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Acronym	s and Abbreviations	
BNMC	Buffalo Niagara Medical Co	ımpus



3K1	Bus Kapid Iransi
:IS	Environmental Impact Statemen
	Federal Transit Administration
	Greater Buffalo Niagara Regional Transportation Counci
	Light Rail Transi
Netro	Niagara Frontier Transit Metro System, Inc
NEPA	National Environmental Policy Ac
NFTA	Niagara Frontier Transportation Authority
	Notice of Inten
Project	Buffalo-Amherst-Tonawanda Corridor Transit Expansion
	State Environmental Quality Reviev
	University at Buffalo



The Niagara Frontier Transit Metro System, Inc. (Metro) is planning to potentially undertake an expansion of its public transportation system that would connect downtown Buffalo with the State University of New York at Buffalo North Campus through the Buffalo-Amherst-Tonawanda Transportation Corridor, i.e. the Buffalo-Amherst-Tonawanda Corridor Transit Expansion Project (the Project). Today, Metro operates a 6.4-mile light rail transit line called Metro Rail that provides service along Main Street in Buffalo, New York, from Downtown Buffalo to the State University of New York, University at Buffalo (UB) South Campus. The Project would expand the present service to include high-quality transit service from the current terminus at the Metro Rail University Station to existing and emerging activity centers in Amherst and Tonawanda.

The Federal Transit Administration (FTA), serving as lead Federal agency, and Metro, the joint lead agency and Project Sponsor, are preparing an Environmental Impact Statement (EIS) to evaluate potential construction-related and operational impacts in accordance with the National Environmental Policy Act (NEPA) of 1969 (42 U.S.C. § 4321 et seq.), FTA's Environmental Impact and Related Procedures (23 CFR §771), and DOT's Efficient Environmental Reviews for Decision-Making (23 U.S.C. §139). The EIS also memorializes compliance with other applicable Federal environmental laws and regulations, including Section 4(f) of the Department of Transportation Act of 1966 and Section 106 of the National Historic Preservation Act of 1966. The EIS also addresses, as applicable, the requirements, guidelines, and methodologies established under the New York State Environmental Quality Review Act (SEQR).

The following summary describes the purpose and need of the proposed Project, a description of the Project, a summary of anticipated environmental impacts and mitigation measures of the Project, and public involvement. For an introduction to the Draft EIS, refer to the Project synopsis in Table ES-1.

Table ES-1. Draft EIS Synopsis

WHAT	High-quality transit service in the Greater-Buffalo region has been considered for nearly 50 years. The concept for Metro Rail evolved in the 1960s and 1970s as one segment of a proposed 43-mile network of rapid-transit rail lines across the region. Today Metro operates a 6.4-mile light rail transit line called Metro Rail that provides service along Main Street in Buffalo, New York, from Downtown Buffalo to the State University of New York, University at Buffalo (UB) South Campus. Metro is proposing to expand high-quality transit service from the current terminus at the Metro Rail University Station to existing and emerging activity centers in Amherst and Tonawanda.

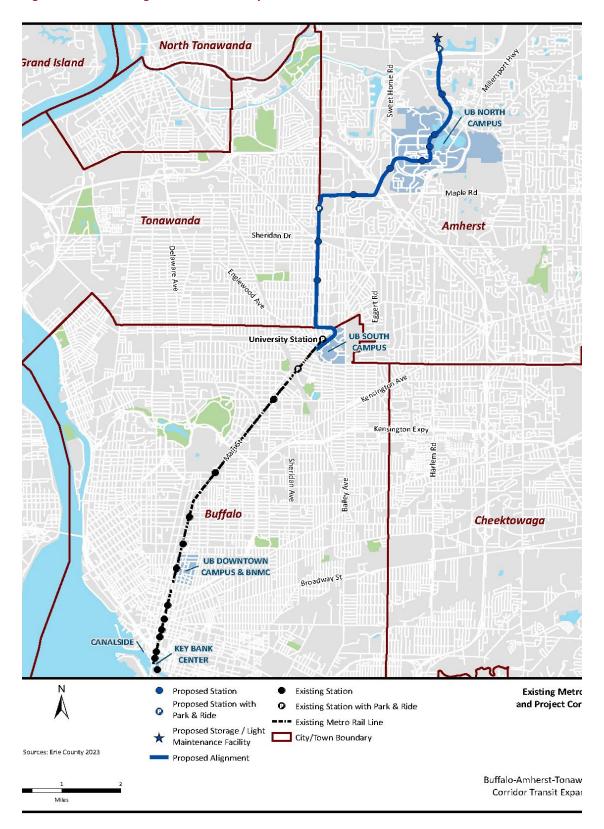


WHERE

Planning for the Project began in 2012 when Metro and the Greater Buffalo Niagara Regional Transportation Council (GBNRTC) initiated a process to evaluate a range of high-quality public transit service options between Downtown Buffalo, the existing Metro Rail Corridor, and Amherst. After reviewing the technical results of this analysis and considering feedback from the Project Steering and Technical Advisory Committees and the public, Metro recommended the Project to advance towards implementation. The Project is proposed along Main Street, Kenmore Avenue, Niagara Falls Boulevard, Maple Road, and Sweet Home Road, through the UB North Campus to John James Audubon Parkway and I-990. Ten stations are proposed as part of the seven-mile Project. Figure ES-1 shows the Project Corridor, which includes the existing Metro Rail line and the proposed Project alignment (the route or positioning of new transit service).



Figure ES-1. Existing Metro Rail and Project Corridor





ES.1 PURPOSE AND NEED

Initiated on August 30, 2021, Project scoping solicited input from agencies and the public to provide input on the Project's purpose and need, its objectives, and the potential alternatives under consideration. For more information refer to Appendix J1, "Public Outreach and Coordination Report." Derived from agency input, the **purpose** of the Project is to link established and emerging activity centers (e.g., UB campuses, BNMC, the Buffalo central business district, employment and retail centers, and the Buffalo waterfront) along the existing Metro Rail line in Buffalo with existing and emerging activity centers in Amherst and Tonawanda by providing fast, reliable, safe, and convenient transit. The Project would serve existing Metro riders; attract new transit patrons; improve regional connections between Buffalo, Amherst, and Tonawanda; and support transit-oriented development and affordable housing opportunities.

The need for increased mobility and transit service that the Project would serve has three main components (Figure ES-2):

Figure ES-2. **Project Needs**



Serve existing and future travel demand



Provide high-quality regional transit service



Improve service for transitdependent population

Serve existing and future travel demand generated by recent, pending, and future regional development.

The Buffalo Metropolitan Region is experiencing economic growth and transformation, including over \$1 billion of projects that have been recently completed, that are under construction, or that are planned for the Region. As reported in the GBNRTC 2019 Comprehensive Transit-Oriented Development Plan, the existing and proposed Project Corridor is expected to experience faster population growth (an increase of 5.8 percent versus 1.3 percent for the region) and employment growth (an increase of 13.3 percent versus 12.5 percent for the region) than the balance of the region between 2015 and 2040.²

Provide high-quality regional transit service.

There is a need for faster, more frequent, more convenient, and more reliable regional transit service in the Project Corridor. Metro currently serves the Project Corridor with buses that

Western New York Regional Economic Development Council. January 2017. "Buffalo Billion Phase II — Buffalo Niagara's Strategic Plan for Prosperity."

GBNRTC and NFTA Metro. May 2019. "Comprehensive Transit-Oriented Development Plan, Final Report."



are mixed with traffic and make frequent stops. The length of the routes increases travel times, traffic congestion makes riders subject to the same delays as motorists, and winter weather can make bus travel even more difficult and time-consuming. As an example, Metro Bus Route 34 along Niagara Falls Boulevard does not currently meet Metro's on-time arrival standards.

The University at Buffalo (UB) also provides shuttle bus service exclusively for the UB community between its North, South, and Downtown campuses. These shuttles are also mixed with traffic and require UB riders to make, in some cases, multiple transfers to or from Metro Bus services to reach destinations within Amherst and Tonawanda, resulting in longer travel times and a reduced desirability to travel using transit.

• Improve service for transit-dependent populations.

Limited transit service in the Project Corridor especially impacts the mobility and access of transit-dependent populations, including people who cannot drive or do not have access to a vehicle. Such segments include minorities, the elderly, the disabled, low-income persons, and students. GBNRTC's 2017 Onboard Survey found that most transit riders using Metro transit services are transit dependent: 84 percent of riders do not have access to a vehicle, 58 percent can be classified as low income, and 57 percent of riders in the region do not have a valid driver's license.³

The Project study area has many senior-living complexes, facilities serving people with disabilities, low-income housing complexes, apartment complexes, and student housing. The current Metro Rail and Metro Bus routes serve some, but not all, of these locations. For example, bus routes provide some service to the UB North Campus and the Town Center on John James Audubon Parkway, but most residents of the many housing complexes in this area do not have public transit options.

The transit-dependent populations in the study area are adversely impacted by limited connectivity and the unreliability of the existing transit services, limiting regional travel. A lack of transit negatively impacts accessibility to employment opportunities, health care, shopping, and entertainment.

For more information regarding the Project purpose and need refer to Chapter 1, "Purpose and Need."

GBNRTC. June 2017. "Niagara Frontier Transportation Authority, Transit Survey for GBNRTC, Final Report."



ES.2 ENVIRONMENTAL IMPACT STATEMENT

Metro anticipates seeking federal funding for the Project by applying for the Federal Transit Administration's (FTA) Capital Investment Grants Program (CIG). The FTA CIG program is a prescribed and competitive grant application process for projects seeking federal funding for transit infrastructure investments. The CIG New Starts program, "as required under Section 5309(d), New Starts projects must complete two phases to be eligible for consideration for a CIG construction grant agreement. The first phase is called Project Development and the second phase is called Engineering." Also described within FTA's CIG Policy Guidance (December 2024), Metro will be required to, "obtain commitment of at least 30 percent of the non-CIG capital funding for the project" at the conclusion of the FTA CIG Project Development phase. At such time, Metro will determine and secure 30 percent of the non-CIG project funding which is anticipated to be a mix of state, local, and in-kind contributions.

