

Executive Summary

for the

Staten Island North Shore Bus Rapid Transit (BRT) Project Final Environmental Impact Statement

January 2024

Prepared for:



Prepared by:







Executive Summary

Introduction and Project Overview

Overview

The Metropolitan Transportation Authority (MTA) has prepared this ~~Draft~~ Final Environmental Impact Statement (~~D~~FEIS) for the Staten Island North Shore Bus Rapid Transit (BRT) Project (the Proposed Project) in accordance with New York's State Environmental Quality Review Act (SEQRA).

This SEQRA FEIS ~~will assesses~~ the proposed implementation of new and enhanced public transit service along the North and West Shores of Staten Island between West Shore Plaza (located near the intersection of South Avenue and Chelsea Road) and St. George Terminal (located near the intersection of Richmond Terrace and Bay Street) in Richmond County, New York. The 8-mile proposed alignment would consist of approximately 4.8 miles of right-of-way (ROW) from the former North Shore Railroad and a total of 3.2 miles of City roadways, such as Richmond Terrace (0.5 miles) and South Avenue (2.7 miles). As shown in **Figure ES-1**, the proposed alignment includes at-grade, elevated viaduct, and below-grade open-cut sections, with street-running portions along South Avenue (mixed traffic) and Richmond Terrace (exclusive two-lane median busway).

The Proposed Project would address the existing transportation needs in the North Shore of Staten Island and meet the demand for expanded transportation capacity through improved and priority transit service. Use of the former North Shore Railroad ROW would provide more consistent and reliable travel times and would improve transit access, capacity, and connectivity between North Shore and West Shore activity, residential centers, and the St. George Terminal. St. George Terminal provides on-island transfers between the Staten Island Railway (SIR) and connections to MTA bus routes, as well as off-island transfers to Lower Manhattan via the New York City Department of Transportation's (NYCDOT) Staten Island Ferry, and to Battery Park City and Midtown West via the NYC Ferry service immediately adjacent to the St. George Terminal.



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Figure ES-1: Proposed Staten Island North Shore BRT Alignment





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Summary of SEQRA Actions

The Proposed Project is being reviewed pursuant to the requirements of the SEQRA. The Proposed Project is also being reviewed in conformance with the New York State Historic Preservation Act of 1980 (SHPA). MTA is the lead agency under SEQRA. Although the Proposed Project is a state action, the City of New York may utilize the SEQRA EIS to make City Environmental Quality Review (CEQR) findings should it be determined that City actions are required to facilitate implementation of the project. The *2021 CEQR Technical Manual* was used to provide guidance in developing environmental analysis methodologies and in establishing impact criteria.

MTA may apply for federal funding from the Federal Transit Administration (FTA) to build the Proposed Project. If MTA intends to seek federal funding to support the capital construction of the Proposed Project, it will require a separate analysis under the requirements of the National Environmental Policy Act of 1969 (NEPA). The FTA would be the lead agency for NEPA compliance. MTA and the FTA have agreed that NEPA would occur after and separately from the SEQRA process.

Purpose and Need

The MTA Staten Island North Shore Alternatives Analysis (SINSAA), completed in 2012, and the 2019 Supplement to the 2012 SINSAA, as well as several concurrent and subsequent planning studies, have identified key, pervasive transportation issues that continue to exist in the North Shore and West Shore areas of Staten Island. The Proposed Project would address the existing transportation needs in the North Shore of Staten Island and meet the demand for expanded transportation capacity through improved and priority transit service.

The purpose of the Proposed Project is to:

- » Provide frequent, efficient, and reliable transit to serve growing demand on the North and West Shores of Staten Island.
- » Facilitate improved connections between Staten Island neighborhoods and existing North and West Shore activity centers, industries, and employment centers.
- » Offer a reliable and cost-effective transportation solution that supports adopted City and community-endorsed public policy initiatives pertaining to economic growth and development, such as the North Shore 2030.
- » Maximize transportation use of the currently unused North Shore Railroad ROW while minimizing property acquisition and disruption to the community and businesses.

The need for the Proposed Project is due to the high demand for public transit on the North and West Shores that is not effectively served by existing transit



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routes; the high demand for public transit is expected to grow in the future. Conditions influencing the need for transit improvements include:

- » Public transportation demand is higher on the North Shore than the rest of Staten Island.
- » The demographic characteristics of the North Shore—including a higher poverty rate and lower car ownership than Staten Island overall—are consistent with high use of transit.
- » Commutes on Staten Island and the North Shore are longer and more circuitous than those in New York City as a whole.
- » Transit demand will increase in the future as growth continues in North Shore communities and as the population ages.
- » Adopted plans for the North Shore and all of Staten Island have established economic development goals that require efficient, reliable transportation.
- » The existing transportation network is physically constrained and limits mobility for general-purpose and transit vehicles.

The Proposed Project's goals and objectives were developed to improve transit accessibility and mobility, reduce travel time, improve reliability, and cost-effectively support Staten Island's growth objectives within a reasonable timeframe. They were also designed to provide benefits to the community character and avoid or minimize impacts on the environment.

