located adjacent to and near the Project Study Area as defined at the beginning of **Section 4.1**. Their locations are depicted in **Figure 4-13a through 4-13c**. Together, these various parks and recreational resources comprise a continuous area of green space along the entire length of the study area, connecting to continuations of the green space located both north and south of the study area.

- **Niagara Falls State Park:** Also known as the Niagara Reservation, this property is a National Historic Landmark and a State/National Register-Listed New York State Park that is partially located in the Project Study Area. Designed by Frederick Law Olmsted, the Niagara Reservation opened in 1885 and is considered the nation’s oldest state park. This state park focuses on the natural wonder of Niagara Falls, and includes the American Falls, Bridal Veil Falls and part of the Canadian Falls within its jurisdiction. The state park provides points of access to the Falls, several viewpoints to observe the Falls and the Gorge, and a variety of related attractions. The majority of this state park is outside and south of the Project Study Area, although it does extend into the Project Study Area along the western side of the RMP for the entire distance from Niagara Street to approximately Pine Avenue. The Niagara Gorge Discovery Center, which is adjacent to the west side of the RMP, is part of the state park. The Discovery Center, originally known as the Schoellkopf Geological Museum, is a showcase of the natural and local history of Niagara Falls and the surrounding area, providing hands-on interactive displays, a 180° multi-screen theater experience and a 26-foot high artificial rock climbing wall. The trailhead and parking for the Great Gorge Railway Trail is also located at this site. The land comprising this portion of the park is owned by NYPA but the improvements are owned and operated by State Parks.
- **Whirlpool State Park:** Whirlpool State Park occupies the land between the Niagara River and the west side of the RMP in the same vicinity where DeVeaux Woods State Park occupies the land east of the RMP, although it extends further to the south than Findlay Drive. This park begins north of the Whirlpool Bridge and continues north along the west side of the RMP to the start of Devil’s Hole State Park at the city boundary with Lewiston, a point well past the northern end of the Project Study Area. It has two levels (i.e., an upper and a lower level). The upper or street

Figure 4-13a – Parks and Recreation Areas along the Robert Moses Parkway - South

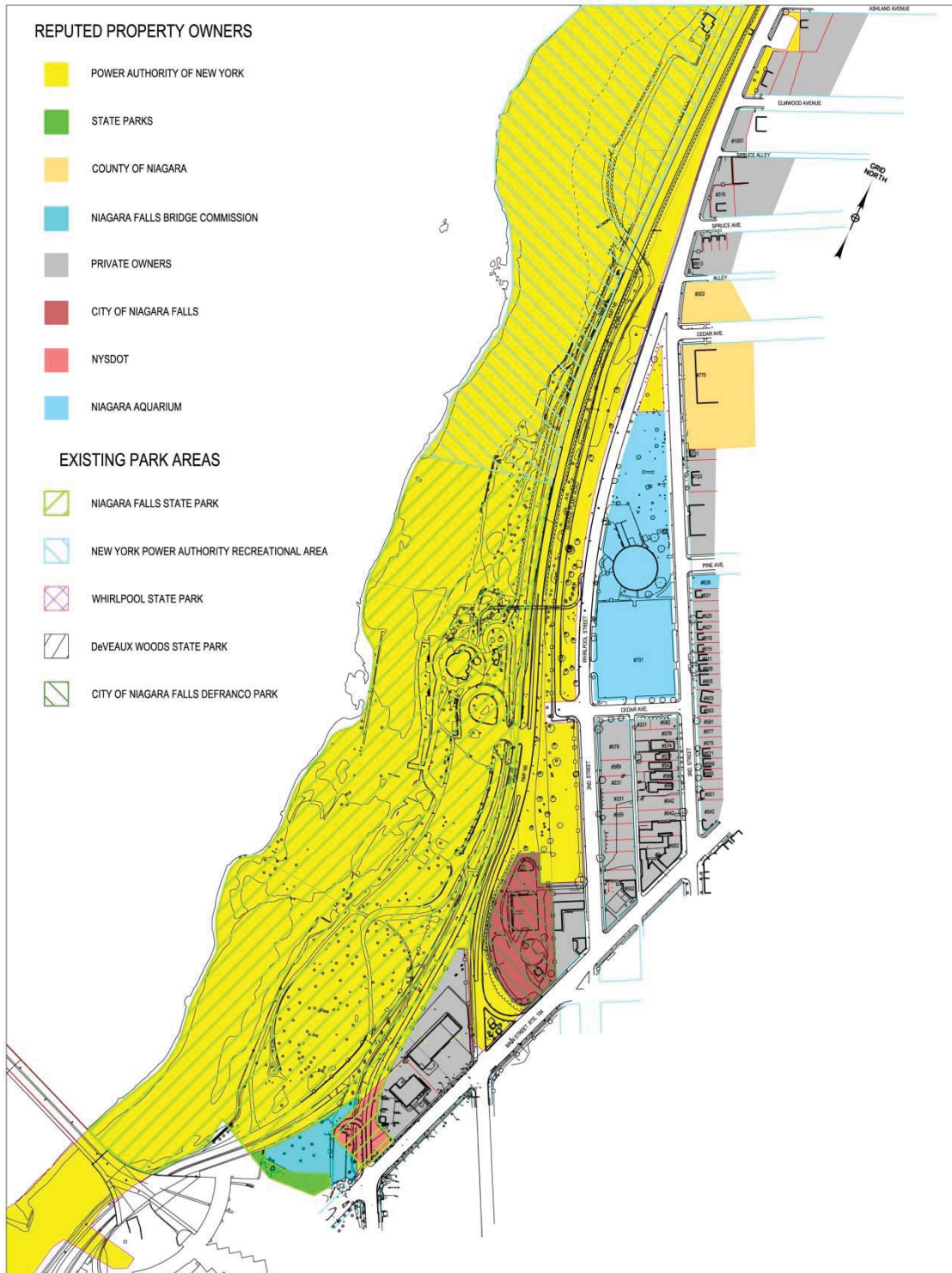


Figure 4-13b – Parks and Recreation Areas along the Robert Moses Parkway - Central

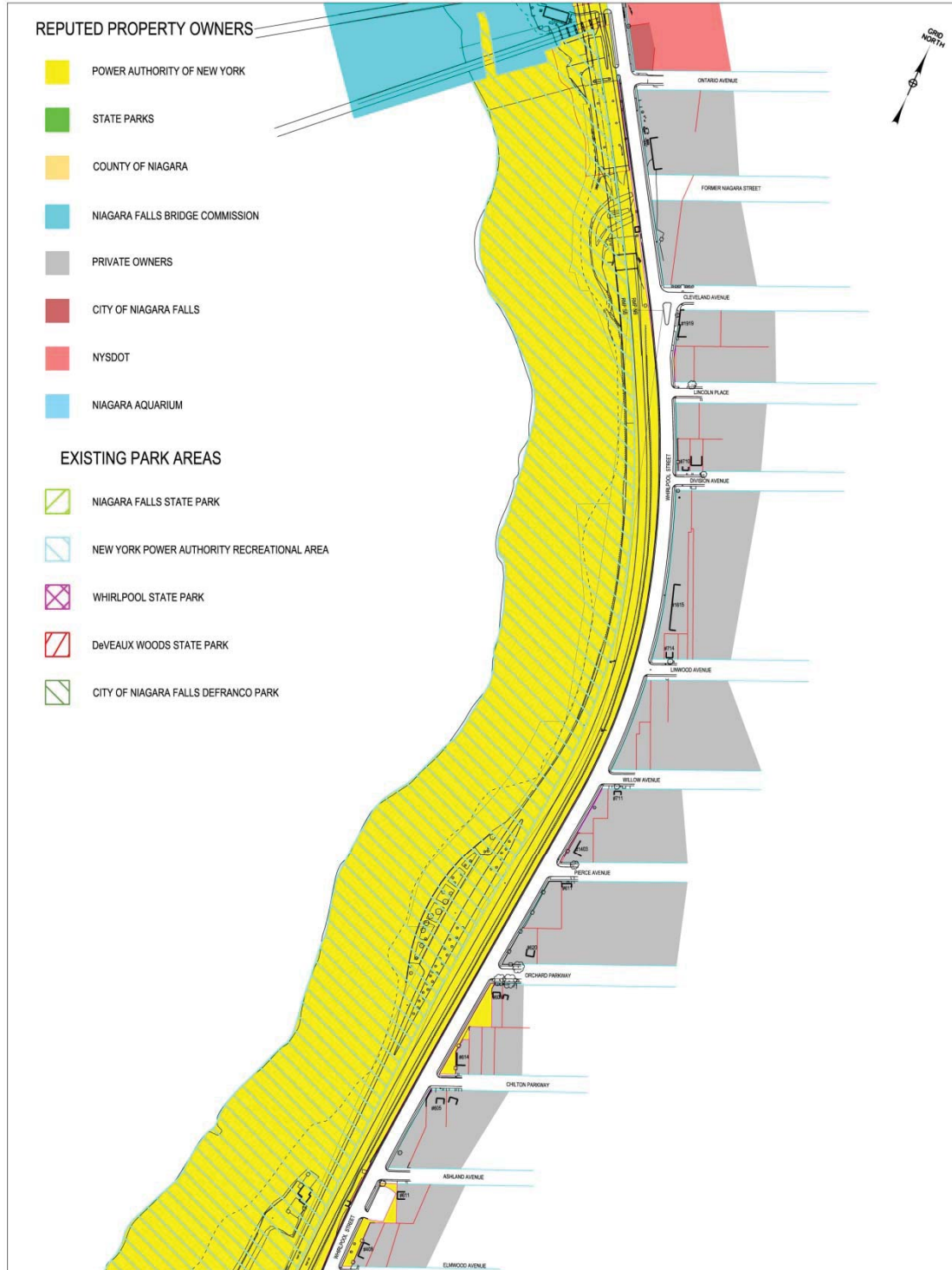
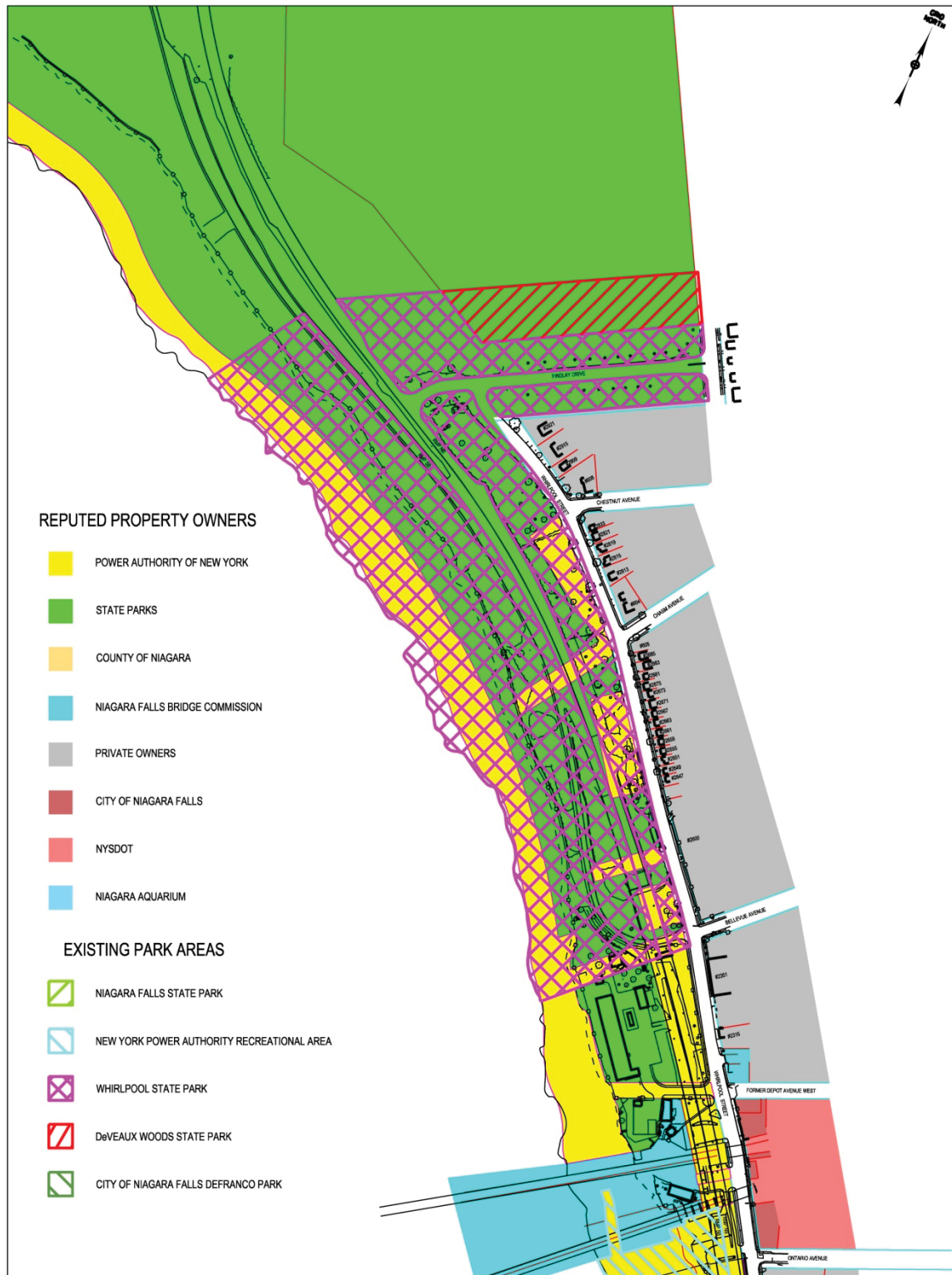


Figure 4-13c – Parks and Recreation Areas along the Robert Moses Parkway - North





level has many overlooks with spectacular views of the swirling waters of the Niagara River's Whirlpool and Rapids in the Gorge below, as well as the Niagara River Escarpment. Picnic areas and a playground are provided at this level. The lower or river level is accessible by walking the 300 feet of trails and steps that descend into the Gorge. This level contains several nature trails and access for fishing.

- **Robert Moses Parkway and Adjacent Properties:** The northern segment of the RMP within the Project Study Area is a two-lane, limited-access expressway that begins at Niagara Street / Main Street and continues north for almost two miles to a partial interchange at Findlay Drive. At that point, the RMP continues north and beyond the study area for an additional 13 miles to end in the town of Porter on Lake Ontario. This section of the RMP lies on land largely owned by NYPA and is maintained by State Parks and/or NYSDOT and occupies property owned primarily by NYPA. In September 2001, the former southbound lanes of the RMP that lie between the Niagara Gorge Discovery Center and the Robert Moses Niagara Power Plant north of the Project Study Area were closed to vehicular traffic. This section has been opened to the public for walking, biking, rollerblading, and other activities (now referred to as the "Robert Moses Parkway Trail"). In addition to this feature, the NYPA property features additional miles of hiking trails, including a trail along the edge of the Niagara Gorge. The NYPA lands also serve as an unofficial area of green/open space between Niagara Falls State Park and other state parks at and beyond the north end of the Project Study Area.
- **Great Gorge Railway Trail:** The Great Gorge Railway Trail is located on NYPA-owned lands on the remains of the former Great Gorge Railway Bed, and is accessed via the trailhead and parking area at the Niagara Gorge Discovery Center. From there, the trail extends approximately two miles north into the Niagara Gorge. The trail ends at a rock slide just north of the Whirlpool Bridge. The trail descends gradually into the Gorge and offers views of Niagara Falls and the Niagara River.
- **DeVeaux Woods State Park:** DeVeaux Woods State Park is located immediately north of Findlay Drive, occupying the land between the eastern edge of the RMP and Main Street/Lewiston Road. It occupies approximately 50 acres and contains two baseball diamonds, a playground, a nature trail through a large meadow and old growth forest, a picnic area and a trail that crosses the RMP to connect with Whirlpool State Park and the Robert Moses Parkway Trail. This state park contains one of the only old-growth forests in an urban setting in the entire country, with its oldest tree dating back approximately 315 years. The northern boundary of the Project Study Area as defined at the beginning of **Section 4.1** cuts approximately through the center of this state park at a point approximately 1,000 feet north of Findlay Drive.
- **DiFranco Park:** DiFranco Park is a former city park established in 1965 on city-owned property. It was named after Thomas J. DiFranco, a former city parks director. The land for the park was originally donated to the city by NYPA, and it contained a playground, wading pool and basketball courts serving the surrounding local neighborhood. The park is not currently open for public use



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and most of its facilities have been either previously-removed or are not actively maintained for use. The property is adjacent to the entrance ramp onto the RMP at Main Street and close to the new State Parks Police Station that is currently under construction, and vehicular access is via Main Street. The parcel has been used over the last decade to help stage construction materials/equipment for a series of downtown infrastructure projects. The property is included within the area identified in the *Comprehensive Plan for City of Niagara Falls, USA* (2009) as being recommended for redevelopment as part of a proposed Cultural District within the city (see discussions in **Sections 2.2.1.1 and 4.2.1.2**).

### ***Impacts and Mitigation***

#### No-Build Alternative

If the proposed Project is not constructed, the existing recreational lands between Main Street and Findlay Drive would remain essentially as they exist today. The RMP would continue to pass through the Project Study Area, thereby disrupting pedestrian access to the Niagara Gorge rim and other areas west of the RMP from adjacent neighborhoods. Access from the neighborhoods would be limited to the existing pedestrian overpass connecting the Aquarium of Niagara on the east side of the RMP to the Niagara Gorge Discovery Center on the west side, as well as via the parking area beneath the RMP viaduct adjacent to Whirlpool Street at the Whirlpool Bridge.

The existing Robert Moses Parkway Trail (former southbound lanes of the RMP) would also continue to exist and be available for use by pedestrians and bicyclists, although the design of the facility would not be improved. Other access improvements within the recreational lands, such as a new multi-use trail system and improvements at certain overlook areas would not be implemented.

#### Build Alternative

If the proposed Project is constructed, the existing RMP and Robert Moses Parkway Trail would be removed along their entire length between Main Street and Findlay Drive, including where they pass through Niagara Falls State Park, Whirlpool State Park and NYPA recreational and open space lands. As a result, the area currently occupied by pavement would be restored to green space with native landscaping provided. This includes the area between the Aquarium and the Discovery Center where the pedestrian bridge over the RMP would also be removed, further adding to open pedestrian green space.

Removal of pavement associated with the existing RMP would add 6.7 acres to the contiguous parkland / green space that currently exists along the Gorge rim within the Project Study Area.<sup>2</sup> This action would also allow 13.4 acres of isolated parcels east of the RMP to be annexed as part of the total contiguous parkland / green space within the Project Study Area. In combination, these enhancements would add a total of 20.1 acres to the contiguous parkland / green space that currently exists west of the RMP. As a

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<sup>2</sup> Although total pavement removal would be 12.4 acres when the existing Robert Moses Parkway Trail on the former southbound lanes of the RMP is also taken into account, the pavement associated with this trail is already considered to be recreational land due to its purpose as a bicycle and pedestrian facility.





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result, the current total of 116.7 acres of contiguous parkland / green space within the Project Study Area would increase to 136.8 acres, comprising a wide, fully-accessible green ribbon connecting Niagara Falls State Park and Whirlpool State Park. **Figures 4-14a through 4-14c** graphically present individual increases to contiguous parkland / green space in Niagara Falls State Park, Whirlpool State Park and the NYPA recreational and open space lands due to RMP removal and annexation of isolated parcels.

Due to the removal of the RMP and associated facilities that serve as physical barriers between the local neighborhoods and the Niagara Gorge rim, direct pedestrian and bicycle access would become available in the long term. Direct access opportunities would be further improved by the proposed elimination of existing fencing, walls, difficult grade transitions, dense shrubbery, etc., within several areas along or adjacent to the green space. A new multi-use trail system would also be constructed along the entire length of the recreational lands, allowing improved and more visually-pleasing internal access for pedestrians and bicyclists. Reconstructed parking and other improvements related to overlooks at several locations along the Gorge rim are also proposed.

As a result of these various proposed improvements and the increased permanent access opportunities provided, it is anticipated that the recreational lands would experience greater utilization by local populations than they do at present. In this regard, the Project offers quick and easy access for the residents of neighborhoods along Third Street and Whirlpool Street to simply walk across the street and enjoy the recreational advantages of their proximity to the green space.

The area could also attract greater utilization by tourists as well, due to the more continuous usable space available for recreation within the green space. This is especially true near the south end where tourists already visit the Aquarium and the Discovery Center in large numbers. Because of the continuous green space between these two facilities that would be provided as part of this Project, there may be greater opportunities for visitors to enjoy additional types of recreation as well, such as picnicking, hiking or just playing or running around.

Near the northern end of the Project, specifically in the area along Whirlpool Street between Chasm Avenue and Chestnut Avenue, reconstruction of the roadway is proposed to extend up to 15 feet into the green space along the west side of Whirlpool Street in order to accommodate a small shift in the roadway alignment. This shift of Whirlpool Street is required in order to provide a grassed verge area between the sidewalk and the roadway which presently does not exist along the east side of the roadway, as well as a formal parking lane that would primarily serve residents essentially trading a narrow band of green area on the west side of the road for widening the verge area on the east side of the road. Several trees on the west side would be lost, however, the trees and the green space that would be impacted by this alignment shift are entirely within the current roadway right-of-way owned by the City of Niagara Falls. Therefore, no direct impact on any designated parkland within Whirlpool State Park would occur. In addition, the loss of unofficial green space along the west side of Whirlpool Street would be more than compensated for with the removal of the RMP, which would restore substantially more green space within designated parkland, as well as the opportunity to introduce more new trees than are proposed to be taken.