To date, NFTA has received \$5 million dollars from the Empire State Development fund to support completing the environmental review process at both the state and federal level, as well as an additional \$26 million from New York State Department of Transportation to support the NEPA process, the completion of preliminary engineering (approximately 30% design) for the project, as well as the programmatic requirements needed to advance the project into and through the Project Development phase of the FTA's CIG New Starts Program.

NEPA mandates the consideration of environmental impacts before approval of any federally funded project (42 United States Code [USC] § 4332). NEPA requires Federal agencies to prepare an EIS for a major Federal action that significantly impacts the quality of the human environment, and 23 U.S.C. § 139 contains certain requirements that apply specifically when an EIS is prepared. FTA and Metro prepared the Buffalo-Amherst-Tonawanda Corridor Transit Expansion Project Draft EIS in accordance with NEPA and other applicable regulations. The process for preparing an EIS includes: (1) publishing a notice of intent (NOI); (2) preparing an annotated outline with input from the scoping process; (3) preparing a Draft EIS, followed by a 45-day review and comment period; and (4) preparing a combined Final EIS/Record of Decision (ROD) or a separate Final EIS, followed by a ROD.

⁴ Capital Investment Grants Policy Guidance, Federal Transit Administration, December 2024

⁵ Capital Investment Grants Policy Guidance, Federal Transit Administration, December 2024



ES.3 PROJECT DESCRIPTION

The NEPA process requires alternatives to be created and studied for comparison purposes to assess the relative benefits and impacts of implementing the proposed Project Build Alternatives. The Project is evaluating three alternatives as part of this EIS:

Alternative	Description
	Represents the future conditions of transportation facilities and services
No Build Alternative	without the Project being built
Light Rail Transit (LRT) - Build	
Alternative	Future conditions with new transit services - LRT
Bus Rapid Transit (BRT) - Build	
Alternative	Future conditions with new transit services - BRT

ES.3.1 Background

Planning for the Project began in 2012 when Metro and GBNRTC initiated an Alternatives Analysis to evaluate a range of options to provide high-quality public transit service between Downtown Buffalo, its Main Street Metro Rail Corridor, and Amherst. The goal of the Alternatives Analysis was to provide enough information to support the recommendation of a Locally Preferred Alternative (LPA). A Project Steering Committee, a Project Technical Advisory Committee, and a public participation plan were established to help guide the study and provide input from community stakeholders. During the study, four public information meetings, over 75 staff-level meetings, meetings with representatives from UB, and numerous presentations were conducted with community organizations and stakeholders. The study evaluated 36 alternatives including rail and bus transit modes. Metro recommended the Niagara Falls Boulevard LRT Build Alternative to advance as the LPA.

In 2018, Metro initiated the environmental review process for the Project and undertook a review of the environmental, socioeconomic, and fiscal impacts in accordance with the New York State Environmental Quality Review Act (SEQR). Given Metro's interest in pursuing federal grant dollars for the Project, the environmental review was then conducted pursuant to NEPA and included the BRT Build Alternative in addition to the locally preferred LRT Build Alternative.

ES.3.2 Build Alternatives

Both Build Alternatives follow the same alignment. Figure ES-3 presents the LRT Build Alternative alignment and Figure ES-4 presents the BRT Build Alternative alignment.

The LRT Build Alternative would be at grade except for a 0.8-mile underground segment from the existing Metro Rail University Station to Niagara Falls Boulevard and an underground configuration at the intersection of Maple Road and Sweet Home Road. The BRT Build Alternative would operate in mixed traffic after leaving the University Station to the intersection of Niagara Falls Boulevard and Kenilworth Avenue, then would transition to a dedicated busway



at-grade. The BRT Build Alternative would not use any underground options, and instead would operate within a dedicated BRT busway at grade.

Both Build Alternatives propose building the same number of stations in the same locations; however, under the BRT Build Alternative a transfer would be required between the existing Metro Rail operations at University Station to the new BRT system. A new vehicle storage and light maintenance facility would also be required for the Project at the proposed I-990 Station and northern terminus of the line.

The LRT and BRT Build Alternatives would operate within the same footprint for the entirety of the Project alignment. Figure ES-5 and Figure ES-6 illustrate the footprint for both Alternatives along Niagara Falls Boulevard near Ford Avenue. At this location, the footprint for operations of the Project (transit only) is approximately 28-feet wide for both Build Alternatives.



Figure ES-3. LRT Build Alternative Alignment

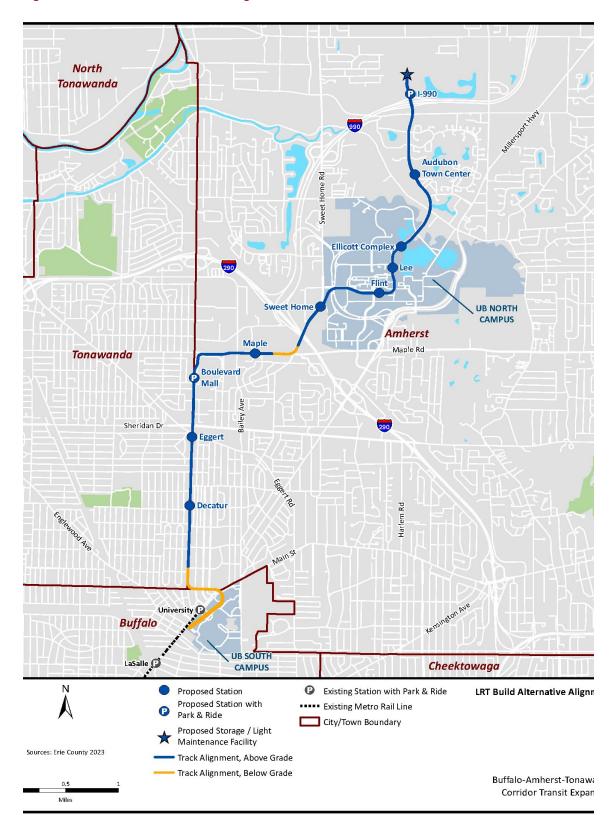




Figure ES-4. BRT Build Alternative Alignment

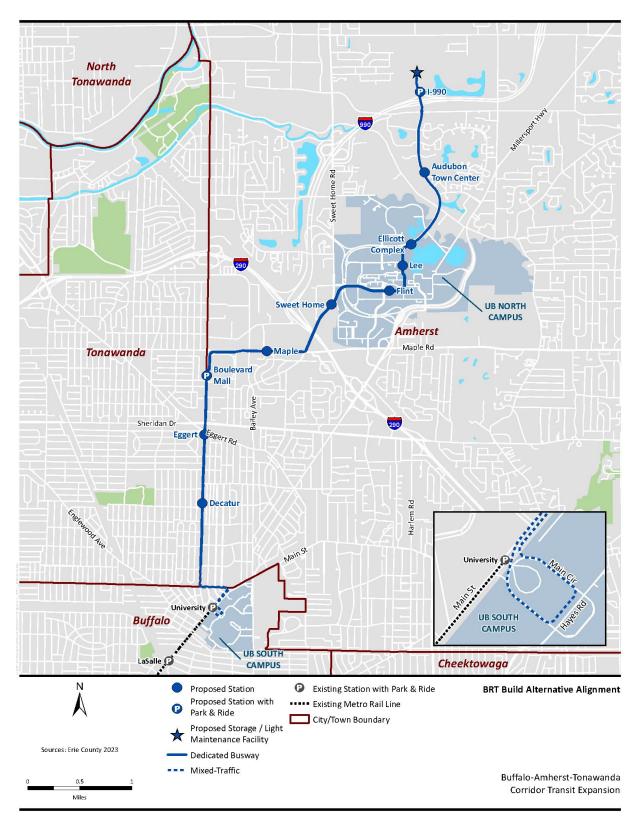
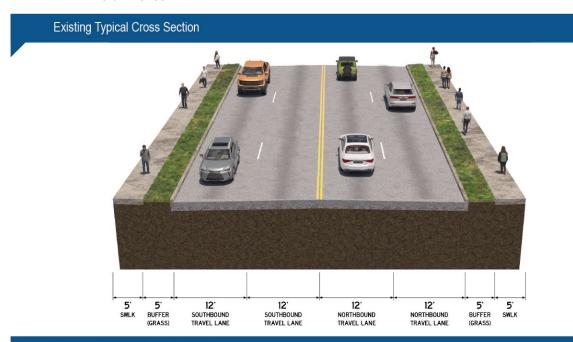




Figure ES-5. Existing and LRT Build Alternative Typical Cross Sections along Niagara Falls Boulevard near Ford Avenue

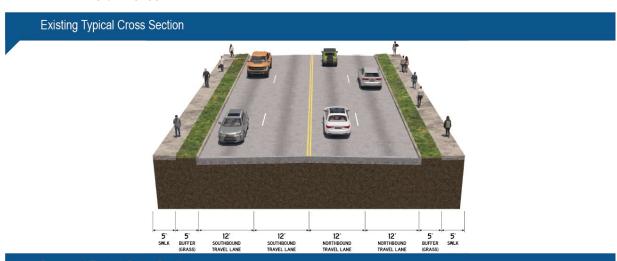


Proposed Typical Cross Section

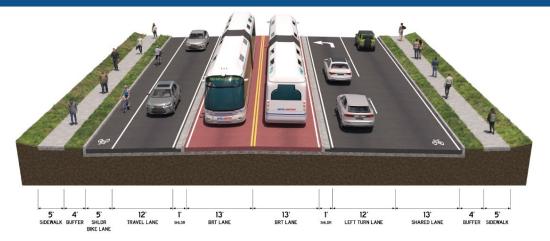




Figure ES-6. Existing and BRT Build Alternative Typical Cross Sections along Niagara Falls Boulevard near Ford Avenue



Proposed Typical Cross Section





Both Build Alternatives would be constructed primarily within the existing transportation right-of-way. However, portions of the existing transportation right-of-way along Niagara Falls Boulevard are constrained. In this area, one lane of vehicle travel (in both directions) would be repurposed for the transit operations. Also, within this area either Build Alternatives would be anticipated to require acquiring property and, in some cases, displace commercial and residential uses. Property acquisitions and displacements have been determined based on the conceptual engineering performed to date and will be further refined as the Project advances design.

