SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT

For the

Proposed Reconstruction and Expansion of Jamaica Bus Depot

Project Location:

Jamaica, Queens, New York

June 2022

Prepared for:

MTA New York City Transit

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I. Introduction

In October 2019, the Metropolitan Transportation Authority ("MTA") New York City Transit ("NYCT") prepared and completed a Final Environmental Impact Statement ("EIS") for the Proposed Reconstruction and Expansion of Jamaica Bus Depot ("JBD"), located at 165-18 Tuskegee Airmen Way in Jamaica, New York ("2019 EIS") consistent with the requirements of the New York State Environmental Quality Review Act ("SEQRA") Article 8 of the New York State Environmental Conservation Law ("ECL"). This Supplemental Environmental Assessment ("SEA") assesses the potential effects that may result from the implementation of the Proposed Project, which includes the construction and operation of the new JBD, incorporating new information and assumptions made since the 2019 EIS, as well as the construction of the proposed Temporary Bus Parking Site and its temporary use during the construction period. In addition to implementation of the Proposed Project, the Proposed Actions subject to SEQRA also include the leasing of the proposed Temporary Bus Parking Site and may include approvals from other City and State agencies.

The Proposed Project involved the construction of a new modernized bus depot including facilities needed to operate, maintain and park up to 300 standard 40-foot-long buses. The 2019 EIS indicated the need for the existing Depot facilities to remain operational throughout the construction period, which would require the relocation of the existing buses parked at the Depot. Since the location of this temporary bus parking was not identified at the time of the publication of the 2019 EIS, the EIS indicated that an SEA would be necessary once the temporary bus parking location is determined. Accordingly, MTA NYCT has identified an approximately 3.5-acre vacant, grass-covered lot on the York College Campus to the north of the existing JBD as a proposed temporary bus parking site ("proposed Temporary Bus Parking Site") at 146-26 Liberty Avenue (see Figure 2: Aerial View in Attachment A: Figures). The lot is owned by the Dormitory Authority of the State of New York ("DASNY") and managed by the City University of New York ("CUNY") York College. In addition, new information and assumptions have been identified since the publication of the 2019 EIS, requiring additional assessment.

In order to assess what effect these changes may have on the findings of the 2019 EIS, a SEQRA assessment is required. This SEA follows methodologies and supplements the guidelines set forth by SEQRA. When matters arise and SEQRA guidance is non-existent, other relevant and reasonable guidance is identified and used, to the extent practicable. For example, the Federal Transit Administration ("FTA") and NYSDEC guidance could be used. In addition, CEQR guidance from the City of New York is used to address traffic issues because NYCDOT stipulations for the Maintenance and Protection of Traffic ("MPT") plan will be sought. This SEA begins with a description of the Proposed Project and its purpose and need (see Section I.A: Project Description and Section I.B: Purpose and Need), followed by a description of the procedural and analytical framework for environmental review (see Section I.C: Framework for Supplemental Environmental Assessment). Construction-period analyses are provided in Section II: Construction-Period Condition, which includes screening-level analyses for the first stage of construction (Stage 1 - Construction of the proposed Temporary Bus Parking Site) and detailed analyses of transportation, air quality, and noise and vibration for the second stage of construction (Stage 2 - Construction of the Depot and temporary construction-period use of the proposed Temporary Bus Parking Site). Operational-condition analyses are provided in Section III: Operational Condition – Depot (Reevaluation of the 2019 EIS) and consist of both screening and detailed analyses that serve as a reevaluation of the 2019 EIS. Secondary and Cumulative Effects are assessed in Section IV: Secondary and Cumulative Effects.

The scope of analysis in this SEA is limited to the assessment of the Candidate Alternative A – Principally Open Parking Design (the "Preferred JBD Alternative") which was one of the three alternatives analyzed and ultimately advanced as the preferred alternative in the 2019 EIS (i.e., this SEA will not consider multiple build alternatives for the Depot), and in accordance with the new information and assumptions (see Section I.A.1: New Information and Assumptions for this SEA).

A. PROJECT DESCRIPTION

1. New Information and Assumptions for this SEA

MTA NYCT has identified the following changes to the Proposed Actions and related new information:

- *Analysis Years.* The 2019 EIS assumed that the analysis year for operations (representing, generally, the first day of operations) would be 2025, and that the construction year with the greatest potential for traffic impacts would be 2022. It was also assumed that the years with the greatest potential for air quality and noise impacts would be 2021 and 2023. Given that the Depot construction was delayed because MTA NYCT had not selected a temporary bus parking location at the time of the 2019 EIS publication, this SEA is warranted to account for the new temporary bus parking location and, subsequently, to reassess these analysis years. Therefore, this SEA considers any changes to the surrounding context and analyzes the various environmental impact areas, as necessary, including updated detailed assessments of both operational-condition and construction-period transportation, air quality, noise and vibration, and secondary and cumulative effects. For the purposes of this SEA, the analysis year for operations would be 2027, the construction year with the greatest potential for traffic impacts would be 2025, and the years with the greatest potential for air quality and noise impacts would be 2025. Given this update to analysis years, the No-Build Alternative, as presented in the 2019 EIS, was updated for this SEA.
- *Depot Entry and Exit Points.* Through ongoing consultation with the New York City Department of Transportation ("NYCDOT"), MTA NYCT has refined the design of the new Depot's entry and exit points since the completion of the 2019 EIS.
- *Minor Street Reconfiguration.* Since publication of the 2019 EIS, NYCDOT has implemented changes to the street configuration to the east of the JBD, including the installation of exclusive bus lanes along Merrick Boulevard.
- *Street De-Mapping in Separate Action.* To accommodate NYCDOT mandates, the portion of Tuskegee Airmen Way directly north of and adjacent to the Depot site – between the fork in Tuskegee Airmen Way to the west and Merrick Boulevard to the east – would be de-mapped in the future (as a separate action, not subject to this SEQRA review) and paved with markings to facilitate bus circulation into and out of the JBD.[1] Security fencing would surround the new roadbed. This de-mapping action would comprise the Tuskegee Airmen Way roadbed, sidewalks, and parking area currently bounded by Tuskegee Airmen Way to the west and south, Merrick Boulevard to the

[1] De-mapping of this portion of Tuskegee Airmen Way is not part of the Proposed Actions currently under review; it would likely be subject to future Uniform Land Use Review Procedure ("ULURP") action and is therefore excluded from this SEA.

east, and Liberty Avenue to the north. The use of a portion of Tuskegee Airmen Way and the adjacent NYCDOT traffic island would result in a slight expansion of the Depot site and study area.

- *Proposed Temporary Bus Parking Site*. The 2019 EIS indicated the need for the existing Depot facilities to remain operational throughout the construction period which would require the relocation and parking of approximately 170 buses at an off-site location. MTA NYCT has identified an approximately 3.5-acre property (Block 10160, Lot 1 and a portion of Block 10159, Lot 3[2]) located on the CUNY York College Campus to the north of the existing JBD owned by DASNY and managed by CUNY York College as a proposed temporary bus parking site ("proposed Temporary Bus Parking Site"). MTA NYCT is attempting to secure its use for future temporary bus parking during construction.[3]

  The vacant grass covered site will be temporarily transformed into a temporary paved parking lot for buses during the construction of the new Depot. The proposed Temporary Bus Parking Site would be excavated and paved with asphalt and would feature fencing at perimeter property lines and neighbor-friendly lighting. Following the completion of the proposed Temporary Bus Parking Site, it would be used to park buses during the remainder of the project construction period. Buses would move between the existing JBD and the proposed Temporary Bus Parking Site. Buses dispatched from the proposed Temporary Bus Parking Site would exit the proposed Temporary Bus Parking Site at the Liberty Avenue driveway. Buses may return to the proposed Temporary Bus Parking Site for midday layovers and would enter from 165th Street. In the evening, buses would enter the JBD for fueling and washing in the same manner as existing operations (via westbound 107th Avenue); however, the buses would then exit the Depot via the north side of the existing Depot to Tuskegee Airman Way and enter the proposed Temporary Bus Parking Site via 165th Street. Upon completion of construction, the proposed Temporary Bus Parking Site would revert to its previous ownership. This SEA will assess the proposed Temporary Bus Parking Site in terms of its construction, as well as its utilization during construction of the new JBD, which includes on-site bus parking and bus movement patterns in the vicinity.

  The construction of the property to be used as the proposed Temporary Bus Parking Site would be approximately 11 months and would precede the construction of the new Depot. The construction activities at the Depot site will not start until the construction of the proposed Temporary Bus Parking Site (including all fencing, security systems, etc.) for bus parking is completed. Contractors would be required to comply with applicable environmental regulations and obtain necessary permits for the duration of construction of the proposed Temporary Bus Parking Site. Construction activities would follow applicable Federal, State, and local laws for building and safety, as well as

[2] The proposed Temporary Bus Parking Site (Block 10160, Lot 1 and a portion of Block 10159, Lot 3) is located within a portion of Site 9 of the CUNY York College Campus. Site 9 is located on the southeastern corner of the CUNY York College Campus and is identified on the CUNY York College website (https://www.york.cuny.edu/about/buildings).