Alternatives Evaluated

The 2012 SINSAA assessed the implementation of new or enhanced transit service along the North and West Shores of Staten Island between West Shore Plaza and St. George Terminal. After evaluating and screening eight alternatives, the SINSAA identified three "short list" alternatives including a Transportation Systems Management (TSM), Electric Light Rail (LRT), and BRT.

Ultimately, after extensive analysis and stakeholder and public outreach, the SINSAA identified a BRT Alternative as the Preferred Alternative based on its potential to reduce travel time, improve transit access, and attract the most riders with lower capital and operating costs compared to the other alternatives evaluated. The alternatives were revisited in the 2019 Supplement to the 2012 SINSAA (the Supplement) based on the 2018 St. George Terminal Access Evaluation. The Supplement identified BRT as the Preferred Alternative.

This DEIS evaluates the With-Action Condition (the Proposed Project), and a No-Action Condition. The With-Action Condition was developed by starting with the No-Action Condition, and then adding to it the effects that are anticipated to result from the Proposed Project.



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No-Action Condition

The No-Action Condition establishes a future baseline that is used to evaluate the incremental changes expected as a result of the Proposed Project and alternatives. Under the No-Action Condition, the Proposed Project would not be implemented, and the existing former North Shore Railroad ROW would remain abandoned and unimproved. Bus service on local streets would continue to operate at existing levels on a constrained roadway network, adding to existing congestion, delay, and lack of reliable transit options as the North and West Shores continue to grow. Without the Proposed Project in place, the ability to add enhanced public transit capacity to meet growing demand would be severely hindered. Moreover, there are no other plans to realize the opportunities afforded by the presence of a separate and dedicated transit ROW. As such, the No-Action Condition would fail to meet the Purpose and Need of the Proposed Project.

With-Action Condition

The Proposed Project would implement new BRT service between West Shore Plaza and St. George Terminal. The approximately 8-mile alignment would comprise approximately 4.8 miles of ROW from the former North Shore Railroad, and approximately 3.2 miles of City streets. The proposed alignment includes at-grade, elevated viaduct, and below-grade open-cut sections, with street-running portions along South Avenue and an exclusive two-lane median busway on Richmond Terrace. On the portion of the proposed alignment that uses the former North Shore Railroad ROW, BRT service would operate within a two-lane, dedicated busway.

The proposed BRT service would re-purpose and utilize the existing taxi stand on the bus deck of the St. George Terminal as its eastern terminus and the existing West Shore Plaza shopping center as the western terminus. In between these termini, seven new BRT stations, with amenities such as platforms and shelters, and three existing, on-street South Avenue stops would be served (see [Figure ES-2](#)). Commuter parking lots would be provided at the proposed Livingston and Arlington Stations and at West Shore Plaza. A passenger pick-up/drop-off area and taxi staging area would also be provided at Arlington Station.

Analysis Framework

Methodology

Analytical methodologies used for evaluating baseline environmental conditions and the potential environmental effects of the Proposed Project are consistent with the guidelines set forth in the *2021 CEQR Technical Manual*, where applicable.



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Analysis (Build) Year

The DEIS describes existing conditions and provides an assessment of conditions in the future with and without the Proposed Project in 2035 (the Build Year), which is when the proposed BRT service would be fully operational.