For more information on the Project Build Alternatives refer to Chapter 2, "Alternatives Considered." For more information on the Project property needs refer to Chapter 4.1, "Property Acquisitions and Displacements."

ES.3.3 Ability to Meet Project Goals and Objectives

Established Project goals and objectives are directly linked to the Project purpose and need. For more information refer to Chapter 1, "Purpose and Need." As summarized in Table ES-2, these goals and objectives are used to compare the LRT and BRT Build Alternatives' ability to meet Project goals, purpose, and need. The LRT Build Alternative best serves the established Project goals and objectives described below.

Table ES-2. Ability to Meet Project Goals and Objectives



Goals and Objectives	LRT Build Alternative	BRT Build Alternative
Goal: Mitigate the growth of traffic congestion on study area roadways.	Best meets goal and objectives.	Meets goal and objectives.
Objective: Increase the share of trips using transit in the study area.	Forecasted to result in a higher share of automobile trips shifting to the use of transit than the BRT Build Alternative.	
	Forecasted to result in nearly 11 million fewer automobile miles traveled annually than the BRT Build Alternative.	
Goal: Improve the accessibility of transit in the study area.	Meets goal and objectives.	Meets goal and objectives.
Objectives: Increase the number of transit options for travelers. Improve the connectivity of transit services. Improve livability by providing increased access to facilities such as affordable housing, jobs, education, medical services, food shopping, retail shopping, entertainment, etc. Provide access to populations that are traditionally underserved.		
Goal: Increase the effectiveness of the regional transit system.	Best meets goal and objectives.	Meets goal and objectives.
Objectives: Increase system ridership. Increase system revenue. Build on investment/reinvestment of original Metro Rail.	Better serves the existing Metro Rail investment and is forecasted to have the greatest increase in system ridership and system revenue.	
Goal: Support sustainable future economic growth in the study area.	Meets goal and objectives.	Meets goal and objectives.
Objectives: Serve new markets with high-quality transit services to support economic development. Provide the basis for transit-oriented development and design to enable the development/redevelopment of quality neighborhoods. Strengthen the regional economy.	Based the Comprehensive Transit- Oriented Development 2019 Final Report, the LRT Build Alternative's effect on development and redevelopment has been evaluated, forecasted, and quantified.	



ES.3.4 Environmental Consequences

Table ES-3 through Table ES-15 summarize the findings of the environmental analyses performed for this Draft EIS. For more detailed information refer to the subsequent Chapters and Sections of this Draft EIS.

Table ES-3. Project Impacts to the Environment: Transportation (Chapter 3)

LRT Build Alternative	BRT Build Alternative	Proposed Mitigation
Traffic impacts: No adverse impacts during the weekday AM peak period. Four intersections adversely impacted during the weekday PM peak period. Five intersections adversely impacted during the Saturday midday peak period.	Traffic impacts: No adverse impacts during the weekday AM peak period. Three intersections adversely impacted during the weekday PM peak period. Four intersections adversely impacted during the Saturday midday peak period.	For LRT traffic impacts: Strategies include an investment in embedded track along Niagara Falls Boulevard and Maple Road that allows automobiles to make left-turn movements across the track alignment at designated locations. Inclusion of a forecasted mode shift from automobile travel to the Project resulting in a reduction in vehicular volumes. New signal technologies will improve traffic LOS. For BRT traffic impacts: Strategies include an investment in the BRT Alternative along Niagara Falls Boulevard that allows automobiles to make left-turn movements across the alignment at designated locations Inclusion of new signal technology, as practical, will improve traffic LOS.
Parking: The LRT Build Alternative would affect a minimal number of existing private parking spaces because of roadway widening along Niagara Falls Boulevard. Most of these affected parcels house commercial uses that have additional property that could be used for relocating affected spaces.	Parking: The BRT Build Alternative would affect a minimal number of existing private parking spaces because of roadway widening along Niagara Falls Boulevard. Most of these affected parcels house commercial uses that have additional property that could be used for relocating affected spaces.	Parking: Metro will compensate those affected by these parking effects. Invest in additional public parking at Project parkand-ride facilities.
Pedestrian and bicycles: The LRT Build Alternative would enhance existing pedestrian and bicycle facilities sidewalks, crosswalks, bicycle lanes, and median refuge areas for pedestrians.	Pedestrian and bicycles: The BRT Build Alternative would enhance existing pedestrian and bicycle facilities sidewalks, crosswalks, bicycle lanes, and median refuge areas for pedestrians.	Pedestrian and bicycles: On-street bike lanes would be added to Niagara Falls Boulevard and Maple Road.
Safety and security: The LRT Build Alternative would enhance vehicle, bicycle, and pedestrian safety provisions and minimize conflicts between	Safety and security: The BRT Build Alternative would enhance vehicle, bicycle, and pedestrian safety provisions and minimize conflicts between	



LRT Build Alternative	BRT Build Alternative	Proposed Mitigation
automobiles, bicyclists, and pedestrians. The LRT Build Alternative is expected to have a greater reduction of traffic crash fatalities and injuries annually as compared to the BRT Build Alternative.	automobiles, bicyclists, and pedestrians.	



Table ES-4. Project Impacts to the Environment: Property Acquisitions and Displacements

Environmental Resource	LRT Build Alternative	BRT Build Alternative	Mitigation
Property Acquisitions and Displacements (Section 4.1)	 192 total real property interests. 14 full acquisitions of real property interests. 178 partial acquisitions of real property interests. 15 displacements. 3.83 acres temporary construction easement. 	 178 total real property interests. 14 full acquisitions of real property interests. 164 partial acquisitions of real property interests. 15 displacements. 4.13 acres temporary construction easement. 	 As part of the preparation procedure for the Acquisition Stage Relocation Plan, site occupants will be interviewed to determine their specific relocation needs. The acquisition and relocation assistance program will be conducted in accordance with the Uniform Relocation Assistance (URA) and Real Property Acquisition Policies Act (RPAPA) of 19706). All site occupants will be provided an information booklet and fully informed of all benefits to which they may be entitled. No site occupant will be required to move from his or her property without at least 90-day written notice. Comparable replacement housing will be offered to all residential occupants. For displacements: Relocation assistance and just compensation is appropriate as a mitigation measure in accordance with the URA, which establishes a policy for the fair and equitable treatment of persons displaced as a result of federal and federally assisted programs (49 CFR part 24.1). Relocation assistance will be offered to all relocated persons without discrimination. During relocation, care will be taken to move displaced businesses to a similar area in terms of traffic counts and demographics. Metro, in coordination with the Town of Amherst, will provide informational resources, permitting support, and points of contact for displaced business owners to find suitable sites for relocation. Metro will assist potentially displaced residents and businesses providing counseling related to government assistance programs, technical support on assistance applications, transportation to inspect new housing / business locations or for those requiring paratransit services. Metro will hire a compliant relocation agent to assist in this outreach.

As amended or as may be amended, as authorized by Section 30 of New York's Highway Law and implementing Rules and Regulations (Part 101, Title 17, and NYCRR



Table ES-5. Project Impacts to the Environment: Land Use, Socioeconomic Conditions, Neighborhoods and Communities, and Visual Quality

Environmental Resource	LRT Build Alternative	BRT Build Alternative	Mitigation
Land Use (Section 4.2)	■ The LRT Build Alternative proposes the construction of power substations in support of LRT operations. The proposed substations would result in a Project impact as they are not consistent with existing study area land uses.	■ No adverse impacts	For the LRT alternative: Metro will design the substations using aesthetic treatments to be compatible with existing surrounding land use and municipal zoning requirements. Metro will consider incorporating substations into the proposed station design.
Socioeconomic Conditions (Section 4.3)	 No adverse impact to population, housing supply, employment, government, student population, or Transit- Oriented Development. 	No adverse impact to population, housing supply, employment, government, student population, or Transit- Oriented Development.	
Neighborhoods and Communities (Section 4.4)	 Community cohesion would be impacted by the impediment to pedestrians created by the construction of ballasted track along Niagara Falls Boulevard and Maple Road. 	No adverse impacts.	For LRT Alternative: The LRT Build Alternative impact would be mitigated, as proposed in Chapter 3, "Transportation", through construction of embedded track which is flush with the roadway removing any physical barrier.
Visual Quality (Section 4.5)	Neighbors: New LRT visual elements consistent with existing transportation uses.	Neighbors: New BRT visual elements consistent with existing transportation uses.	 LRT: Project will consider context sensitive visual design of trackway and stations. Project will coordinate with neighbors, visual elements near Sweet Home Middle School, UB, Skinnersville Cemetery, and Amherst Government and Library Complex, and ensure visual design of trackway and stations that emphasizes area identity. BRT: Project will consider context sensitive visual design of stations. Project will coordinate with neighbors, visual elements near Sweet Home Middle School, UB, Skinnersville Cemetery, and Amherst Government and Library Complex, and ensure visual design of stations that emphasizes area identity.