[3] MTA NYCT has not yet reached final agreement on a lease for the property, assuming that we are able to enter into a lease, it is currently understood that once the property is no longer needed for the temporary parking of buses to facilitate the construction of the Depot, the lease will be terminated, and the property will revert to the owner. MTA NYCT currently expects to be required to restore the property to a condition with some or all of the improvements removed to CUNY's specifications. MTA NYCT's use of the property for temporary bus parking will be in compliance with applicable regulations, including zoning, to the extent required by CUNY and the City of New York.

the City noise ordinances. Construction activities for the proposed Temporary Bus Parking Site would include the development of an asphalt paved surface parking lot, installation of stormwater and catch basin system, and the installation of security systems, lighting, guardrails, fencing, and a dispatcher booth. The work will require the removal of up to four feet of soil across the entire proposed Temporary Bus Parking Site and the erection of a new retaining wall; contaminated materials would be identified and managed prior to construction and temporary construction-period use of the proposed Temporary Bus Parking Site. The parking lot would be striped for parking, and instructional signage would be erected.

2. Key 2019 EIS Information and Assumptions that Remain Valid

With the exception of the aforementioned modifications to the Proposed Project (i.e., updated analysis years, refinement of the new Depot's entry and exit points, minor street reconfiguration, use of a portion of Tuskegee Airmen Way and adjacent NYCDOT traffic island, the ability to support a zero-emissions fleet upon opening, and the construction and temporary use of the proposed Temporary Bus Parking Site to accept buses during Depot construction), the project as it was proposed and analyzed in the 2019 EIS remains unchanged, as described below:

a. *New Depot*

As was stated in the 2019 EIS,[4]

"[The Proposed Project] would be a new one-story building positioned along Merrick Boulevard, and extending southward from Tuskegee Airmen Way to 107th Avenue…[The Proposed Project] would include:

- *[The Proposed Project] consists of two buildings. The main depot building (Building A) would be located along Merrick Boulevard and would extend from Tuskegee Airmen Way to 107th Avenue. An administrative building would be located along Tuskegee Airmen Way and would extend from 165th Street to Merrick Boulevard.*
- *A three-story administrative building would provide about 7,600 square feet (sf) of administrative space on the first and second floors, and the third floor would bridge over the at-grade bus parking area and extend to the main structure providing an additional 19,700 sf. The height of the administrative building would be approximately 43 feet, which would include a four-foot parapet wall.*
- *The one-story depot building would provide approximately 125,000 sf on the first floor.*
- *The roof level of the main building would be about 26 feet above the ground floor, with a 10-foot parapet wall on all sides. A ramp at the south end of the depot building would connect the ground floor to the rooftop parking level. The height of the ramp structure is approximately 15 feet above the roof level; therefore, the*

[4] This text from the 2019 EIS is stated verbatim for the benefit of readers and is shown as indented and italicized for clarity. In some cases, minor editorial revisions may have been made to this text. However, no substantive changes have been made to any of the 2019 EIS.

height of the depot building would range from 36 feet at the north end of the facility to a maximum building height of 51 feet at the south end of the building.

- *A surface parking lot would be located west of the main depot building.*
- *A 31-foot security/sound barrier wall would be located on the west side of the depot, adjacent to the mostly residential buildings located along 165th Street. A 20-foot security/sound barrier wall would be constructed along the south side of the depot at 107th Avenue.*
- *[The Proposed Project] would have three fueling lanes, three bus wash lanes, two interior bus wash stations, one chassis wash station, and 15 maintenance bays."*

b. *Bus Parking*

As was stated in the 2019 EIS,

"[The Proposed Project] would provide a total of 305 SBE[5] parking spaces:

- *18 SBE parking spaces would be indoors on the first level of the main building;*
- *170 SBE parking spaces would be outdoors on the west side of the property; and*
- *117 SBE parking spaces would be outdoors on the roof."*

c. *Bus Circulation*

All buses returning in the late afternoon or evening would enter the proposed Depot structure via the south Merrick Boulevard driveway located just north of 107th Avenue. These buses would queue in the outdoor bus parking area west of the Depot before proceeding to the three fueling/wash lanes that will be accessed via the north apron of the Depot. When fueling and washing is complete, the buses would then park on the roof or within the outdoor bus parking area. The Depot would have several exits for buses. A driveway on the east side of the building, approximately midblock between Tuskegee Airmen Way and 107th Avenue, would allow buses to exit onto southbound Merrick Boulevard. Buses could exit on the west side of the building to the outdoor parking area and exit the Depot to the north on Tuskegee Airmen Way. An emergency exit would be located at 107th Avenue at the south end of the Depot.

d. *Depot Construction*

As was stated in the 2019 EIS,

"In order for bus operations and maintenance to remain operational during the 42-month construction period, the proposed one-story structure would be constructed along Merrick Boulevard; this would minimize interference with bus operations of the existing depot and require modest construction phasing."

[5] An SBE (standard bus equivalent) represents the space needed to park a standard 40-foot-long, single-unit bus. A 60-foot-long articulated bus is considered as 1.5 SBEs and a 45-foot-long express bus is considered as 1.15 SBEs.

e. *Costs*

As was stated in the 2019 EIS,

> *"Total project costs are estimated to be approximately $385,000,000, while the annual operational energy costs are estimated to be approximately $1,050,000."*

f. *Sustainability Policy*

As was stated in the 2019 EIS, the Proposed Project would include a Construction Environmental Protection Plan ("CEPP"). The CEPP must identify those commitments adopted by MTA NYCT that would contribute to mitigating the Proposed Actions' potential for the adverse environmental impacts during construction, while reducing the Proposed Actions' potential cumulative adverse effects in the study area.

MTA NYCT Capital Program Management is ISO 14001 certified and the continuous improvement mandate that is an intrinsic aspect of its certification also applies to the continuous improvement of environmental performance and sustainability. This provides a further framework for implementing emission reduction measures. ISO 14001 registration requires evidence of implementation of ISO 14001, which includes: procedures to maintain compliance to applicable laws; commitment to continual improvement (in a broad sense); and commitment to prevention of pollution (e.g., recycling, process changes, energy efficiency, materials substitution).

MTA NYCT has registered the Proposed Actions for Leadership in Energy and Environmental Design ("LEED") certification with the United States Green Building Council ("USGBC"), and the final design will be required to meet LEED standards for certification at the highest level achievable.

g. Transition to Electric Vehicles

On December 14, 2021, MTA NYCT announced that the redeveloped JBD would fully support an all zero-emissions fleet of up to 60 electric buses upon opening in summer 2026. However, for the purposes of a conservative analysis it is assumed in this SEA that the introduction of this all electric fleet would be phased over time.

As was stated in the 2019 EIS,

> *"Typically, the attention to and analysis of sustainable facility construction and operation is applied to an enterprise that has certain "fixed" features (e.g., a new heating/ventilation system, a new commercial/residential/mixed use structure, use of concrete versus steel, a new depot, etc.) that are planned to exist in its original condition for a reasonably foreseeable time period. In the current project, however, the reconstructed JBD is planned to:*
>
> - *Initially support 300 SBE fleet of buses; approximately 15 percent would be electric, and 85 percent would be diesel fuel; and,*
> - *Progressively migrate to 100 percent electric bus fleet within the 15 years of operation, from 2025 to 2040…*
>
> *…[T]o the extent practicable, the Preferred Alternative should:*
>
> - *Allow the facility to be retrofitted to support that future all-electric bus fleet;*

- *Not include structural/components that will need to be removed/demolished/rebuilt in the future; and,*
- *[N]ot commit more resources (building materials, funding, etc.) than necessary to support and service the fleet composition of the known future (2040).*

Consideration would be given to the facility design to enable easy retrofitting for future technology and developments that can be reasonably anticipated but may not be ready yet, thereby allowing facilities/structures to be 'fitted for but not yet fitted with' future improvements that would enhance environmental and community resiliency and sustainability."

B. PURPOSE AND NEED

As was stated in the 2019 EIS,

"The original bus depot design configuration cannot provide adequate maintenance for the current buses; specifically, articulated buses. Further, the JBD's transportation and maintenance staff amenities are in poor condition and in need of improvement. Moreover, the depot does not meet the Unified Buses Planning and Design Guidelines and current code standards, such as Americans with Disabilities Act of 1990 (ADA) the Accessibility Guidelines (ADAAG). The current depot cannot be expected to service the projected number of buses required to meet the increased ridership demands in this section of Queens, nor could it respond to new demands resulting from service changes that may necessarily occur (i.e., resulting from changes in depot/route assignment reconfigurations). Additionally, the depot would not be able to service the emerging generation of electrical buses which is expected to be fully implemented by NYCT in 2040…

The purpose of the project is to develop a reconstructed JBD that can:

- *Manage the operations/maintenance and on-site bus storage of up to 300 Standard Bus Equivalents (SBEs) to serve the projected bus assignments at this depot;*
- *Allow additional capacity due to the density of bus service in the southeast section of Queens and the long-range outlook for new service demands, while accommodating potential route/depot assignment reconfigurations; and,*
- *Demonstrate the maximum potential…to minimize adverse effects/impacts to the community based on integrated consideration of engineering, economic, and environmental factors.*

The need for the project results from:

- *Upgrade the antiquated technology and facilities at the existing JBD to provide appropriate operation and maintenance services for a modern bus fleet;*
- *Increase bus service and storage capacity to meet the growing demand for bus service; and,*
- *The long-term inability of NYCT to secure a new property(ies) in the region to manage the current and estimated future bus demand capacity."*

While the purpose and need for the Proposed Project remain unchanged, there is a specific need – as identified in the 2019 EIS – to temporarily park buses within approximately five miles of the JBD during the construction period, thereby enabling service to continue at current levels. Construction of the Depot was delayed as MTA NYCT had not identified a suitable candidate location for temporary bus parking at the time of 2019 EIS publication; however, the Proposed Project can now progress with the proposed Temporary Bus Parking Site identified for temporary construction-period bus parking.