Figure 4-14a – Impacts and Proposed Property Increases to Recreational Properties



Figure 4-14b – Impacts and Proposed Property Increases to Recreational Properties

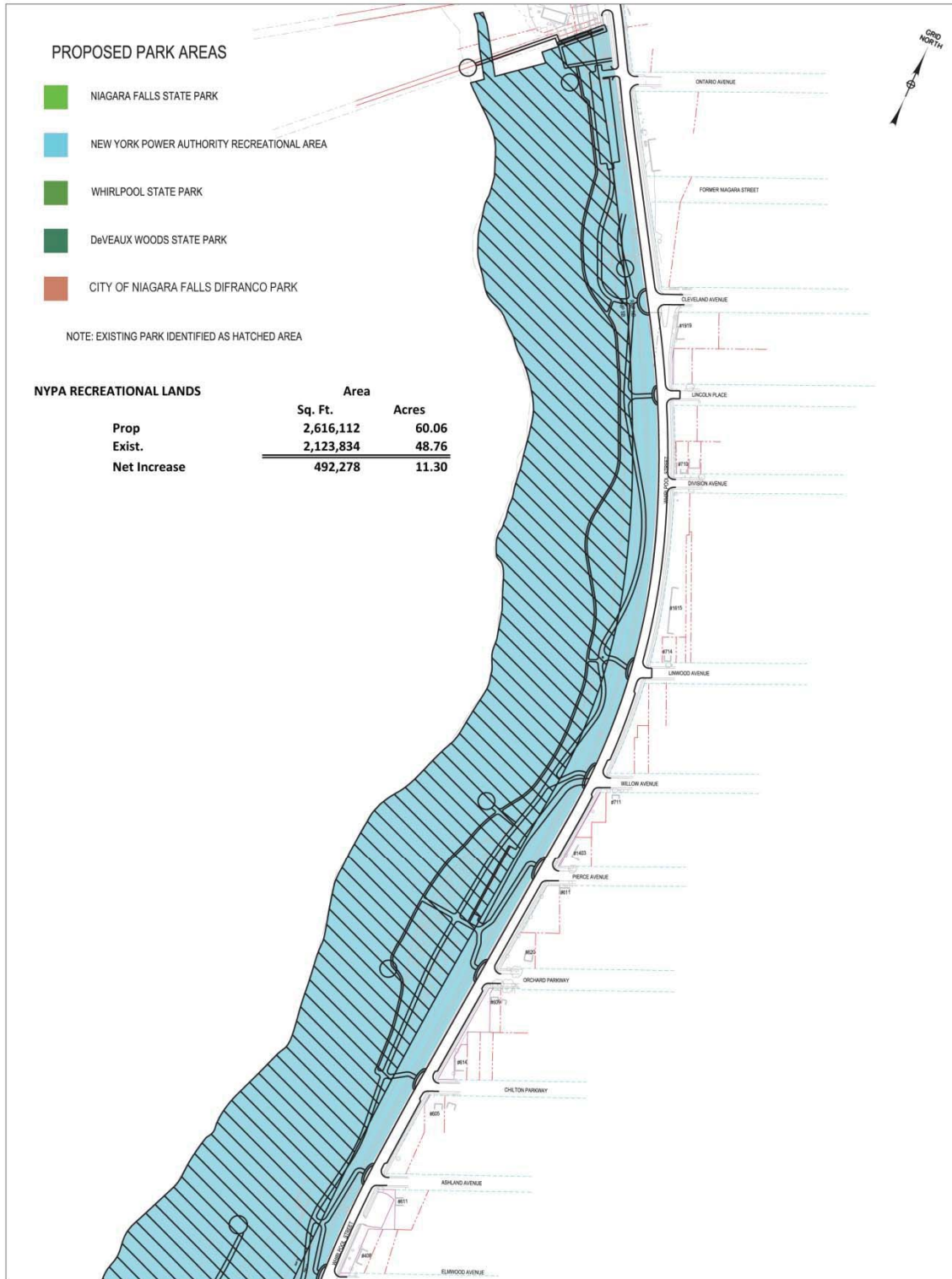
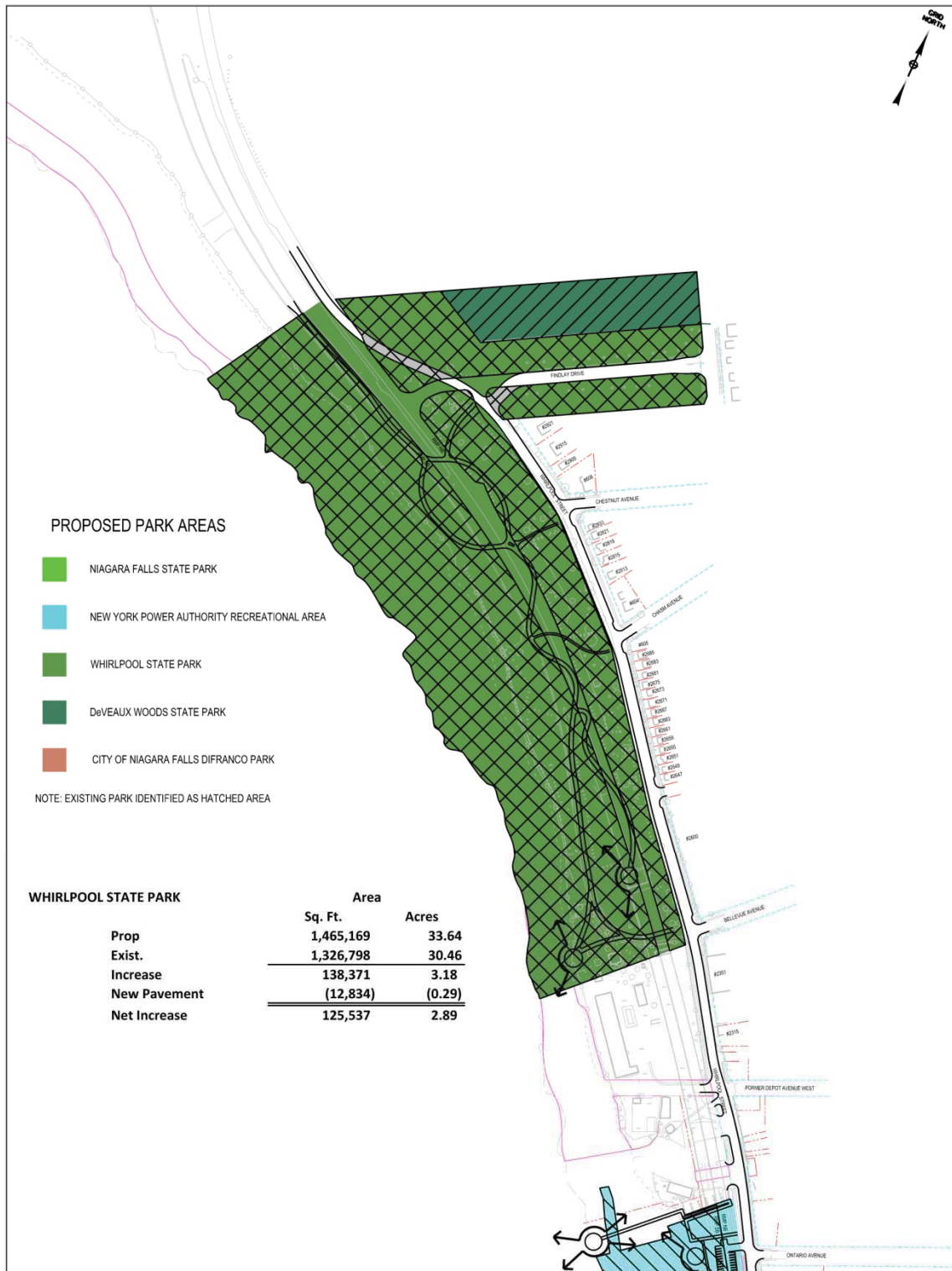


Figure 4-14c – Impacts and Proposed Property Increases to Recreational Properties





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There is likely to be short-term impacts along the entire length of the recreational lands, from the Niagara Falls State Park at the south end to Whirlpool State Park at the north end, during much of the construction period. The removal of the RMP and the existing Robert Moses Parkway Trail, as well as the reconstruction of Third and Whirlpool Streets adjacent to the recreational lands, would require the location and use of construction equipment along these corridors, which could potentially result in portions of the recreational lands being closed off from public use at certain times.

Also, since the new multi-use trail system cannot be constructed until all current and former RMP components have been removed, there would be a temporary closure of the Robert Moses Parkway Trail within the Project Study Area. This temporary closure is estimated to extend over a 9-month period during the 24- to 30-month Project construction period, and would not occur until reconstruction of Third Street and Whirlpool Street is accomplished. Alternative paths and/or detours for bicycles and pedestrians (e.g., within the reconstructed pavement of Third Street and Whirlpool Street) will be developed during final design in order to maintain such recreational use to the greatest extent possible. It is also anticipated that the removal of existing pavement and the construction of new trails could be phased such that the temporary re-routing of bicycles and pedestrians would not be required along the entire Project length at the same time.

Given the temporary closure of the Robert Moses Parkway Trail within the Project Study Area during a portion of the construction period, a phased detour route is likely to be implemented during that period(s) of facility closure, thereby allowing bicycle and pedestrian activity to continue in some fashion at all times. It should also be noted that once the new trail system has been fully constructed, conditions for bicycles and pedestrians through the park would be greatly improved in comparison to the existing conditions.

As a whole, access to and continued use of much of the recreational lands along the Niagara Gorge rim would be maintained throughout construction, as it is the intent to perform as much of the RMP removal activities from within the existing right-of-way. State Parks officials, Project team members and their associated consultants and contractors would coordinate closely in terms of scheduling/staging of construction activities to maintain the maximum amount of accessibility to/through these recreational areas and facilities (e.g., Discovery Center, Aquarium, etc.) as would be safe and feasible during the various phases of the construction period.

There would also be generation of dust and construction noise during the short term. Efforts to control construction-related dust and noise would be implemented, including the use of best management practices as discussed in **Sections 4.4.15** and **4.4.17**, respectively.

With regard to former DiFranco Park, because of its proximity to the RMP demolition and road construction area, and because it will likely be used as a construction staging area (as it has for other downtown projects) it is likely that a Project betterment involving removal of underutilized paved areas at this former City park would be undertaken, followed by grading and replanting of grass mixes used in the overall Project.



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#### Section 4(f) Compliance

A Section 4(f) Evaluation pursuant to the requirements of the Department of Transportation Act of 1966 is included as **Chapter 6** of this document. These requirements apply to any transportation project that results in the use of publicly-owned parks, recreation areas, and wildlife and waterfowl refuges, as well as publicly or privately owned significant historic properties. Details of the proposed “use” of such properties and the applicability of Section 4(f) to these properties with regard to the proposed Project are discussed in the Section 4(f) Evaluation.

#### Section 6(f) Compliance

Section 6(f) of the Land and Water Conservation Fund Act of 1965 (LWCF) requires that property acquired or developed with LWCF funds shall not be converted to uses other than for public outdoor recreation uses. State Parks is the state agency responsible for administering LWCF funds, and on this particular project, State Parks is also the state agency that owns and operates the parkland within the Project Study Area that would have potentially received LWCF funds in the past. Consultation with the National Park Service is also required for final approval if it is determined that a conversion is needed.

State Parks has determined that there are no lands or facilities under its jurisdiction within the Project Study Area that have ever received LWCF funds. The nearest LWCF-funded facility is the Niagara Gorge Trail (Project No. 36-01210), which was originally planned as a contiguous trail system along former railroad beds within the Niagara Gorge (located immediately west of the Project Study Area) between Niagara Falls State Park and Artpark (located north of the Project Study Area in the town of Lewiston). A portion of this trail, generally below the Whirlpool Bridge Plaza, has been washed out several times from heavy rains and rock slides of loose shale in the area. As a result, hikers now need to head up from the Gorge Trail to the Gorge rim to walk around the washed-out trail section. This trail up and out of the Gorge deposits hikers to a trailhead located underneath the RMP elevated viaduct above the Whirlpool Bridge Plaza. However, it has been determined that there has never been any connection between the trailhead under the viaduct and the Robert Moses Parkway Trail. As a result, there are no Section 6(f) conversion issues associated with the proposed Project.

A concurrence email from State Parks dated March 4, 2016 specifically states that “there has been no LWCF funding for the pedestrian sections of the Robert Moses Parkway. Any work on that trail does not violate Section 6(f)(3) of the LWCF Act and, therefore, would not trigger a conversion of use.” A copy of that email and a summary of a January 29, 2016 conference call related to this topic are provided in **Appendix O.2 – Recreational Section 6(f)**.

#### 4.4.13. Visual Resources

A Visual Impact Assessment (VIA) Report was prepared to assess the visual impact on the existing visual resources due to the complete removal of the existing RMP and Robert Moses Parkway Trail, as well as other proposed improvements within the Project Study Area. The complete report is included in **Appendix H - Visual Impacts Assessment Report** and is prepared in accordance with FHWA’s Guidelines for the Visual Impact Assessment of Highway Projects (2015).

##### *Existing Conditions*

##### Existing Visual Character and Context

Located in the Huron Plain, south of the Niagara Escarpment, the Project Study Area is mostly flat with the exception of the Niagara Gorge along its western border. The RMP’s uniform side slopes and flat top surface visually identifies it as an engineered landform. Minor man-made landforms, including roadway and bridge embankments, are located along the RMP. These landforms are utilized for the ramp access and road layout of the RMP.



*Existing RMP and the Project Study Area Looking South*

Vegetation along the Niagara Gorge is composed of the Calcareous Cliff, Calcareous Talus Slope Woodland, and Successional Shrubland

communities, which provide a dense canopy with sporadic open areas. Areas immediately surrounding the RMP are maintained lawn areas with some successional shrubland, providing an open viewshed. The residential areas to the east provide some vegetation in the form of street trees, residential manicured landscapes and natural buffer areas.

As stated in **Section 4.2.1**, the Project Study Area contains residential, residential – deteriorated/blighted fabric, discontinuous urban fabric/vacant, main street corridors (commercial), and open space. More specifically, single family detached housing within clusters of residential neighborhoods dominates the area east of the RMP. The main commercial district is located at the south end of the Project Study Area and beyond, primarily in the Niagara Falls tourist area, while a linear commercial area is located along Main Street to the east of Whirlpool Street at the eastern edge of the study area. Recreational land consists of the state parks along the Niagara Gorge rim connected by NYPA-owned open space lands, and is located primarily along the western boundary of the RMP. Vehicular access to the RMP and the



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Robert Moses Parkway Trail is located via Main Street from the south and via Findlay Drive from the north.

#### Viewer Groups

A viewer group's sensitivity to visual change is affected by several variables, such as proximity to the visual resource, the visibility of resources within a landscape unit, frequency and duration of views, and type and expectations of the viewer groups. Visual sensitivity is generally higher for viewer groups that are driving for pleasure, engaging in recreational activities or living in the vicinity since typically these viewers have extended viewing periods and are concerned about changes in their views, such as views from their homes. Visual sensitivity tends to be lower for viewer groups who are commuting through the visual resource since typically these viewers have fleeting views and tend to focus on the traffic, rather than the surrounding scenery.

Four viewer groups within the Project Study Area were identified, as follows:

- Residential Neighbors – People living within viewing distance of the proposed Project;
- Civic Neighbors – People working in and around the Project Area;
- Recreational Neighbors – People involved in outdoor activities in and around the Project Area; and
- Travelers – People traveling through the Project Area.

Removal of the RMP and the Robert Moses Parkway Trail would open up viewsheds to park land, the Niagara Gorge and Canada in the distance for each of these viewer groups. Given these expanded viewsheds and the proposed improvements within the corridor, including increased recreational activity and enhancements to the existing vegetation, the viewer groups identified generally would have a low-to-moderate sensitivity to change in the visual environment.

#### Landscape Units

To provide a framework for comparing the visual effects of the Project, the landscape is divided into distinct landscape units based on its landform, vegetation, color, and man-made development. The RMP corridor is divided into four landscape units that encompass distinct spatial areas, including suburban residential, business/commercial, transportation corridor, and riverfront/recreation/state park.

#### Viewsheds

Viewsheds define what can be seen or valued by viewer groups within the landscape units, illustrate the existing and proposed visual environment, and are used to assess the visual impact of the RMP. Nine viewsheds were selected to represent typical views by the four viewer groups for their effectiveness in depicting the visual impacts of the proposed improvements of the RMP (see **Figure 4-15**), while **Table 4-11** provides a summary of the viewsheds, along with their associated landscape units, viewer groups, and key visual features. It should be noted that more detailed discussion of each of these viewsheds is provided in the VIA Report in **Appendix H**.



Figure 4-15 – Viewshed Location Map

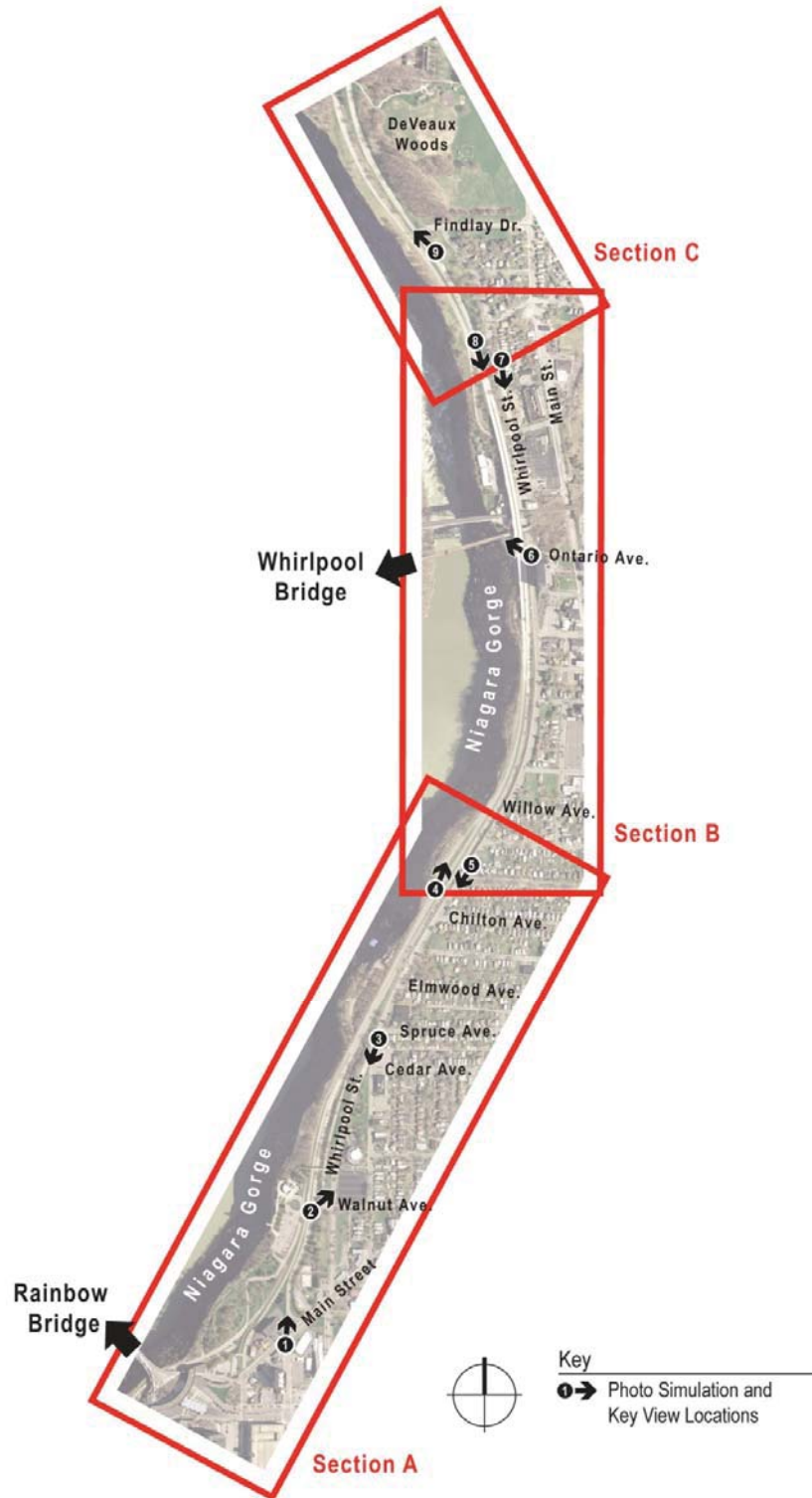




Table 4-11 - Summary of Viewsheds

View	Viewer Group	Landscape Unit	Key Visual Features
View 1 – Robert Moses Parkway Trail Entrance on Main Street	<ul style="list-style-type: none"> <li>• Civic Neighbors</li> <li>• Recreational Neighbors</li> <li>• Travelers</li> </ul>	Business/Commercial	<ul style="list-style-type: none"> <li>• View of open lawns and park trees in background</li> <li>• Howard Johnson’s Hotel blocks view to Park</li> <li>• Existing vegetation and trees on Main Street screen entrance to Park</li> </ul>
View 2 - Niagara Gorge Discovery Center View towards Walnut Avenue	<ul style="list-style-type: none"> <li>• Recreational Neighbors</li> <li>• Travelers</li> </ul>	Riverfront/Recreation/State Park	<ul style="list-style-type: none"> <li>• Open lawns and little variation in the vegetation provide moderate-low visual interest</li> <li>• RMP and pedestrian bridge crossing very present in viewshed</li> <li>• Existing vegetation screens view completely to Aquarium</li> </ul>
View 3 - South View at Intersection of Third Street with Whirlpool Street	<ul style="list-style-type: none"> <li>• Residential Neighbors</li> <li>• Civic Neighbors</li> <li>• Recreational Neighbors</li> <li>• Travelers</li> </ul>	Suburban Residential	<ul style="list-style-type: none"> <li>• Connection from Whirlpool Street to Park complex closed off with unsightly cinder blocks and bright orange signage</li> <li>• White road fencing stands out visibly against scrub vegetation buffer (which in turn limits view to RMP)</li> <li>• Aquarium lawns visible in the distance and only clue to existing access to the Park</li> </ul>
View 4 – Abandoned RMP Parking Area near Niagara Gorge Overlook opposite Orchard Parkway	<ul style="list-style-type: none"> <li>• Residential Neighbors</li> <li>• Recreational Neighbors</li> <li>• Travelers</li> </ul>	Transportation Corridor	<ul style="list-style-type: none"> <li>• Parking and RMP dominate the view</li> <li>• Limited open lawns and young trees reflect maintenance practices</li> <li>• Stone wall along Gorge adds visual interest and draws visitors to explore views of the Gorge</li> </ul>
View 5 - South View at Intersection of Whirlpool Street with Pierce Avenue	<ul style="list-style-type: none"> <li>• Residential Neighbors</li> <li>• Civic Neighbors</li> <li>• Recreational Neighbors</li> <li>• Travelers</li> </ul>	Suburban Residential	<ul style="list-style-type: none"> <li>• Four lanes of Whirlpool Street dominate the view</li> <li>• Views of the RMP are screened by existing vegetation buffer, which is cordoned off with a very visible white fence which follows the entire stretch of Whirlpool Street</li> </ul>
View 6 – View under RMP Viaduct at Intersection of Whirlpool Street and Ontario Avenue	<ul style="list-style-type: none"> <li>• Residential Neighbors</li> <li>• Travelers</li> <li>• Civic Neighbors</li> <li>• Recreational Neighbors</li> </ul>	Business/Institutional	<ul style="list-style-type: none"> <li>• RMP viaduct dominates the view, limiting vistas to the Gorge, blocking sunlight underneath its structure and providing little to no visual quality to the streetscape</li> <li>• Poorly developed trees and damaged paving provide poor aesthetic value to the view</li> <li>• Visibility of parking underneath the</li> </ul>



View	Viewer Group	Landscape Unit	Key Visual Features
			viaduct is limited <ul style="list-style-type: none"> <li>Recreational users are forced to walk along this stretch to follow existing multi-use trail and connect to the other end of the park towards Whirlpool State Park</li> </ul>
View 7 - South View at Intersection of Whirlpool Street with Chasm Avenue	<ul style="list-style-type: none"> <li>Residential Neighbors</li> <li>Travelers</li> </ul>	Suburban Residential	<ul style="list-style-type: none"> <li>Whirlpool Street becomes less visibly predominant</li> <li>Tree lines on both sides of the street provide screening of part of the RMP and offer a more pedestrian friendly streetscape, creating longer views for commuters</li> <li>RMP visible from houses and Whirlpool Street in some stretches</li> <li>Open lawns suggest visual and physical accessibility for recreational users and local residents to park</li> </ul>
View 8 - South View of RMP opposite Chasm Avenue	<ul style="list-style-type: none"> <li>Recreational Neighbors</li> <li>Travelers</li> </ul>	Transportation Corridor	<ul style="list-style-type: none"> <li>RMP dominates the view and viaduct in the distance limits views beyond where the structure begins.</li> <li>Selective maintenance practices provide open spaces with visual and physical access for recreational users, as well as natural meadow landscaped areas</li> <li>Dense vegetation limits views to the Gorge</li> </ul>
View 9 – View along Northbound RMP at Intersection with Findlay Drive	<ul style="list-style-type: none"> <li>Recreational Neighbors</li> <li>Travelers</li> </ul>	Transportation Corridor	<ul style="list-style-type: none"> <li>RMP dominates the view, with clear signage marking the intersection with Findlay Drive</li> <li>Dense vegetation and grade changes limit views to the Gorge and to Whirlpool Street residents</li> <li>Selective maintenance practices offer open spaces which suggest visual and physical access for recreational users, as well as natural meadow landscaped areas</li> </ul>



**Impacts and Mitigation**

Visual Quality

The existing visual quality for each of the viewsheds was evaluated based on indicators of the level of visual relationships, rather than judgments of physical landscape components. This approach utilized a set of three evaluative criteria—natural harmony, cultural order, and Project coherence. These criteria are defined as follows:

- *Natural Harmony*: The memorable landscape components as they combine in striking and distinctive visual patterns;
- *Cultural Order*: The visual integrity of the natural and man-made landscape and the visual freedom from element encroachment; and
- *Project Coherence*: The visual unity and compositional harmony of the landscape considered as a whole, a combination of the natural and man-made elements of the view.