Table ES-6. Project Impacts to the Environment: Historic and Cultural Resources

Environmental Resource	LRT Build Alternative	BRT Build Alternative	Mitigation
Historic and Cultural Resources (Section 4.6)	 No adverse effects to built historic properties. Findings of Phase 1B Archeological Field Investigation will be included within the Final EIS. 	 No adverse effects to built historic properties. Findings of Phase 1B Archeological Field Investigation will be included within the Final EIS. 	 If archeological resources are identified during the Phase IB, a Phase II would be required to determine whether any identified archeological resources meet the National Register of Historic Places (NRHP) eligibility criteria. If archaeological resources are present, and if they meet the eligibility requirements of the NRHP, then Metro will coordinate with the New York State Office of Parks, Recreation and Historic Preservation (SHPO) regarding the completion of a Phase II Site Evaluation and Phase III Data Recovery—or another form of mitigation developed in consultation with the SHPO and other consulting parties—that mitigates the unavoidable effects of a project by recovering the data value of the resource. An unanticipated discoveries plan was submitted to SHPO for review and comment (Appendix F5, "Archaeological Testing Work Plan"). The plan describes coordination and protective actions that would occur in the event of the discovery of an archaeological resource during construction. If required, FTA will enter into a Project-specific Memorandum of Agreement to provide stipulations for future investigations and ways to avoid, minimize, or resolve any adverse effects to archaeological resources from the construction of the Project.



Table ES-7. Project Impacts to the Environment: Parklands and Recreational Resources and Geology, Soils, and Prime Farmlands

Environmental Resource	LRT Build Alternative	BRT Build Alternative	Mitigation
Parklands and Recreational Resources (Section 4.07)	 No adverse impacts. 	 No adverse impacts. 	
Geology, Soils, and Prime Farmlands (Section 4.8)	Geological impacts resulting from construction of the tunnels on UB South Campus and the underground segment at Maple Road and Sweet Home Road.	No adverse impacts.	 Direct Contractor to execute sequential excavation method protocols for tunnel excavation and controlled blasting as defined by the final construction plans, including development of a monitoring program/mitigation plan. Direct Contractor to properly treat, manage, and dewater groundwater encountered during deep excavation activities in accordance to state and federal regulations. Direct Contractor to execute safety protocols associated with the potential to encounter hydrogen sulfide gas encountered during excavation. Direct Contractor to properly treat and manage contaminated soils in accordance with state and federal regulations. Require the Contractor to develop and implement a Dust Control Plan that includes pro-active measures to prevent discharge of dust into the atmosphere. Require sediment and erosion controls and stormwater maintenance facilities to be implemented in accordance with all applicable state and federal permit requirements.

Table ES-8. Project Impacts to the Environment: General Ecology and Wildlife

Environmental Resource	LRT Build Alternative	BRT Build Alternative	Mitigation
General Ecology and Wildlife (Section 4.9)	Ecological: Approximately 38 acres of land would be affected in the study area. The conversion of currently disturbed ecological communities from one community type to another would not result in adverse effects. Wildlife: Wildlife in study area would not be expected to be displaced or otherwise affected by the operation of the LRT Build Alternative. Existing species would be allowed to naturally repopulate the corridor and adjacent areas once	Ecological: Approximately 38 acres of land would be affected in the study area. The conversion of currently disturbed ecological communities from one community type to another would not result in adverse effects. Wildlife: Wildlife in study area would not be expected to be displaced or otherwise affected by the operation of	 Ecological and Wildlife: Areas disturbed during construction that are not part of the permanent project footprint would be revegetated, in accordance with a Landscape Restoration Plan, to the greatest extent practicable with plant species indigenous to Western New York. Invasive Species: NYSDOT policy would be followed; design and construction would include specifications to address the management of invasive species, including using a restorative seed mix. Threatened and Endangered Species: The removal of trees would be limited to the winter hibernation period (November 1 to March 31) when northern long-eared bats would not be present. Mitigation may be required for tree cutting in northern long-eared bat habitat.



the BRT Build construction has been As design advances and scheduling for tree completed. Alternative. cutting is planned, any mitigation required Invasive Species: Existing species would be developed in coordination with FHWA, USFWS, and NYSDEC. would be allowed to Net benefit by the naturally re-populate removal of existing the corridor and invasive species and replacement with native adjacent areas once construction has species whenever been completed. possible. Threatened and Endangered Invasive Species: Species: Net benefit by the removal of existing The Project would remove approximately 60 invasive species and replacement with trees during construction. native species Northern long-eared bat whenever possible. preliminary finding of May Affect, Not Likely to Threatened and **Endangered Species:** Adversely Effect. ■ The Project would ■ Peregrine Falcon – no effect. remove approximately 60 trees during construction. Northern long-eared bat preliminary finding of May Affect, Not Likely to Adversely Effect ■ Peregrine Falcon – no effect.

Table ES-9. Project Impacts to the Environment: Water Resources

Environmental Resource	LRT Build Alternative	BRT Build Alternative	Mitigation
Water Resources (Section 4.10)	Freshwater wetlands: 0.036 acres of wetlands affected by at-grade alignment. Surface waters: Project would require a new bridge over Bizer Creek. Relocation of humanmade drainage swales along I-990 and the northern portion of John James Audubon Parkway. Stormwater: Net increase in impervious cover	Freshwater wetlands: 0.023 acres of wetlands affected by at-grade alignment. Surface waters: Project would require a new bridge over Bizer Creek. Relocation of human made drainage swales along I-990 and the northern portion of John James Audubon Parkway. Stormwater: Net increase in impervious cover	Preshwater wetlands: During final design avoidance, minimization, or mitigation measures will be completed. Effects to waters will adhere to all federal and state regulations, including a one-for-one replacement of wetland losses that exceed 0.10 acre. Surface waters: During final design avoidance, minimization, or mitigation measures will be completed. Effects to surface waters will adhere to all federal and state regulations. Stormwater: Water quality treatment and increased stormwater runoff flows and volumes will be mitigated via new permanent stormwater management practices and detention practices



because of Project construction. Groundwater: Stormwater pollution effects to groundwater quality. Groundwater	because of Project construction. Groundwater: Stormwater pollution effects to groundwater quality.	that meet the requirements of the NYSDEC Stormwater Management Design Manual. Replace modify or improve the private stormwater basins at the Boulevard Mall Sweet Home Middle school and at the UB North Campus that are impacted by the project. Groundwater:
collected at the tunnels effects to groundwater quality and potential drawdown of the water table.		 Water quality treatment and increased stormwater runoff flows and volumes will be mitigated via permanent stormwater management practices. Groundwater collected at the tunnels may need to be treated prior to being discharged into the drainage system.



Table ES-10. Project Adverse Impacts to the Environment: Noise

Environmental Resource	LRT Build Alternative	BRT Build Alternative	Mitigation
Noise (Section 4.11)	 At Receptor 10c, which represents Lockwood Memorial Library on the UB North Campus, operation of the surface tracks would result in LRT Build Alternative generated noise that would exceed the FTA thresholds for moderate impacts but not the threshold for severe impacts. The incremental change from existing noise levels at Receptor 10c would be 6 dBA, which would be considered a readily noticeable difference. The LRT Build Alternative's total noise level of 62 dBA would be moderate and generally consistent with a noise-sensitive use. At Receptor 13a, operation of the surface tracks would result in an LRT Build Alternative noise exposure (i.e., LRT Build Alternative generated noise) that would exceed the FTA threshold for moderate impacts but not the threshold for severe impacts. This receptor represents residences along the east side of John James Audubon Parkway between Dodge Road and the Amherst Police station. Of these receptors, those within 172 feet of the surface tracks and embedded track at grade crossings would experience noise exposure in the moderate impact category and noise level increments (i.e., the difference from existing noise levels) between 4 and 8 dBA. Such noise levels would be perceived as readily noticeable as compared to existing levels at these receptors. Consequently, the LRT Build Alternative would result in an adverse impact at approximately 16 residences within 172 feet of the surface tracks along John James Audubon Parkway between Dodge Road and the Amherst Police station. 	No adverse impacts.	 LRT Alternative: A new fleet of rail vehicles to reduce noise resulting from steel train wheels making contact with the steel track configuration. Rail skirts on LRT vehicles An investment, quarterly, in rail greasers on the track to reduce the friction between the rail vehicle wheels and the track. Signals to be used at the entrance or exit of tunnel portals that produce a level not greater than 83 dBA at a distance of 50 feet. Reduced speeds north of the proposed Ellicott Station and no warning bells at-grade crossings. During final design of the LRT Build Alternative, horizontal alignment shifts will be considered to further reduce noise impacts. Specifically, along John James Audubon Parkway, an alignment shift west (closer to the travel lanes) will be considered.