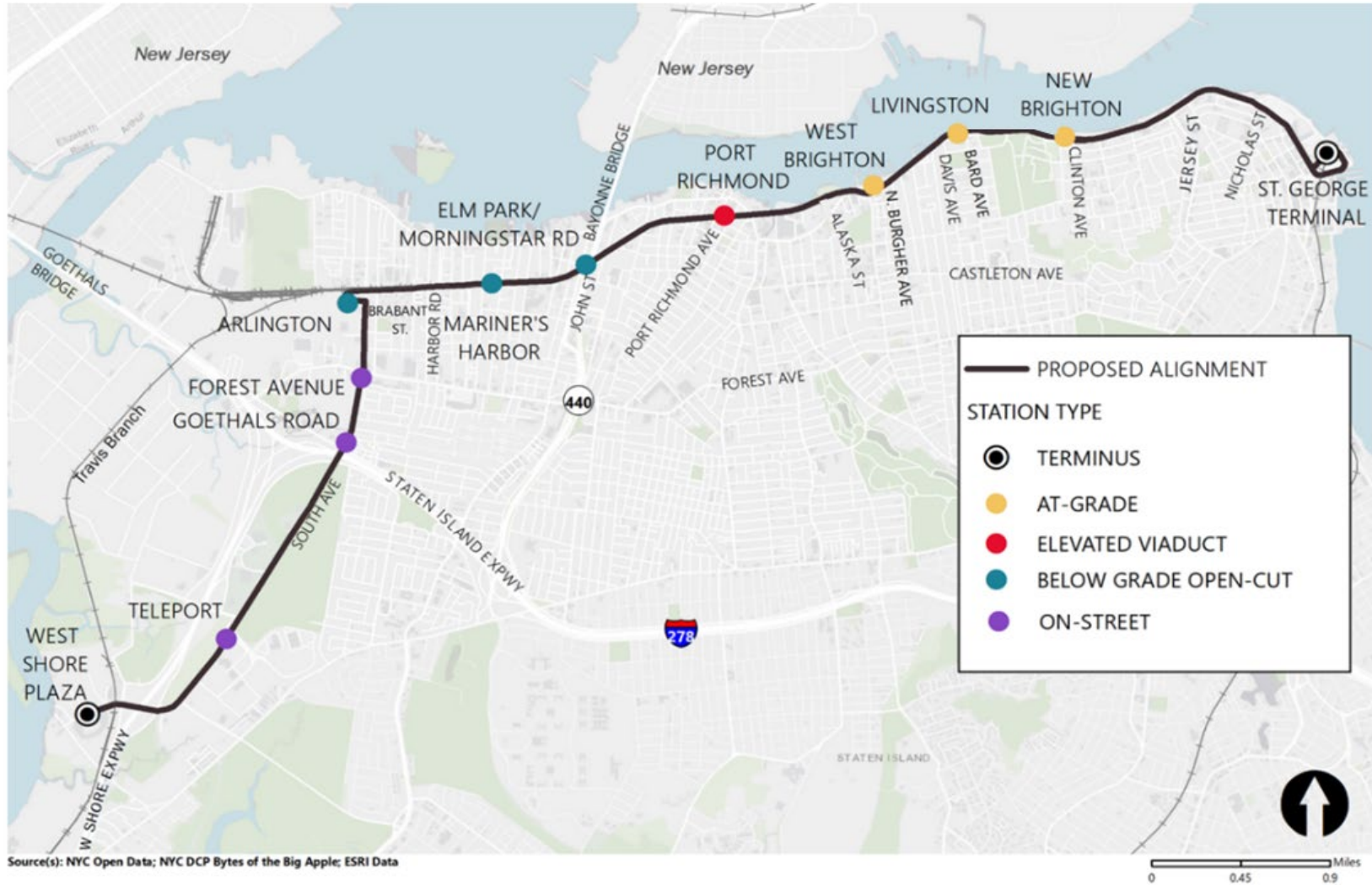
Delineation of Study Areas

As described in **Chapter 2, Project Description**, the primary study area for the Proposed Project includes the proposed alignment, proposed station areas, and ancillary facilities, as well as a 400-foot-wide buffer around each side of the approximately 8-mile proposed alignment. In some technical areas, the study area varies from the 400-foot primary study area, according to the impact category under consideration and the scope of potential impacts (see *Analysis Areas Examined in the FEIS* for additional detail). As an organizing principle for assessment purposes, the proposed alignment was divided into seven sections, each of which is distinct from an engineering standpoint or comprises generally similar land use concentrations (see **Figure ES-3**). A description of the proposed alignment and associated project elements is provided below for each section, beginning in St. George and moving west towards West Shore Plaza.



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Figure ES-2 Proposed Station Types and Locations





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Figure ES-3: Assessment Section Overview Map





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1. St. George

The proposed alignment would extend down Richmond Terrace for approximately 0.5 miles from the St. George Terminal entrance at Bay Street to the intersection of Nicholas Street and Richmond Terrace. A center-running exclusive bus lane would be constructed in each direction through this area. The ROW for this busway would be obtained by reallocating space from adjacent parking lanes, the existing concrete median, and some existing sidewalk space within the Richmond Terrace right-of-way. Lane configurations for intersection approaches along this stretch of Richmond Terrace would be modified to accommodate the busway.

The proposed alignment would pass Borough Hall and other civic uses, including the New York City Police Department (NYPD) 120th Police Precinct and the Staten Island Family Court facility located on Richmond Terrace between Wall Street and Hamilton Avenue. The Proposed Project would be designed to maintain unobstructed access to Richmond Terrace for NYPD emergency vehicles while accommodating the proposed busway.

At Nicholas Street, the proposed busway would descend from Richmond Terrace to the former North Shore Railroad ROW via a new ramp that would share an intersection with the existing access ramp to the garage ramp at the former New York Wheel site. After reaching the bottom of the new ramp, the busway would continue westward to Jersey Street in city-owned ROW parallel and south of Bank Street.

2. New Brighton Waterfront

Moving west from Jersey Street, the city-owned ROW passes through Atlantic Salt, a marine salt terminal, which extends from Jersey Street to Clinton Avenue. MTA has developed a proposed alignment through the facility in consultation with Atlantic Salt, including a shift in the ROW alignment closer to Richmond Terrace that would enable the company to maximize maintain waterfront access which is essential to its business operations. MTA will continue to coordinate with Atlantic Salt beyond the FEIS during project development phases such as NEPA and Preliminary/Final Design should the project advance.

An existing at-grade tunnel structure on the Atlantic Salt property is located north of and parallel to Richmond Terrace. After clearing the tunnel, the proposed alignment would travel toward the proposed New Brighton Station, which would be located just west of the Atlantic Salt property, fronting Richmond Terrace between Tysen Street and Clinton Avenue.

Through Snug Harbor, the Proposed Project would involve the construction of an elevated busway primarily within the existing ROW just north of Richmond Terrace. This option would deviate from the existing ROW at the eastern end of Snug Harbor Road. While the busway would primarily utilize city-owned ROW, the alignment through this area would require the conversion of approximately



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0.36 acres of existing parkland from the shoreline portion of the Snug Harbor Cultural Center and Botanical Garden to ROW.