**Table 4-12** below summarizes the analysis on the visual quality of the No-Build and Build Alternatives for the nine viewsheds. Further discussion of visual quality impacts are presented after the table.

**Table 4-12 - Visual Quality Summary**

View	No-Build Visual Quality	Build Visual Quality
View 1 – Robert Moses Parkway Trail Entrance on Main Street	Low	Moderate / Average
View 2 - Niagara Gorge Discovery Center View towards Walnut Avenue	Low	Moderate / Average
View 3 - South View at Intersection of Third Street with Whirlpool Street	Low	Moderate / Average
View 4 – Abandoned RMP Parking Area near Niagara Gorge Overlook opposite Orchard Parkway	Moderately Low	Moderately High
View 5 - South View at Intersection of Whirlpool Street with Pierce Avenue	Moderately Low	High
View 6 – View under RMP Viaduct at Intersection of Whirlpool Street and Ontario Avenue	Low	Moderately High
View 7 - South View at Intersection of Whirlpool Street with Chasm Avenue	Moderate / Average	High
View 8 - South View of RMP opposite Chasm Avenue	Moderately Low	High
View 9 - View along Northbound RMP at Intersection with Findlay Drive	Moderately Low	High

No-Build Alternative

There would be no visual impact to any of the viewer groups at any of the viewsheds since existing viewsheds would remain unchanged.



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### Build Alternative

Based on the local community's recommendations for the proposed Project to be sensitive to the Gorge, parklands and the residential streets' visual character, as well as the various viewers' understanding of the existing visual character, it is anticipated that residential neighbors and civic neighbors, as well as travelers along Whirlpool Street, would all respond positively to changes in the visual environment related to the proposed removal of the RMP, improvement of the park and trail system along the Niagara Gorge rim, and street improvements along Third and Whirlpool Streets. Each of these viewer groups currently are exposed to prolonged and, in some cases, unobstructed views of the RMP. Under the Build Alternative, they will be provided an opportunity to view additional contiguous green space, an improved trail system, overlook vistas and improved landscaping in place of the RMP.

The response from travelers currently using the RMP to the change in visual quality is predicted to be neutral. These viewers would have to change their commute itineraries to drive along Third Street / Whirlpool Street instead of the RMP, which would generally provide them less time to view the parklands and the Niagara River Gorge from their vehicles. In some viewsheds the Build Alternative introduces new focal features, such as new views to the parklands and the Gorge and an improved tree-lined streetscape. Although travelers are expected to respond positively to these opportunities, this could be offset due to the viewers' narrower visual fields and need to maintain their primary focus on traffic, signage and the road, thereby resulting in a more neutral response.

The response from recreational neighbors is predicted to be very positive, given the removal of the RMP, and the improved trail system that would increase recreational opportunities and provide additional space for programming potential future park improvements. These viewers are expected to remain longer in the improved park areas with more prolonged views due to their activities, the improved aesthetic value of the park's landscape, and the greater recreational opportunities available.

The following features of the Build Alternative will help ensure that the visual impacts of the Project are perceived as positive by the various viewer groups.

- *Proper Design and Siting* – The proposed lawn verge area (i.e., grassed area between the street curb line and the sidewalk) along the residential side of Whirlpool Street would be widened where possible. This would provide a larger buffer between the roadway and the houses fronting and/or adjacent to Third and Whirlpool Streets. Locations where existing vegetation is adjacent to the RMP and Whirlpool Street, thereby serving as a buffer and visual screen, would be managed in certain areas to allow improved views to the parklands and increase the visual connection between pedestrians along Whirlpool Street, and the elements which comprise the Gorge rim landscape. All areas where the RMP would be removed would undergo re-vegetation to increase the parklands' ecological and aesthetic value. Whirlpool Street, Third Street and the new Park Access Road (i.e., which would connect Main Street with the Niagara Gorge Discovery Center) would include improvements in their streetscapes, mostly comprised of tree lines, gateway features and pedestrian access points, lighting, on-street parking, and decorative crosswalks.



- *Long-Term Maintenance* – All access points would need general landscaping and maintenance to ensure a continued level of positive aesthetic quality that would convey to recreational users and visitors a sense of care and attention to this improved area. The multi-use trail system and other infrastructure features would also require maintenance to provide comfort and safe access to the various park and open space features. Regular maintenance activities, including selective mowing, weeding, and pruning would be periodically necessary on all landscaped areas to promote and maintain healthy vegetation, although the intent would be to create a more naturalized landscape that might reasonably minimize the need for such maintenance activities. Removal of invasive species would also ensure native species will establish themselves in the restored Gorge rim landscape.

Photos and simulations of a representative sample of three of the nine viewsheds assessed in this study are presented on the next several pages. Specifically, Existing / No-Build Alternative views at these three viewsheds (i.e., View 6 [View under RMP Viaduct at Intersection of Whirlpool Street and Ontario Avenue]; View 7 [South View at Intersection of Whirlpool Street with Chasm Avenue]; and View 8 [South View of RMP opposite Chasm Avenue]) are presented in comparison with the Build Alternative views at each (see **Figures 4-16 through 4-18**, respectively). Similar comparative views are presented for all nine viewsheds assessed within the full VIA Report in **Appendix H**.

### **Conclusion**

As noted above and in more detailed fashion in **Appendix H**, the overall visual impact of the Build Alternative compared to the ratings for the No-Build Alternative is determined to be moderately high because it would result in a moderately-high change to the visual resources with low viewer response and no notable negative impacts in the visual quality of the corridor.

Figure 4-16 – View No. 6: View toward the RMP Viaduct from Intersection of Whirlpool Street and Ontario Avenue



*Existing / No-Build Alternative – View toward the RMP Viaduct from intersection of Whirlpool Street and Ontario Avenue*



*Build Alternative – View toward the removed RMP Viaduct and improved parking lot from intersection of Whirlpool Street and Ontario Avenue*



Figure 4-17 – View No. 7: South View at Intersection of  
Whirlpool Street with Chasm Avenue



*Existing / No-Build Alternative - View looking south at intersection of Whirlpool Street and Chasm Avenue*



*Build Alternative - View looking south at intersection of Whirlpool Street and Chasm Avenue*



**Figure 4-18 – View No. 8: South View of RMP Opposite Chasm Avenue**



*Existing / No-Build Alternative - View looking south along the existing RMP*



*Build Alternative - View looking south along the removed RMP and new multi-use trail*



#### 4.4.14. Farmlands

##### *Existing Conditions*

Based on a review of the NYS Agricultural District Maps for Niagara County, the proposed Project is not located in or adjacent to an Agricultural District.

##### *Impacts and Mitigation*

Neither the No-Build nor the Build scenario of the proposed Project would result in any impact on farmlands.

#### 4.4.15. Air Quality

##### *Existing Conditions*

Niagara County is currently in attainment with the National Ambient Air Quality Standards (NAAQS). Under the requirements of the Clean Air Act Amendments of 1990 (CAAA), the impact of certain transportation projects on air quality must be studied to determine if they conform to the purpose of the State Implementation Plan (SIP), which is to achieve/maintain attainment of the NAAQS. The transportation conformity regulation, "Conformity to State or Federal Implementation Plans of Transportation Plans, Programs, and Projects Funded, Developed or Approved under Title 23 U.S.C. or the Federal Transit Act" (40 CFR parts 6, 51 and 93), is used for conformity determinations.

As of July 20, 2013, Niagara County is in attainment with all current NAAQS. Therefore, this Project is not subject to "project level" conformity requirements. The Project is listed in the GBNRTC's 2014-2018 Transportation Improvement Plan (TIP). As a result of the Niagara County attainment status, the GBNRTC was not required to make a transportation conformity determination under the new 2008 8-Hour Ozone NAAQS.

##### *Impacts and Mitigation*

###### No-Build Alternative

There will be no significant changes in mobile air emissions under the No-Build Alternative, given that there would be no major changes to traffic patterns/levels from current conditions.

###### Build Alternative

The Carbon Monoxide (CO) microscale air quality screening is based on the Air Quality - Project Environmental Guidelines, Chapter 1.1 of *The Environmental Manual* (TEM) published by the NYSDOT in January 2001 and updated in December 2012. The need for a CO microscale analysis is determined using the three part screening procedures outlined in the TEM. The microscale screening process determined that the volume threshold would not be exceeded at any intersection or free flow traffic segment within the Project during Estimated Time of Completion (ETC), ETC+10, or ETC+20 peak hour volumes. Details of the screening process are available in the Project's *Air Quality Study* included as **Appendix I – Air Quality Study**. Road improvement projects located in densely-developed urban areas



often require a microscale air quality analysis to assess the localized ground-level concentrations of Carbon Monoxide (CO) that may result from changes in the traffic patterns, volumes, or speed in a given area.

Some transportation projects may have a significant effect on traffic conditions over a large area. Such large projects would warrant consideration of regional air quality impacts of the Project. Chapter 1.1 of the TEM outlines the criteria for projects requiring a mesoscale air quality analysis. These criteria identify projects that would have significant impact on emissions on a regional level. The Project would divert traffic from the existing RMP to other existing roads in the area, including Whirlpool Street and Main Street. While individual road segments would experience an increase of vehicles during the peak hour, as noted in Attachment B of **Appendix I**, the Build Alternative regional vehicle miles traveled (VMT) is expected to be reduced by 0.81%. This Project is located within an attainment area and the Build Alternative would not result in significantly different VMT. Therefore, this Project does not require a quantitative mesoscale air quality analysis. The mesoscale screening process determined that the Project would not have a significant impact on air quality emissions on a regional basis.

A detailed air quality analysis is not necessary since this Project would not increase traffic volumes, reduce source-receptor distances, or change other existing conditions to such a degree as to jeopardize attainment of the NAAQS.

Airborne particulates caused by construction can generally be controlled through appropriate precautionary measures included in the standard specifications. Such measures as wetting of soil surfaces and covering of trucks and other dust sources during construction are typically used in controlling particulates. Requirements for applying such measures will be included as part of the specifications of the construction contract.

#### **4.4.16. Energy**

##### ***Background***

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. Accordingly, the potential energy effects related to the proposed removal of the RMP and reconstruction of local roadways (i.e., the Build Alternative) is to be compared to taking no action (i.e., the No-Build Alternative).

The Project has been screened 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 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 or other factors such as an increase in VMT; construction cost; projects identified through the scoping process; nature of the project; or existing problems in energy supply or distribution. These criteria as related to the proposed Project are presented below.



- 
- *Regional significance:* This Project is not regionally significant based on the Regional Significance Thresholds given in NYSDOT's draft guidance. The regional significance thresholds refer to roadways with a designation of "principal arterial or above". This Project proposes the reuse and reclassification of Whirlpool Street as an urban arterial; therefore, the Regional Significance Thresholds do not apply.
  - *Increase in VMT (greater than 10%):* Traffic from the existing RMP would be re-routed to local roadways, which may increase VMT in some instances; however, based on traffic studies conducted for this Project, it has been determined that this Project would not result in a greater than 10% increase in VMT for the study area. In addition, there would be no new travel lanes, major re-alignment, or major new developments that would generate large increases in traffic.
  - *Construction costs:* The guidance indicates that a project should be "considered" for analysis if construction costs are \$50,000,000 or more. Construction costs for the proposed Project are far below this level.
  - *Projects identified through the scoping process:* This Project has not been identified as a project of energy concern.
  - *Nature of the project:* Given the low traffic volumes along this corridor, the nature of this Project would not be considered energy intensive.
  - *Existing problems in energy supply or distribution:* There are no known energy supply or fuel distribution problems in this area.

Therefore, the energy screening indicates that a "Project-Level" energy analysis is not needed for this Project.

### ***Existing Conditions***

In general, there are two types of energy use that are assessed for transportation projects: Indirect Energy and Direct Energy. These are described below.

- *Indirect Energy* is associated with constructing, operating and maintaining a facility. Construction energy covers production and transport of materials, powering on-site equipment, worker transportation and other factors plus the materials used in construction itself.
- *Direct Energy* impact is the energy consumed by vehicles using a facility.

In the Existing Condition, Indirect Energy is being used to generally operate and maintain the RMP and the local roadways. Indirect Energy usage under the Existing Condition include tasks such as sweeping, snowplowing, salting, asphalt repair, and drainage system cleaning and repair. Direct Energy usage in the Existing Condition is made up of the vehicles that currently travel through the corridor in the present roadway configuration.



## ***Impacts and Mitigation***

### No-Build Alternative

Under the No-Build scenario, Indirect Energy use would be similar to the Existing Condition, while Direct Energy usage would be slightly higher due to anticipated minor growth in traffic along the roadways.

### Build Alternative

Under the Build Alternative, Indirect Energy would be used to remove the RMP and reconstruct Whirlpool Street and a portion of Third Street, as well as to generally operate and maintain the roadways. Indirect Energy usage under the Build Alternative would include tasks such as initial construction improvements as well as post construction tasks such as sweeping, snowplowing, salting, asphalt repair, and drainage system cleaning and repair.

Direct Energy usage under the Build Alternative would incorporate the fact that vehicles currently using the RMP would divert to local roadways, especially Whirlpool Street.

Based on these factors, the Indirect Energy and Direct Energy comparisons under the Build Alternative would compare to the No-Build Alternative as follows.

- *Indirect Energy* -- With respect to construction energy in the short term, Indirect Energy use is expected to go up during actual construction of the proposed Project. However, since the Project would result in the removal of the existing RMP lanes, the Robert Moses Parkway Trail, and associated ramps and overpasses, in the long term there would be overall less pavement and fewer lane miles that would normally require maintenance and repairs. Therefore, the Indirect Energy effects of construction of the proposed Project would actually reduce energy use in the long run in comparison to the No-Build Alternative.
- *Direct Energy* -- For this Project, vehicles would be re-routed from the RMP to city streets. The traffic study completed for the Project has estimated some increases in VMT, slightly slower vehicle operating speeds and/or slightly higher levels of traffic movements (i.e., decreased LOS) at a few intersections. These factors generally would lead to an increase in total energy use; however, given the low traffic volumes related to the Project, the relatively minor changes in these factors and the limited geographical extent of the Project, Direct Energy consumption under the Build Alternative is not expected to be significantly changed in comparison to the No-Build Alternative.

In summary, and as indicated above, a “Project-Level” energy analysis is not needed for this Project. The qualitative comparisons indicate that construction of the Project would cause a reduction in Indirect Energy usage and an increase in Direct Energy usage. However, it is generally accepted that over time, changes in Direct Energy usage would eventually outweigh the changes in Indirect Energy usage. While this indicates that construction of the Project would increase the combined total energy usage/fuel consumption to some extent, energy impacts are not expected to be significant based on the scale of this Project.



4.4.17. Noise

Existing Condition

The proposed Project is classified as a Type 1 project under Chapter I of Title 23, Code of Federal Regulations, Part 772 (23 CFR 772), Procedures for Abatement of Highway Traffic Noise and Construction Noise, which requires that noise studies be performed for Type I projects. A Type I project is defined as a project on new location, or a project that significantly changes horizontal and/or vertical alignment, or includes the addition of a through travel lane. This Project proposes to significantly alter the existing RMP by completely removing it within the limits of the Project Study Area, thereby altering local traffic patterns. Therefore, a noise study is required. Although this section presents a summary of the noise study prepared for this Project, it should be noted that a more detailed noise report is included as Appendix J – Noise Study.

Noise Abatement Criteria (NAC) developed by the FHWA define limits for determining impacts due to traffic noise levels in areas based on defined land use (see Table 4-13). Federal regulations (23 CFR 772) define traffic noise impacts as "occurring when the predicted traffic noise levels approach or exceed the NAC, or when the predicted levels are substantially higher than the existing levels." In practice the NYSDOT definition of this regulation quantifies "approach" as within 1 A-weighted decibel (dBA), and "substantially higher" as 6 dBA or greater. Therefore, an impact is considered to occur if the predicted future noise level is one dBA lower, equals or exceeds the NAC, or is 6 dBA or more above the existing noise level. If an impact is identified, abatement measures for reducing or eliminating the impact must be considered.

Table 4-13 – FHWA Noise Abatement Criteria (NAC)

Table with 3 columns: Activity Category, Leq(h), and Description of Activity Category. Rows A through G describe various noise abatement criteria and their corresponding noise levels and descriptions.



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Existing land uses were determined for the Project Study Area, and FHWA NAC corresponding to the land uses that were assigned. The land on the west side of the RMP is dominated by open space owned and maintained by the NYPA. This open space, which is available for public use and includes a paved walking/biking trail, rest area, and heavily wooded hiking trails, would be classified as FHWA Activity Category C, which has an exterior NAC of 67 dBA.

At the southern end of the corridor, the Project Study Area is a mixture of residential, park, hotels, restaurants, commercial, retail, and maintenance facility properties. The residential properties are Activity Category B and the park lands are Activity Category C, both of which have exterior NAC of 67 dBA. The hotels, restaurants, and other commercial properties are Land Use Category E, having an exterior NAC of 72 dBA. The retail buildings and maintenance facility (Land Use Category F) do not have applicable FHWA NAC.

The area around the Whirlpool Bridge is comprised of office buildings, a retail building, maintenance yards, and undeveloped lands. The office buildings are considered FHWA Activity Category E, having an exterior NAC of 72 dBA. The retail building and maintenance facilities (Activity Category F), as well as undeveloped lands (Activity Category G) do not have applicable FHWA NAC.

North of Whirlpool Bridge to the northern terminus of the Project at Findlay Drive, the land east of the RMP is a mixture of residential, commercial, and industrial properties. The Project corridor primarily consists of residential properties, and the portion of the property (or “house lot” concept) where human activity is likely to occur is considered FHWA Activity Category B, which has an exterior NAC of 67 dBA. The area immediately north of Findlay Drive, which is part of DeVeaux Woods State Park, is considered FHWA Activity Category C, which also has an exterior NAC of 67 dBA.

The noise measurements for 16 sites throughout the corridor were obtained during September 2014 (see **Figures 4-19a – 4-19b**). These measurements aided in establishing existing noise levels, the peak noise hour, and the effects of noise sources other than the existing local street traffic. Vehicle speeds, potential natural barriers, and shielding were also observed and recorded at each measurement site. The peak hour  $L_{eq}$  sound level measured at each measurement site has been summarized in **Table 4-14** below. The Noise Survey Data Sheets can be found in the Project's *Traffic Noise Analysis Study*.