Table ES-11. Project Adverse Impacts to the Environment: Vibration

Environmental	LRT Build Alternative	BRT Build	Mitigation
Resource Vibration (Section 4.12)	 Receptor 3 represents Alan Hall on the UB South Campus, which contains a music performance hall and is consequently sensitive to ground-borne noise. The predicted ground-borne noise levels at this receptor would constitute the potential for an adverse impact. Receptor 5 represents residences on Kenmore Avenue at Niagara Falls Boulevard that would be within 140 feet of underground track. The predicted vibration and ground-borne noise levels at this receptor would constitute the potential for an adverse impact at these residences. Receptor 6 represents residences on Niagara Falls Boulevard that would be within 165 feet of at-grade track. The predicted vibration and ground-borne noise levels at this receptor would constitute the potential for an adverse impact at these residences. Receptor 17 represents Baird Hall on the UB North Campus, which contains two multiuse rehearsal halls and a music performance hall and is consequently especially sensitive to ground-borne noise. The predicted ground-borne noise levels at this receptor would constitute the potential for an adverse impact at this building. Receptor 23 represents residences along the east side of John James Audubon Parkway between Dodge Road and the Amherst Police Station that would be within 160 feet of at-grade track. The predicted vibration and ground-borne noise levels at this receptor would constitute the potential for an adverse impact at these residences. Receptor 27 represents residences at The Station Buffalo, located within 160 feet from the at-grade track. The predicted vibration and ground-borne noise levels at this receptor would constitute the potential for an adverse impact at these residences. 	No adverse impacts.	LRT Alternative: Further study of potential vibration impacts would be undertaken during final Project design to determine which mitigation measures would be necessary to avoid impacts. As necessary, additional mitigation measures could include the following: Relocating potentially sensitive research or equipment to buildings that are farther from the final alignment of the LRT Build Alternative. Using specialized isolated construction or isolation tables for continued use of sensitive equipment and research in cases where relocation is not possible. Using specialized resilient bedding of track and rail utilizing floating slabs and resilient ballast bedding in the area adjacent to highly sensitive equipment/activities. During final Project design, Metro will incorporate LRT Build Alternative mitigation measures like resilient fasteners and resiliently supported rail ties. Resilient fasteners would fasten the rail to the primary support ties. Similarly, resiliency supported rail ties systems (such as ballast mats) would be used to separate and support rail ties from the ground. Both approaches would help dissipate vibration energy from the rail system before it enters the ground. This would minimize vibration and eliminate discontinuities in main rail sections (e.g., rail sections without crossovers, changes, etc.). Wheel and rail interaction is the primary source of vibration in rail systems. The LRT Build Alternative would utilize all-new vehicles with wheels that are as close to perfectly round as is practical. A program of preventative maintenance, including rail grinding, rail head grinding, and wheel truing, would be implemented on the rail vehicles and tracks. Rough wheels or rails can significantly increase vibration levels, potentially



Environmental Resource	LRT Build Alternative	BRT Build Alternative	Mitigation
			as much as 20 dB in extreme cases according to FTA's guidance manual. Over time, rail vehicle wheels can develop flat spots along the circumference of the wheel, which produce vibration. Over time, constant repetitive impact from rolling heavy-rail vehicles with flat spot wheels can cause corrugation of the steel rails. Effective maintenance of rail wheels, through service removal upon identification of audible wheel flat sounds and rail grinding, would avoid this condition. Specifically, preventative maintenance would keep both systems at "like-new" condition and significantly reduce vibration from the LRT Build Alternative.



Table ES-12. Project Adverse Impacts to the Environment: Air Quality, Energy, Hazardous Materials, and Utilities

Environmental Resource	LRT Build Alternative	BRT Build Alternative	Mitigation
Air Quality (Section 4.13)	No adverse impacts.	■ No adverse impacts.	
Energy (Section 4.14)	 No adverse impacts. LRT Build Alternative operations and patronage reduces energy consumption. 	 BRT Build Alternative would result in a net increase in direct energy consumption. 	
Hazardous Materials (Section 4.15)	5 sites impacted by Project construction with hazardous waste or contaminated materials present.	5 sites impacted by Project construction with hazardous waste or contaminated materials present.	Require the Contractor to properly remove, contain, and transport the materials in accordance with the applicable regulations defined in 40 CFR 260-282, 300-355, and 6 NYCRR Part 370 Series. In addition, the contractor would be required to clean its vehicles to prevent offsite contamination.
Utilities (Section 4.16)	Utility Supply and Usage: The LRT Build Alternative would require the placement of electrical substations for rail operations. Utility Infrastructure: Construction would impact utility infrastructure along the Project Alignment. However, Project impacts along John James Audubon Parkway north of Ellicott Creek will be minimized considering the alignment utilizes the northbound travel lanes and follows the existing road alignment.	Utility Supply and Usage: The BRT Build Alternative would require the placement of electric charging infrastructure at various stations. Utility Infrastructure: Construction would impact utility infrastructure along the Project Alignment. However, Project impacts along John James Audubon Parkway north of Ellicott Creek will be minimized considering the alignment utilizes the northbound travel lanes and follows the existing road alignment.	 Where feasible, possible utility conflicts would be minimized during final design. Mitigation techniques would include relocation, removal, and protection (e.g., pipe casing). Existing utilities in conflict with To minimize scheduling conflicts and coordination issues during construction, the necessary utility relocations would occur before major construction activities begin.



Table ES-13. Project Adverse Impacts to the Environment: Construction Effects

Environmental	LRT Build	BRT Build	Mitigation
Resource	Alternative	Alternative	•
Construction	Transportation:	Transportation:	Transportation:
Effects (Section	Transit,	Transit,	Direct Contractor to maintain safe pedestrian traffic and
4.17)	Pedestrian and	Pedestrian and	to maintain public access to intersecting roads,
	Bicycle	Bicycle	residences, business establishments, adjacent property,
	Interruptions.	Interruptions.	bus stops, pedestrians, and bicyclists.
	Traffic	Traffic	 Where sidewalks, walkways, trails or shoulders must be
	Interruptions.	Interruptions.	temporarily closed to facilitate construction, safe
	Parking	Parking	pedestrian and bicycle passage shall always be
	displaced by	displaced by	maintained on one side of the roadway, unless other
	property	property	temporary pedestrian accommodations are provided in
	easements.	easements.	the contract documents.
	Acquisitions and	Acquisitions and	 Refine the construction staging plan to reduce the need
	Displacements:	Displacements:	for street closures and detours.
	Temporary	Temporary	Direct Contractor to shuttle construction workers from
	activities include	activities include	remote parking sites to construction areas, when
	construction	construction	reasonable.
	staging,	staging,	Acquisitions and Displacements of Property and Parking:
	materials	materials	Property owner compensation will be performed in
	stockpiling, and	stockpiling, and	accordance with federal, state and local requirements. Land
	hauling of dirt	hauling of dirt	Use:
	and materials	and materials	 Apply contractor incentives as practical, to minimize
	within final	within final TCEs.	construction durations.
	Temporary	Land Use:	Require that temporary construction lighting avoid glare
	Construction	Temporary	that affects traffic on the roadway or that causes
	Easements	activities include	annoyance or discomfort for adjacent residences, when
	(TCEs).	construction	reasonable.
	Land Use:	staging,	Coordinate with emergency service providers as well as
	Temporary	construction	schools and hospitals near the construction zone to
	activities include	access,	minimize the impact of construction activities on their
	construction	temporary	operations.
	staging,	changes to	 Require that there are no short-term temporary lane
	construction	access, and	and/or shoulder closures during major holidays and
	access,	temporary	major events.
	temporary	parking loss.	Economic Impacts:
	changes to	Economic Impacts:	Provide timely construction information regarding
	access, and	■ Temporary	construction zones/road closures/detours to the public,
	temporary parking loss.	activities include	public agencies, and emergencies services.
		construction	■ Direct Contractor to install temporary business signs to
	Economic Impacts:	staging,	identify business entrances and to direct customers to
	 Temporary activities include 	construction	affected businesses.
	construction	access, and	 Develop a strategic marketing plan to help reduce
	staging,	temporary parking loss,	impacts to businesses during construction.
	construction	access	Community Facilities:
	access, and	restrictions, loss	Provide construction incentives to minimize construction
	temporary	of landscaping,	durations.
	parking loss,	loss of business	Require that temporary construction lighting avoid glare
	access	signage, traffic	that affects or causes annoyance or discomfort for
	restrictions, loss	congestion,	facilities adjoining the alignment, when reasonable.
	of landscaping,	noise, dust, and	Coordinate with emergency service providers as well as
	loss of business	noise, dust, and	schools and hospitals near the construction zone to
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Environmental	LRT Build	BRT Build	Mitigation
Resource	Alternative	Alternative	
	signage, traffic	aesthetic	minimize the impact of construction activities on their
	congestion,	disruptions.	operations.
	noise, dust, and	Community	Require that there are no short-term temporary lane
	aesthetic	Facilities:	and/or shoulder closures during major holidays and major
	disruptions.	Temporary	events.
	Community	activities include	Visual Resources:
	Facilities:	access	 Direct Contractor to minimize removal of existing
	Temporary	restrictions,	vegetation, where applicable. In the event of vegetation
	activities include	increased traffic	removal for construction, the Contractor will replace the
	access	congestion, lane	vegetation and return conditions equivalent to previous
	restrictions,	closures, and	conditions.
	increased traffic	detours.	Require that temporary construction signage shall be
	congestion, lane	Visual Resources:	installed.
	closures, and	Temporary	Historic and Cultural Resources:
	detours.	activities include	 The Project will continue to survey for the presence of
	Visual Resources:	removal of	archaeological resources in advance of Project
	Temporary	vegetation	construction.
	activities include	(including	 Implement all stipulations specified in the Project's
	removal of	existing	Memorandum of Agreement and the unanticipated
	vegetation	landscaping),	discoveries plan if required.
	(including	presence and	Parks and Recreational Resources:
	existing	movement of	 Provide construction incentives to minimize construction
	landscaping),	construction	durations.
	presence and	machinery,	 At Gateway Park, direct Contractor to follow all
	movement of	equipment,	stipulations required by Metro and the Town of Amherst
	construction	building	as it relates to returning the park to existing conditions (if
	machinery,	materials,	not improved) after Project construction is complete.
	equipment,	temporary roads	Direct Contractor to minimize removal of existing
	building	and access	vegetation, where applicable. In the event of vegetation
	materials,	ways,	removal for construction, the Contractor will replace the
	temporary roads and access	construction	vegetation and return conditions equivalent to existing
		cranes,	conditions.
	ways, construction	temporary construction	Require that temporary construction lighting shall be
		_	designed, installed, and operated to avoid glare that
	cranes, temporary	fences, construction	affects park and recreational users or that causes
	construction	screens,	annoyance or discomfort, when reasonable.
	fences,	signage, and	Direct Contractor to maintain safe public access to park and recreational resources, when reasonable. Where
	construction	construction site	sidewalks, walkways, or shoulders must be temporarily
	screens,	lighting.	closed to facilitate construction, safe pedestrian passage
	signage, and	Historic and Cultural	shall be maintained on one side of the roadway, unless
	construction site	Resources:	other temporary pedestrian accommodations are
	lighting.	■ Ground	provided in the contract documents.
	Historic and Cultural	disturbances as	Direct Contractor to include specific provisions for
	Resources:	a result of the	pedestrian and bicycle access to Ellicott Creek Trail
	■ Ground	construction of	during construction of the Project Alignment along John
	disturbances as	Project	James Audubon Parkway. Where applicable and
	a result of the	alignment,	practical, this will include information on available
	construction of	stations, and	detours, trail alternatives, and signage.
	Project tunnels,	other ancillary or	Geology, Soils, and Prime Farmland:
	alignment,	supporting	LRT only: Direct Contractor to execute Sequential
	stations, and	Project	Excavation Method protocols for tunnel excavation and
	other ancillary or	infrastructure	Executation method proteodis for turnor executation and
	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		