West of Snug Harbor, before entering Livingston Station, the proposed alignment would pass behind a restaurant and a gas station on the east corner of Richmond Terrace and Bard Avenue. At Bard Avenue, a busway entrance would be provided to allow local feeder bus routes to enter it.

A one-block section from Bard Avenue to Davis Avenue that currently contains a Con Edison surface parking lot would be developed for the proposed Livingston Station. Based on coordination with Con Edison, MTA has configured the proposed Livingston Station in such a way as to accommodate the continuation of these uses with the Proposed Project in place.

3. West Brighton Waterfront

West of Livingston Station, the proposed alignment would travel through Caddell Dry Dock (Caddell), an active maritime business situated along the Kill Van Kull. The former North Shore Railroad ROW bisects the lots that comprise the Caddell property lengthwise. Currently, the former ROW is being used by Caddell as an access road. The proposed alignment through the facility has been developed in consultation with Caddell. MTA will continue to coordinate with Caddell beyond the FEIS during project development phases such as NEPA and Preliminary/Final Design should the project advance.

The West Brighton Station would be along Richmond Terrace just west of North Burgher Avenue. Exiting the west end of the Caddell Dry Dock property, the proposed alignment would pass immediately south of Heritage Park. MTA would work with NYC Parks to maintain vehicle and pedestrian access between Richmond Terrace and the waterfront parcel on the north side of the right-of-way. At Alaska Street, a new curb cut on Richmond Terrace would be installed to allow local feeder bus routes and emergency service providers to enter the busway.

4. Viaduct

West of Alaska Street, the proposed alignment would ascend to the existing elevated viaduct structure. The viaduct would cross above the Port Richmond Wastewater Resource Recovery Facility and Bodine Creek, then would shift slightly inland to cross over Richmond Terrace and through the Port Richmond neighborhood.

The proposed Port Richmond Station would be located between Maple and Park Avenues, spanning Port Richmond Avenue. West of Port Richmond Avenue, the viaduct would pass through commercial/industrial and residential areas before ending just west of Treadwell Avenue. Here it would transition to an at-grade section, which curves southwest to cross Nicholas Avenue on an overpass and passes north of the Port Richmond High School sports fields before reaching the beginning of the open-cut section.



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5. Open-Cut Section

In the vicinity of John Street, just east of the Bayonne Bridge, the proposed alignment would transition into the open-cut section of the former North Shore Railroad ROW. Elm Park/Morningstar Station, the first of two proposed stations in the open-cut section, would be between Morningstar Road and Eaton Place. Part of the proposed station and busway would be between the existing Bayonne Bridge footings.

Moving west, the proposed alignment would pass beneath a series of bridges at Morningstar Road, Granite Avenue, Lake Avenue, and Simonson Avenue. After passing beneath the Simonson Avenue bridge, the alignment would reach Van Name Avenue, where the eastern edge of the proposed Mariner's Harbor Station would be located.

6. Arlington Station

The proposed alignment would continue west under the Harbor Road Bridge before shifting slightly south. Near Roxbury Street, the alignment would leave the open cut and rise to grade. To accommodate the proposed busway and to align the busway with the existing South Avenue Bridge, Roxbury Street between Lockman and Grandview Avenues would be shifted to the south.

The proposed alignment would pass beneath the South Avenue Bridge and enter the proposed Arlington Station.

7. South Avenue

Coming out of Arlington Station, the proposed BRT route would access South Avenue from a driveway located just north of Brabant Street. The proposed BRT would operate in mixed traffic within general travel (non-separated) lanes along South Avenue in the same manner as a regular bus. Accordingly, there would be no modifications required along this 2.7-mile section of South Avenue. Three on-street BRT stops would be located on South Avenue at Forest Avenue, Goethals Road North, and Teleport Drive. West Shore Plaza would function as the western terminus of the Proposed Project.

Proposed BRT Service Plan

BRT service under the Proposed Project would be provided on two routes, the S1 and S2. Each would utilize a fully electric-powered fleet. It is anticipated that existing New York City Transit (NYCT) bus depots on Staten Island with available capacity, such as Castleton Depot, would be utilized for the storage, inspection, and maintenance of the BRT fleet.

The S1 would operate in the busway between St. George Terminal and the proposed Arlington Station before entering into mixed traffic on South Avenue to West Shore Plaza with an average running time of 25 minutes. The S2 would travel on the proposed busway between St. George Terminal and Arlington Station, with an average running time of 18 minutes.



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Additionally, three existing local bus routes, the S53, S54, and S57, would be extended to enter the busway and would use the existing non-electric bus fleet. The existing S40 route would maintain local service along Richmond Terrace. Two bus routes, the S90 and the S96, are proposed to be eliminated under the Proposed Project. The S40 and S1 BRT Route would effectively provide the geographic coverage that would be lost.