C. FRAMEWORK FOR SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT

1. Scope of Environmental Analyses

This SEA is organized around two sets of analyses, 1) construction-period analyses (see **Section II: Construction-Period Condition**), and 2) reevaluation of the operational condition (see **Section III: Operational Condition – Depot (Reevaluation of the 2019 EIS)**).

The construction-period analyses consider the two stages of construction: 1) construction of the proposed Temporary Bus Parking Site ("Stage 1") and; 2) the construction of the Depot and temporary construction-period use of the proposed Temporary Bus Parking Site ("Stage 2"). The evaluation of Stage 1 construction (i.e., the construction of the proposed Temporary Bus Parking Site) is presented in **Section II.B: Stage 1 Construction**. The evaluation of Stage 2 construction (i.e., the construction of the Depot and temporary construction-period use of the proposed Temporary Bus Parking Site) requires specific analyses of transportation, air quality, and noise and vibration (see **Section II.C: Stage 2 Construction (Transportation, Air Quality, and Noise and Vibration)**).

Operational-condition analyses are provided in **Section III: Operational Condition – Depot (Reevaluation of the 2019 EIS)** and serve as a reevaluation of the 2019 EIS.

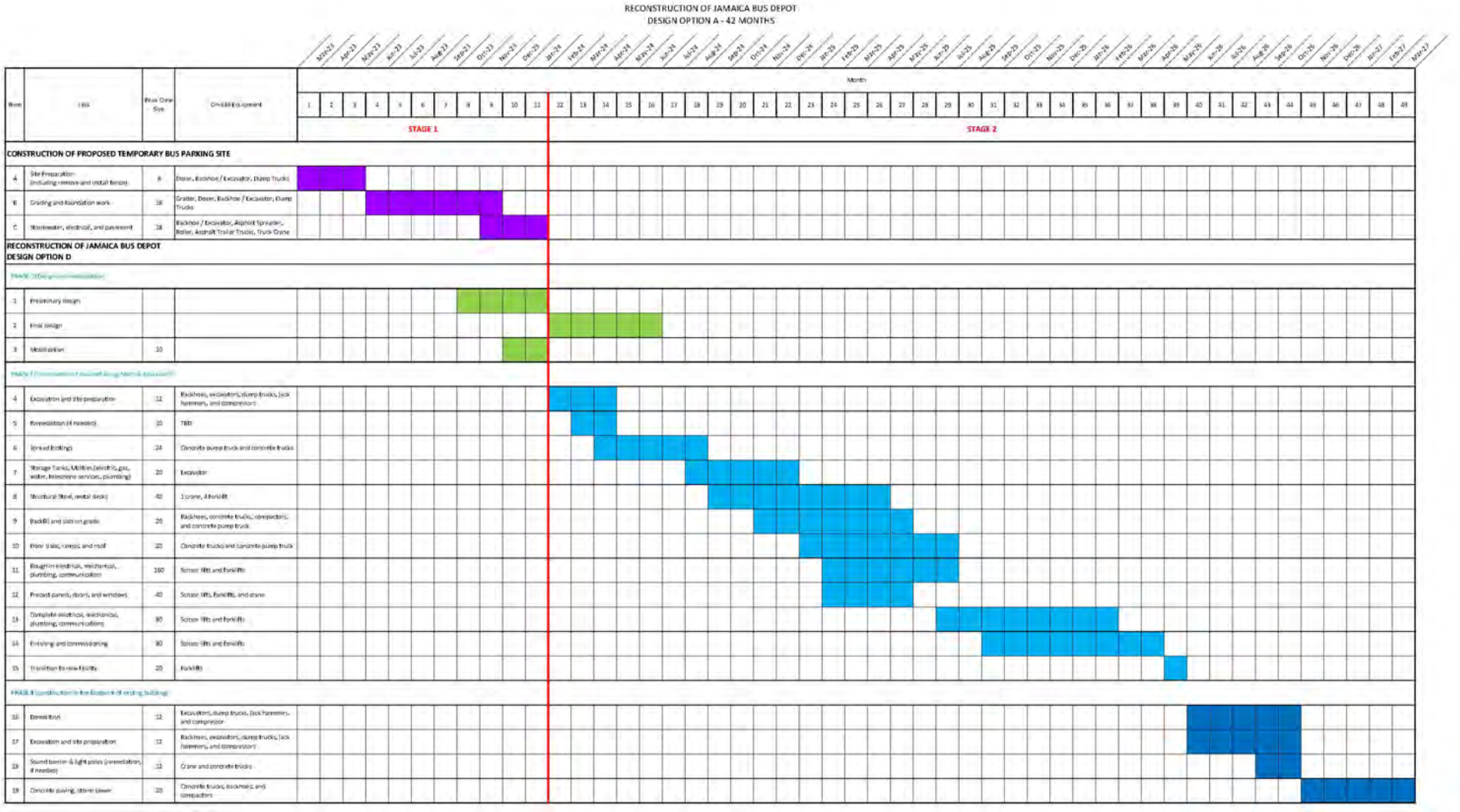
2. Analysis Years and Construction Timeline

This SEA analyzes the effects of a proposed action on its environmental setting. Typically, a proposed project, if approved, would take place in the future, and so future conditions must be projected. This projection is made for a particular year, generally known as the "analysis year" or the "build year," which is the year when the Proposed Project would be substantially operational.

The Proposed Project could have potential significant adverse environmental impacts during its operational phase (the effects of the operation of a bus depot); therefore, the analysis year 2027 (representing, generally, "first day of operations"), is considered the operational year in this document for the Proposed Actions. Conditions in the future without the Proposed Actions, (i.e. the No-Build condition), have been evaluated to compare conditions in the future with the Proposed Actions for the analysis year.

The construction-period for the Proposed Project is anticipated to begin in 2023 and last in total 49 months. Stage 1 of construction, the initial 11 months of the construction period, would consist of the construction of the proposed Temporary Bus Parking Site into a paved parking lot for buses. Stage 2 of construction, the remaining 38 months, would see the reconstruction and expansion for the new Depot (see below for the proposed construction schedule). The critical construction year – the period when construction activity has the greatest potential for environmental impacts – would vary depending on the resource category.

For example, the greatest potential for transportation impacts, has been determined to be in 2025 when the combination of construction-related trucking activity and number of construction workers would be at a peak (see Section II: Construction-Period Condition). For noise and air quality impacts, the construction activities related to excavation and demolition activities would be considered the peak period, which would occur in approximately 2025 (see Section II: Construction-Period Condition).



Note: Except for the inclusion of time for preparing the proposed Temporary Bus Parking Site (indicated in purple above), the proposed construction schedule remains the same as in the 2019 EIS; this schedule also shows the new build year.

As the build year has been updated, the No-Build projects (i.e., those projects in close proximity that would be completed by the identified build year regardless of the Proposed Project) previously presented in the 2019 EIS have been reevaluated. The 2019 EIS noted two projects that were under construction and which have since been completed: an 89-unit mixed-use affordable housing development at 92-61 165th Street and a commercial structure with a mezzanine located at 104-32 Merrick Boulevard. A review of the New York City Department of City Planning ("DCP") Zoning Application Portal ("ZAP") on January 4, 2022, as well as a fall 2021 field visit, did not indicate any pending developments within the expanded 400-foot study area for the Proposed Project. However, outside of the expanded 400-foot study area, an application from the Department of Small Business Services ("SBS") to expand and amend the Sutphin Boulevard (Downtown Jamaica) Business Improvement District ("BID") in the vicinity of the expanded study area is currently in the public review process.[6] Given these considerations, it is assumed that the No-Build Alternative would largely resemble existing conditions within the 400-foot study area. However, for the transportation analysis, which considers a larger network-based study area, four No-Build projects were identified: 1) 90-02 168th Street: 614-unit residential and 24,000 square foot commercial building; 2) 92-32 Union Hall Street: 110-room hotel; 3) 160-05 Archer Avenue: mixed-use retail and 315-unit residential building; and 4) 163-05 Archer Avenue: 605-unit residential building.

3. Procedural Framework

As with the 2019 EIS, this SEA is prepared pursuant to SEQRA, Article 8 of the Environmental Conservation Law (ECL §§ 8-0101 et seq.) and its implementing regulations, Title 6 NYCRR §617. As the Proposed Project is located within Queens, New York, the *New York City Environmental Quality Review ("CEQR") Technical Manual* is used for guidance, so as to account for the unique local environmental conditions of New York City. All analyses provided in this SEA both meet the regulations of SEQRA and adhere to the guidance of the *CEQR Technical Manual*.