Environmental Resource	LRT Build	BRT Build	Mitigation
Resource	supporting Project infrastructure. Parks and Recreational Resources: Temporary disturbances to parks and recreational facilities because of the construction of Project tunnels for the LRT Build Alternative, alignment, stations, and other ancillary or supporting Project infrastructure. Geology, Soils, and Prime Farmlands: Construction for underground Project segments (LRT Build Alternative only), at-grade alignment configurations, proposed stations, storage and light maintenance facility, and supporting systems and infrastructure. Ecology, Wildlife, and Water Resources: Temporary construction activities will include tunneling (LRT Build Alternative only), construction of the Project alignment, and construction of	Parks and Recreational Resources: Temporary disturbances to parks and recreational facilities because of the construction of Project alignment, stations, and other ancillary or supporting Project infrastructure. Geology, Soils, and Prime Farmlands: Construction for at-grade alignment configurations, proposed stations, storage and light maintenance facility, and supporting systems and infrastructure Ecology, Wildlife, and Water. Resources: Temporary construction activities will include construction of the Project alignment, and construction of Project stations, and other ancillary or supporting Project infrastructure that would result in short-term and long-term impacts to natural resources.	controlled blasting as defined by the final construction plans, including monitoring program. IRT only: Direct Contractor to properly treat, manage, and dewater groundwater encountered during deep excavation activities in accordance to state and federal regulations. IRT only: Direct Contractor to execute safety protocols associated with the potential to encounter hydrogen sulfide gas encountered during excavation. IRT: Direct Contractor to properly treat and manage contaminated soils and groundwater in accordance to state and federal regulations. BRT: Direct Contractor to properly treat and manage contaminated soils in accordance to state and federal regulations. IRT and BRT: Require the Contractor to develop and implement a Dust Control Plan that includes pro-active measures to prevent discharge of dust into the atmosphere. In areas not subject to traffic, apply products and materials including vegetative cover, mulch, and spray adhesives on soil surfaces to prevent airborne migration of soil particles. In areas subject to traffic, apply products and materials including water sprinkling, polymer additives, barriers, windbreaks, and wheel washing. IRT and BRT: Require sediment and erosion controls and stormwater maintenance facilities to be implemented in accordance with the 2010 Western New York Stormwater Coalition Stormwater Management Plan as well as all applicable state and federal permit requirements. Ecology, Wildlife, and Water Resources: IRT and BRT: Direct Contractor to conduct tree clearing during, as much as possible, outside the migratory bird nesting season; LRT and BRT: Tree removal would be timed, as much as possible, to occur outside the migratory bird nesting season, which occurs generally from April 1—September 15 and as early as March 1 for some species. IRT and BRT: If tree removal must occur during the nesting season, two biological surveys would be conducted: one 15 days before and a second 72 hours before the construction. The surveys would be performed by a biologist and surve



Environmental	LRT Build	BRT Build	Mitigation
Resource No I	Alternative Project stations, construction of a bridge across Bizer Creek, and other ancillary or supporting Project infrastructure that would result in short-term and long-term impacts to natural resources. ise: LRT Build Alternative construction activities would include tunneling, construction of the Project alignment, and construction of Project stations, and other ancillary or supporting Project infrastructure that would result in construction related noise impacts. Dration: LRT Build Alternative construction of the Project alignment, and construction related noise impacts. Dration: LRT Build Alternative construction activities will include tunneling, construction of the Project alignment, and construction of the Project stations, and other ancillary or supporting Project infrastructure that would result in construction related vibration impacts.	Noise BRT Build Alternative Noise BRT Build Alternative construction activities will include construction of the Project alignment, and construction of Project stations, and other ancillary or supporting Project infrastructure that would result in construction related noise impacts. Vibration: BRT Build Alternative construction activities will include construction activities will include construction of the Project alignment, and construction of Project stations, and other ancillary or supporting Project infrastructure that would result in construction related vibration impacts. Air quality: Construction of at-grade alignment configurations, proposed stations, storage and light maintenance facility, and supporting systems and infrastructure.	juveniles have fledged and when there is no evidence of a second attempt at nesting. LRT and BRT: Avoidance measures would be incorporated into the design of the project, where feasible. If construction were to require removal of a protected tree, a permit would be required in accordance with applicable local codes and ordinances. LRT and BRT: After construction is complete, trees will be planted that are at least three inches in diameter and three to four feet in height. Planted trees would be maintained such that 90 percent are in good condition after 6 months and irrigation would be carried out until the tree is established. LRT and BRT: Direct Contractor to revegetate disturbed areas in accordance with a Landscape Restoration Plan to include native plant species. LRT and BRT: Disturbed areas not used for transportation infrastructure would be revegetated with species indigenous to Western New York to the extent practicable in accordance with a landscape plan. LRT and BRT: Direct Contractor to use netting to capture construction debris and avoid its potential to fall within waterways. LRT and BRT: Require erosion and sediment controls in accordance with the 2016 New York State Standards and Specifications for Erosion and Sediment Control ("Blue Book"). LRT and BRT: Require a Stormwater Pollution Prevention Plan that would meet the requirements of State Pollutant Discharge Elimination System General Permit for Stormwater Discharges from Construction Activity (GP-0-25-001). LRT and BRT: Direct contractor to follow the requirements of the NYSDOT Highway Design Manual, Chapter 8 Highway Drainage, specifically Inlet protection at existing stormwater inlets, sediment controls to prevent erosion and sediment from leaving the construction sites, dust control measures, spill prevention and containment measures, stabilized construction on entrance/exits, and vegetative measures to stabilize exposed soils LRT only: Constructing the tunnel segments will require dewatering of groundwater. Monitoring wells were i



Environmental Resource	LRT Build Alternative	BRT Build Alternative	Mitigation
Resource	Air quality: Construction of underground and at-grade alignment configurations, proposed stations, storage and light maintenance facility, and supporting systems and infrastructure. Traffic disruption rerouting, and temporary shutdown of traffic as a result of construction activities. Hazardous Materials: Construction activities that result in transport, removal and remediation, accidental spills, and discovery of previously unidentified hazardous or contaminated materials. Utilities: Construction activities that result in the relocation or replacement of existing utilities.	■ Traffic disruption rerouting, and temporary shutdown of traffic as a result of construction activities. Hazardous Materials: ■ Construction activities that result in transport, removal and remediation, accidental spills, and discovery of previously unidentified hazardous or contaminated materials. Utilities: ■ Construction activities that result in the relocation or replacement of existing utilities.	 LRT and BRT: Depending on the volume of ground water to be removed during construction, groundwater would be removed via dewatering utilizing one of these methods: existing dewatering systems present within the existing Metro Rail system, centrifuges, filter presses, drying beds, sludge lagoons, or gravity and low-pressure devices. The groundwater would be pumped into the local sewer system or to a nearby water body under the State Pollutant Discharge Elimination System (SPD) permit. LRT and BRT: Dewatering of groundwater will be tested, treated, and disposed in accordance with all applicable local, State, and Federal regulations. LRT and BRT: Direct Contractor to document and execute best management measures to protect surface waters, such as turbidity curtains, cofferdams, and temporary piping or diversion of waterways for any inwater construction activities, as necessary, to maintain stream flow and minimize increases in suspended sediment. LRT and BRT: Require that new culverts intended to convey surface water have a minimum width of 1.25 x bankfull and would be embedded or three sided (open bottom) to allow for passage of aquatic organisms and small terrestrial species. Provisions for wildlife passage will be incorporated in the culvert design where practicable. LRT and BRT: Require measures to reduce and avoid temporary fill placement in wetlands. Should temporarily fill placement be unavoidable, these impacts would be included within the Section 401 and 404 permits and an Article 24 "Freshwater Wetlands" permit would be obtained from the USACE and NYSDEC. LRT and BRT: Require the Contractor to include erosion and sediment control practices during construction to protect wetlands within the Project study area. LRT and BRT: Require post-construction stabilization of the stream banks near in-water construction stabilization of the stream banks near in-water construction stabilization of the stream banks near in-water construction stabilization o



Environmental Resource	LRT Build Alternative	BRT Build Alternative	Mitigation
Resource	Alternative	Alternative	prevent sedimentation on lands adjacent to or affected by the work. Noise: • LRT only: During Project final design and final construction plans, develop noise criteria and monitoring plan for noise impacts from tunneling to sensitive receptors to ensure there are no detrimental impacts. • LRT and BRT: Coordinate work operation to coincide with time periods that would least affect neighboring residences and businesses. Normal work hours would be scheduled between 6:00 a.m. and 9:00 p.m. Nighttime, Saturday morning, and Sunday construction activities would be limited to 70dBA Lmax at 50' in Noise Sensitive Areas when reasonable (schools, places of worship, medical facilities, residential areas). • LRT only: Implement temporary construction noise abatement measures that would include shrouds or other noise curtains, acoustic fabric, soundproof housings, physical barriers, and/or enclosures to reduce noise from pile drivers, compressors, generators, pumps, and other loud equipment when reasonable. • BRT only: Implement temporary construction noise abatement measures that would include shrouds or other noise curtains, acoustic fabric, soundproof housings, physical barriers, and/or enclosures when reasonable. • LRT and BRT: Restrict the use of impact and drilling equipment including pile drivers, jackhammers, hoe rams, core drills, direct push soil probes (e.g., Geoprobe), pavement breakers, pneumatic tools, and rock drills when reasonable. • LRT and BRT: Require motorized construction equipment to be equipped with an appropriate well-maintained muffler and require silencers to be installed on both air intakes and air exhaust when reasonable. • LRT and BRT: Require all construction devices with internal combustion engines to be operated with engine doors closed and with noise-insulating material mounted on the engine housing that does not interfere with the manufacture guidelines. • LRT and BRT: Require self-adjusting or manual audible back up alarms for vehicles and equipment used in areas adjacent to sens
			Vibration:



Environmental Resource	LRT Build Alternative	BRT Build Alternative	Mitigation
resource	ARCHIGUYC	ARCHIGUYC	sequences, operations, safety protocol, mitigation, and monitoring efforts. I LRT and BRT: Project final design and construction plans related to tunneling will develop vibration criteria and monitoring plan for vibration impacts to existing structures within 25-feet of construction activities. Coordinate with UB to avoid blasting proximate to Allen Hall during use of the performance space in that building. I LRT and BRT: Coordinate work operation to coincide with time periods that would least affect neighboring residences and businesses. Normal work hours would be scheduled between 6:00 a.m. and 9:00 p.m. I LRT and BRT: Restrict the use of impact and drilling equipment including caisson drilling, jackhammers, hoe rams, core drills, direct push soil probes (e.g., Geoprobe), pavement breakers, pneumatic tools, and rock drills when reasonable. I LRT and BRT: Direct Contractor to transport construction equipment and vehicles carrying rock, concrete, or other materials along designated routes that would cause the least disturbance to vibration-sensitive receptors when reasonable. Air quality: Direct Contractor to protect sensitive receptors including hospitals, schools, daycare facilities, building fresh air or ventilation intakes, elderly housing, and convalescent facilities from impacts of diesel exhaust furnes. As practical and feasible, the Contractor will: Use Tier IV rated construction equipment Ensure that diesel powered engines are located away from building air conditioners and windows. Minimize exposure of sensitive receptors in close proximity (50°) to diesel exhaust, in terms of both concentration and time. Limit idling time for diesel powered equipment to three consecutive minutes for delivery and dump trucks and all other diesel-powered equipment with limited exceptions. Before construction and as site preparations are being made, direct Contractor to complete the following activities as warranted to minimize fugitive dust emissions: Minimize land disturbance Use watering trucks to minimi



Environmental	LRT Build	BRT Build	Mitigation
Resource	Alternative	Alternative	the construction site, to prevent dirt from washing onto paved roadways. During construction, the Contractor shall perform the following to minimize fugitive dust emissions: Implement an OSHA-compliant Health and Safety Plan (HASP) for each construction site or a HASP for the entire Project. Cover trucks when transferring materials. Use watering trucks or dust suppressants such as calcium chloride on unpaved traveled paths. Minimize unnecessary vehicular and machinery activities and enforce onsite speed limits. Minimize dirt track-out by washing or cleaning trucks before leaving the construction site. An alternative to this strategy is to pave a few hundred feet of the exit road just before entering the public road. After construction, the Contractor shall perform the following to minimize fugitive dust emissions: Revegetate any disturbed land that is not used. Remove unused material. Remove dirt piles. Revegetate all vehicular paths created during construction to avoid future off-road vehicular activities. Direct Contractor to use solar powered digital signs, including arrow panels and portable variable message signs when reasonable. Implement an ambient air quality monitoring program during construction that will be overseen by Metro. The program would identify the locations and durations of ambient air quality monitoring and protocols to address any exceedances of National Ambient Air Quality Standards should they be observed. Develop and execute a CTMP. Establish aggressive completion and/or milestone dates to minimize construction durations. Refine the construction durations. Refine the construction staging plan to reduce the need for street closures and detours. Implement capacity and safety enhancements early in construction phase to reduce the impacts of later phases of the Project. Direct Contractor to shuttle construction workers from remote parking sites to construction areas, when reasonable Hazardous Materials: Require the development of a detailed Site Investigation (i.e., Pha

Detailed Site Investigation (a.k.a., Phase II ESA) - A Phase II Environmental Site Assessment is the second stage of a phased contaminated land assessment.

Soil Management Plan — A soil management plan addresses excavation, handling, and disposal of contaminated soil. This is also known as a Contaminated Material Handling Plan and can be found under Section 205 - Contaminated Soil in NYSDOT's Standard Specifications



Environmental Resource	LRT Build Alternative	BRT Build Alternative	Mitigation
			 Direct Contractor to develop a Field Organic Vapor Monitoring Plan9. Direct Contractor to develop a Project Health and Safety Plan. Direct Contractor to submit native construction materials for the appropriate testing in accordance with 6 NYCRR Part 360 series. For the removal and remediation of contaminated sites, the Contractor will be required to properly remove, contain, and transport the materials in accordance with the applicable regulations defined in 40 CFR 260-282, 300-355, and 6 NYCRR Part 370 Series. In addition, the contractor would be required to clean its vehicles to prevent off-site contamination. Require the Contractor to manage discharge of hazardous or contaminated materials or accidental spills during construction according to 40 CFR Part 61, subpart M and Part 763, 29 CFR 1910.1001, and 12 NYCRR Part 56 and 6 NYCRR Parts 610-614 regulations. During final design and before start of construction activities an Unanticipated Contamination Discoveries Plan will be developed. Utilities: Develop a utility relocation plan during final design and require contractor to advance utility relocation or replacement before construction. Require Contractor to replace utilities in-kind if not improved from existing conditions, as warranted.

Table ES-14. Project Adverse Impacts to the Environment: Indirect and Cumulative Effects and Commitment of Resources

Environmental Resource	LRT Build Alternative	BRT Build Alternative	Mitigation
Indirect and Cumulative Effects (Section 4.18)	 No adverse effects after proposed mitigation. 	 No adverse effects after proposed mitigation. 	
Commitment of Resources (Section 4.20)	 No adverse impacts after proposed mitigation. 	 No adverse impacts after proposed mitigation. 	

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Field Organic Vapor Monitoring Plan specifications can be found under Section 205 - Contaminated Soil in NYSDOT's Standard Specifications.



Table ES-15. Project Adverse Impacts to the Environment: Section 4 (f)

Environmental	LRT Build Alternative	BRT Build Alternative	Mitigation
Resource Section 4(f) (Chapter 5)	 At the time of this Draft EIS, the determination of Gateway Park's significance has not been made. The process of deciding the significance requires coordination with the owner of Gateway Park, which is the Town of Amherst. Coordination with the Town of Amherst will occur prior to the final EIS, and the results will be included therein. During construction of the LRT Build Alternative, there would be a Temporary Use of Gateway Park. The Gateway Park will be closed for construction of the tunnel using a cut-and-cover construction technique and has been identified as a potential staging area for tunnel construction. The staging area would also be used for storage and preparation of precast type segments, ventilation lines, shaft support (air, water, electricity), workshops, mixing and processing slurry for excavation, and postexcavation slurry treatment. If determined to be significant, the Gateway Park's Temporary Use would not be de minimis given that the Park would be closed to the public during construction and could be considered an adverse impact. The Section 4(f) mitigation process when an adverse impact is determined to be unavoidable is as follows: Determine that no feasible and prudent avoidance alternative exists. If avoidance is possible, it must be selected. If not, the process moves to minimization and mitigation. Select the alternative with the least overall harm. Develop and implement mitigation measures. Mitigation must be developed in consultation with the Town of Amherst for the Gateway Park. For Parks and Recreation Areas mitigation strategies may 	■ During construction of BRT Build Alternative, there would be a temporary occupancy of Ellicott Creek Trailway. The existing pedestrian bridge that crosses Ellicott Creek would be moved to the southeast to accommodate a new bridge deck for the BRT Build Alternative. The new Project bridge deck would use the existing piers remaining from a former section of the John James Audubon Parkway northbound lanes. The Project will construct a new pedestrian bridge deck for the Ellicott Creek Trailway connection over Ellicott Creek using the existing piers remaining from a former section of the John James Audubon Parkway northbound lanes. The Project will also construct the trailway connection under the bridge. The relocation of the Ellicott Creek Trailway pedestrian bridge would be temporary and would not be considered adverse in terms of the Section 4(f) statute's preservation purpose. Following construction, the trailway will be restored to its previous condition. The BRT Build Alternative would also occur within the historic property boundary of the UB North Campus and would introduce new visual elements including new transit-related infrastructure in an area currently served by a university bus system. Original plans for the campus from the 1970s included an anticipated NFTA transit corridor, and Project elements that would be installed would consist of	■ For Gateway Park and Ellicott Creek Trailway, Metro will continue to coordinate with the Town of Amherst for these Section 4(f) properties. This coordination needs to be complete prior to issuing a 4(f) determination. FTA will provide a Draft Section 4(f) Evaluation to the U.S. Department of Interior (DOI) and officials with jurisdiction for coordination and comment for a period of 45 days. Comments will be addressed in a Final Section 4(f) Evaluation. ■ The Final EIS will provide a summary of substantive comments received on the DEIS and Draft Section 4(f) Evaluation during the public review period. Concurrence from SHPO, the University at Buffalo, and the Town of Amherst is required to confirm these preliminary findings. The Final Section 4(f) Evaluation will incorporate any relevant changes necessitated by public comments.