Environmental Effects

Analysis Areas Examined in the FEIS

The following section summarizes the potential impacts for each environmental resource category analyzed in this DEIS. In some technical areas, the study area varies from the primary study area described above, according to the impact category under consideration and the scope of potential impacts. Certain analyses require information from an expanded area; for example, the parking study area is the area from which individuals can reasonably walk to a bus stop (represented by a one-quarter mile radius around the proposed alignment). Other analyses—such as those related to hazardous materials and architectural resources—have a narrower study area, as potential impacts for those resource categories are focused on the physical limits of disturbance associated with the Proposed Project.

Long-term potential operational impacts are summarized in [Table ES-1](#) below. Analysis areas eliminated for further study in the Environmental Assessment Form (EAF) and short-term construction impacts are addressed in the discussion that follows.

Table ES-1 Summary of Long-Term Potential Operational Impacts

Resource	No-Action Condition	With-Action Condition
Land Use, Zoning, and Public Policy	Ongoing economic development is expected to continue based on market conditions.	No significant adverse impacts. Approximately 4.8 acres of public and private property in total would be converted to transportation ROW. A zoning map amendment would be necessary if parkland and private properties are acquired and converted to ROW.
Socioeconomic Conditions	The study area would continue to be developed with residential and commercial uses.	No significant adverse impacts. Up to five businesses employing 46 workers may be displaced. Businesses would receive just compensation and relocation assistance.



Table ES-1 Summary of Long-Term Potential Operational Impacts

Resource	No-Action Condition	With-Action Condition
<p>Community Facilities and Services</p>	<p>MTA bus service would continue to operate on a constrained roadway network. Transportation demands within the study area would continue to grow. MTA would increase transit service levels to the extent feasible. No changes to or displacement of existing community facilities and services would occur in the study area.</p>	<p>No significant adverse impacts. Improved transit service would enhance the ability of North Shore residents, workers, and visitors to access community facilities and services. The Proposed Project is not expected to introduce new utilization demands on community facilities because it would not increase the number of residents or workers in the area. As such, no changes to or displacement of existing community facilities and services would occur in the study area.</p>
<p>Open Space</p>	<p>No new open spaces are expected to be developed, and no substantial changes are planned to the existing open space.</p>	<p>Significant adverse impact to the Snug Harbor Cultural Center and Botanical Garden would result if parkland alienation is required. MTA anticipates that significant adverse impacts to North Shore Esplanade and Heritage Park would be avoided and minimized through measures such as landscape design, buffering, <u>and</u> maintenance of access. Other open spaces in the study area would not experience impacts.</p>
<p>Shadows</p>	<p>No potential for shadow impacts as the Proposed Project would not be implemented.</p>	<p>No significant adverse impacts. Project-generated shadows cast on identified sunlight sensitive resources would be relatively limited in scope and would not impact the viability of vegetation or marine habitats in the area.</p>



Table ES-1 Summary of Long-Term Potential Operational Impacts

Resource	No-Action Condition	With-Action Condition
<p>Historic and Cultural Resources</p>	<p>It is assumed that historic and cultural resources within and adjacent to the ROW would remain the same as for the existing conditions.</p>	<p>Adverse Effect upon the contextual setting of the National Historic Landmark (NHL) Sailors’ Snug Harbor State/National Register of Historic Places (S/NRHP) Historic District and therefore significant adverse impact would occur under SEQRA.</p> <p>Potential Adverse Effect on resources in the 90-foot Architectural Area of Potential Effects (APE) in Sections 1-6 depending on the degree of vibration and related physical impact during construction. Potential impact to archaeological resources in Sections 1, 2, 3, and 6 to be determined by future geotechnical soil borings and/or subsurface testing.</p>
<p>Urban Design and Visual Resources</p>	<p>Several developments are anticipated to be completed by the Build Year of 2035 that may have an effect on the study area’s visual character.</p>	<p>Significant adverse impact on the urban design characteristics and visual resources of the study area in Section 2 adjacent to the Snug Harbor campus as the context of the campus would be altered. No significant adverse impacts in Sections 1, 3, 4, 5, and 6. No impacts anticipated in Section 7 - South Avenue.</p>
<p>Natural Resources</p>	<p>Ongoing natural and human-caused conditions such as flooding, storm surges, and development would result in gradual changes over time. The projects currently anticipated to occur within the study area by the Build Year would be developed on land that is already disturbed and surrounded by urban land uses.</p>	<p>No significant adverse impacts. No expected impairments to water resources; only minor amounts of permanent fill in wetland-adjacent areas required; no impacts to significant, sensitive, or designated resources or the habitat of protected species; and no noticeable decrease in resource functions such as habitat value, recreational use, or commercial productivity.</p>