Lead Agency. The lead agency for the project was established as MTA NYCT prior to the 2019 EIS and remains unchanged for this SEA. No new determination of significance will be issued beyond the Positive Declaration issued prior to the 2019 EIS on May 18, 2016. During the preparation of this SEA, MTA NYCT has coordinated with NYCDOT, New York State Historic Preservation Office ("SHPO"), the New York Natural Heritage Program ("NYNHP"), the New York State Department of Environmental Conservation ("NYSDEC"), the New York City Department of Environmental Protection ("NYCDEP"), the New York City Department of Parks and Recreation ("NYCDPR"), and the U.S. Fish and Wildlife Service ("USFWS") on the preparation of several of the analyses provided in this SEA.

Public Outreach. A Notice of Availability was published for the Draft SEA in the New York Daily News and Queens Chronicle on February 23, 2022, the same day that the document will also be made publicly available online. The Draft SEA will be open for public comment for 30 days until March 24, 2022 at 5:00 PM. All public comments provided during this period will be included, categorized, and addressed in the publication of the Final SEA, which will be completed by March 31, 2022.

[6] Source: DCP ZAP.

Coordination. The Proposed Project would require a number of City and State approvals and coordination with various City and State agencies as listed below:

- MTA NYCT & MTA Board;
- NYSDEC;
- NYNHP & USFWS;
- NYCDOT;
- NYCDEP; and
- NYCDPR.

Statement of Findings. The lead agency must adopt a formal set of written findings based on this SEA. In accordance with 6 NYCRR Part 617.11(d), the SEQRA Findings Statement issued in connection with a project approval must: (i) consider the relevant environmental impacts, facts, and conclusions disclosed in this SEA; (ii) weigh and balance relevant environmental impacts with relevant social, economic, and other considerations; (iii) provide the rationale for the agency's decision; (iv) certify that the requirements of 6 NYCRR Part 617 have been met; and (v) certify that, consistent with social, economic, and other essential considerations, and considering the reasonable alternatives available, the action is one that avoids or minimizes adverse environmental impacts to the maximum extent practicable, and that adverse environmental impacts will be avoided or minimized to the maximum extent practicable by incorporating as conditions to the decision, those mitigation measures identified as practicable.

II. Construction-Period Condition

A. INTRODUCTION

This SEA includes a review of the changes to the Proposed Project since the 2019 EIS, including an updated construction year with the greatest potential for impacts, changed baseline conditions, and the identification of the location of the proposed Temporary Bus Parking Site. Construction-period conditions are considered, first, for the construction of the proposed Temporary Bus Parking Site, followed by construction of the Depot and the temporary construction-period use of the proposed Temporary Bus Parking Site.

The construction-period for the Proposed Project would last in total 49 months and would comprise two stages: "Stage 1" comprising the construction of the proposed Temporary Bus Parking Site and; "Stage 2" comprising the construction of the Depot and temporary construction-period use of the proposed Temporary Bus Parking Site:

- Stage 1 would entail the transformation of a vacant, grass-covered lot to an asphalt-paved parking lot and would comprise the initial 11 months of the of the 49 month construction period. The construction of the proposed Temporary Bus Parking Site must be completed before any construction of the new Depot can begin (i.e., there will be no overlapping of the proposed Temporary Bus Parking Site construction activities with any other Depot project construction activities). The evaluation of Stage 1 construction is presented in Section II.B: Stage 1 Construction.
- Stage 2 would comprise the remaining 38 months and would entail the construction of the Depot and temporary construction-period use of the proposed Temporary Bus Parking Site (see Section

I.C.2: Analysis Years and Construction Timeline for the proposed construction schedule). The construction year with greatest potential for impacts related to transportation, air quality, and noise and vibration would occur during Stage 2 (see Section II.C: Stage 2 Construction (Transportation, Air Quality, and Noise and Vibration)).

B. STAGE 1 CONSTRUCTION

1. Introduction

Stage 1 construction would result in the creation of the proposed Temporary Bus Parking Site, which must be completed before any Stage 2 construction of the new Depot can begin (i.e., there will be no overlapping of the proposed Temporary Bus Parking Site construction activities with any other Depot project construction activities). The following screening-level analyses assess potential effects of the proposed Temporary Bus Parking Site. As these analyses determine that no significant adverse impact would result for any of the technical areas analyzed in this section, no further analysis is warranted. (See Section II.C: Stage 2 Construction (Transportation, Air Quality, and Noise and Vibration) for information describing construction-period transportation, air quality, and noise and vibration analyses.)

2. Historic and Cultural Resources

This screening analysis assesses potential effects to historic and cultural resources that may result with the proposed Temporary Bus Parking Site. (No additional construction-period analysis of historic and cultural resources related to the Depot site is warranted beyond what is provided in the 2019 EIS.)

According to the *CEQR Technical Manual*, historic and cultural resources are divided into two main categories: archaeological resources and architectural resources. Archaeological resources are physical remains of past activities that generally are found below ground. These archaeological resources may date to the Native American, or "precontact" period, or the historic period, which includes the period from the European colonization of the area through the recent past. Architectural resources can include buildings, structures, sites, districts, and objects.

As part of the environmental review process for the proposed Temporary Bus Parking Site, a Phase IA Cultural Resources Assessment is currently underway to identify known and potential archaeological and architectural resources within the Area of Potential Effect ("APE") associated with the proposed Temporary Bus Parking Site. The assessment herein employs the same methodology as outlined in the 2019 EIS, which follows the guidelines set forth in the *CEQR Technical Manual* and the processes established in the National Historic Preservation Act ("NHPA") and related legislation. The APE for archaeological resources is limited to the locations of proposed ground disturbance, consisting of Block 10160, Lot 1 and a portion of Block 10159, Lot 3, which comprise the proposed Temporary Bus Parking Site. The architectural APE is defined as the area within 400 feet of the proposed Temporary Bus Parking Site (see Figure 3: Construction-Period – Architectural and Archaeological APE and Figure 4: Construction-Period – Historic Resources in Attachment A: Figures).

From what is known of precontact period settlement patterns in New York City and Long Island, most habitation and processing sites are found in sheltered, elevated sites close to wetland features, major waterways, and with nearby sources of fresh water. The Phase IA Cultural Resources Assessment underway

is expected to confirm that in its natural condition the proposed Temporary Bus Parking Site was located nearby a small creek and, with its level terrain, would have represented a favorable location for Native American settlement. However, the proposed Temporary Bus Parking Site has experienced substantial disturbance that has likely destroyed much, if not all, of the soils in the upper reaches of the soil column, where precontact period archaeological sites are normally located. It is anticipated that the proposed Temporary Bus Parking Site has a low potential for hosting precontact cultural remains and that there are no additional historic resource concerns for the proposed Temporary Bus Parking Site; therefore, it is likely that no additional archaeological investigations will be recommended. Overall, given the level of disturbance across the proposed Temporary Bus Parking Site, it is anticipated that the Phase IA Cultural Resources Assessment will confirm that there is little to no historic period archaeological sensitivity on the proposed Temporary Bus Parking Site.

Of the 25 architectural resources listed in or eligible for listing in the S/NRHP located within ½-mile of the proposed Temporary Bus Parking Site, none are on or within a 400-foot radius of the proposed Temporary Bus Parking Site, nor are there New York City Landmarked resources (see Table 1: National Register of Historic Places Eligible and Listed Resources). Further, none of the buildings or structures within a 400-foot radius of the proposed Temporary Bus Parking Site appear to meet criteria for S/NRHP eligibility. Additionally, the Phase IA Cultural Resources Assessment underway is expected to confirm that there is no remaining precontact or historic period archaeological sensitivity on the proposed Temporary Bus Parking Site and, therefore, there would be no impacts to archaeology as a result of the construction activities. Therefore, no additional archaeological investigations are recommended, and there are no additional historic resources concerns for the proposed Temporary Bus Parking Site. Therefore, the proposed Temporary Bus Parking Site does not have the potential for significant adverse impacts related to historic and cultural resources.

Table 1: National Register of Historic Places Eligible and Listed Resources

Item	Last Action	Name	Within ½ Mile of Proposed Temporary Bus Parking Site
1	Listed	Grace Episcopal Church Complex	X
2	Listed	King Manor (Rufus King House)	
3	Listed	La Casina Nightclub – Roxanne Swimsuit MFG	X
4	Listed	Jamaica Savings Bank	X
5	Listed	Office of the Register/Jamaica Arts Center	X
6	Listed	Sidewalk Clock 16-11 Jamaica Ave	X
7	Listed	J. Kurtz & Sons Store Building	X
8	Listed	Jamaica Chamber of Commerce Building	X
9	Listed	US Post Office – Jamaica Main	X
10	Listed	Prospect Cemetery	X
11	Listed	Prospect Cemetery: Chapel of the Three Sisters	X
12	Listed	Prospect Cemetery Chapel of the Sisters	X
13	Listed	St. Monica's Roman Catholic Church	X
14	Listed	First Reformed Dutch Church of Jamaica	X
15	Eligible	Magill Memorial Building	X
16	Eligible	Presbyterian Manse	X
17	Eligible	First Presbyterian Church of Jamaica	X
18	Eligible	Suffolk Title & Guaranty Co.	X
19	Eligible	Fourth Regiment Armory (204th Field Artillery) – Jamaica Armory	X
20	Eligible	PS 116 William C. Hughley School, ca. 1924	X
21	Eligible	P.S. 48 Queens	X
22	Eligible	St. Joseph's Roman Catholic Parish	
23	Eligible	South Jamaica Houses I	X
24	Eligible	Mary Immaculate Hospital	
25	Eligible	Soldiers' and Sailors' Monument (SRB approved but not listed)	

Source: New York State Cultural Resource Information System ("CRIS").