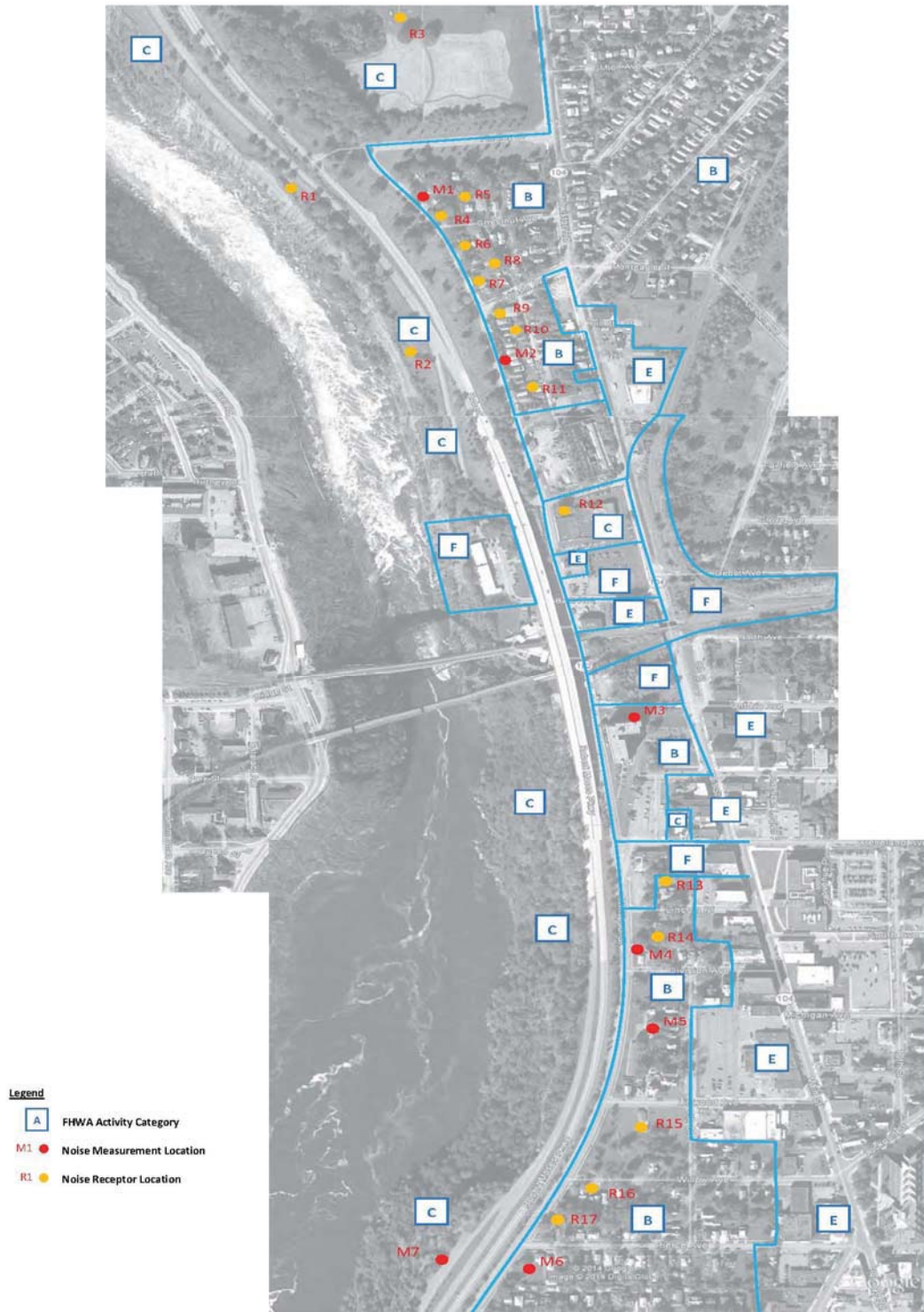
Other noise sources identified included construction equipment, back-up warning devices, hammering, car doors closing, dogs barking, and tourism helicopters. During the noise measurements taken at the southern end of the corridor, the low rumble of Niagara Falls was audible. The frequent passing of helicopter tours was the most significant non-traffic noise observed. Helicopters were not recorded during the AM peak measurements, but were constant throughout the remainder of the day with as many as 12 helicopters counted during a single 15-minute noise measurement. All of these noise sources were considered as part of the existing noise environment.

Figure 4-19a – Noise Measurements and Receptor Locations – South





Figure 4-19b – Noise Measurements and Receptor Locations – North





The noise meter data were reviewed to determine the ambient, or background, noise level for each measurement. This ambient noise level reflects the frequent helicopter noise observed at each site. The ambient noise was subtracted from the measured noise level using logarithmic decibel subtraction, to determine the contribution from vehicular traffic, as shown in **Table 4-14** below.

**Table 4-14 – Noise Monitoring and Model Validation Results**

Site	Location	Date	Time		Measured Noise Levels		
			Start	End	Measured Leq (dBA)	Ambient Noise (dBA)	Traffic Noise <sup>1</sup> (dBA)
M1	2915 Whirlpool Street	9/4/14	5:06 pm	5:21 pm	58	54	56
M2	2667 Whirlpool Street	9/4/14	5:27 pm	5:42 pm	61	57	59
M3	Henry Wrobel Tower	9/4/14	11:05 am	11:20 am	57	53	55
M4	710 Division Street	9/5/14	7:34 am	7:49 am	63	57	62
M5	1634 Eighth Street	9/5/14	7:54 am	8:09 am	55	51	53
M6	711 Pierce Avenue	9/5/14	7:13 am	7:28 am	62	53	61
M7	Robert Moses Parkway Trail Rest Area	9/9/14	8:39 am	8:59 am	55	50	53
M8	611 Ashland Drive	9/5/14	8:35 am	8:50 am	61	54	60
M9	316 Spruce Avenue	9/5/14	8:56 am	9:11 am	64	56	63
M10	Niagara County Civic Building	9/4/14	2:58 pm	3:13 pm	60	53	59
M11	Aquarium of Niagara	9/8/14	4:28 pm	4:43 pm	58	54	56
M12	619 Third Street	9/9/14	7:58 am	8:13 am	60	54	59
M13	Niagara Gorge Discovery Center	9/4/14	3:45 pm	4:05 pm	58	54	56
M14	568 Third Street	9/9/14	8:16 am	8:31 am	55	51	53
M15	492 Main Street (Rodeway Inn)	9/8/14	3:20 pm	3:40 pm	60	56	58
M16	472 Main Street (Howard Johnson)	9/8/14	2:44 pm	3:04 pm	57	50	56

Note: Decibels (dBA) are subtracted using logarithmic decibel subtraction. For example, given two decibel levels X and Y,  $X - Y = 10 * \log_{10} [10^{(X/10)} - 10^{(Y/10)}]$ .

After noise measurements were taken in the field, a TNM 2.5 noise prediction model reflecting existing roadway conditions was developed using available design mapping. When their presence was significant, rows of building shielding and terrain lines were incorporated into the model. Traffic volumes, speeds, and classifications recorded during each measurement were applied to the TNM 2.5 model, and used to validate the accuracy of the model.

The validated TNM model was then used to determine existing peak hour traffic noise levels. Additional noise receptors and land features were incorporated into this model, and existing peak hour traffic volumes, vehicle classifications, and speeds were applied.



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### *Impacts and Mitigation*

The validated existing peak hour TNM model was used to determine future No-Build and Build alternative traffic noise levels. TNM 2.5 models representing future (2040) traffic conditions for the No-Build and Build alternatives were developed. To complete the models, projected future (2040) peak hour traffic volumes, vehicle classifications and speeds were applied for each scenario. At the proposed intersection of Findlay Drive and Whirlpool Street, two separate design options were modeled under the Build Alternative (i.e., T-intersection approach and stop sign on Findlay Drive or T-intersection approach and stop sign at Whirlpool Drive). The predicted future noise levels of the northern-most receptor locations are reported for each condition. To determine whether or not noise abatement measures are required, the future traffic noise levels for the Build Alternative were compared to levels approaching the FHWA NAC, and the existing noise levels following the NYSDOT/ FHWA guidelines in order to identify impacts.

As previously stated, Federal regulations (23 CFR 772) define traffic noise impacts as "occurring when the predicted traffic noise levels approach or exceed the NAC, or when the predicted noise levels are substantially higher than the existing levels." In determining impacts, all residential properties are FHWA Activity Category B, while the land within the parks and recreation areas are all FHWA Activity Category C. All lands classified as Category B and C activities have a corresponding NAC of 67 dBA. Since the approach threshold for both categories is 1 dBA, then an impact is considered to occur if the future noise level at these receptors is 66 dBA or greater, or if it is 6 dBA or more above the existing noise level.

The hotels, restaurants, and other commercial properties (including office buildings) primarily located at the southern end of the corridor are Land Use Category E, with exterior NAC of 72 dBA. With the approach threshold of 1 dBA, this means that an impact is considered to occur if the future noise level at these receptors is 71 dBA or greater.

The results of these comparisons are shown in **Table 4-15**.

For the Build Alternative, future year 2040 noise levels for the analysis sites range from 41 – 67 dBA. The noise change from the existing to the Build Alternative noise levels range from -6 dBA at the NYPA parkland/open space and Niagara Gorge Discovery Center to +4 dBA on the east side of Third Street. This noise level increase is attributed to highway geometry changes, altered travel patterns due to the removal of the RMP, and the projected increase in traffic volume between 2010 and 2040.

The variation of Whirlpool Street / Findlay Drive design configurations was found to have a minimal difference in terms of impact on noise levels. Only noise receptor R1 (on the Robert Moses Parkway Trail) was determined to have any change in predicted noise levels between these two options. The stop sign on Findlay Drive would result in 52 dBA, while the stop sign on Whirlpool Street would result in 53 dBA. Both of these noise levels are below existing noise levels of 54 dBA at this location, and significantly below the FHWA NAC of 67 dBA.



Table 4-15 – Summary of Traffic Noise Levels (L<sub>eq</sub>)

Site	Location	FHWA Activity Category /NAC	Equivalent Number of Residential Receptors <sup>1</sup>	Existing Noise Levels (dBA)	Predicted 2040 Noise Level		Noise Level Differences		Impact <sup>2</sup>
					No-Build	Build	Build - Existing	Build – No-Build	
<b>Whirlpool Street / Findlay Drive – Stop Sign on Findlay Drive</b>									
R1	Robert Moses Parkway Trail	C / 67	4	54	56	52	-2	-4	
R3	DeVeaux Woods Baseball Diamond	C / 67	50	42	43	41	-1	-2	
M1	2915 Whirlpool St.	B / 67	2	62	62	62	0	0	
<b>Whirlpool Street / Findlay Drive – Stop Sign on Whirlpool Street</b>									
R1	Robert Moses Parkway Trail	C / 67	4	54	56	53	-1	-3	
R3	DeVeaux Woods Baseball Diamond	C / 67	50	42	43	41	-1	-2	
M1	2915 Whirlpool St.	B / 67	2	62	62	62	0	0	
<b>Build Alternative</b>									
R2	Robert Moses Parkway Trail	C / 67	4	55	56	49	-6	-7	
R4	Whirlpool St.	B / 67	2	61	61	61	0	0	
R5	Chestnut Ave.	B / 67	2	50	50	49	-1	-1	
R6	Whirlpool St.	B / 67	4	64	63	65	1	2	
R7	Whirlpool St.	B / 67	2	63	63	64	1	1	
R8	Chasm Ave. N	B / 67	1	53	53	54	1	1	
R9	Chasm Ave. S	B / 67	4	59	59	60	1	1	
R10	Whirlpool St.	B / 67	6	54	54	55	1	1	
M2	2667 Whirlpool St.	B / 67	3	64	64	65	1	1	
R11	Whirlpool St.	B / 67	6	54	55	55	1	0	
R12	2351 Whirlpool St.	E / 72	2	62	63	62	0	-1	
M3	Henry Wrobel Tower	B / 67	250	58	58	58	0	0	
R13	Lincoln Pl. N	B / 67	1	57	58	57	0	-1	
R14	Lincoln Pl. S	B / 67	4	56	57	57	1	0	
M4	710 Division St.	B / 67	1	62	63	65	3	2	
M5	1634 Eighth St.	B / 67	4	56	57	57	1	0	
R15	Linwood Ave.	B / 67	4	53	54	54	1	0	
R16	Willow Ave.	B / 67	5	59	60	59	0	-1	
R17	Pierce Ave. N	B / 67	1	61	62	62	1	0	
M6	711 Pierce Ave.	B / 67	3	62	63	65	3	2	



Site	Location	FHWA Activity Category /NAC	Equivalent Number of Residential Receptors <sup>1</sup>	Existing Noise Levels (dBA)	Predicted 2040 Noise Level		Noise Level Differences		Impact <sup>2</sup>
					No-Build	Build	Build - Existing	Build – No-Build	
R18	Orchard Pkwy. N	B / 67	1	60	61	61	1	0	
M7	Robert Moses Parkway Trail Rest Area	C / 67	9	55	57	54	-1	-3	
R19	Chilton Ave. N	B / 67	3	58	59	59	1	0	
R20	Chilton Ave. S	B / 67	2	55	56	55	0	-1	
M8	611 Ashland Dr.	B / 67	4	59	60	60	1	0	
R21	Elmwood Ave. N	B / 67	1	59	60	60	1	0	
R22	Elmwood Ave. S	B / 67	5	56	57	56	0	-1	
M9	316 Spruce Ave.	B / 67	1	64	65	65	1	0	
R23	Whirlpool St.	B / 67	1	64	64	65	1	1	
M10	Niagara County Civic Bldg.	C / 67	3	60	61	64	4	3	
M11	Aquarium of Niagara	C / 67	4	53	55	50	-3	-5	
R24	Third St.	B / 67	3	51	51	55	4	4	
M12	619 Third St.	B / 67	5	61	61	65	4	4	
R25	Third St.	B / 67	6	51	51	54	3	3	
R26	Third St.	B / 67	3	57	57	58	1	1	
M13	Niagara Gorge Discovery Center	C / 67	8	54	56	48	-6	-8	
M14	568 Third St.	B / 67	3	54	55	55	1	0	
M15	492 Main St. (Rodeway Inn)	E / 72	1	62	63	63	1	0	
M16	472 Main St. (Howard Johnson)	E / 72	3	60	62	56	-4	-6	

NOTES

1. Per NYSDOT's *The Environmental Manual (TEM)* Section 4.4.18.5.3.2 guidance, for FHWA Activity Category C and E areas, the equivalent number of residential receptors was determined by dividing the area of frequent human use by the minimum high-density residential lot size from the City of Niagara Falls Zoning Ordinance (0.091 acres).
2. The predicted future noise level is one decibel lower, equals or exceeds the NAC, or is 6 dBA or more above the existing noise level.



For each analysis sites, the future predicted traffic noise levels do not approach or exceed the NAC established for the Activity Category, nor do they cause substantial increases of 6 dBA or greater over existing noise levels. Therefore, noise abatement was not considered along the corridor. Traffic noise impacts for the No-Build and Build Alternatives are summarized in **Table 4-16** below.

**Table 4-16 – Noise Impacts by FHWA Activity Category**

Alternative	FHWA Category B – Number of Impacts		FHWA Category C– Number of Impacts		FHWA Category E– Number of Impacts	
	Existing	2040	Existing	2040	Existing	2040
No-Build	0	0	0	0	0	0
Build	N/A	0	N/A	0	N/A	0

In regard to abatement, 23 CFR Part 772 requires that after an impact has been identified, “noise abatement shall be considered and evaluated for feasibility and reasonableness.” No noise impacts were identified as a result of this project. Therefore, noise abatement was not considered.

**Construction Noise**

The phases of construction typical to the subject Project can be identified as: mobilization, earthwork, drainage, base preparation, paving, and clean-up. Each phase of construction has its own scope, objective, mix of equipment, and therefore, its own noise characteristics. Earthwork operations were determined to produce a high amount of construction noise for this Project.

This Project can be expected to produce noise impacts on a short duration basis to numerous receptors during the duration of construction. Noise mitigation measures including design modifications, the reduction of noise emitted from equipment, the abatement of noise escaping from the site, and public relations may be utilized to provide some degree of reduction in the annoyance associated with the construction noise from this Project.



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#### 4.4.18. Asbestos

##### *Existing Conditions*

An Asbestos Assessment consists of a review of record plans and previous environmental inspections, a preliminary field reconnaissance to look for suspect asbestos-containing materials, and the development of an assessment report and sampling plan. This assessment was completed in general accordance with NYSDOT's *The Environmental Manual* (TEM), Section 4.4.19 Asbestos Management (updated March 2013). Asbestos Containing Materials (ACM) can potentially be encountered when a project involves:

- The acquisition and demolition of existing buildings;
- The removal or replacement of existing utility lines; and
- The demolition of culverts and bridge structures.

The proposed Project would not require the acquisition and demolition of existing buildings. However, existing utility lines may be removed or replaced along Whirlpool Street. In addition, the proposed Project has been identified as requiring the removal of the RMP Bridge that crosses over the Sewage Treatment Plant Access Road (BIN 1068229) and the elevated section of the RMP that crosses over the Whirlpool Bridge approach (BIN 1039539).

An Asbestos Assessment Screening (see **Appendix K – Asbestos Abatement Report**) was performed as part of the environmental review which included an examination of the record plan drawings found in the bridge folders for the two structures at the regional NYSDOT offices. Review of the record plans identified both known and suspected asbestos-containing materials. The following materials were identified from a review of the plans:

- BIN 1068229 (Robert Moses Parkway over Sewage Treatment Plant Access Road)
  1. *Bridge paint* – The Bridge Paint Asbestos Testing Bulk Sample Summary Table that was located within the bridge folder shows that 2004 laboratory testing results (using polarized light microscopy [PLM] and transmission electron microscopy [TEM] methods) of the gray bridge paint identified the paint as non-ACM.
  2. *Bituminous coating* – The circa 1965 as-built plans indicate that a bituminous coating was installed on the wing wall, slabs, and fascia safety walk concrete.
  3. *Joint caulk* – The circa 1965 as-built plans indicate that caulking was installed over the pre-moulded bituminous joint.
  4. *Pre-moulded bituminous joint material* – The circa 1965 as-built plans indicate that a pre-moulded bituminous joint material was utilized on the structure.
  5. *Railing post pad* – The circa 1965 as-built plans indicate that pads were installed beneath the railing posts.



6. *Diluted tack coat and waterproofing membrane* – The 2012 record plans indicate the installation of a waterproof membrane and diluted tack coat beneath the roadway surface.
  7. *Railing post caulk* – Various photographs reviewed within the Bridge Inspection Report show caulk that is present around the perimeter of the railing posts.
  8. *Bearing pads* – Various photographs reviewed within the Bridge Inspection Report show bearing pads that are present beneath the bearing plates.
- BIN 1039539 (Robert Moses Parkway over Whirlpool Bridge)
    1. *Bridge paint* – The Bridge Paint Asbestos Testing Bulk Sample Summary Table that was located within the bridge folder shows that 2004 laboratory testing results (PLM and TEM methods) of the green/brown bridge paint identified the paint as non-ACM.
    2. *Pre-moulded bituminous joint material* – The circa 1962 as-built plans indicate that a pre-moulded bituminous joint material was utilized on the structure.
    3. *Compressed asbestos sheet packing* – The circa 1962 as-built plans indicate that compressed asbestos sheet packing was installed between the road surface and the abutment.
    4. *Bearing pads* – Various photographs reviewed within the Bridge Inspection Report show bearing pads that are present beneath the bearing plates.

After the record plan review was completed, an assessment of existing field conditions associated with each bridge was completed to document those materials that could be identified in the field. The field inspection identified the presence of the materials listed in **Table 4-17** below. Materials identified in the field are recommended for sampling and laboratory analysis during final design:

**Table 4-17 – Summary of Findings and Recommended Materials to be Sampled (BIN 1068229 and BIN 1039539)**

Suspect Material	Location	Proposed Number of Samples
Beige/tan paint	BIN 1068229 – underside of bridge	3
Bituminous coating/waterproof coating	BIN 1068229 – backside of bridge	3
Joint Caulk	BIN 1068229 – within the pre-moulded bituminous joint (was not observed during the initial site visit – may not be sampled)	0
Pre-moulded bituminous joint material	BIN 1068229 – expansion joints (was not observed during the initial site visit – may not be sampled)	0
Railing post pad	BIN 1068229 – beneath railing posts along western side of bridge	3
Waterproofing membrane and diluted tack coat	BIN 1068229 – beneath roadway (was not observed during the initial site visit - may not be sampled)	0
Railing post caulk	BIN 1068229 – beneath railing posts along western side of bridge	3
Bearing pads	BIN 1068229 – bridge abutments	3





Suspect Material	Location	Proposed Number of Samples
Cementitious drain pipe	BIN 1068229 – base of eastern wing walls	3
Abutment masonry stone pointing	BIN 1068229 – abutments	3
Abutment/wing wall caulk	BIN 1068229 – between abutment and wing wall	3
Joint filler	BIN 1068229 – between abutment and wing wall	3
Caulk on old deck/sewer conduit	BIN 1068229 – along western side of bridge	3
Sealant/tar on old deck/sewer conduit	BIN 1068229 – along western side of bridge	3
Green/brown paint	BIN 1039539 – underside of bridge	3
Pre-moulded bituminous joint material	BIN 1039539 – expansion joints (was not observed during the initial site visit - may not be sampled)	0
Compressed asbestos sheet packing	BIN 1039539 – beneath approach roadway (was not observed during the initial site visit – may not be sampled)	0
Bearing pads	BIN 1039539 – bridge abutments	3
Masonry coating	BIN 1039539 – bridge abutments	3
Joint filler between abutment and wing wall	BIN 1039539 – between abutment and wing wall	3
Caulk on deck	BIN 1039539 – southern approach western side	3
Caulk at base of pier	BIN 1039539 – base of piers	3
Joint filler at base of pier	BIN 1039539 – base of piers	3

### ***Impacts and Mitigation***

#### No-Build Alternative

No further sampling of materials at either bridge (i.e, RMP Bridge over the Sewage Treatment Plant Access Road and the RMP Bridge over the Whirlpool Bridge approach) would be required under this scenario. However, at some point in the future, in support of bridge renovation, bridge replacement, or demolition, an asbestos survey that includes the collection and analysis of suspect material samples would be required prior to this work.

#### Build Alternative

As stated above, both the RMP Bridge over the Sewage Treatment Plant Access Road and the RMP Bridge over the Whirlpool Bridge approach will be removed, as part of the proposed Project. During the final design phase of the Project, a sampling plan would be prepared. Upon the NYSDOT's approval of a sampling plan such as that indicated above in **Table 4-17**, a New York State Certified Asbestos Building Inspector would collect representative samples of the suspect ACMs using accepted industry techniques. Friable materials are analyzed by PLM following NYSDOH method 198.1. In addition, many of the materials to be sampled are classified as non-friable organically-bound materials (NOBs). NOBs include, but are not limited to asphalt roofing, roofing cement, bituminous coatings, caulk and mastics. NOBs are analyzed using NYSDOH Method 198.6 which includes gravimetric reduction (GR), and then PLM under NYSDOH Method 198.1, Stratified Point Count for residues greater than 1% after GR. In accordance with NYSDOT protocol, if PLM analysis does not detect any asbestos in NOB samples, the laboratory shall re-analyze the samples from each set of homogeneous materials using TEM analysis (NYSDOH



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TEM Method 198.4) until either the entire group has been determined negative or a positive result is obtained.

If one analysis (PLM or TEM) is positive for any homogeneous material, that material must be considered to be ACM. If one sample of a homogeneous material is determined to be ACM, the remaining samples will not be analyzed. The results will be used to define the scope and estimated costs of any future asbestos abatement work on this Project. If asbestos is determined to be present on the Project, an Asbestos Special Note and Specifications will need to be prepared by a New York State Certified Asbestos Project Designer.