Table ES-1 Summary of Long-Term Potential Operational Impacts

Resource	No-Action Condition	With-Action Condition
Hazardous Materials	Changes in the use of the study area would likely continue, and there would still be potential for disturbance of contaminated materials that could increase exposure. Stockpiles of contaminated soil in the North Shore ROW are expected to be removed independently of the Proposed Project.	No significant adverse impacts. Best management practices (BMPs) would be used to address areas of identified contamination within the limits of disturbance.
Water and Sewer Infrastructure	No change to the existing water supply infrastructure or existing sanitary and stormwater sewer infrastructure.	No significant adverse impacts. Water and sewer infrastructure would be replaced and/or relocated in accordance with New York City Department of Environmental Protection (NYCDEP) requirements. Improvements to drainage infrastructure would accommodate anticipated stormwater runoff loads.
Solid Waste and Sanitation Services	No change to the amount of solid waste generated along the former North Shore ROW as compared to existing conditions.	No significant adverse impacts. Nominal amount of solid waste disposal (of waste generated elsewhere) at proposed BRT facilities; however, this would not be new solid waste generated as a result of the Proposed Project.
Energy	By 2040, MTA is expected to have converted their entire fleet of buses to electric-propulsion models. There would be a shift in energy consumption from traditional fuels to electric power as under existing conditions.	No significant adverse impacts. MTA would implement the use of energy-efficient technologies where feasible in implementation and operations of the BRT service, including the use of a fully electrically powered fleet.



Table ES-1 Summary of Long-Term Potential Operational Impacts

Resource	No-Action Condition	With-Action Condition
Transportation	<p>Transportation and parking demands would be expected to increase due to long-term background growth and new developments. Transit and pedestrian traffic would remain the same as existing conditions. Freight operations similar to existing conditions to support Arlington Yard are anticipated to occur.</p>	<p>Significant adverse impacts are anticipated to traffic movements at 19 different intersections during one or more analyzed time periods. Significant adverse impacts are anticipated at two sidewalk locations.</p> <p>Approximately 250 on-street parking spaces along Richmond Terrace between Bay Street and Nicholas Street would be eliminated to accommodate the proposed busway (except for the 90-degree parking on Richmond Terrace associated <u>with</u> the NYPD 120th Precinct); however, off-street parking would have capacity to accommodate the on-street shortfall. Additional transit demand generated by the Proposed Project would be satisfied by the new BRT service. No adverse impacts are anticipated to freight rail service.</p>
Air Quality	<p>No change in ambient air quality concentrations as compared to existing conditions.</p>	<p>No significant adverse impacts. The Proposed Project is not anticipated to cause or exacerbate a violation of National Ambient Air Quality Standards for any criteria pollutant on a <u>localized</u> or microscale basis. Similarly, the Proposed Project would not result in an increase in regional emissions.</p>



Table ES-1 Summary of Long-Term Potential Operational Impacts

Resource	No-Action Condition	With-Action Condition
<p>Greenhouse Gas (GHG) Emissions and Climate Change</p>	<p>MTA bus service would continue to operate on a constrained roadway network. Transportation demands within the study area would continue to grow. Higher levels of traffic congestion would result in increased vehicle emissions. Climate risks would continue to compound and synergistically interact.</p>	<p>No significant adverse impacts. Increase in ridership of the BRT and subsequent minimization of on-road travel would reduce GHG emissions. Some portions of the proposed alignment would be located within year 2050 anticipated flood hazard zones. Where feasible, the conceptually-designed BRT roadway alignment would be elevated and designed with drainage systems. In extreme weather events, the busway could flood and the MTA could decide to temporarily close the busway.</p>
<p>Noise and Vibration</p>	<p>Traffic would be expected to increase due to long-term background growth and new developments that could occur including small, moderately sized, and large-scale projects. Increases in traffic would result in increases in traffic noise.</p>	<p>Significant adverse impacts for noise are anticipated prior to mitigation. There would be a total of 20 severe noise impacts in Section 4 and 141 moderate noise impacts in Sections 5 and 6. There would be no noise impacts in Sections 1, 2, 3, or 7. There would be no operational vibration impact.</p>
<p>Public Health</p>	<p>No increase in the potential for the public to be exposed to project-related hazards. No changes to existing water supply infrastructure or to existing stormwater and sanitary sewer infrastructure. No benefits to air quality. No increase in noise or vibration due to BRT operations.</p>	<p>No significant adverse impacts. Following construction and mitigation, there would be no further potential for significant adverse noise or hazardous materials impacts. The Proposed Project would have an overall beneficial impact to water and sewer infrastructure and air quality.</p>



Table ES-1 Summary of Long-Term Potential Operational Impacts

Resource	No-Action Condition	With-Action Condition
Neighborhood Character	No potential for impact to neighborhood character as the defining features of the study area would remain similar to existing conditions.	No significant adverse impacts. No significant combined effects to the contributing elements of neighborhood character. Adverse impacts identified in other technical analyses are anticipated to be localized to the visual and historic context of the Snug Harbor Cultural Center and Botanical Garden and are not anticipated to alter the features that make the Snug Harbor campus a defining feature of Section 2.
Environmental Justice	No potential for disproportionate burden to environmental justice communities. However, environmental justice communities would continue to be affected by existing transportation mobility issues within the study area.	No significant adverse impacts. No disproportionate burden to environmental justice communities. There would be benefits to the communities served by MTA buses in Staten Island.