Environmental	LRT Build Alternative	BRT Build Alternative	Mitigation
Resource	include replacing lost land with equivalent recreational value, relocating facilities (e.g., trails, playgrounds), improving access or amenities elsewhere in the park, and timing construction to avoid peak use periods. Document all possible planning to minimize harm. Coordinate with Officials with Jurisdiction Include Mitigation in the Final Section 4(f) Evaluation Monitor and Enforce Mitigation Commitments Following the construction of the LRT Build Alternative, an underground permanent easement will be required to operate the LRT Build Alternative which constitutes a Direct Project Use of Gateway Park, if determined to be a significant Section 4(f) property. Following construction, there will be no surface infrastructure present at Gateway Park that is required to operate the LRT Build Alternative. Following construction, the park will be restored to the condition in which it was originally found, and ownership will remain with the Town of Amherst. As a result, it is anticipated that this Direct Use of Gateway Park is de minimis because the Project would not adversely affect the features, attributes, or activities qualifying the property for protection under Section 4(f). During construction of the LRT Build Alternative, there would be a de minimis Temporary Use of Ellicott Creek Trailway. The existing pedestrian bridge, that crosses Ellicott Creek, would be relocated slightly southeast to accommodate a new bridge deck for the LRT Build Alternative. The Project will reposition the pedestrian bridge deck using the existing piers remaining from a	additional rail or bus-related infrastructure.	



Environmental	LRT Build Alternative	BRT Build Alternative	Mitigation
Resource	LRT Build Alternative	BRT Build Alternative	Mitigation
	former section of the John James		
	Audubon Parkway northbound		
	lanes. The Project will also		
	reconstruct the trailway		
	connection under the bridge. The		
	relocation of the Ellicott Creek		
	Trailway pedestrian bridge would		
	constitute a Temporary Use, and		
	construction activities associated		
	with moving the pedestrian		
	bridge deck are anticipated to		
	take approximately one to two		
	weeks. As a result, the		
	Temporary Use of the Ellicott		
	Creek Trailway is considered de		
	minimis, because the short		
	duration of the closure will not		
	meaningfully or substantially		
	deprive the public of access to		
	the bridge. Since the use will		
	result in a de minimis impact,		
	there is no requirement to conduct an avoidance alternative		
	analysis under 23 CFR §		
	774.3(b). Following these		
	construction activities, the		
	trailway will be restored to its		
	original condition. During this		
	short repositioning of the trailway		
	bridge, the Project will coordinate		
	with the Town of Amherst to		
	notify the community and define		
	reasonable detour routes.		
	 The LRT and BRT Build Alternative 		
	would also occur within the historic		
	property boundary of the UB North		
	Campus and would introduce new		
	visual elements including new		
	transit-related infrastructure in an		
	area currently served by a		
	university bus system. Original		
	plans for the campus from the		
	1970s included an anticipated		
	NFTA transit corridor, and Project		
	elements that would be installed		
	would consist of additional rail or		
	bus-related infrastructure.		



ES.4 PUBLIC INVOLVEMENT

The FTA and Metro are committed to an open, participatory environmental review process and have solicited early and continued feedback from the public and from agencies. Public outreach sessions encourage open discussion of Project details and issues and provide opportunities for comments and questions. These efforts will continue throughout the environmental review of the Project. Appendix J1, "Public Outreach and Coordination Report" describes the public outreach and coordination that has been implemented for the Project.

ES.4.1 Scoping

Scoping occurs early in the environmental review process and affords an opportunity for agencies and the public to provide input on a project's purpose and need, its objectives, the potential alternatives under consideration, and the environmental analysis methodology. On August 30, 2021, the FTA, in coordination with Metro, issued a Notice of Intent (NOI) to prepare an EIS in accordance with NEPA, the Fixing America's Surface Transportation Act, the New York SEQR, and Article 8 of the New York State Environmental Conservation Law and its implementing regulations. The NOI initiates public scoping for the NEPA EIS and provides information on the Project, including its purpose and need and the alternatives being considered for evaluation. The NOI also invited public comment on the environmental impacts that may be associated with the Project and the alternatives being considered for evaluation. The 45-day public comment period ended on October 14, 2021.

Metro hosted two public scoping meetings for the Project on Wednesday, September 15, 2021 (a daytime meeting from 1:00 p.m. to 2:30 p.m. and an evening meeting from 6:30 p.m. to 8:00 p.m.) using Zoom Webinar video conferencing. The scoping meetings were promoted using an "e-blast" invite to the Project contact list, distributing information to media outlets, and posting to the Project website. The Project website (https://www.nftametrotransitexpansion.com) contains copies of promotional materials and links to the presentation, facilitator script, and meeting recordings. Metro considered the comments received during the scoping period, incorporated them into the written record of the meeting, and addressed the comments in the Final Scoping Document. The Project website provides a summary of the scoping comments and responses.

ES.4.2 Draft EIS Public Comment Period and Public Hearings

A 45-day public comment period will follow the release of this Draft EIS to the public. Public hearings will be held after this Draft EIS is released to the public and during the 45-day Draft EIS public comment period. The public hearings will include informational displays and a presentation. The public hearings will provide opportunities for the public to submit comments on this Draft EIS verbally and/or in writing. Comments received during this comment period will be considered and included and responded to, as appropriate, in the Final EIS.



ES.5 OTHER INVOLVED OR INTERESTED AGENCIES

In addition to FTA and Metro, several other involved or interested public agencies or authorities have been identified for the Project. Table ES-16 lists the agencies that have been invited to serve as Cooperating or Participating Agencies for the Project along with the reason for their requested involvement and particular responsibilities. Table ES-17 lists the anticipated permits and approvals required for the Project to be implemented.

Table ES-16. List of Invited Cooperating and Participating Agencies

Agency Name	Involvement
Cooperating Agencies	
Federal Highway Administration	Traffic and transportation
U.S. Environmental Protection Agency	Section 309 Clean Air Act
U.S. Army Corps of Engineers	Section 404 Clean Water Act; 33 USC 408 (Section 408); Section 10 of the Rivers & Harbors Act of 1899
U.S. Fish and Wildlife Service	Section 7 of the Endangered Species Act
Empire State Development	Project funding
New York State Department of Transportation	Traffic and transportation
New York State Department of Environmental Conservation	New York State environmental permits
New York State Office of Parks, Recreation and Historic Preservation – State Historic Preservation Office	Section 106, National Historic Preservation Act; Section 4(f), U.S. Department of Transportation Act
Dormitory Authority State of New York (DASNY)/ State University of New York	University at Buffalo campus
Erie County Department of Public Works	Transportation right-of-way
Participating Agencies	
Greater Buffalo Niagara Regional Transportation Council	Consultation regarding traffic modeling and forecasting
Erie County Department of Environment and Planning	Consultation regarding planning and development
City of Buffalo	Consultation regarding ongoing and planned development within the Project study area and other topics as needed
Town of Amherst	Consultation regarding ongoing and planned development within the Project study area and other topics as needed
Town of Tonawanda	Consultation regarding ongoing and planned development within the Project study area and other topics as needed



Table ES-17. List of Required Project Permits and Approvals

Agency	Permit or Approval	Regulatory Authority
FTA	Floodplain Determination	Executive Order 11988 of 1977; USDOT Order 5650-2, "Floodplain Management and Protection," April 23, 1979
FTA	Wetlands Finding	Executive Order 11990 of 1977; USDOT Order 5660.1A, "Preservation of the Nation's Wetlands," August 24, 1978
FTA in consultation with ACHP and SHPO	Section 106 Effect Finding pursuant to the Nation Historic Preservation Act	54 USC 300101 et seq.; 36 CFR Part 800
FTA in consultation with DOI and SHPO	Section 4(f) Finding pursuant to Section 4(f) of the USDOT Act	49 USC § 303; 23 CFR Part 774
FHWA	Interstate Access Modification	23 CFR § 103(c)(4)(B)
NYSDEC	New York State Endangered Species Act	ECL Article 1, Title 5 § 11-0535; 6 NYCRR Part 182
NYSDEC	Article 16 Flood Control Permit	Environmental Conservation (ENV) 43-B, Article 16
NYSDOT	Consistency with Smart Growth Public Infrastructure Policy Act	ECL § 6-0101 et seq.
USFWS	Section 7 Consultation pursuant to the Endangered Species Act	16 USC §§ 1531-1544; 50 CFR Part 402
USACE	Section 404 Permit pursuant to the Clean Water Act	33 USC §§ 1251-1387 and 33 CFR §§ 320-330
NYSDEC	Section 401 Water Quality Certification pursuant to the Clean Water Act	33 USC §§ 1251-1387 and 33 CFR §§ 320-330
NYSDEC	State Pollutant Discharge Elimination System (SPDES) Permit	State Pollutant Discharge Elimination System (ECL Article 3, Title 3; Article 15; Article 17, Titles 3, 5, 7, and 8; Article 21; Article 70, Title 1; Article 71, Title 19; 6 NYCRR Part 750)
NYSDEC	Protection of Waters / Freshwater Wetlands Permit	NYSDEC/NYSDOT Memorandum of Understanding Regarding ECL Articles 15 and 24 (February 19, 1997); ECL Article 15, Title 5; 6 NYCRR Part 608; ECL Article 24; 6 NYCRR 663
Local municipalities	Local Waterfront Revitalization Program consistency review Permits and approvals for construction related to any necessary tree removal, demolition and fencing, transport of construction materials and equipment, temporary traffic controls, and utilities.	Local code and enforcement
University at Buffalo	Memorandum of Understanding	Establish terms and conditions for Project cooperation between NFTA and the University at Buffalo



Agency	Permit or Approval	Regulatory Authority
Aspen Heights	Ç	Establish terms and conditions for Project cooperation between NFTA and the developer of the Muir Woods project



ES.6 CONTACT INFORMATION

For further information on the Project, please consult the Project website (https://www.nftametrotransitexpansion.com) or the following point of contact:

Jeffery Amplement, Project Manager Niagara Frontier Transportation Authority 181 Ellicott Street Buffalo, NY 14203 (716) 855-7382

Written comments regarding this Draft EIS should be submitted to the following:

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