In addition, a sewer utility is located along the western side of BIN 1068229 (RMP over Sewage Treatment Plant Access Road). One manhole structure is located on the northwest quadrant and one manhole structure is located on the southwest quadrant. A sewer pipe may connect these two manhole structures within the adjacent concrete bridge structure. There is also a sewer manhole located within the roadway surface of the southern approach on the western side of BIN 1039539 (RMP over Whirlpool Bridge). During final roadway design, any underground utilities that will be impacted should be contacted by the designer to confirm their knowledge with regards to the presence of asbestos within their utility conduits.

Impacts resulting from the proposed Project would be limited to the construction phase and may include protection of on-site workers and disposal of asbestos materials removed during demolition or subsequent construction activities.

#### **4.4.19. Hazardous Waste and Contaminated Materials**

For this Project, a special assessment of potential for radioactive materials was conducted due to the history of radioactive concerns in the Project Study Area. The non-radioactive hazardous waste and contaminated materials are first discussed below, followed by a separate discussion of radioactive materials.

##### **4.4.19.1. Non-Radioactive Hazardous Waste and Contaminated Materials**

###### ***Existing Conditions***

The purpose of the preliminary screening phase of the Hazardous Waste and Contaminated Materials (HW/CM) Assessment is to identify potential areas of contamination that may be excavated during construction. The second phase of the HW/CM Assessment, if warranted, is used for soil (or other material) characterization to determine disposal requirements for excavated soil, to identify environmental concerns that could affect the public or worker safety, and to assist with the preparation of plans, specifications, and cost estimates in support of the work.

A preliminary screening for sites that could potentially contain hazardous waste or contaminated materials was conducted as part of the environmental review in accordance with the procedures recommended in



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NYS DOT's *The Environmental Manual* (TEM) (including updates), Section 4.4.20, Contaminated Materials and Hazardous Substances.

The screening consisted of collecting information via a thorough record search to investigate previous activities and site uses in the Project Study Area as defined in **Section 4.1**, a review of government databases and records, a field inspection, and discussions/interviews with government personnel and other knowledgeable individuals. Sources of information referenced during the search included the following:

- Investigation of previous activities and site uses
- United States Geological Survey ("USGS") Topographic Maps
- Historic maps (i.e., Sanborn Maps, Historic Land Use Atlases)
- Historic and current aerial photographs
- City Directories
- Federal Databases (i.e., National Priorities List [NPL], Comprehensive Environmental Response, Compensation, and Liability Information System [CERCLIS], and Resource Conservation and Recovery Act [RCRA] information)
- New York State Databases (i.e., Inactive Hazardous Waste Disposal Sites List, Underground Storage Tank ("UST") Database, and Chemical Bulk Storage Underground Storage Tank Database)

Based on an initial review of NYSDEC records, there are approximately 24 sites along or adjacent to the Project corridor which were identified in one or more methods of investigation as having the potential to be an environmental concern to the Project. This is a result of a site being listed in one or more databases (i.e., spills, leaking tanks, RCRA, etc.); having had a historical usage often associated with soil and/or groundwater contamination (e.g., gasoline retail, manufactured gas plant production, automotive repair, etc.); confirmed contamination from prior investigations; or, a history of undocumented fill. The sites, along with their known and potential concerns and suggested recommendation for follow-up work are listed in **Table 4-18** below, while their locations are graphically depicted in **Figures 4 -20a through 4-20c**. The full HW/CM Assessment is included as **L.1 – Preliminary Screening Report for the Hazardous Waste / Contaminated Materials Assessment**.



Table 4-18 – Areas of Known and Potential Concern

Property Name and Address	Environmental Concerns		Recommendation
	Known	Potential	
A - Niagara Parkway –Robert Moses Parkway (Project Corridor)	Former Manufacturing Facilities, Former Hydraulic Canal, Former Railroad Lines	Chemical/Solvent Contamination, Petroleum Contamination, Urban Fill	Fill Previously Placed on the site.  Environmental Inspection services during construction if soil contamination is identified.
B - Rainbow Bridge	Former Manufactured Gas Plant, Former Auto Repair Shop	Petroleum Contamination, Abandoned USTs	Environmental Inspection services during construction if soil contamination is identified.
C - Entrance Ramp to Robert Moses Parkway – 440 Main Street	Former Gas Station, Former Manufacturing Facility, USTs	Petroleum Contamination, Abandoned USTs,	Environmental Inspection services during construction if soil contamination is identified.
D - Days Inn Niagara – 443 Main Street	Former Auto Repair Shop	Abandoned USTs, Petroleum Contamination	Environmental Inspection services during construction if soil contamination is identified.
E - Three Sisters Trading Post – 454 Main Street	Former Manufacturing Facilities, USTs	Chemical/Solvent Contamination, Petroleum Contamination, Abandoned USTs	Environmental Inspection services during construction if soil contamination is identified.
F - Star Food Mart – 465 Niagara Street	Gas Station, USTs	Petroleum Contamination, Abandoned USTs	Environmental Inspection services during construction if soil contamination is identified.
G - Howard Johnson Hotel – 472 Main Street	Former Manufacturing Facilities, Former Hydraulic Canal	Chemical/Solvent Contamination, Petroleum Contamination, Urban Fill	Fill Previously Placed on the Site. Environmental Inspection services during construction if soil contamination is identified.
H - Former DiFranco Park – 480 Main Street	Former Manufacturing Facilities, Former Hydraulic Canal, Former Railroad Lines	Chemical/Solvent Contamination, Petroleum Contamination, Urban Fill	Fill Previously Placed on the Site. Environmental Inspection services during construction if soil contamination is identified.
I - Rodeway Inn – 492 Main Street	Former Gas Station, Former Auto Repair Shop, USTs	Petroleum Contamination, Abandoned USTs	Environmental Inspection services during construction if soil contamination is identified.
J - Sunoco Gas Station – 502 Main Street	Gas Station, USTs	Petroleum Contamination, Abandoned USTs	Environmental Inspection services during construction if soil contamination is identified.
K - Vacant Lot – 503 Main Street	Former Gas Station, Former Auto Repair Shop, USTs	Petroleum Contamination, Abandoned USTs	Possible GPR survey. Environmental Inspection services during construction if soil contamination is identified.
L - Aquarium of Niagara – 701 Whirlpool Street	Former Manufacturing Facilities, Former Hydraulic Canal, Former Gas Station, USTs, Former Railroad Line	Chemical/Solvent Contamination, Petroleum Contamination, Abandoned USTs, Urban Fill	Possible GPR survey. Fill Previously Placed on the Site. Environmental Inspection services during construction if soil



Property Name and Address	Environmental Concerns		Recommendation
	Known	Potential	
			contamination is identified.
M - Angelo DelSignore Civic Bldg – 775 3rd Street	USTs	Petroleum Contamination, Abandoned USTs	Environmental Inspection services during construction if soil contamination is identified.
N - Vacant Building – 318 Spruce Street	Former Manufacturing Facilities	Chemical/Solvent Contamination	Environmental Inspection services during construction if soil contamination is identified.
O - Vacant Lot – 624-626 Ashland Avenue	Former Auto Sales and Service Facility	Petroleum Contamination, Abandoned USTs	Environmental Inspection services during construction if soil contamination is identified.
P - Parking Lot – 808 Cleveland Avenue	Former Gas Station, Former Auto Repair Shop, USTs	Petroleum Contamination, Abandoned USTs	Environmental Inspection services during construction if soil contamination is identified.
Q - Henry E. Wrobel Towers – 800 Niagara Avenue	Former Coal yard, Former Railroad lines, Former Gas Station, USTs	Chemical/Solvent Contamination, Petroleum Contamination, Abandoned USTs	Environmental Inspection services during construction if soil contamination is identified.
R - Vacant Lot – 2201 Whirlpool Street	Former Gas Station, Former Auto Repair Shop, USTs	Petroleum Contamination, Abandoned USTs	Environmental Inspection services during construction if soil contamination is identified.
S - Former US Customs House – 2243-2245 Whirlpool Street	Former Gas Station, USTs	Petroleum Contamination, Abandoned USTs	Environmental Inspection services during construction if soil contamination is identified.
T - Whirlpool Bridge – 2250 Whirlpool Street	Former Railroad Lines	Chemical/Solvent Contamination	Environmental Inspection services during construction if soil contamination is identified.
U - Whirlpool Regional Maintenance Center – 2630 Whirlpool Street	Former Garage, Former Manufacturing Facilities, USTs, ASTs	Chemical/Solvent Contamination, Petroleum Contamination, Abandoned USTs	Environmental Inspection services during construction if soil contamination is identified.
V - Unifrax Corp. – 2351 Whirlpool Street	Former Manufacturing Facilities, Former Railroad Line, Former Heating Plant	Chemical/Solvent Contamination, Petroleum Contamination	Environmental Inspection services during construction if soil contamination is identified.
W - Former Grand Manor Inc. –2600 Main Street	Former Manufacturing Facilities, UST	Chemical/Solvent Contamination, Petroleum Contamination, Abandoned USTs	Environmental Inspection services during construction if soil contamination is identified.

Figure 4-20a – Sites of Potential Environmental Concern - South

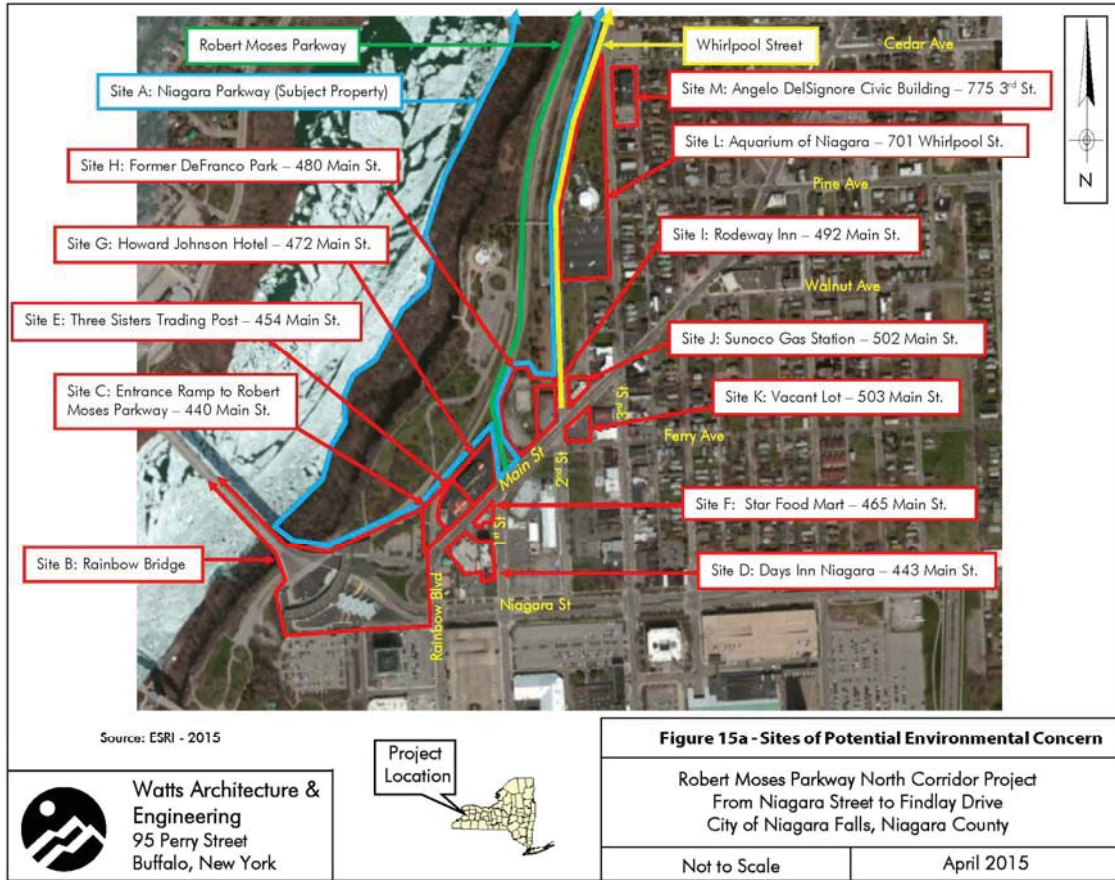
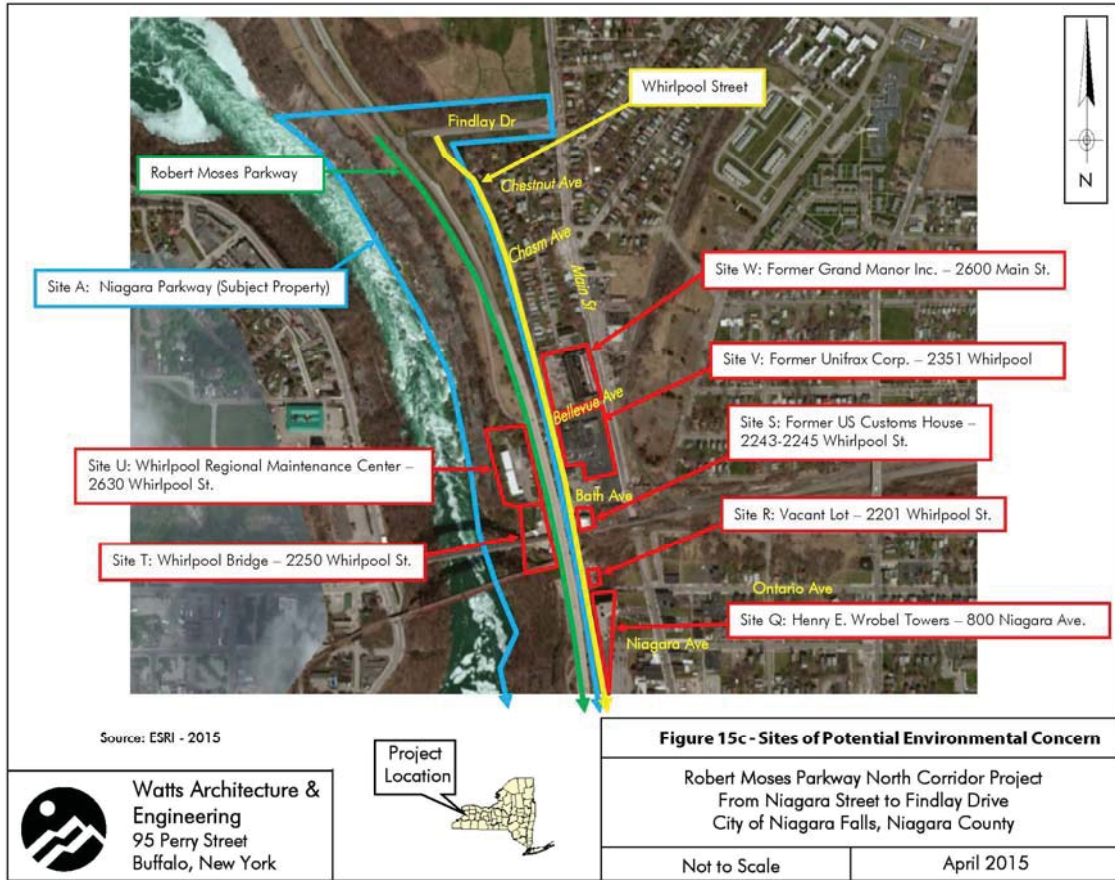


Figure 4-20b – Sites of Potential Environmental Concern - Central



Figure 4-20c – Sites of Potential Environmental Concern - North







### ***Impacts and Mitigation***

#### **No-Build Alternative**

If the proposed Project is not constructed, there will be no potential for disturbance to areas containing hazardous wastes or contaminated materials. Therefore, no further studies or avoidance / remediation measures would be required during construction in this regard.

#### **Build Alternative**

The Hazardous Waste/Contaminated Materials Site Screening indicates the likely presence of hazardous waste/contaminated materials within the Project Study Area. There is a potential that materials may be encountered in the subsurface during construction. All excavations that are scheduled to be performed at a depth beyond 2+/- feet have the potential to encounter urban fill and contamination. The Engineer-in-Charge (EIC) should be made aware of the availability of the Hazardous Waste/Contaminated Materials Screening Assessment Report. In the event that evidence of contamination is identified in the field during construction, the EIC should be notified and an environmental inspector brought to the site for assistance with the segregation of excavated materials into appropriate waste streams and ultimately disposed of in accordance with all applicable regulations. A contingency plan for the removal and mitigation of any other potential impacts (i.e., buried petroleum tanks) should be developed following NYSDOT specifications.

Several hazardous waste/contaminated material sites possibly warranting remediation were identified in the Hazardous Waste/Contaminated Materials Site Screening Assessment. The need for a Detailed Site Investigation (Phase II Field Investigation) for Hazardous Waste/Contaminated Materials Site Assessment should be assessed once the preliminary design details have been prepared and knowledge of right-of-way acquisition, fee takings, and areas of significant disturbance (e.g., deeper excavation and cuts, utility installation, etc.) are known. If necessary, a Remediation Plan will be developed after completion of the Detailed Site Investigation (Phase II Field Investigation) for Hazardous Waste/Contaminated Materials Site Assessment.

In general indirect benefits of preparing a hazardous waste assessment including a detailed site investigation and a remediation plan may include:

1. Return of land value for further development or enjoyment.
2. Elimination of the future leaching of contaminants into the environment and specifically groundwater.
3. Land being brought back into beneficial use that was previously identified as contaminated.

As applicable, continued coordination with NYSDEC's Division of Environmental Remediation will occur as the Project progresses.



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#### 4.4.19.2. Radioactive Materials

##### *Existing Conditions*

The purpose of this analysis is to identify the issues that may arise in the course of planning and execution of the proposed Project relating to the potential presence of Technically Enhanced Naturally Occurring Radioactive Material (TENORM). The concern is based largely upon experience gained in the execution of comparable projects within the city of Niagara Falls, including the reconstruction of Main Street (also referred to in various documents as “Lewiston Road” or Route 104 Project), Buffalo Avenue, and the replacement of the CSX rail bridge over Whirlpool Avenue. TENORM in this context is any material that contains naturally occurring radioactive materials, the concentration of which has been increased by anthropogenic process. This would include isotopes of uranium, radium, thorium, and potassium. The problematic TENORM was produced as a byproduct of historic phosphate production operations within the region. Ores were processed to manufacture phosphates, and a typically hard and rocky “slag” material was produced as a byproduct. The manufacturing process elevated the concentration of natural radioisotopes present in the ore, into the slag. The slag was widely utilized within the region as fill or sub-base material for foundations, roads, sidewalks, and parking lots. This TENORM material cannot be visually differentiated from non-radioactive slags or rocks.

A gamma radiation survey was conducted within the Project Study Area with radiation data recorded every two seconds along the lengths of selected traverse paths. Road and area transects were selected to provide data that are indicative of the larger project construction area (i.e., additional road width, median and adjacent road locations, etc.) and was based on historical site knowledge (i.e., when the roads or walks were constructed, materials used, adjacent areas, and recent findings during similar work, etc). After downloading and evaluation of the data, several elevated locations were identified that have a high probability of containing TENORM slag sub-base materials along the transect length. The locations can be used to extrapolate the presence of similar sub-base material across adjacent lanes or over a wider localized area or when a higher degree of confidence is required; follow up surveys can then be performed in the identified locations to better delineate the spatial extent of the suspected TENORM materials.

A GPS enabled overland gamma radiation survey was performed along roadways in the vicinity of the Niagara Falls Aquarium (denoted as Area 2) and over a larger area encompassing the Robert Moses Parkway from Main Street to Finlay Drive (denoted as Area 1). Both survey areas are shown in **Figure 4-21**.

Figure 4-21 – Radioactive Materials Survey Results along the Robert Moses Parkway



Map Data Color Coding Legend

Radiation Reading (x 1000) CPM	Color Code	Probability of TENORM Material
< = 5	Light Blue	Low
> 5 < 10	Dark Blue	Low – Moderate
> = 10 < 12	Yellow	Moderate – High
> = 12 < 20	Red	High
> = 20	Purple	Very High
Outlier	Green	Low / No Trend



The survey of Area 1 began at the intersection of Third and Whirlpool Streets and progressed north along the right side of Whirlpool Street to the intersection of Findlay Drive and the RMP. The survey resumed on the closed lanes of the RMP located west of Findlay Drive, and continued south to the terminus of the expressway at Main Street, at which point, the survey turned east on Main Street and ended at the intersection of Main and Second Streets.

Area 2 survey transects were located along the right side of the streets encircling the Niagara Falls Aquarium, including Walnut, Second, Third, and Main Streets. The Area 2 survey origin was located at the intersection of Second and Main Streets.

Several side roads, paved areas and satellite “dead” zones were also surveyed after completion of the main transects across both areas. These areas included: paved areas in the vicinity of the Whirlpool Bridge, Bridge Authority facilities and the Customs House; sidewalk areas adjacent to Whirlpool and Third Streets; and unpaved median areas between and adjacent to the Robert Moses Parkway and green space adjacent to the location of current construction activities at the new State Parks Police Station facilities in Area 1.

The following data objectives were identified for conducting the survey for this Project:

- Collect geographical positioning and gamma radiation data from ground surfaces along transects following roadways in the proposed reconstruction corridor for the Robert Moses Parkway.
- Differentiate radiation levels statistically above area instrument background gamma radiation levels with an identified spatial accuracy of 1 meter.
- Present data on an area map showing relative count rate variations through discrete point symbols and trends identified by color variations in point symbols indicative of gamma radiation readings.

Overall, in excess of 8,048 gamma radiation measurements were taken along the investigation roadways, paved areas and adjacent green spaces. Geographical positioning and radiation data were downloaded and evaluated using statistical and geographical software (i.e., Tremble Pathfinder Office, ESRI ArcGIS and Visual Sample Plan) as well as evaluation in MS Excel. Results of the data evaluation included: determination of survey point location accuracy; statistical evaluation of radiation data; trend analysis; and identification of possible outliers and erroneous data points.

Survey data points shown in blue (background range) on **Figure 4-21** are less likely to be locations with underlying radioactive TENORM sub-base materials. As the colors trend from blue to darker blue/black, then yellow, red and purple, the likelihood of underlying TENORM materials increases. Locations shown in yellow, red and purple have radiation levels significantly above background and therefore have the highest likelihood of representing the location of radioactive sub base materials.

It should be noted that due to shielding by cover materials (i.e., rock, gravel, saturated soils, etc), thickness of the slag materials and depth below grade, TENORM materials may not be detected at the



surface. Also, locations near or at background radiation levels may have TENORM present at depths below grade.