3. Social and Economic Conditions

a. Land Use, Zoning, and Public Policy

This screening analysis assesses potential effects to land use, zoning, and public policy that may result with the proposed Temporary Bus Parking Site. According to the *CEQR Technical Manual*, a preliminary land use and zoning assessment includes a basic description of existing and future land uses and zoning information and describes any changes in zoning that could cause changes in land use. It also characterizes the land use development trends in the area surrounding a project site that might be affected by a proposed project and determines whether a proposed project is compatible with those trends or may affect them.

The assessment herein employs the same methodology as outlined in the 2019 EIS, which follows the guidelines set forth in the *CEQR Technical Manual* for a preliminary assessment. The study area for land use is defined as the area within 400 feet of the proposed Temporary Bus Parking Site (see **Figure 5:**

Construction-Period – Land Use Study Area in Attachment A: Figures). This study area is generally bounded by 160th Street to the west, mid-block between Tuskegee Airmen Way and 107th Avenue to the south, Merrick Boulevard to the east, and Clayton Road to the north.

Directly abutting the proposed Temporary Bus Parking Site on the corner of Liberty Avenue and Guy R. Brewer Boulevard is the Methodist Cemetery, which is not part of the proposed Temporary Bus Parking Site. Land uses within the proposed Temporary Bus Parking Site study area are generally characterized by commercial and industrial/manufacturing uses to the east, as well as several institutional uses scattered throughout, the most notable being CUNY York College. The proposed Temporary Bus Parking Site and the majority of the proposed Temporary Bus Parking Site study area is situated within an R6 zoning district (see Figure 6: Construction-Period – Zoning in Attachment A: Figures). Additionally, the proposed Temporary Bus Parking Site and study area are not situated within a coastal zone, historic district, or other local, State, or Federal special planning districts. They are, however, situated within the Food Retail Expansion to Support Health ("FRESH") program-designated area for zoning and tax incentives and subject to the guidance of OneNYC.

The construction of the proposed Temporary Bus Parking Site would necessitate a change in land use of the currently vacant, grass-covered lot to a surface parking lot. However, a surface parking lot would not represent a new or incompatible land use to the area, and this change would be temporary in nature and isolated to the proposed Temporary Bus Parking Site itself. Further, MTA is not subject to New York City zoning requirements. Additionally, the construction of the proposed Temporary Bus Parking Site would not change existing zoning controls in the proposed Temporary Bus Parking Site study area. Regarding public policy, the nature of the proposed Temporary Bus Parking Site is such that it is not subject to nor would it be affected by the FRESH program; the proposed Temporary Bus Parking Site would also be consistent with the purpose of the OneNYC plan as it would represent an investment in existing infrastructure to better serve New York City's transit needs. Therefore, the proposed Temporary Bus Parking Site does not have the potential for significant adverse impacts related to land use, zoning, and public policy.

b. Socioeconomics

This screening analysis assesses potential effects to socioeconomics that may result with the proposed Temporary Bus Parking Site. Per the guidance of the *CEQR Technical Manual*, an assessment of socioeconomic conditions is warranted when a project would result in direct displacement of existing residential populations, businesses, or institutions on a project site; or if it would result in indirect residential or business displacement in a study area; or if it would result in adverse effects on specific industries.

The proposed Temporary Bus Parking Site comprises a vacant, grass-covered lot and, thus, its temporary transformation to a bus parking lot would not result in direct or indirect commercial or residential displacement impacts. Additionally, the proposed Temporary Bus Parking Site Census Tract study area is geographically located within the 2019 EIS Census Tract study area for socioeconomics (i.e., the Census Tracts generally within a half mile of the Depot site) and, therefore, the 2019 EIS socioeconomics assessment is adequate (see Figure 7: Construction-Period – Socioeconomic Conditions Study Area in Attachment A: Figures). It should be noted that the proposed Temporary Bus Parking Site ¼-mile radius does extend slightly further north into Census Tract 446.01, a Census Tract that was not included in the 2019 EIS. However, this small portion of Census Tract 446.01 contains little to no residential population and, therefore, was not included as part of the socioeconomic study area. Therefore, the proposed

Temporary Bus Parking Site does not have the potential for significant adverse impacts related to socioeconomics.

c. Community Facilities

This screening analysis assesses potential effects to community facilities that may result with the proposed Temporary Bus Parking Site. According to the *CEQR Technical Manual*, "…community facilities are public or publicly-funded schools, libraries, child care centers, health care facilities, and fire and police protection." The *CEQR Technical Manual* calls for analysis of impacts on community facilities where there are direct effects (a physical alteration or displacement) or indirect effects (addition to population of an area and a concomitant increase in demand for community services).

The proposed Temporary Bus Parking Site study area for community facilities is defined as the area within ½ mile of the proposed Temporary Bus Parking Site (see **Figure 8: Construction-Period – Community Facilities** in **Attachment A: Figures**). There are a number of community facilities located within the proposed Temporary Bus Parking Site study area, which are listed in **Table 2: Map Key to Community Facilities and Services**.

The construction of the proposed Temporary Bus Parking Site would not directly displace or alter a community facility, nor would it introduce new resident population to the area, therefore creating little new demand for community facilities and services, including public schools, libraries, child care centers, health care facilities, and police protection. Further, the proposed Temporary Bus Parking Site would meet all existing fire code regulations and would generate a negligible increase to the potential workload of the FDNY. Therefore, the proposed Temporary Bus Parking Site does not have the potential for significant adverse impacts related to community facilities and services.

Table 2: Map Key to Community Facilities and Services

Key #	Facility	Address
Public Schools		
1	P.S./I.S. 116 - The William C. Hughley School	107-25 Wren Place
2	J.H.S. 008 – The Richard S. Grossley Middle School	108-35 167th Street
3	P.S. 40 - The Samuel Huntington School	109-20 Union Hall Street
4	P.S./I.S. 268	92-07 175th Street
5	P.S. 48	155-02 108 Avenue
6	Presentation of the BVM School*	88-13 Parsons Boulevard

Table 2: Map Key to Community Facilities and Services (cont'd)

Key #	Facility	Address
Libraries		
7	Queens Library Central	89-11 Merrick Boulevard
8	Lefrak City Branch Library	16517 Jamaica Avenue
9	Queens Library at South Jamaica	108-41 Guy R. Brewer Boulevard
Child Care Centers		
10	Jamaica Day Nursery	108-17 159th Street
11	Nee Cee Cares Day Care	106-38 Guy R. Brewer Boulevard
12	South Jamaica Center for Children and Parents	94-43 159th Street
13	Jamaica Kids Pre-School	1 Jamaica Center Plaza
14	A Special Place for Kids	89-14 163rd Street
15	Jamaica Montessori Associates	90-01 Merrick Boulevard
16	Little People's Day Care	92-61 165th Street
17	Clifford Glover/Starlight Day Care	165-15 Archer Avenue
18	Bessie & Nora's Place	92-12 168th Street
19	New Deal Day Care & Learning Center	172-12 Jamaica Avenue
20	New Millennium Day Care	172-07 Jamaica Avenue
21	All My Children Day Care & Nursery School*	110-15 164th Place
22	New Dawn Elementary*	90-34 161st Street
23	Bethel Mission Junior Academy*	106-15 154th Street
24	Jamaica SDA-Busy Bee Learning Center*	88-28 163rd Street
Health Care Facilities		
25	Jamaica Health Center	90-37 Parsons Boulevard
Fire Protection		
26	FDNY Engine Company 275	111-36 Merrick Boulevard
Police Protection		
27	NYPD 103rd Police Precinct	168-02 91st Avenue
28	NYPD Forensics Laboratory*	150-14 Jamaica Avenue
29	NYCHA South Jamaica I Public Safety*	106-44 159th Street

Note:
* Indicates new community facility identified since the publication of the 2019 EIS.

Source: New York City DCP MapPLUTO; STV Incorporated, 2022.

d. Open Space/Parklands

This screening analysis assesses potential effects to open space and parklands that may result with the proposed Temporary Bus Parking Site. According to the *CEQR Technical Manual*, an open space analysis may be necessary if a project could potentially result in a direct or indirect effect on open space. A direct effect on an open space resource occurs when a project results in the physical loss of open space or a change of use so that it no longer serves the same user population, limits public access, or causes increased noise or air pollutant emissions, odors, or shadows on a public open space, thus affecting its usefulness (whether on a permanent or temporary basis). An indirect effect may occur when population generated by a project would be sufficiently large to noticeably diminish the ability of an area's open space to serve the future population.