Environmental Topics Eliminated from Further Study in the EAF

In accordance with SEQRA, MTA completed an EAF to determine the environmental significance of the Proposed Project. MTA identified potential project impacts to environmental areas in a Full EAF (FEAF) and eliminated topics from further study. No impacts to the following environmental areas were identified:

- » Geological Features
- » Groundwater
- » Agricultural Resources
- » Critical Environmental Areas
- » Community Plans
- » Community Character

Construction Effects

The Proposed Project would be designed, scheduled, and staged to minimize disruption to abutting neighborhoods and the environment. Although some interference is unavoidable due to the nature of construction, the duration and severity of these effects would be minimized by implementing strong controls



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and best management practices (BMPs). Potential construction-related impacts of the Proposed Project would be temporary.

The overall construction period of the Proposed Project is anticipated to commence in early 2032 and be completed in late 2034. While the overall construction period could take up to three years, no one location along the proposed alignment is anticipated to experience construction activities for the full duration of the three-year construction period. The construction duration would vary across locations extending for longer or shorter durations depending on the complexity of the work effort.

Construction-related assessments for each technical area analyzed in the EEIS are discussed in more detail in **Chapter 21, Construction**. Other than the construction-related impacts identified below, no significant adverse construction-related impacts are expected as a result of the Proposed Project.

The following sections summarize the potential for significant adverse impacts, as well as mitigation measures, for construction-related traffic, vibration, and noise.

Transportation

The traffic analysis assessed construction-generated traffic at nine key intersections during the peak construction quarter (Q2 2033) for the AM and PM construction peak hours. The traffic analysis assumes that construction workers would follow typical arrival and departure patterns. Construction-related traffic impacts are not anticipated during the AM construction peak hour. Seven intersections would experience significant impacts during the PM construction peak hour. Significant impacts at six intersections would be mitigated with signal timing modifications, while impacts at the intersection of Richmond Terrace and Jewett Avenue would not be able to be mitigated. A traffic monitoring program would be implemented at the intersections that are anticipated to experience significant construction-related traffic impacts during the peak quarter of construction, and traffic enforcement agents would be deployed where deemed necessary in consultation with NYCDOT. If severe adverse impacts continue, construction efforts would result in short-term unavoidable adverse impacts to the affected intersections.

Noise

According to the FTA construction noise guidelines, impacts from construction noise would occur prior to mitigation at residences within approximately 75 to 125 feet, commercial properties within approximately 50 to 80 feet, and industrial receptors within approximately 30 to 50 feet of the proposed BRT alignment. The construction noise mitigation measures described in NYCDEP's rule for *Citywide Construction Noise Mitigation* would fulfill the New York State Department of Environmental Conservation (NYSDEC) noise policy to provide BMPs for construction and meet the FTA guideline criteria.



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Vibration

There would be the potential for construction vibration impacts prior to mitigation at nearby structures based on the type of building and their proximity to vibration-generating construction activities, such as pile driving or impact equipment. Construction vibration control measures would be implemented to reduce the risk of damage to all buildings and structures that are within the vibration screening distances or for historic properties that are within 90 feet of construction activities.

Mitigation Measures and Unavoidable Impacts

The Proposed Project has the potential to result in significant adverse impacts to open space, historic and cultural resources, urban design and visual resources, transportation, and noise, as well as traffic, noise, and vibration during the construction period. A number of the potential impacts identified for the Proposed Project could be mitigated. However, as summarized below and described in **Chapter 25, Unavoidable Adverse Impacts**, in some cases, impacts from the Proposed Project would not be fully mitigated. Construction-related significant impacts and mitigation measures are discussed in the preceding section. Potential mitigation measures for each of the technical areas are summarized below and described in **Chapter 23, Mitigation**.

Open Space

In the Snug Harbor area, if the final design for the Proposed Project requires the conversion of 0.36 acres of parkland to ROW for the proposed busway, the City would initiate Parkland Alienation legislation, which would identify substitute parkland of similar function and value. If it is not possible to identify the substitute land at the time the alienation legislation is introduced, the need to identify substitute land would be clearly stated in the legislation.

MTA will be coordinating continue to coordinate with NYC Parks and the Snug Harbor Cultural Center to identify ways to minimize the use of parkland, to maintain access to the waterfront, and to implement design measures that would make the busway more compatible with the adjacent park use. Additionally, the elevated busway would not preclude any of the other waterfront/access projects currently planned and/or funded by Snug Harbor, the City, or federal government.

Historic and Cultural Resources

The Proposed Project would have one or more Adverse Effects to architectural resources in the Sailors' Snug Harbor S/NRHP listed Historic District, which would constitute a significant adverse impact. If these impacts cannot be avoided, then mitigation would need to be developed to address these visual and contextual impacts. MTA is working with the New York State Office of Parks, Recreation, and Historic Preservation (OPRHP) State Historic Preservation Office (SHPO) to identify ways to minimize the Adverse Effect under the Proposed Project. Further



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mitigation options will be explored with SHPO. If mitigation is determined to not be feasible, the construction of a raised busway would constitute an unavoidable adverse impact. Should the Proposed Project move forward beyond the FEIS, SHPO and key stakeholders would continue to be involved to advance design solutions and mitigation options.