Due to obstructions and a lack of satellite signals, the areas under the Robert Moses Parkway viaduct and adjacent to the Whirlpool Bridge entrance and exit were surveyed with area levels manually recorded as they were collected. The survey readings for these areas and the associated probability of TENORM sub-base are provided in Table 4-19 below.

Table 4-19 – Manually Logged Survey Data

Location Description	Radiation Readings (x 1000) cpm	Probability of TENORM Sub base
Whirlpool bridge entrance pavement area	3.8 to 7.5	Low
Whirlpool bridge entrance grass and green spaces (n. side)	6.5 to 8.5	Low to moderate
Grass/green space in front Park Maintenance facility	6.5 to 9.0	Low to moderate
Park Maintenance facility paved area	3.5 to 8.0	Low to moderate
Whirlpool bridge exit pavement area near Whirlpool	12 to 25	High
Whirlpool bridge exit area parking drive pavement	5.0 to 14	High
Whirlpool bridge exit area grass adjacent to sidewalk and sidewalk	6.0 to 8.5 4.0 to 5.5	Low
Whirlpool bridge exit area older parking pavement, curbed area	9.0 to 55.0	Very High
Whirlpool Street at an South of Bridge Exit, Customs House sidewalk and grass area	4.5 to 9.0	Low to moderate

Based on the scoping data collected during the gamma radiation surveys in Areas 1 and 2, specific areas of suspect radioactive slag (TENORM) sub-base materials appear to be present in the RMP Removal Project Area. It should be noted that survey transects were not laid out to identify the full spatial extent of suspect locations, but rather to identify locations where there is a likelihood of TENORM.

While locations with light blue markers are characteristic of background radiation levels, blue markers adjacent to black then yellow and red markers would be indicative of upward trending radiation levels marking the boundaries or extent of TENORM sub-base. However, consistent dark blue to black markers identify locations that are above the background range but not definitively elevated with regards to the presence or absence of TENORM materials. These locations would require additional investigation to determine a correlation between the range of radiation levels and the presence of TENORM materials.

Radioactive slag and sub-base materials containing TENORM can have a range of radiation intensity or concentration levels due to several factors including blending with non-radioactive materials or the radioactive content of the source from which the materials came. In addition, the depth and thickness of the material will also affect surface radiation levels as will the type and density of materials overlying the TENORM sub-base. Therefore, a higher degree of uncertainty exists when trying to determine if TENORM is present at radiation levels less than twice the background range (i.e., blue to black ranges).



When surface radiation levels are well above background levels (i.e., yellow, red, purple ranges) there is a much greater confidence level in the determination.

There are three locations along the Robert Moses Parkway in Survey Area 1 that showed upward trending radiation readings indicative of TENORM:

- The northern-most survey line along the RMP, including the adjacent grass areas (approx. 435 linear ft). The spatial extent east and west was not determined.
- A small segment of Whirlpool Street near the northern terminus of the survey traverse on that street (approx. 40 linear ft.).
- The Whirlpool Bridge exit road and adjacent parking area/roadway (approx. 150 x 75 ft.).

These locations are depicted in **Figures 4-22** and **4-23**.

In Area 2, data along Whirlpool Street and a segment of Main Street showed upward trending and elevated readings:

- Whirlpool Street for most of its length between Walnut and Main Streets had elevated readings (approx. 650 ft). This area, adjacent to on-going State Parks Police Station construction activities, was identified on the basis of three different traverses alongside the street on the sidewalk area and on both sides of the Second Street indicating that the horizontal extent (E and W) was not fully identified and is still undetermined.
- A small segment of the north side of Main Street on the sidewalk area, showed an increasing trend with elevated readings (approx. 75 ft in length).

These locations are depicted in **Figure 4-24**.

Further details regarding the methodology and the results of the TENORM survey related to radioactive materials are provided in **Appendix L.2 – GPS Enabled Overland Gamma Radiation Survey**.

Figure 4-22 – Radioactive Materials Survey Area 1,  
Robert Moses Parkway Survey Results  
(Expanded View of Elevated Locations at North End)

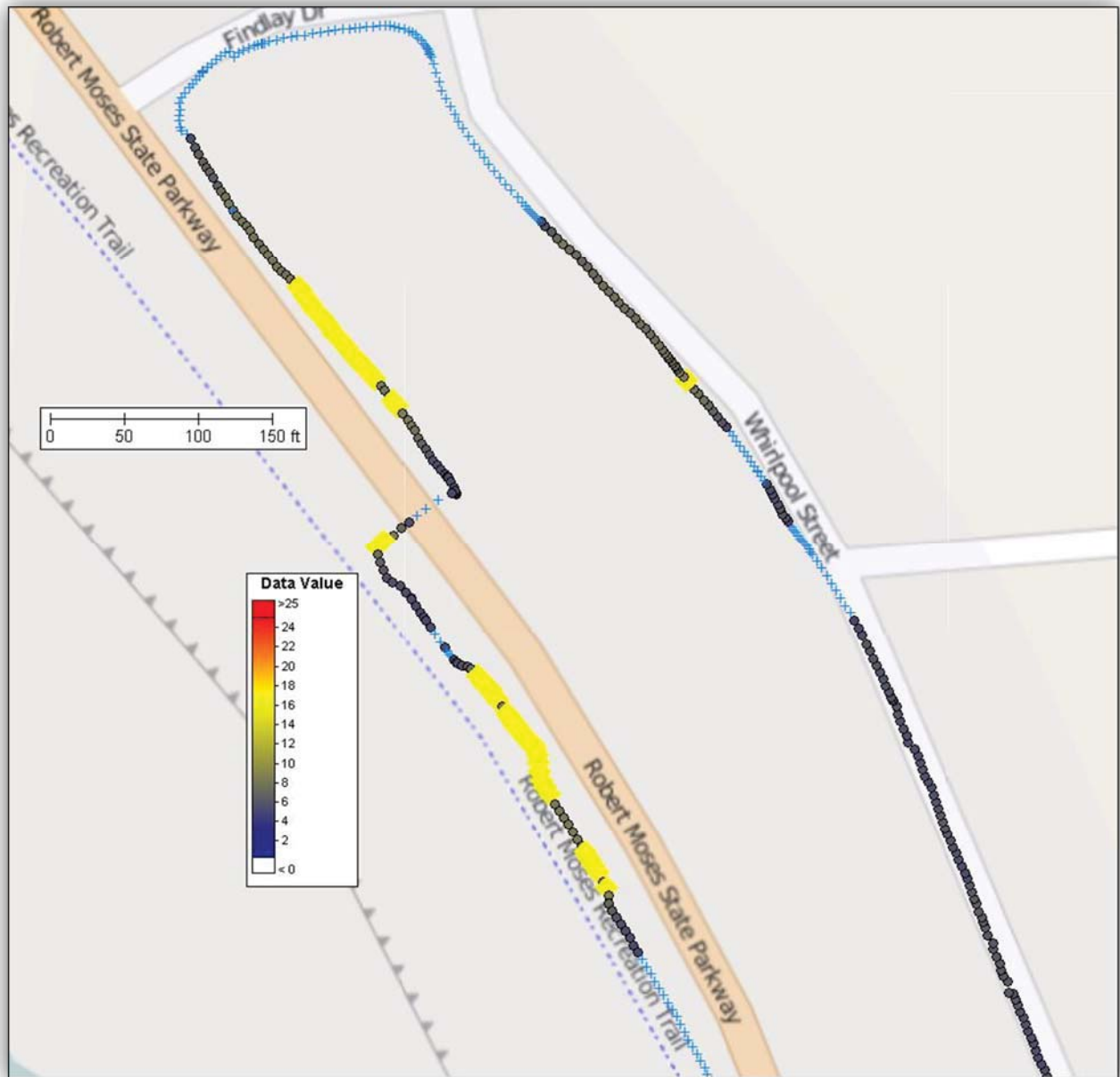


Figure 4-23 – Radioactive Materials Survey Area 1,  
Robert Moses Parkway Survey Results  
(Expanded View of Elevated Locations at Viaduct and Whirlpool Bridge)

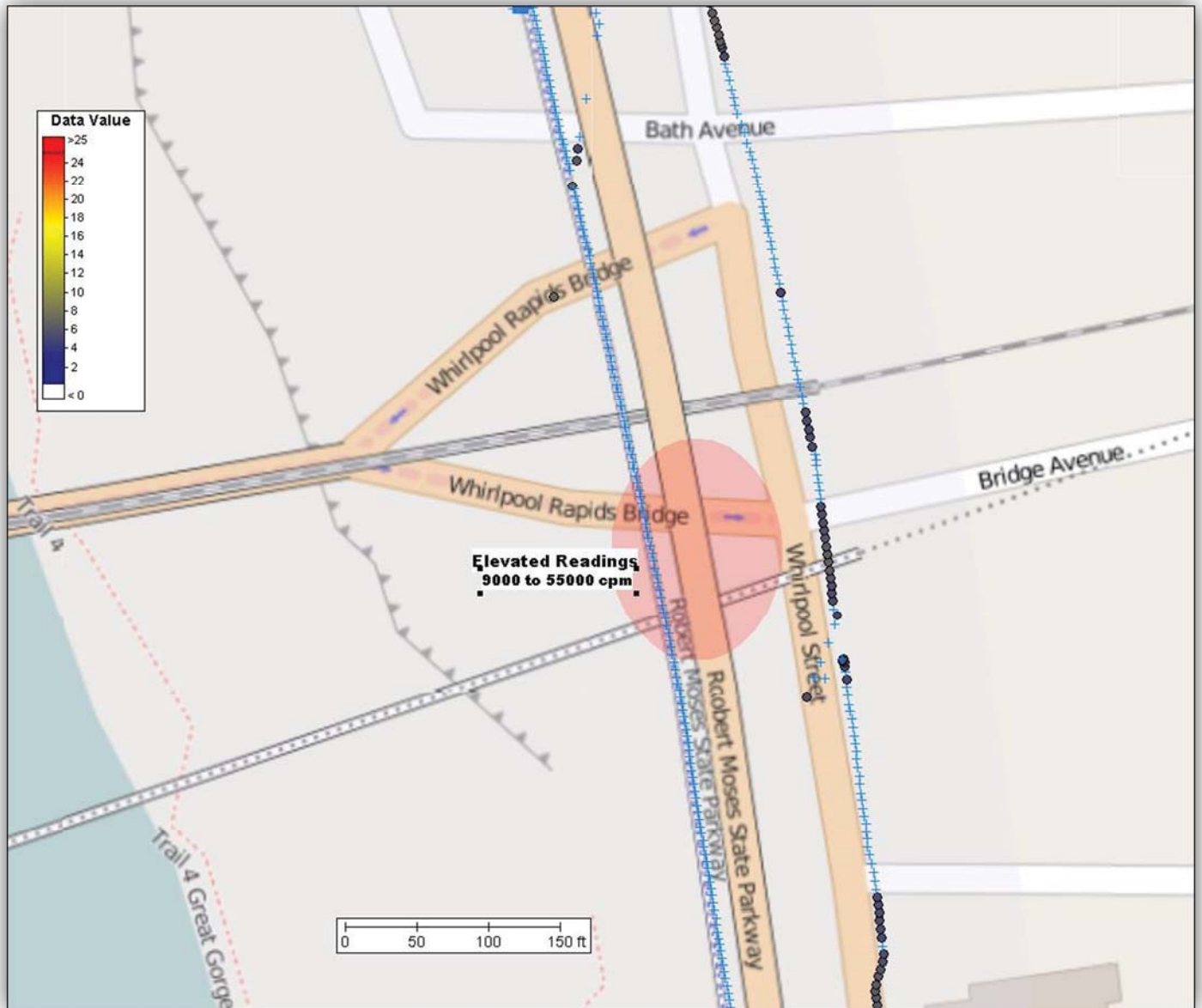
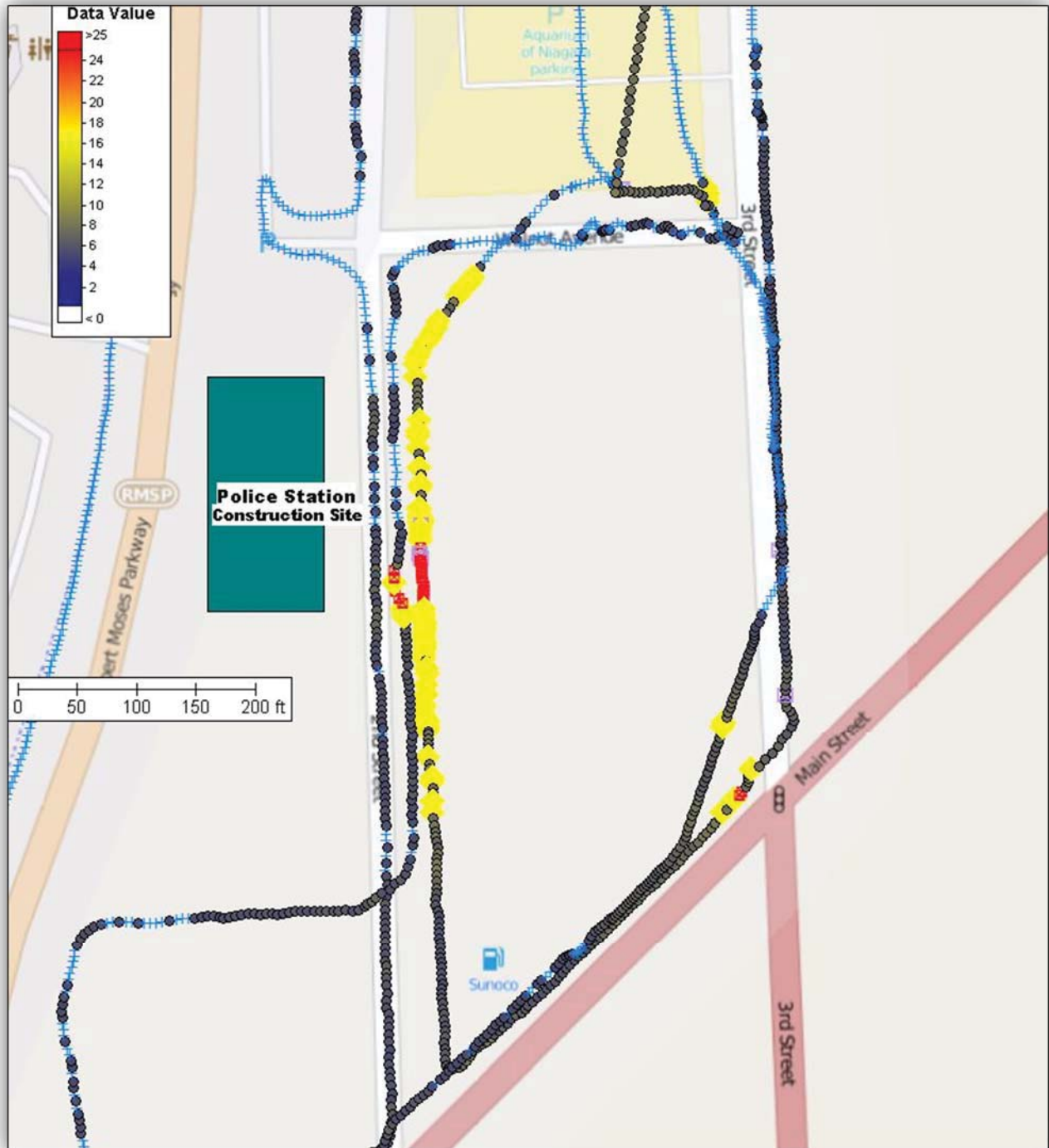




Figure 4-24 – Radioactive Materials Survey Area 2,  
Niagara Falls Aquarium Area Survey Results  
(Expanded View of Elevated Locations)





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### ***Impacts and Mitigation***

Radioactive Materials in the work place can result in radiation exposure to persons. This can occur when people spend time in proximity to radioactive materials, or when through some physical process, the radioactive materials are introduced into their body, typically by inhaling or ingesting the radioactive materials. The level of hazard is determined by many factors including what isotopes are present, what quantity or concentration of radioactive material is present, the amount of time spent in proximity to the materials, the distance from the materials, the extent to which intervening materials “shield” the radiation, and the manner in which persons are in direct contact or inhale or ingest the material.

The New York State Department of Health has determined that the general presence of these materials within the Niagara Region does not constitute a significant public health risk, after considering many factors as mentioned above, including the fact that the materials are low in concentration, below the ground surface, and are shielded by intervening materials such as soil, concrete, or asphalt.

In the course of excavating and handling the TENORM during road reconstruction and similar projects, workers are protected by relatively simple methods including monitoring with instruments to determine when TENORM is present, suppression of potentially contaminated dusts, and simple hygiene measures such as hand washing. The use of respirators, protective suits, etc. is typically not required.

The New York State Health Department has, however, required that a qualified and licensed radiation safety (“Health Physics”) organization should be involved in the projects to effectively identify and evaluate any TENORM that is present and to ensure that appropriate radiation safety measures are performed.

NYSDEC regulates the environmental impacts and disposal of radioactive materials within New York. The NYSDEC has determined that the TENORM slag, once it has been excavated, may not be disposed of within New York State, if it is determined to be in excess of background radiation levels. The NYSDEC has not required projects to “chase” TENORM when it is encountered. For example, if TENORM is encountered below a road or sidewalk, any TENORM excavated must be managed and disposed of properly. However, if the material appears to extend beyond the project excavation boundary, it may be left undisturbed.

As a result, when the TENORM slag is encountered, it must be appropriately segregated from non-radioactive materials, staged in covered and bermed stockpiles (or closed containers), and ultimately shipped out of state for disposal. The TENORM is identified using hand-held radiation detection instruments. Any materials that are clearly TENORM or are suspected of being TENORM are stockpiled. Composite samples are later taken and sent to a radiation laboratory. The lab results are in turn used to gain acceptance of the material by an out-of-state disposal facility. Typically the disposal occurs in an out-of-state facility which does not consider the materials to be radioactive waste, by virtue of being below the regulated levels in that state (e.g., some states have less conservative regulations). If the TENORM is not otherwise contaminated (e.g., with hazardous chemicals, asbestos, etc.), it is manifested and transported as non-hazardous because the radioactivity is below U.S. Department of Transportation threshold levels



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to be considered radioactive. The cost of the transportation and disposal out of state is often a significant incremental expense for the project.

#### No-Build Alternative

If the proposed Project were not to be constructed, as would be the case with the No-Build Alternative, any radioactive slag would remain in place, covered and undisturbed. As discussed above, this would not cause any health risks to the general public using the RMP, the existing Robert Moses Parkway Trail or the adjacent parks and green spaces, nor would it create any risks for adjacent neighborhoods or businesses.

#### Build Alternative

If the proposed Project were to be constructed, as would be the case with the Build Alternative, extensive regrading and soil removal activities would be required. However, as described above, the removal of any soils containing radioactive slag materials would not create any health risks to the general public using the RMP, the existing Robert Moses Parkway Trail or the adjacent parks and green spaces, nor would it create any risks for adjacent neighborhoods or businesses. The greater impact is that the cost of these activities could increase in order to comply with specific State requirements if removal and disposal of slag sub-base materials containing technically enhanced naturally occurring radioactive materials (TENORM) is present. As indicated above, several areas appear to have the potential for elevated levels in this regard.

When necessary for reasons such as disposal, handling cost considerations or other factors, a precise estimation of area and/or volumes would be required, and additional walkover investigations and evaluation of the affected areas should be performed to better delineate the spatial extent and volume of the material present.

### **4.5. Construction Effects**

Construction effects have generally been discussed in the individual resource areas. Summaries of such effects during the construction period, as well as proposed best management practices, as applicable, are provided below.

- Construction activities along Third Street and Whirlpool Street would result in a short-term/periodic inconvenience and disruption to local traffic, as well as to the residences / businesses along these streets. Given the construction equipment operating along these streets, the need for parking of personal vehicles of the workers, and the phased construction that would require lane reductions during the construction period, driving conditions and on-street parking availability could be made difficult. Traffic delays through construction work zones and along detours for certain movements may occasionally occur, but the preparation of Maintenance and Protection of Traffic Plans, contract pay items and other contract requirements would be used to keep delays as short as possible. Close coordination with the residents and business owners along the affected streets is proposed to be conducted early and regularly during the construction



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period to advise on schedule of construction activities and propose specific measures to minimize impacts and ensure that maintenance of traffic and local parking would not be significantly interrupted. Potential measures that may be considered in this regard include: designated parking areas for storage of construction equipment during evenings and weekends; designated parking areas other than along the local roadways for use by construction workers; designated short-term parking areas for local residents and businesses during construction; reconstruction and virtual completion of Third Street and Whirlpool Street before the RMP is removed; temporary signage along Third Street and Whirlpool Street for one-way traffic; timing restrictions for certain construction activities; etc.

- Construction activities related to removal of the RMP and existing Robert Moses Parkway Trail would result in short-term inconvenience and disruption to users of the recreational lands adjacent to the Niagara Gorge rim. Although the intent is to perform all or most of the work, including placement of construction vehicles, along the existing pavement of these facilities during the construction period, the presence of the construction activity would certainly be evident and a nuisance to anyone walking, exploring or otherwise using the adjacent green space. It is likely that the multi-use trail would be closed to bicycle and pedestrian traffic at the same time that vehicular traffic is diverted from the RMP lanes. Despite these inconveniences, it is anticipated that all or most of the recreational lands would continue to be available and open for recreational use while Third Street and Whirlpool Street are being reconstructed. Where the RMP is currently in cut or at ground level, this would continue to be true as well. However, due to safety concerns, it is likely that recreational lands usage in areas below the RMP viaduct would be curtailed during its removal along this portion.
- Construction activities related to construction of access trails throughout the recreational lands, including the new multi-use trail that loosely follows the existing Robert Moses Parkway Trail, as well as improvements to overlook areas would require the placement of construction equipment and implementation of actual construction in various parts of the recreational lands. During such activities, it may be necessary to close off these portions of the recreational lands from use by the general public for safety reasons. However, it is the intent to maintain as much access to, from and within the recreational lands for public use as is safely allowable.
- Several tourist businesses on Main Street near the existing RMP entrance/exit ramp may experience some construction-related disturbances while a new access road from Main Street to the Niagara Gorge Discovery Center is constructed nearby and while the existing RMP is being demolished and removed. Such impacts may include dust, construction noise and operations of construction vehicles. Of those businesses located between the RMP and the new access road to be constructed (i.e., Howard Johnson's Hotel, Three Sisters Trading Post and Helicopter Tours), the hotel would be the most sensitive to such construction-related impacts. Project team members and/or their contractors would coordinate closely with all of these businesses in terms



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of scheduling of construction activities and would ensure that access is maintained throughout the construction period.