The proposed Temporary Bus Parking Site does not contain any publicly-accessible open space; the site itself is publicly inaccessible, though utilized by CUNY York College. As shown on **Figure 9: Construction-Period – Open Space/Parkland** in **Attachment A: Figures**, the proposed Temporary Bus Parking Site ¼-mile study area contains four publicly-accessible open spaces including portions of the CUNY York College Campus and three open spaces that are part of NYCHA's South Jamaica I housing complex. Methodist Cemetery, located on the southwest corner of Liberty Avenue and Guy R. Brewer Boulevard, is publicly inaccessible and heavily tree-covered, though it directly abuts the proposed Temporary Bus Parking Site.

The construction of the proposed Temporary Bus Parking Site would require the paving of a vacant, grass-covered lot, which would be unavailable for CUNY York College's use during construction; however, upon completion of construction of the Depot, the proposed Temporary Bus Parking Site would revert to its previous ownership. Further, the construction of the proposed Temporary Bus Parking Site would not result in the physical loss or displacement of the Methodist Cemetery or other open space or a change of use so that it no longer serves the same user population, limits public access, or causes increased noise of air pollutant emissions, odors, or shadows on a public open space. Additionally, there would be no residential or worker population increase as a result of the construction of the proposed Temporary Bus Parking Site. Therefore, the proposed Temporary Bus Parking Site does not have the potential for significant adverse impacts related to open space or parklands.

e. Environmental Justice

This screening analysis assesses potential effects to environmental justice communities that may result with the proposed Temporary Bus Parking Site. The assessment herein employs the same methodology as outlined in the 2019 EIS, which follows the guidance provided in NYSDEC Commissioner Policy 29 ("CP 29"). According to the *CEQR Technical Manual*, environmental justice is defined as the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. An environmental justice analysis addresses environmental justice concerns and ensures community participation in the NYSDEC permit review process and the NYSDEC application of SEQRA, when applicable. The proposed Temporary Bus Parking Site study area for environmental justice is defined as the Census Tracts having at least 50 percent of total physical area within ¼-mile of the proposed Temporary Bus Parking Site (see **Figure 10: Construction-Period – Potential Environmental Justice Areas** in **Attachment A: Figures**).

Per the methodology described in the 2019 EIS, the entire proposed Temporary Bus Parking Site study area's Census Tracts exceed thresholds for definition as minority and/or low income communities, and the percentage of the population living below the poverty threshold is higher in the proposed Temporary Bus Parking Site study area than in the borough of Queens, though lower than Community District 12. Therefore, the entire proposed Temporary Bus Parking Site study area is considered to comprise one or more communities subject to EJ analysis and consideration.

One key criterion for an environmental justice analysis is whether or not adverse impacts identified in each of the environmental analysis categories are disproportionate within communities of concern, i.e., whether the impacts within the study area (within a minority or low-income community) would be appreciably more severe or greater in magnitude than those that would be experienced in non-minority or non-low-income communities. There would be no unmitigated significant adverse impacts or cumulative impacts resulting from the proposed Temporary Bus Parking Site; two significant adverse traffic impacts that were identified at the intersections of Liberty Avenue and 165th Street and Merrick Boulevard and 107th Street during the

PM peak hours will be mitigated through signal timing adjustments, a standard traffic mitigation practice. Therefore, the proposed Temporary Bus Parking Site does not have the potential for significant adverse impacts that would affect the surrounding environmental justice communities in any way that would be appreciably more severe or greater in magnitude than non-EJ community areas.

4. Urban Design and Visual Resources

This screening analysis assesses potential effects to urban design and visual resources that may result with the proposed Temporary Bus Parking Site. The *CEQR Technical Manual* recommends a preliminary assessment of urban design and visual resources to determine whether physical changes proposed by a project could rise to the level of potential significant adverse impact. A detailed assessment of urban design and visual resources may be appropriate when a project would have substantially different bulk or setbacks than currently exist in an area, and when substantial new, above-ground construction would occur in an area that has important views, natural resources, or landmark criteria.

The study area for urban design and visual resources is defined as the area within 400 feet of the proposed Temporary Bus Parking Site (see **Figure 11: Construction-Period – Existing Conditions Photo Key** in **Attachment A: Figures**). This proposed Temporary Bus Parking Site study area is generally bounded by 160th Street to the west, mid-block between Tuskegee Airmen Way and 107th Avenue to the south, Merrick Boulevard to the east, and Clayton Road to the north.

Photographs of the proposed Temporary Bus Parking Site and of streetscapes throughout the study area are provided to illustrate the urban design characteristics of the proposed Temporary Bus Parking Site and surrounding neighborhood. The location from which each photograph was taken is identified on **Figure 11: Construction-Period – Existing Conditions Photo Key** in **Attachment A: Figures**. The proposed Temporary Bus Parking Site comprises a vacant, grass-covered lot (see **Photo 1**) and is adjacent to an existing CUNY York College parking lot (see **Photo 2**). The vacant, grass-covered lot is maintained (i.e., regularly mowed) but is publicly-inaccessible. Chain-link fencing surrounds the vacant, grass-covered lot, separating it from the surrounding streetscapes along Liberty Avenue, 165th Street, and Tuskegee Airmen Way. However, pedestrians along these streets can see into the proposed Temporary Bus Parking Site, which generally adds a sense of openness to the study area. Views are most direct from Liberty Avenue (see **Photo 3**), while the views along Tuskegee Airmen Way (see **Photo 4**) and 165th Street (**Photo 5**) are limited due to the fact that the proposed Temporary Bus Parking Site is slightly elevated above street grade. Similarly, the existing CUNY York College parking lot, located at the corner of Guy R. Brewer Boulevard and Tuskegee Airmen Way, is slightly elevated above street grade and is only partially visible from the surrounding Tuskegee Airmen Way and Guy R. Brewer Boulevard (see **Photo 6**).

Photo 1: View from within the proposed Temporary Bus Parking Site, looking southwest toward Tuskegee Airmen Way and Guy R. Brewer Boulevard.

Photo 2: View of the CUNY York College parking lot on the proposed Temporary Bus Parking Site (behind chain-link fencing) looking northeast from Guy R. Brewer Boulevard.

Photo 3: View along Liberty Avenue facing east toward 165th Street. The vacant, grass-covered lot that comprises the proposed Temporary Bus Parking Site is visible on the right behind chain-link fencing.

Photo 4: View along 165th Street facing south toward Tuskegee Airmen Way. The vacant, grass-covered lot that comprises the proposed Temporary Bus Parking Site is visible on the right behind chain-link fencing and is partially obscured by a change in grade and perimeter trees.

Photo 5: View facing west along Tuskegee Airmen Way near the intersection with 165th Street. The vacant, grass-covered lot that comprises the proposed Temporary Bus Parking Site is visible behind chain-link fencing and is partially obscured by a change in grade.

Photo 6: View of the existing parking lot on the proposed Temporary Bus Parking Site from the corner of Tuskegee Airmen Way and Guy R. Brewer Boulevard. Direct views into the parking lot are obscured from street level by a change in grade.

As described in **Section II.B.3.a: Land Use, Zoning, and Public Policy**, the proposed Temporary Bus Parking Site is located within the neighborhood of Jamaica, Queens in an area generally characterized by low-rise commercial, industrial/manufacturing, institutional, transportation/utility, and residential uses. The study area is bound by the midblock point between Liberty Avenue and Clayton Road to the north, Merrick Boulevard to the east, the midblock point between Tuskegee Airmen Way and 107th Avenue to the south, and the midblock point between Guy R. Brewer Boulevard and 160th Street to the west.

The northwestern portion of the study area is composed of CUNY York College Campus. In addition to the area proposed to be utilized as temporary bus parking, this portion of the CUNY York College Campus is made up of academic buildings (see **Photo 7**), recreational fields (see **Photo 8**), parking lots (see **Photo 9**), and the Methodist Cemetery (see **Photo 10**). The southern portion of the proposed Temporary Bus Parking Site study area consists of low-rise residential (predominantly one- and two-family detached homes), mixed-use, institutional, and commercial buildings, as well as several vacant lots. Low-rise commercial, mixed-use, and institutional buildings are congregated along and near Tuskegee Airmen Way (see **Photo 11**). Low-rise residential buildings and vacant lots are present south of Tuskegee Airmen Way along Union Hall Street, Guy R. Brewer Boulevard, and 164th Street (see **Photo 12)**. Low-rise industrial/manufacturing, auto-related, and commercial uses are present in the northeast portion of the proposed Temporary Bus Parking Site study area along 165th Street and Merrick Boulevard (see **Photo 13**). Along 165th Street the buildings are largely one-story industrial/manufacturing buildings, which includes a floor supply company and construction demolition service (see **Photo 14**). Along Merrick Boulevard the buildings are primarily one-story auto-related uses (see **Photo 15**).

Photo 7: View facing east along Liberty Avenue towards Guy R. Brewer Boulevard. CUNY York College academic buildings are visible on either side of Liberty Avenue.

Photo 8: View facing east along Tuskegee Airmen Way, showing recreational fields associated with CUNY York College.

Photo 9: View facing west on 165th Street between Archer Avenue and Liberty Avenue, showing a CUNY York College parking lot and academic buildings in the background.