Urban Design and Visual Resources

The Proposed Project's raised busway north of Richmond Terrace would be visible from locations within Snug Harbor and would block some existing views of the Kill Van Kull. The Proposed Project would also obstruct a unique view and diminish the quality of the experience for pedestrians walking along the shoreline in this area. Potential mitigation options for the significant adverse impacts on the urban design characteristics and visual resources of the study area may include the following: modification of the proposed concrete safety barrier of the busway with a bridge-style railing that would allow for views through the structure to the water; or reduction in the lower elevation of the elevated structure to the Design Flood Elevation (DFE) to reduce its visual impact. If mitigation is determined to not be feasible, the construction of a raised busway would constitute an unavoidable adverse impact.

Transportation

Traffic Street Network

As detailed in **Chapter 15, Transportation**, significant adverse impacts are anticipated at 19 different intersections during one or more analyzed time periods. Where significant impacts were identified, potential traffic improvement measures, such as signal timing changes, were evaluated to determine whether these impacts could be mitigated during the traffic analysis peak hours. Implementation of these measures would be subject to review and approval by NYCDOT. If any of these measures are deemed infeasible and no alternative mitigation measures could be identified at a particular location, then the identified significant adverse traffic impacts at such location would be unmitigated. Specific measures for each intersection are detailed in **Chapter 23, Mitigation**.

Significant adverse traffic impacts would be mitigated at nine intersections; however, 10 intersections during at least one of the peak hours analyzed could not be mitigated during at least one of the peak hours analyzed: five of these intersections are in St. George at the eastern end of the proposed alignment; one is along Richmond Terrace in the midsection of the alignment; and three are along South Avenue at the western end of the alignment.

At these intersections, traffic impacts would not be fully mitigated due to the projected increase in background traffic volumes from trips generated by background development projects expected to be constructed and occupied by the Proposed Project's build year, as well as limited physical right of way to provide additional roadway capacity. For intersections along Richmond Terrace



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within the St. George area, the Proposed Project would reduce capacity for general purpose traffic in order to accommodate the proposed busway. However, as a mobility enhancement project, the Proposed Project would provide frequent, efficient, and reliable transit; facilitate enhanced connections between neighborhoods and activity nodes along the North and West Shores of Staten Island; and facilitate the adaptive reuse of the abandoned North Shore Railroad ROW for the public good.

Pedestrians

Due to a mix of increased pedestrian activities that would result from the Proposed Project, as well as existing obstructions and narrow sidewalk widths, significant impacts to pedestrian travel would occur at two locations: Clinton Avenue and Richmond Terrace (E leg, S sidewalk) and South Avenue and Teleport Drive (E leg, S sidewalk). Significant impacts at these sidewalk locations would not be able to be mitigated without widening the sidewalk and reducing the adjacent roadway width. Therefore, these potential impacts would remain unmitigated. Detailed analyses of pedestrian conditions are discussed in [Chapter 15, Transportation](#).

Noise

Prior to mitigation, there would be a total of 20 severe noise impacts and 141 moderate noise impacts along the proposed alignment. Severe noise impacts represent the most compelling need for mitigation to reduce the potential for significant adverse reactions. For moderate noise impacts, the change in noise level is noticeable to most people, but may not cause strong, adverse reactions from the community. Mitigation of moderate noise impacts is based on the overall noise level, the types and numbers of noise-sensitive receptors, effectiveness of mitigation measures, and mitigation costs.

Most of the severe noise impacts would occur at residential buildings in close proximity (i.e., within approximately 20 feet) of the viaduct (Section 4). Severe noise impacts would generally occur at upper floor receptors where the viaduct would not be effective in reducing noise from the buses. Two potential options to mitigate severe noise impacts include constructing noise barriers along the BRT alignment or implementing building sound insulation improvements. The two noise mitigation options would include:

- » **Noise Mitigation Option 1:** Noise barriers along the edge of the viaduct near the impacted receptors would be effective in mitigating potential severe impact. The noise barriers would need to be approximately eight to 10 feet above the roadway surface. A total of seven noise barriers constructed along the edge of the viaduct near the affected receptors would mitigate potential severe noise impacts. With the introduction of noise barriers, visual conditions would still include an elevated viaduct structure within Section 4. Therefore, it is not anticipated that Noise Mitigation Option 1 would significantly alter existing visual conditions in Section 4.



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- » **Noise Mitigation Option 2:** Building sound insulation improvements such as replacing windows and doors with ones that provide greater outdoor-to-indoor noise reduction and providing air-conditioning systems to allow homeowners to keep their windows closed, would be effective in mitigating potential severe noise impact. Such building improvements would generally be needed just for upper floors at residences with severe noise impact. As detailed in **Chapter 23, Mitigation**, sound insulation improvements would be recommended at approximately 20 residences with exposure to the BRT alignment.

Conclusion

The implementation of the Proposed Project would address the existing transportation mobility needs in the North Shore of Staten Island, an area of Staten Island that has high public transportation demand which is not effectively served by existing transit routes. On balance, the Proposed Project would enable expanded transportation capacity through improved and priority transit service primarily utilizing a long-abandoned transportation corridor. Use of the former North Shore Railroad ROW would provide more consistent, reliable travel times and would improve connectivity between existing North Shore and West Shore activity and employment centers, neighborhoods, and St. George Terminal.