- Construction activities adjacent to the Aquarium of Niagara and the Niagara Gorge Discovery Center would likely have some effect on visitors' use and enjoyment of these attractions. These activities would include pavement removal associated with the existing RMP and the existing Robert Moses Parkway Trail, as well as removal of the pedestrian bridge connecting the two attractions. However, vehicular access to and parking for both attractions would be maintained throughout the construction period, and the pedestrian bridge would not be removed until the RMP pavement has been fully removed, filled and landscaped to accommodate pedestrian movements between the two attractions. Close coordination with the operators of both attractions is proposed to be conducted early and regularly during the construction period to advise on schedule of construction activities and propose specific measures to minimize impacts and ensure that visitation would not be significantly interrupted.
- Construction of the proposed Project could have positive, although temporary, economic effects on the local and regional economies. Construction would necessitate employing both skilled tradespeople and unskilled laborers and generate a short-term demand for products and services from construction-related vendors and other local businesses. It is during this construction period when the benefits to the local businesses could be most noticeable.
- Construction of the Project would require the use of soil erosion and sediment control measures to mitigate potential erosion effects. Prior to the start of construction activities, a project-specific SWPPP would be prepared. The project-specific Stormwater Pollution Prevention Plan (SWPPP) would be completed during final design in accordance with the NYSDEC State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activity (GP-0-10-001), and the requirements of NYSDOT's Standard Specifications for Soil Erosion and Sediment Control (NYSDOT 2009). The SWPPP would detail the site-specific methods that would be implemented to control or reduce the rate of stormwater runoff, reduce potential erosion of exposed soil, and minimize potential flooding. Engineering controls such as diversion ditches, vegetative swales, and retention/detention ponds/systems would be considered as well as consideration of green stormwater management technology. The use of standard sediment and erosion control measures would effectively prevent potential soil erosion from affecting adjacent land and water resources.
- Construction-related impacts to wildlife would be minimal and are anticipated to be limited to incidental injury and mortality due to construction activity and vehicular movement, habitat disturbance/loss associated with clearing and earth-moving activities during construction, and displacement of wildlife due to increased noise and human activities. Incidental injury and mortality should be limited to sedentary/slow-moving species such as small mammals, reptiles, and amphibians that are unable to move out of the area being disturbed by construction. If construction occurs during the nesting season, wildlife subject to mortality could also include the



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eggs and/or young offspring of nesting birds, as well as immature mammalian species that are not yet fully mobile. More mobile species and mature individuals should be able to vacate areas that are being disturbed.

- Some wildlife displacement would occur due to increased noise and human activity as a result of Project construction. Urban wildlife species are generally highly adaptable and mobile, and construction noise and activities would likely motivate the wildlife to temporarily relocate to neighboring areas during construction. The significance of this impact would vary by species and the seasonal timing of construction activities. Native landscape restoration would occur in all areas where existing pavement is to be removed and efforts would be made to replace wildlife-supporting vegetation that is removed in the course of construction.
- Nuisance effects such as generation of dust would occur temporarily during the construction period. Airborne particulates caused by construction can generally be controlled through appropriate precautionary measures included in the standard specifications, and a dust control plan would be prepared and implemented for the construction of the Project. Such measures as wetting of soil surfaces and covering of trucks and other dust sources during construction are typically used in controlling particulates. Construction of the Project would also require the use of erosion and sediment control measures which would help to control dust. Requirements for applying such measures would be included as part of the specifications of the construction contract.
- Nuisance effects such as noise would occur temporarily during the construction period. Construction noise is generated by heavy equipment operations (e.g., excavation, grading, and paving) that occur during the work day. Such impacts would be temporary in nature, limited to the construction period of the Project, and could vary greatly, depending on the actual activities taking place. Construction noise abatement measures such as the use of properly designed and well-maintained mufflers in internal combustion engines, engine enclosures, and intake silencers may be implemented to minimize and reduce potential noise concerns relating to construction activities that entail the disturbance of surface soils. As appropriate, noise mitigation measures could also include minor design modifications, the abatement of noise escaping from the site, and close coordination with the general public to share information during construction that could help to reduce the annoyance associated with construction noise.
- Indirect Energy use is associated with constructing, operating and maintaining a facility. Construction energy covers production and transport of materials, powering on-site equipment, worker transportation and other factors plus the materials used in construction itself. It is expected that Indirect Energy would increase in the short-term during actual construction of the proposed Project. However, the construction component only tells part of the story, since the Project would result in the removal of the existing RMP lanes, and the existing Robert Moses Parkway Trail. As a result, there would be overall less pavement and fewer lane miles that would



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normally require maintenance and repairs, such that Indirect Energy effects of construction would actually reduce energy use in the long run in comparison to the No-Build Alternative.

- Asbestos-related impacts resulting from the proposed Project would be limited to the construction phase and may include protection of on-site workers and disposal of asbestos materials removed during demolition or subsequent construction activities.
- There is a potential that hazardous waste and/or contaminated properties may be encountered in the subsurface during construction. All excavations that are scheduled to be performed at a depth beyond 2+/- feet have the potential to encounter urban fill and contamination. In the event that evidence of contamination is identified in the field during construction, the Engineer-in-Charge should be notified and an environmental inspector brought to the site for assistance with the segregation of excavated materials into appropriate waste streams and ultimately disposed of in accordance with all applicable regulations.

#### 4.6. Indirect (Secondary) Effects

Whereas *direct effects* are “caused by the action and occur at the same time and place” as that action, *indirect effects* are “caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable.” Indirect effects “may include growth-inducing effects and other effects related to induced changes in the pattern of land use, population density, or growth rate, and related effects on air, water, and other natural systems, including ecosystems” (40 CFR § 1508.8). Indirect effects are often referred to as “secondary effects.”

The Council on Environmental Quality (CEQ) identifies three potential categories of significant indirect effects stemming from a project’s effect-causing activities (CEQ 1997):

- *Encroachment alteration effects* are those that alter the behavior and functioning of the physical environment related to a project’s design features. They are indirect because they can be separated from a project in time and distance.
- *Access-alteration effects* are changes in traffic patterns and accessibility attributable to the design of a project that can influence the location of commercial and residential growth in a project area.
- *Induced growth-related effects* are attributable to induced growth itself.

Potential indirect effects related to the proposed Project are discussed below within three broad categories: Transportation Effects, Social / Economic Effects and Environmental Effects. These indirect effects were previously discussed in preceding sections, but are summarized below. It should be noted that any specific disciplines not discussed below are anticipated not to result in any indirect effects.

##### ***Indirect Transportation Effects***

As discussed in **Section 3.3.1.5**, the removal of the RMP between Main Street and Findlay Drive would result in the diversion of all traffic that would have used the RMP during the No-Build scenario to other



local streets. In the 2040 study year, approximately 235 vehicles in both directions combined would be diverted during the AM peak hour, while slightly more than 300 vehicles in both directions would be diverted during the PM peak hour. The majority of the diverted traffic would use a portion of Third Street and Whirlpool Street. Substantially fewer diversions would occur along Main Street, with minor amounts of diversion along any other roadways.

The amount of future No-Build traffic that would be diverted from the RMP and added to Third Street / Whirlpool Street in the Build scenario during the AM peak hour would be approximately 180 vehicles in both directions combined. When they are added to the AM peak hour vehicles that would already be using Third Street / Whirlpool Street in the No-Build scenario, total vehicles using that route in the Build scenario would be approximately 540 – 580 vehicles in both directions combined, depending on specific location.

In the PM peak hour, RMP diverted traffic to Third Street / Whirlpool Street would total more than 180 vehicles in both directions combined. When added to the PM peak hour vehicles that would already be using Third Street / Whirlpool Street in the No-Build scenario, total vehicles using that route in the Build scenario would range between 330 and 450 vehicles in both directions combined, depending on specific location.

Of the total vehicles that would divert from the RMP to Third Street / Whirlpool Street during the course of an entire day, between approximately 80 and 120 are anticipated to be tour buses, based on recent traffic counts taken along the RMP during a week in May 2015, including Memorial Day weekend. Since most of these buses occur during a 14-hour period each day, these would average about 6 to 9 tour buses per hour.

It should be noted that only minor to negligible indirect effects related to traffic are anticipated to occur in areas north of Findlay Drive as a result of construction of the proposed Project. Given the nature of the Project and the driving patterns of the traffic that currently use the RMP, the large majority of traffic that would divert to local roads between Main Street and Findlay Drive, particularly to Third Street and Whirlpool Street, would continue back onto the RMP at Findlay Drive to travel to points north of the Project. Therefore, travel patterns north of Findlay Drive would be essentially similar to No-Build travel patterns along that portion of the corridor.

#### ***Indirect Social / Economic Effects***

The proposed Project has the potential to indirectly affect social and economic conditions within and perhaps immediately beyond the limits of the Project Study Area. In general, these effects would be related to potential growth possibilities that would not otherwise exist with the No-Build alternative. Specific types of potential growth opportunities are presented below.

- *Land Use, Planning and Zoning* – As discussed in the subsections within **Section 4.2.1**, the proposed improvements along Third Street and Whirlpool Street would create a pleasant and more inviting image along their length within the Project Study Area in comparison to their existing condition. As a result of these improvements, there may be some impetus to attract





redevelopment along these roadways, as well as within the Project Study Area in general. In this manner, some of the vacant and underutilized areas that exist in parts of the Project Study Area could potentially be improved at some point in the future. Similarly, the ability of the City to achieve some of their Core City Strategies (e.g., reconnecting the City to its waterfront, creating a Cultural District around the Aquarium and the Discovery Center, improving the Third Street Corridor, etc.) as a direct result of the Project could potentially attract new development and/or provide the impetus to attract new or upgrade existing development in proximity to these areas. It is also slightly possible that the zoning classifications that exist within the Project Study Area could be changed or otherwise affected if the proposed project is constructed or implemented. This change, or at least consideration of such a change, would only occur if the City determines that the improvements along either Third Street or Whirlpool Street provide new opportunities for redevelopment on currently vacant properties.

- *Community Cohesion* – There is a potential that the proposed Project, including the reconstruction of Third Street and Whirlpool Street, could indirectly help to make the adjacent neighborhoods more attractive as a place to live, thereby enticing some residents to remain in the area rather than following the recent trend of moving out of the city. This potential is due to the better accessibility to, from and within the recreational lands along the Niagara Gorge rim, as well as the overall visual and functional improvements along Whirlpool Street.
- *Parks and Recreation Areas* – As a result of the various proposed improvements within the Niagara Gorge rim recreational lands and the increased access opportunities provided, it is anticipated that these lands would experience greater utilization by local populations than it does at present. The area could also attract greater utilization by tourists as well, due to the more continuous usable space available for recreation within the green space. These beneficial outcomes would be indirect effects of the proposed Project.
- *Economic and Business Effects* – In addition to direct expenditures and employment effects during construction, the Project would have the potential to expand the area’s level of activities to include a more varied mix of outdoor recreational activities (bicycling, rock climbing, x- country skiing, fishing, etc.) through the restoration of the Gorge rim and opening of access to the gorge itself. This could further expand typical visitor stays and increase demand for lodging and other associated development in neighborhoods near these natural resources, in turn expanding and refining the overall image of Niagara Falls to include more than only the waterfalls.

#### ***Indirect Environmental Effects***

The proposed Project could have the potential to indirectly affect environmental conditions within and immediately beyond the limits of the Project Study Area, particularly below the Niagara Gorge rim. However with the implementation of the best management practices noted in **Sections 4.4.8, 4.4.9.4, 4.4.9.5, 4.4.15, 4.4.17 and 4.5** these affects are not likely to occur.



## 4.7. Cumulative Effects

This section presents a Cumulative Effects Analysis for the proposed Project. The Council on Environmental Quality (CEQ) defines *cumulative effects* as an “impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such actions (40 CFR 1508.7).” As the term implies, cumulative effects are a summation of the effects that can result from individual actions taken or that are likely to take place over a period of time. Cumulative effects may include the effects of natural processes and events, depending on the specific resource in question. There may be different cumulative effects on different environmental resources.

The goals of this cumulative effects analysis are to identify the following:

- The geographic area of potential effects associated with the project;
- Other actions—past, present, proposed, and reasonably foreseeable—that have or are expected to have effects in the same area;
- The effects or expected effects from these other actions;
- The overall significant cumulative effect that can be expected if the individual effects are allowed to accumulate; and
- Mitigation measures to be considered if significant cumulative effects are identified.

The following paragraphs discuss the methodology used to complete this Cumulative Effects Analysis, the geographic scope or boundary of the Project, and the time frame considered for the analysis.

### ***Methodology***

This cumulative effects analysis was developed using the CEQ handbook, “*Considering Cumulative Effects under the National Environmental Policy Act*” (1997) and USEPA guidance, “*Consideration of Cumulative Impacts in EPA Review of NEPA Documents*” (USEPA 1999). The analysis follows the 11-step process identified in the CEQ handbook (see **Table 4-20**).



Table 4-20 – Steps in the Cumulative Effects Analysis

Component	CEA Steps
Scoping	<ol style="list-style-type: none"> <li>1. Identify the significant cumulative issues associated with the Preferred Alternative and define the assessment goals</li> <li>2. Establish the geographic scope for the analysis</li> <li>3. Establish the time frame for the analysis</li> <li>4. Identify other actions affecting the resources, ecosystems, and human communities of concern</li> </ol>
Describing the Affected Environment	<ol style="list-style-type: none"> <li>5. Characterize the resources, ecosystems, and human communities identified in scoping (steps 1 through 4) in terms of their response to change and capacity to withstand stresses</li> <li>6. Characterize the stresses affecting these resources, ecosystems, and human communities and their relation to regulatory thresholds</li> <li>7. Define a baseline condition for the resources, ecosystems, and human communities</li> </ol>
Determining the Environmental Consequences	<ol style="list-style-type: none"> <li>8. Identify the important cause-and-effect relationships between human activities and resources, ecosystems, and human communities</li> <li>9. Determine the magnitude and significance of cumulative effects</li> <li>10. Modify or add alternatives to avoid, minimize, or mitigate significant cumulative effects</li> <li>11. Monitor the cumulative effects of the selected alternative and adapt management</li> </ol>

Source: CEQ Handbook, 1997.

**Potentially Significant Cumulative Issues**

Potentially significant cumulative issues are based on those resource categories identified previously as areas of concern in terms of direct impacts (i.e., **Sections 4.2 – 4.4**), construction impacts (i.e., **Section 4.5**) and/or indirect effects (**Section 4.6**). Those disciplines determined not to be of any concern as part of the proposed RMP Removal Project due either to non-existence of certain resources in the Project Study Area (e.g., wetlands or water resources), a determination that detailed studies are not required (e.g., air quality or energy), or the site-specific nature of the effects (e.g., asbestos or hazardous materials) are also not considered to be a concern from a cumulative perspective and are not discussed further. Those disciplines/issues of potential concern related to the RMP Removal Project that may also have some potential concern from a cumulative perspective include the following:

- Traffic
- Social and Economic (including Land Use, Planning and Zoning: Community Cohesion; Social Groups / Environmental Justice; and Economic and Business Effects)



- 
- Environmental (including General Ecology and Wildlife Resources; Historic and Cultural Resources; Parks and Recreation Areas; and Noise)

### **Geographic Scope**

The geographic scope of this Cumulative Effects Analysis is defined for the three resource categories identified above – i.e., traffic, social/economic, and environmental. The scope of the examination varies among the three categories, as well as within each category depending on the scale of the individual resource or system being examined (e.g., traffic patterns and accessibility, established business districts, or general ecology and wildlife). While the actual geographic boundary of the study areas for each resource category examined varies somewhat, the established boundaries of the Project Study Area are described in **Section 4.1 - Introduction**. If the analysis required changes to the Project Study Area limits, they are discussed below.

### Traffic Concerns

The study area for assessing traffic effects related to this Project was developed in order to ensure that all routes that could potentially serve as alternate routes to the RMP would be included. Given the proposed removal of the RMP between Main Street and Findlay Drive, any reasonable routes that could absorb some of the diverted traffic from the RMP needed to be incorporated, including Third Street, Whirlpool Street, Main Street, Portage Road, 11<sup>th</sup> Street and Lockport Road. The southern end was extended to Niagara Street and the northern end was extended to Ontario Avenue, as the next major roadways beyond the limits of the proposed RMP removal.

### Social and Economic Concerns

*Land Use, Planning and Zoning* – The study area for considering the potential for cumulative effects from other projects on land use, planning and zoning is the same area identified as the Project Study Area in **Section 4.1.**, since the effects on these resources would be fully contained within the limits of the Project Study Area.

- *Community Cohesion, Social Groups / Environmental Justice* – The study area for considering the potential for cumulative effects from other projects on community cohesion and social groups is the same area identified as the Project Study Area in **Section 4.1**. In the case of environmental justice, it is the same EJ Study Area as defined in **Section 4.2.3.3**. Any cumulative effects on these resources would be fully contained within the limits of these two study areas.
- *Economic and Business Effects* – The study area for considering the potential for cumulative effects from other projects on economic and business conditions is the same area identified as the Project Study Area in **Section 4.1**, in addition to the entire east side of Third Street and Main Street between Niagara Street and Findlay Street, since the effects on these resources would be fully contained within the limits of these two areas.



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## Environmental Concerns

*General Ecology and Wildlife\_Resources*– The study area for considering the potential for cumulative effects from other projects on general ecology and wildlife habitat is the same area identified as the Project Study Area in **Section 4.1**, but slightly larger at the north end (i.e., approximately 1,000 feet north of Findlay Drive) than the boundary as described in **Section 4.4.9**.

- *Historical and Cultural Resources* – The proposed Area of Potential Effect (APE), which is being coordinated with the NY SHPO, is fully contained within the general Project Study Area presented in **Section 4.11**, which is defined in **Section 4.1** and modified specifically for historical and cultural resources as defined at the beginning of **Section 4.4.11** (i.e., north end terminating at Findlay Drive). The study area for considering the potential for cumulative effects from other projects on historical and cultural resources is the same as the existing study area for historical and cultural resources for this project based on the fact that it is already larger than the APE.
- *Parks and Recreational Areas* – The study area for considering the potential for cumulative effects from other projects on parks and recreation areas is the same area identified as the Project Study Area in **Section 4.1**, since the effects on these resources would be fully contained within the limits of the Project Study Area.
- *Noise* – The study area for considering the potential for cumulative effects is similar to that used for the noise analysis of Project-related impacts, which included an eastern boundary that is approximately midway between Whirlpool Street and Main Street in order to capture any noise impacts associated with traffic diversions along Whirlpool Street. Since no impacts were identified along that eastern line, this same study area is applicable for the cumulative effects analysis as well.

## ***Time Frame***

The time frame used in this analysis relates to the past, present, and future actions as defined below:

- *Past* - The RMP was constructed and opened to traffic in 1962. At that time, the RMP was a four-lane limited –access expressway limited to non-commercial vehicular traffic and certain types of transit/intercity bus travel. However, the two southbound lanes were closed to vehicular traffic and converted to a wide multi-purpose trail for use by pedestrians and bicyclists as part of a Pilot Project in the year 2000. At the same time, the two northbound lanes were converted for two-directional vehicular traffic, one lane in each direction. This configuration of the RMP continues today. Depending on the particular resource being assessed, the current configuration and usage of the RMP and its multi-purpose trail which began in 2000 is the appropriate date to represent the past for this Project, while for other resources, the original 1962 construction date of the RMP is the appropriate date to consider.
- *Present* - The year 2015 defines the present time frame used for most of this analysis, although the year 2010 was used to represent the Existing Condition for traffic since that was the year



used for modeling of traffic. Therefore, 2010 was also used for studies such as Noise that are closely linked to the modeled traffic. Although Air Quality is also closely linked to the modeled traffic, a detailed study of Air Quality was determined not to be required for this Project, and therefore, the year used for such analysis is not relevant.

- *Future* - The future time frame to determine reasonably foreseeable actions is 2040, which is the furthest date used in the analysis of direct effects for the Project. Reasonably foreseeable actions include those that have been officially approved, funded or initiated via construction.

### **Non-Project Actions**

Besides the proposed RMP Removal Project, there are several other ongoing, planned, or potential improvements within the Project Study Area between now and the year 2040. These and other actions unrelated to the proposed RMP Removal Project between Main Street and Findlay Drive were reviewed and considered during planning and development for this Project. The paragraphs below describe the other actions which were at least considered for their relevance to a cumulative effects analysis. Many of these projects had also been described previously in **Section 2.2**.

- *Niagara Gorge Corridor Project (Niagara Falls to Lewiston)* – As described in **Section 2.1** of this document, a scoping process for the Niagara Gorge Corridor project from Niagara Falls to Lewiston, which originally included this proposed RMP Removal Project between Main Street and Findlay Drive, was initiated in 2010 to address the future of the six-mile Robert Moses Parkway – North Segment. During the course of project scoping, the concept of advancing the Main Street-to-Findlay Drive portion of the corridor as a separate and independent project was presented. The *Niagara Gorge Corridor Project: Final Scoping Report (October 2013)* further reinforced the intent to advance a project within the portion of the corridor between Main Street and Findlay Drive as a separate and independent project. The analysis performed by the Federal Highway Administration (FHWA) to assess the viability of advancing the RMP Removal Project between Main Street and Findlay Drive as a separate and independent project is provided in a White Paper included as **Appendix B – White Paper – Appropriateness of Applying NEPA Requirements to the First Phase Project**. Other than a Town of Lewiston project (PIN 5757.79) for a \$1.8 million pedestrian and bicycle pathway stretching from Devil's Hole to Center Street, there is currently no funding available for construction of any project north of Findlay Drive and no further study of such project is ongoing or proposed at this time. The Greater Buffalo-Niagara Regional Transportation Council (GBNRTC) as the Metropolitan Planning Organization (MPO) for Erie and Niagara Counties in its 2014-2018 Transportation Improvement Program (TIP) has only allocated funding for a feasibility study along the Niagara River Gorge, which is actually the RMP Removal Project between Main Street and Findlay Drive. Given that there has been no approval to date, and that funding has not been identified at this time for any NGC project north of Findlay Drive, and that the details of the specific action that may be taken have not been definitively defined to date, a cumulative effects analysis related to any NGC action north of Findlay Drive is



not technically required. However, such potential project is considered for the Project Study Area as applicable, especially as it relates to Transportation consequences.