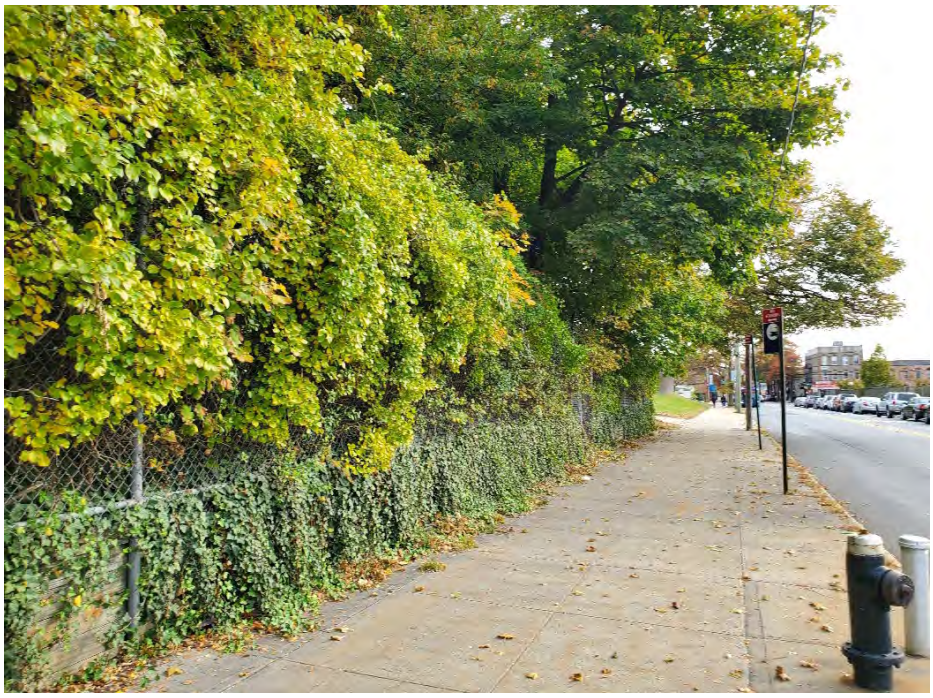


Photo 10: View facing south along Guy R. Brewer Boulevard between Liberty Avenue and Tuskegee Airmen Way. The Methodist Cemetery is located on the left but is obscured by overgrowth and chain-link fencing.

Photo 11: View facing west along Tuskegee Airmen Way between Guy R. Brewer Boulevard and Union Hall Way, directly south of the proposed Temporary Bus Parking Site, low-rise commercial, mixed-use, and institutional buildings.

Photo 12: View facing south along 164th Street between Tuskegee Airmen Way and 107th Avenue, showing low-rise residential buildings.

Photo 13: View facing west along Liberty Avenue toward 165th Street, showing low-rise industrial/manufacturing, auto-related, and commercial uses.

Photo 14: View facing south along 165th Street toward Liberty Avenue, showing low-rise industrial/manufacturing buildings on the left and CUNY York College Campus on the right.

Photo 15: View facing south along Merrick Boulevard toward Liberty Avenue, showing one-story auto-related uses.

The existing buildings in the proposed Temporary Bus Parking Site study area varies between the institutional campus of CUNY York College north of Tuskegee Airmen Way, the mixed-use neighborhood south of Tuskegee Airmen Way, and the industrial/manufacturing and commercial buildings along 165th Street and Merrick Boulevard. The CUNY York College buildings that are present in the proposed Temporary Bus Parking Site study area are large academic buildings that are set on large blocks and surrounded by lawns and athletic fields. The neighborhood south of Tuskegee Airmen Way consists primarily of two-story attached and semi-detached buildings; although, some detached one-story buildings are also present. With the exception of scattered vacant lots, the buildings in this portion of the proposed Temporary Bus Parking Site study area largely adhere to a consistent streetwall. In the northeast portion of the proposed Temporary Bus Parking Site study area along 165th Street and Merrick Boulevard, the buildings are a mix of detached and attached warehouses arranged in a somewhat uniform manner along a consistent streetwall.

The street patterns of the proposed Temporary Bus Parking Site study area are a small portion of a larger grid system that extends outside the proposed Temporary Bus Parking Site study area. The blocks north of Tuskegee Airmen Way that comprise portions of CUNY York College Campus are larger than elsewhere in the proposed Temporary Bus Parking Site study area, forming superblocks. South of Tuskegee Airmen Way the blocks adhere to a traditional rectilinear grid pattern. The blocks along 165th Street and Merrick Boulevard are small portions of a larger irregular grid pattern. The main corridors in the proposed Temporary Bus Parking Site study area are Liberty Avenue and Guy R. Brewer Boulevard. The remaining streets are generally local in character.

Moderately-well maintained sidewalks serve most of the proposed Temporary Bus Parking Site study area, with the notable exception of the northern side of Tuskegee Airmen Way east of Guy R. Brewer Boulevard, where no sidewalk is present. Street trees line the blocks of the CUNY York College Campus; however, elsewhere throughout the proposed Temporary Bus Parking Site study area street trees are less common. With the exception of 165th Street, on-street parking is present throughout the proposed Temporary Bus Parking Site study area.

No identified historic properties or districts, or view corridors related to such resources, have been identified in the proposed Temporary Bus Parking Site study area. The proposed Temporary Bus Parking Site study area is not located within close proximity to the waterfront or a waterfront view nor is it located within close proximity to a significant natural resource or view of a natural resource. There are no publicly-accessible open spaces in the proposed Temporary Bus Parking Site study area. However, portions of the CUNY York College Campus contain lawns and athletic fields, and the Methodist Cemetery – publicly inaccessible and overgrown – is present at the corner of Liberty Avenue and Guy R. Brewer Boulevard.

The construction of the proposed Temporary Bus Parking Site would introduce an approximately 3.5-acre asphalt parking lot on what is currently a vacant, grass-covered lot. In the future with the Proposed Project, the proposed Temporary Bus Parking Site would feature fencing at perimeter property lines similar to that which is currently in place and would remain publicly-inaccessible; lighting would also be installed on the proposed Temporary Bus Parking Site, though it would be shielded and oriented downward. No street trees would be affected by the construction of the proposed Temporary Bus Parking Site. The temporary transformation of the proposed Temporary Bus Parking Site to a bus parking lot would not add bulk or alter any building arrangements, street hierarchy, block form, street pattern, or the streetscape in the surrounding area.

Additionally, the proposed Temporary Bus Parking Site would not affect any existing viewsheds, nor would it significantly alter the views of the Jamaica neighborhood as it currently exists. The proposed Temporary Bus Parking Site would not result in visual impacts to either CUNY York College or the Methodist Cemetery given that the character and form of both of these resources not dependent on its relationship to the proposed Temporary Bus Parking Site. The temporary transformation of the Temporary Bus Parking Site to a bus parking lot would be a noticeable change to pedestrians along the surrounding streets; however, this change would be temporary in nature and isolated to the proposed Temporary Bus Parking Site itself. Therefore, the proposed Temporary Bus Parking Site does not have the potential for significant adverse impacts related to urban design and visual resources.

5. Shadows

This screening analysis assesses potential shadow effects on nearby sunlight-sensitive resources that may result with the proposed Temporary Bus Parking Site. Per the guidance of the *CEQR Technical Manual*, a shadow is defined as "…the condition that results when a building or other built structure blocks the sunlight that would otherwise directly reach a certain area, space or feature." A shadow assessment is appropriate only if a project would either: (a) result in new structures (or additions to existing structures including the addition of rooftop mechanical equipment) of 50 feet or more; or (b) be located adjacent to, or across the street from, a sunlight-sensitive resource.

Given that the construction of the proposed Temporary Bus Parking Site would introduce an approximately 3.5-acre asphalt parking lot on what is currently a vacant, grass-covered lot, no new structures or buildings that could result in potential shadow effects on nearby sunlight-sensitive resources would be introduced. Therefore, the proposed Temporary Bus Parking Site does not have the potential for significant adverse shadow-related impacts.

6. Natural Resources

This screening analysis assesses potential effects to natural resources that may result with the proposed Temporary Bus Parking Site. According to the *CEQR Technical Manual*, a natural resources assessment considers the potential impacts that would be expected to result from a proposed project, including any potential indirect impacts that may result to natural resources in the vicinity, such as surrounding water bodies and naturalized areas that may provide habitat. The natural resources assessment also considers whether a proposed project would be compliant with applicable Federal, State, and City policies pertaining to natural resources in the vicinity of the project site.

The primary study area for natural resources is defined as the area within 400 feet of the proposed Temporary Bus Parking Site to assess potential direct and indirect impacts in the vicinity. A secondary study area, delineated by a ½-mile radius around the proposed Temporary Bus Parking Site, is also utilized to identify natural resources in the vicinity that either are: related to applicable Federal, State, and City policies governing the management of natural resources; or which potentially could be affected by changes occurring at the proposed Temporary Bus Parking Site (such as changes to surface water run-off, habitat alteration, etc.). More specifically, the secondary study area facilitates identification of ecological communities and significant habitat as part of the broader context of ecologically related natural resources, such as floodplains, water resources, and wetlands.