- *Other Transportation Improvement Program (TIP) Projects* – Only two other transportation projects included on the 2014-2018 TIP are specifically located in the Project Study Area. One is the *Niagara Gorge Bicycle /Ped Trail* (ROW acquisition and new/improved shared use paths), which is proposed as part of the proposed Project. The other is the *Niagara Falls International Rail Station/Intermodal Center* (bus and passenger rail station), of which the third and final phase of the improvements is currently under construction. The new station, which is located off Whirlpool Street near the Whirlpool Bridge, will be served by both U.S. (Amtrak) and Canadian (VIA Rail) passenger service, and will serve as a transportation hub that will enhance accessibility to bus routes, pedestrian and bicycle facilities, taxis, shuttles and park-and-ride lots. That project also includes renovation of the adjacent historic Customs House. Other projects listed in the TIP are outside of the Project Study Area, including the *RT 957A (RMP) at John B. Daly Boulevard / Southern CBD Gateway* (interchange reconstruction) and *John B. Daly Boulevard from Niagara Street to Pine Avenue* (new highway construction), both of which are under construction. Of these several projects listed on the TIP, only the Niagara Falls International Railway Station could be considered as part of a cumulative effects analysis for the proposed Project.
- *New York State Parks Police Station* – The existing State Parks Police Station on Goat Island in Niagara Falls State Park is being relocated to a property near the Niagara Gorge Discovery Center between the RMP and Whirlpool Street, immediately north of DiFranco Park. The site, which is located on NYPA property, would be accessed both from Whirlpool Street and from the RMP (i.e., until changes are made as part of the RMP Removal Project). The new station will comprise 7,000 SF of space, which is approximately three times the size of the existing station. Construction began in Summer 2015 and is anticipated to be completed for the 2016 summer tourist season.
- *City of Niagara Falls Comprehensive Plan* – A major goal of the Comprehensive Plan (2009) is to guide development and growth in the City, as well as overcoming the past four decades of economic, industrial, and population decline. The comprehensive plan places a strong emphasis on the quality of the urban experience for both visitors and residents, and supports improvements to the whole community – streets, parks, heritage and commercial areas – to improve quality of life and hopefully entice visitors to stay for longer periods and visit more often. There are several Core City Strategies identified in the Comprehensive Plan that are within the RMP Removal Project Study Area that could potentially benefit from the proposed Project between Main Street and Findlay Drive. These include the following improvements, among others: 1) reconnect the City to its Waterfront (due to presence of the Robert Moses Parkway); 2) create the Cultural District (encompassing the area bounded by Cedar Street, Third Street, Main Street and the Niagara River, and including a portion of the RMP, the Niagara Aquarium, the Niagara Gorge Discovery Center and underutilized properties along Main and Third Streets); 3) preserve the



heritage of the Core City (especially the [Wright Park] Park Place District encompassing the area bounded by Main Street, Third Street and Pine Avenue); 4) Customs House and North-Main Loft Precinct (encompassing the area extending north along Main Street from Lockport Road to Findlay Drive, and from the western side of Robert Moses Parkway to the eastern side of Main Street); and 5) the Third Street Precinct (extending from Niagara Street to Pine Avenue). Although a variety of recommendations are made with regard to these strategies, definitive funding allocations or time schedules are not specifically stated in the plan.

- *City of Niagara Falls Niagara River Greenway Vision and Project Proposals* –This plan was drafted to complement development of the Niagara River Greenway Plan (see below). The City's plan provides recommendations for 54 projects citywide that would better connect the city with the waterfront, provide information centers and interpretive opportunities for exploration of the area's heritage, expand the pedestrian/bicycle trail system and help to repair and improve both the urban and natural environments. Several of the city-wide recommended projects are directly related to the proposed improvements associated with the proposed RMP Removal Project, or would be benefitted as a result of constructing the proposed Project.
- *Niagara River Greenway Plan* – This plan was prepared by the Niagara River Greenway Commission and officially approved by State Parks in May 2007. It establishes a unified vision and set of principles for the Niagara Greenway. The area defined in the plan as the Niagara Greenway is located along the eastern edge of the Niagara River between Lake Erie and Lake Ontario, incorporating 13 municipalities between Buffalo to the south and Youngstown to the north, including the city of Niagara Falls. The Greenway Plan outlines 11 principles that will guide planning in the Greenway and promote high-quality, ecologically sensitive and sustainable development, and many of the Greenway Plan goals closely resemble the project goals developed for the proposed RMP Removal Project. Specific construction projects identified in the plan for the Project Study Area primarily relate to trail improvements, including those already completed.
- *Niagara Falls National Heritage Area Management Plan* – The Niagara Falls National Heritage Area was designated by Congress in 2008 to recognize the national significance of the region's natural and cultural legacies. The National Heritage Area seeks to strengthen community awareness of its history; support the stewardship of historic, cultural and natural resources; and use heritage resources as a means through which to contribute to the regional economy. In that context, a management plan was prepared for the Niagara Falls National Heritage Area Commission and the U.S. National Park Service in July 2012. The plan outlines the National Heritage Area's vision and goals, identifies potential actions that support the vision and goals, and provides guidelines and processes for undertaking desired actions. No specific construction projects are recommended that could potentially be considered in a cumulative effects analysis.





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### ***Cumulative Effects Analysis***

This section presents a Cumulative Effects Analysis based upon the identified incremental effects of past, present, and reasonably foreseeable future actions on the various transportation, social/economic, and environmental resources within the Project Study Area. The above identified studies and projects were initially reviewed to determine if their proposed activities, when combined with the proposed RMP Removal Project, would result in direct or indirect cumulative effects on the transportation, social/economic or environmental aspects of the Project Study Area. If no effects were identified, then no further analysis of potential cumulative effects was necessary. The analysis indicated that the Niagara Falls International Rail Station/Intermodal Center and the New York State Parks Police Station, both of which are currently under construction, have the most potential to generate some minor cumulative effects within the Project Study Area. The other projects considered are either outside of the Project Study Area zone-of-influence, not specific in their design and/or without approval, funding or a clear schedule.

### **Transportation Consequences**

The road infrastructure in the Project Study Area includes a two-lane limited-access expressway (the RMP), portions of several principal arterials (Main Street, Niagara Street and Pine Avenue), and at least one minor arterial (Whirlpool Street). There is also the Robert Moses Parkway Trail on former RMP lanes serving pedestrians and bicyclists adjacent to the RMP. The results of the Transportation cumulative effects analysis are presented below.

- *Past* – As part of a “Pilot Project” implemented in the year 2000, the RMP was converted from a four-lane, divided expressway to a two-lane expressway on the former northbound lanes, with an adjacent but separated multi-modal trail on the former southbound lanes, currently known as the Robert Moses Parkway Trail. This conversion, which extends from the Niagara Gorge Discovery Center in the Project Study Area to the Niagara Power Project north of the Project Study Area, was implemented in recognition of the significant decline in usage of the RMP since its original completion in 1962. Usage has continued to decline since conversion was completed, regardless of any other projects that may have been constructed within or near the Project Study Area since that time.
- *Present* – In the 2010 Existing Condition, total two-way traffic using the RMP during the AM peak hour is only about 200 vehicles, while the PM peak hour two-way traffic is only about 265 vehicles. As a result of these low traffic volumes, traffic delays are not an issue along the RMP. However, pedestrian and vehicular access to the adjacent Robert Moses Parkway Trail is limited to only a few locations along the corridor based on the current design of the RMP. There are no ongoing projects that would significantly alter existing use of the RMP or its adjacent Robert Moses Parkway Trail.
- *Future* – The primary element of the proposed Project is the removal of both the RMP travel lanes and the adjacent multi-modal trail from Main Street to Findlay Drive. Traffic that would normally



use the RMP would divert to other parallel routes, most notably, Whirlpool Street and to a lesser extent, Main Street. Design, traffic-calming and landscaping improvements are proposed along Whirlpool Street to mitigate the increase in traffic that it would receive as a result of the Project. From a cumulative effects perspective, any traffic that may be destined for the soon-to-be completed Niagara Falls International Rail Station / Intermodal Center would not be an issue since such traffic would not have used the RMP anyway. For any traffic that may utilize Whirlpool Street in this regard, the improvements proposed as part of the RMP Removal Project could actually help to lessen the effect on that road. In the case of the new Parks Police Station that is currently under construction, the improvements would facilitate ingress and egress at the station for police vehicles without creating any noticeable effect on total vehicular volumes on the local roads. In the case of any Niagara Gorge Corridor improvements north of Findlay Drive, such action would have no effect on traffic in the Project Study Area, since these improvements are not designed to increase total traffic volumes or vehicle miles traveled within the corridor, and no new traffic in the corridor or Project Study Area would be induced.

Based on the above-stated discussions, the likelihood for any Transportation cumulative effects within the Project Study Area are minimal to none.

#### Social and Economic Consequences

As previously discussed, Social and Economic disciplines within the Project Study Area that could potentially experience cumulative effects due to other projects relate to Land Use, Planning and Zoning; Community Cohesion; Social Groups / Environmental Justice; and Economic and Business Effects. These various Social and Economic disciplines are discussed together since the types of cumulative effects that could be experienced within the Project Study Area overlap. The results of the Social and Economic cumulative effects analysis are presented below.

- *Past* – Over the past several decades, the City of Niagara Falls has experienced significant economic, employment and population decline. Population has declined by more than 50% since the RMP was originally constructed, and with a loss of more than 5,000 residents just since the year 2000, the population now stands at less than 50,000. Businesses and jobs have also been declining in the city.
- *Present.* – As a result of population and jobs that have moved out of the city in the past, portions of the Project Study Area have been abandoned and replaced by closed and/or deteriorating buildings, as well as vacant properties. The business corridors, such as Main Street and Third Street, exhibit high vacancy rates. Neighborhoods within the Project Study Area are adjacent or close to these business corridors, although they generally do not appear to be within close walking distance to food stores, pharmacies or other types of retail establishments. Many areas within these neighborhoods exhibit higher percentages of non-white residents and residents living below the poverty level than do the populations of the City of Niagara Falls as a whole and the County of Niagara. These characteristics of the Project Study Area do not appear to be related to any specific projects that have been undertaken in the recent past or at the present time.



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- *Future* – Construction of the proposed Project may result in short-term, positive economic effects on the local and regional economies due to direct and indirect spending associated with the construction payroll and the purchase of supplies and materials required for the Project in the Project Study Area and within the region as a whole. Local commercial establishments such as restaurants, gas stations and convenience markets within the business corridors of Main Street and Third Street would likely see an increase in sales as a result of construction personnel purchasing food, gas and supplies while the Project is being built. It is possible that some incidental long-term positive effects could also occur due to the minor re-routing of traffic from the RMP to Main Street. Any other as-yet undefined projects could also contribute to the potential for positive economic effect on a cumulative basis. The ongoing construction of the Niagara Falls International Rail Station / Intermodal Center and Parks Police Station projects are likely to already be completed by the time that the proposed RMP Removal Project is actually constructed, although their positive effect contributions to the economy may be more long lasting depending on the additional permanent employment associated with these projects. These projects, in addition to the RMP Removal Project, could also create further incentive and positive cumulative effect on land use redevelopment within the Project Study Area, as well as making the adjacent neighborhoods more attractive as a place to live, thereby enticing some residents to remain in the area. These projects in combination would also improve access to the waterfront, access to transit and intermodal opportunities, safety, and aesthetic conditions within the Project Study Area. As a result, environmental justice populations living within the neighborhoods of the Project Study Area would also benefit overall.

Based on the above-stated discussions, the likelihood for any negative cumulative effects within the Project Study Area are minor, although there are enhanced opportunities for positive cumulative effects on the Social and Economic conditions of the Project Study Area.

#### Environmental Consequences

As previously discussed, Environmental disciplines within the Project Study Area that could potentially experience cumulative effects due to other projects relate to General Ecology and Wildlife Resources; Historic and Cultural Resources; Parks and Recreation Areas; and Noise. These various Environmental disciplines are presented separately below since the types of cumulative effects that could be experienced within the Project Study Area are somewhat different.

#### General Ecology and Wildlife Resources

- *Past* – The ecological conditions of the Project Study Area that exist today have essentially existed for many years (i.e., since the construction of the original RMP and the Niagara Gorge Discovery Center). The majority of the Project Study Area consists of disturbed/developed and mowed lawn/ornamental planting communities, with a narrow area of mature forest along and below the Niagara Gorge rim. In the recent past, the clearing of trees from a portion of the land overlooking the Gorge rim and adjacent to the Niagara Gorge Discovery Center for a previously-proposed State Parks Police Station site removed some mature trees resulted in the removal of



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some hazardous soil material and the planting of some 50 native shade trees and lawn grasses in new topsoil.

- *Present* – Non-native plant species represent a significant portion of the current flora within the Project Study Area. All of the six state-listed plant species documented as occurring in the vicinity of the Project Study Area, all are either below the Gorge rim or along the rim but further north of the Project Study Area. Two additional state-listed plant species in the vicinity of the Project Study Area are historical accounts, and given current habitat conditions, are not likely to occur within the Project Study Area. The presence of one federally-listed threatened species within the Project Study Area, i.e., northern long-eared bat (*Myotis septentrionalis*) has been identified within an existing database. Although no critical habitat has been proposed at this time, the entire state of New York is within the range of this species. In the winter months, northern long-eared bats hibernate in caves and mines where the air temperature rarely fluctuates from cool temperatures and high humidity, but there are no such features within the Project Study Area.
- *Future* – Impacts to native vegetation from the proposed Project or any other known or potential project would be minimal due to the nature of the vegetation that exists within the Project Study Area. The new State Parks Police Station that is currently under construction is entirely located on property characterized as disturbed/developed and mowed lawn/ornamental planting. No project other than the RMP Removal Project is currently proposed within the parkland and areas of green space along the Gorge rim within the Project Study Area. Cumulative effects to native vegetation would be minimal, and there would not be an adverse cumulative effect on significant natural communities, wildlife refuges or wildlife habitats. Although any Project construction would primarily occur outside of forested areas, some limited tree clearing would occur. Clearing of trees has no direct effect on individual northern long eared bats, provided the trees are cut within the USFWS-approved winter cutting period of October 31 to March 31 (when the bats are hibernating in caves or mines). Consequently, this Project is not anticipated to result in any adverse impacts to northern long-eared bats or their habitat.

#### Historical and Cultural Resources

- *Past* – Many historic and archaeological resources within the Project Study Area have been destroyed, constructed over or otherwise disturbed in past decades. For instance, original construction of the RMP primarily occurred over a former rail bed, so details of that resource are limited. In addition, the Niagara Gorge Discovery Center was constructed on part of the former Schoellkopf Power Plant and its foundations. More recent construction projects included the Maid of the Mist winter storage facility which was built on the pad of the former power plant along the river at the base of the Gorge and initial construction activities associated with a previously-proposed State Parks Police Station near the Gorge rim in the Niagara Reservation, a National Register-listed resource.



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- *Present* – Within the overall Project Study Area, there are currently four National Register-listed properties, two National Register-listed historic properties, 41 properties eligible for the National Register, three bridges eligible for the National Register, 26 potentially eligible properties and one potentially eligible historic district. One ongoing project within the Project Study Area that has resulted in a positive effect is the restoration of the Customs House, which is one of the four National Register-listed properties. That project has actually resulted in saving the structure, although it continues to be located in the shadows of the RMP viaduct.
  - *Future* – Although the City of Niagara Falls' Comprehensive Plan places much emphasis on preservation of its historic resources, including those within the Project Study Area, no timelines or actual funding is provided for many of the strategies and recommendations stated. The new State Parks Police Station currently being constructed on Whirlpool Street across the RMP from the Niagara Gorge Discovery Center, has already been determined not to result in any significant effects, and a survey of historic resources was prepared as part of the ongoing construction of the Niagara Falls International Rail Station / Intermodal Center. The proposed removal of the RMP viaduct near the restored Customs House would actually be a benefit to that resource. As a result, it does not appear that cumulative effects to historic and cultural resources within the Project Study Area are likely.

#### Parks and Recreational Facilities

- *Past* – Parkland along the Niagara Gorge rim is essentially continuous throughout the Project Study Area with green space on property owned by the NYPA along both sides of the RMP connecting Niagara Falls State Park on the south end to DeVeaux Woods and Whirlpool State Parks at the north end. This continuous parkland has generally been in existence at least since the RMP was constructed and completed. The Niagara Gorge Discovery Center was constructed within the boundaries of the Niagara Falls State Park, and has been integrated into its overall set of attractions. There are also several trails along the Gorge rim, below the Gorge rim and along the RMP that have been constructed and been promoted as attractions over the years. The Robert Moses Parkway Trail adjacent to the RMP was actually constructed in 2000 on the former southbound lanes of the RMP, and has retained the appearance of a roadway even though only pedestrians and bicyclists are permitted to use it.
- *Present* – As a result of the presence of the RMP through the parklands, pedestrian and bicycle access from adjacent neighborhoods to the Niagara Gorge rim and other areas west of the RMP has virtually been cut off, except from Main Street at the south end, at the pedestrian bridge connecting the Aquarium of Niagara Falls to the Niagara Gorge Discovery Center and at a location below the RMP viaduct near the Whirlpool Rapids Bridge. North of Findlay Drive, there is also a trail through DeVeaux Woods State Park that crosses over the RMP to the Gorge rim.
- *Future* – Of the ongoing and proposed projects within the Project Study Area, the one that has the greatest effect on the parklands is the RMP Removal Project, as that is the project that would allow improved access to, from and within the parks system, as well as open up additional land



for actual recreational use rather than transportation use. These effects are all positive in nature, and the improvements directly address the goals and strategies stated in several planning documents prepared by the City of Niagara Falls, the Niagara Greenway Commission, the Niagara Falls National Heritage Area Commission, etc. Ongoing construction projects within the Niagara Study Area, including the new State Parks Police Station and the Niagara Falls International Rail Station / Intermodal Center (which includes the restoration of the adjacent Customs House), would result in neither a positive or a negative cumulative effect on the recreational properties within the Project Study Area.

#### Noise

- *Past* – With the exception of one receptor at the extreme southern end of the Project Study Area, noise levels throughout the study area are well below the impact thresholds identified by FHWA. The existing noise levels already take into account any other development that has occurred in recent years, including the existing RMP corridor.
- *Present* – Once again, with the exception of the same receptor at the extreme southern end of the Project Study Area, future noise levels (both No-Build and Build) are predicted to continue to be well below the impact threshold identified by FHWA. Given the minor to moderate traffic associated with ongoing construction projects such as the Niagara Falls International Rail Station / Intermodal Center and the new State Parks Police Station, it is not anticipated that such projects would result in cumulative noise impacts that are dramatically different from the noise levels predicted for the RMP Removal Project.
- *Future* – At this point in time, there are no other definite or likely projects that are proposed within the Project Study Area beyond those that are currently under construction. Therefore, the potential for cumulative noise impacts associated with future known projects is similar to that with the ongoing projects described above.

Based on the above-stated discussions, the likelihood for any Environmental cumulative effects within the Project Study Area is minimal to none.

#### **4.8. Short Term Uses of Man's Environment and the Maintenance and Enhancement of Long Term Productivity**

With regard to the proposed Project, short-term effects on and uses of the environment refer to the immediate economic and physical effects of the construction process and short-term changes in traffic. The short-term economic effects are largely beneficial. The work force would be drawn primarily from the local metropolitan / western New York area. Salary income generated from the proposed Project would flow into the local and regional economies through the purchases of goods and services, resulting in a multiplier effect to stimulate wages. Businesses from outside the area that would provide goods and services for the Project would also benefit.



Even though there would be long-term changes in traffic patterns as a result of the Project, there may also be short-term disruptions to the established traffic patterns as well as associated physical effects during construction. Construction activities may result in some temporary rerouting of traffic, increased noise and dust levels, and localized traffic delays on streets that are typically free-flowing. These effects would be short-term in nature, variable, and localized, depending on the particular work being conducted and the time of the activity. Project construction would require the movement of workers, equipment, and materials throughout the Project Study Area.

Construction activities would be scheduled to minimize these effects to the extent practicable. Improvements in construction techniques and the equipment used would result in reduced noise and air pollution in and around the Project Study Area. All construction activities would be conducted within the time and spatial limits prescribed by the necessary permits, and an Erosion and Sediment Control Plan would be developed and approved to control anticipated construction-related pollutants.

Modern construction equipment is provided with mufflers, and the hours of operation would be limited to minimize noise effects on the neighborhood residents. Detailed staging plans and traffic management plans would be developed with the City to ensure the orderly movement of works and the delivery of goods and services to the work site in a manner that maintains the normal flow of neighborhood traffic to the extent practicable.

On a regional level, the long-term effects of the Project would be positive. Specifically, the proposed physical improvements and the enhanced accessibility between local neighborhoods and the Niagara Gorge rim and waterfront could potentially help to make the area more attractive to local residents, thereby keeping them from continuing the recent trend of leaving the city. These improvements could also serve as an impetus to trigger some redevelopment within the Project Study Area. Local businesses could also potentially benefit from permanent rerouting of some traffic from the RMP to existing business corridors.

#### **4.9. Irreversible and Irretrievable Commitments of Resources**

The labor required for construction of the Project would be an irretrievable commitment of this resource. Use of the labor would not have an adverse effect upon continued availability of these resources. The regional pool of necessary skills is sufficient to meet the project's needs without any disruption in development activities.

Other resources that would not be retrievable would be the physical materials used to construct the Project. These include raw materials such as aggregate used to make cement and asphalt, steel needed to make rebar and steel structures, oil to make asphalt, and fill material. These are finite resources; however, they are not currently in short supply.

Excavated soil and fill material not required for construction of this Project would be transported to an approved storage and disposal site. The region has adequate capacity to accommodate soils and fill materials removed from this construction site.



The energy used to build the Project would not be retrievable. However, since the Project would result in the removal of the existing RMP lanes, the former southbound lanes of the RMP currently being used as the Robert Moses Parkway Trail for bicyclists and pedestrians, and associated ramps and overpasses, in the long term there would be overall less pavement and fewer lane miles that would normally require maintenance and repairs. Therefore, the Indirect Energy effects of construction of the proposed Project would actually reduce energy use in the long run.

The removal of the RMP, the reconstruction of Third Street and Whirlpool Street, and the provision of other park improvements would require the commitment of these resources. Residents in the immediate area and region would benefit from the improved local access to the Niagara Gorge rim and the waterfront, the improved access within the existing parklands, the improved roadway and travel conditions along Third Street and Whirlpool Street, and the ability to accommodate numerous local plans promoting such improvements. These benefits would outweigh the commitment of resources.

#### **4.10. Adverse Environmental Impacts That Cannot be Avoided or Adequately Mitigated**

There would be no adverse environmental effects that cannot be avoided or adequately mitigated.

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