There are no rock outcroppings or unique geological features on the proposed Temporary Bus Parking Site or in the proposed Temporary Bus Parking Site study area, and the predominant soil type present on the proposed Temporary Bus Parking Site is urban land. The Brooklyn-Queens Aquifer System, which underlies the proposed Temporary Bus Parking Site, is designated by USEPA as a Sole Source Aquifer ("SSA"). However, groundwater is not currently utilized for the potable water supply at the proposed Temporary Bus Parking Site or in this part of New York City. No surface water bodies or State- or Federally-mapped wetlands or "Adjacent Areas" (buffers) are located on or in the immediate vicinity of the proposed Temporary Bus Parking Site (see **Figure 12: Construction-Period – Water Resources and Wetlands** in **Attachment A: Figures**). According to the Federal Emergency Management Agency ("FEMA") Flood Insurance Rate Maps, the proposed Temporary Bus Parking Site is located outside both the designated 100- and 500-year flood zones (see **Figure 13: Construction-Period – Flood Zones** in **Attachment A: Figures**). Lastly, consultation with NYNHP, the New York State Department of State ("NYSDOS") Office of Planning and Development, and USFWS Information for Planning and Consultation ("IPaC") indicated that there are no records of significant natural communities, SCFWH, or species or habitats of concern likely to be present on the proposed Temporary Bus Parking Site or in the vicinity. (See copies of agency correspondence provided in **Attachment C: Natural Resources**.)

Additionally, construction activities for the proposed Temporary Bus Parking Site would need to meet standards for coverage under the SPDES General Permit, and a SWPPP for the proposed Temporary Bus Parking Site would be prepared by the Design/Build contractor. It is assumed that, unless determined unnecessary, an oil and water separator would be installed on the proposed Temporary Bus Parking Site, thereby addressing any concerns related to potential petroleum runoff resulting from bus parking. Lastly, no biological or natural resources are present on the proposed Temporary Bus Parking Site given that it is currently a vacant, grass-covered lot that is maintained (i.e., regularly mowed). Therefore, the proposed Temporary Bus Parking Site does not have the potential for significant adverse impacts related to natural resources.

7. Coastal Zone

This screening analysis assesses potential effects associated with coastal zones and coastal zone policy that may result with the proposed Temporary Bus Parking Site. According to the *CEQR Technical Manual*, the coastal zone encompasses all land and water that impose a direct and significant impact on coastal waters. The assessment herein employs the same methodology as outlined in the 2019 EIS, which considers the regulatory context provided by Federal, State, and local agencies. The study area for coastal zones is defined as the area within 400 feet of the proposed Temporary Bus Parking Site, providing the opportunity to assess potential indirect impacts in the vicinity, to the extent that the construction of the proposed Temporary Bus Parking Site may be expected to result directly or indirectly to the built and natural environs of the proposed Temporary Bus Parking Site.

According to the New York City Coastal Boundary Map, the proposed Temporary Bus Parking Site is not located within the New York Coastal Zone (see **Figure 14: Construction-Period – Coastal Zone** in **Attachment A: Figures**). Therefore, the proposed Temporary Bus Parking Site does not have the potential for significant adverse impacts related to coastal zones.

8. Contaminated and Hazardous Materials

This screening analysis assesses potential effects to contaminated and hazardous materials that may result with the proposed Temporary Bus Parking Site. Based on the findings of the Phase I ESA and Phase II ESI that were performed for the proposed Temporary Bus Parking Site (see **Attachment B: Hazardous Materials**), the proposed Temporary Bus Parking Site would not result in any significant adverse impacts related to contaminated or hazardous materials.

It is assumed that the construction of the proposed Temporary Bus Parking Site would comply with applicable Federal, State, and local regulations and other MTA NYCT protocols regarding the abatement, handling, transport, and disposal of contaminated materials. Additionally, construction activities for the proposed Temporary Bus Parking Site would need to meet standards for coverage under the SPDES General Permit, and a SWPPP for the proposed Temporary Bus Parking Site would be prepared by the Design/Build contractor. It is also assumed that, unless determined unnecessary, an oil and water separator would be installed on the proposed Temporary Bus Parking Site, thereby addressing any concerns related to potential petroleum runoff resulting from bus parking. The relevant governing agencies and regulations are discussed in Chapter 20.0, "Commitments to Mitigating Adverse Effects" of the 2019 EIS. Environmental conditions would be considered and incorporated into the proposed Temporary Bus Parking Site design. MTA NYCT Specification 12R, which is applicable to contaminated construction and demolition debris and contaminated water, would be implemented during construction of the proposed Temporary Bus Parking Site. Soil excavated during construction of the proposed Temporary Bus Parking Site would be characterized to identify appropriate material handling, reuse, and/or disposal requirements (including collection and analysis of additional samples if required by the contractor-selected disposal facility). Excavated material would be managed in accordance with applicable Federal, State, and local laws and regulations.

9. Infrastructure, Energy, and Solid Waste

This screening analysis assesses potential effects to infrastructure, energy, and solid waste that may result with the proposed Temporary Bus Parking Site. According to the *CEQR Technical Manual*, an assessment of infrastructure, energy, and solid waste should assess whether a proposed project may adversely affect the City's water distribution or sewer system or cause a substantial increase in solid waste production that may overburden available waste management capacity; the assessment should also discuss the effects of a proposed project on the consumption and conservation of energy.

Given that the proposed Temporary Bus Parking Site is currently a vacant, grass-covered lot, it does not have any water demand, produce any solid waste, or consume any energy. The proposed Temporary Bus Parking Site is located in an area with separate sewer systems in which sanitary waste is carried to the Jamaica Wastewater Treatment Plant in Queens while stormwater is channeled directly to local waterways. Additionally, given that no bus maintenance would occur on the proposed Temporary Bus Parking Site, there would not be any water demand, wastewater production, or solid waste generation in the future with the Proposed Project. Lighting would be installed on the proposed Temporary Bus Parking Site, though this increment in energy consumption over the existing vacant, grass-covered lot is minimal in terms of the annual energy demands of the area surrounding the proposed Temporary Bus Parking Site and New York City as a whole. It is assumed that the proposed Temporary Bus Parking Site would comply with applicable Federal, State, and local regulations concerning infrastructure, utilities and energy, and solid waste.

Therefore, the proposed Temporary Bus Parking Site does not have the potential for significant adverse impacts related to infrastructure, energy, and solid waste.

10.Safety and Security

This screening analysis assesses potential effects to safety and security that may result with the proposed Temporary Bus Parking Site. Safety and security measures for the proposed Temporary Bus Parking Site would be determined during design development and implemented during its construction and in coordination with MTA NYCT Security and Development. All safety and security measures would comply with all relevant Federal, State, and local safety regulations as previously described in the 2019 EIS, as applicable.

Safety and security measures to be implemented involve coordination with appropriate public safety agencies for creating safety and security plans for the proposed Temporary Bus Parking Site and the continued training of staff and contractors on site. Physical security means and methods would include, at minimum, fencing at perimeter property lines and neighbor friendly lighting. With these measures in place, the proposed Temporary Bus Parking Site is not expected to result in adverse impacts to safety and security. MTA NYCT anticipates using flaggers at the Liberty Avenue driveway from the proposed Temporary Bus Parking Site to enhance safety and reduce conflicts between pedestrians on the sidewalk and buses at the proposed Temporary Bus Parking Site exit.

11.Displacement and Relocation

This screening analysis assesses potential displacements and relocations that may result with the proposed Temporary Bus Parking Site. The proposed Temporary Bus Parking Site is owned by DASNY and managed by CUNY York College. It is currently a vacant, grass-covered lot fenced off from the surrounding streets and publicly-inaccessible. The temporary transformation of the proposed Temporary Bus Parking Site for bus parking during the 49-month construction period by NYCT would be undertaken through a proposed temporary agreement between CUNY York College and MTA NYCT. NYCDOT permits would be sought to allow NYCT to temporarily occupy certain sidewalks and streets surrounding the proposed Temporary Bus Parking Site to facilitate construction of the proposed Temporary Bus Parking Site. No displacements would occur, and no properties would be acquired; therefore, no compensation or relocation assistance would be necessary. No significant adverse impacts are anticipated to be associated with the temporary easement for the proposed Temporary Bus Parking Site.

Aside from the proposed Temporary Bus Parking Site, no other property would be acquired, and no displacement would occur. No additional construction-period analysis of displacements and relocations related to the Depot is warranted for this SEA.

12.Noise and Vibration

a. Noise

Noise levels were assessed at representative locations chosen based on their ability to represent numerous noise-sensitive sites in the area (such as residences); their proximity to the proposed Temporary Bus Parking Site; and the potential for increases in future noise levels. Mobile source noise impacts from bus

diversions to and from the proposed Temporary Bus Parking Site were assessed at one representative worst-case location at 168-11 106th Avenue (near Merrick Boulevard).

With respect to vibration, the primary concern with construction would be building damage, which is generally assessed in terms of peak particle velocity ("PPV"). Equipment used in construction, such as jackhammers, backhoes, and excavators do not generate significant area-wide vibration, and the impact of such equipment is typically more localized.

Projected noise levels for construction equipment related to the proposed Temporary Bus Parking Site would not exceed the FTA noise thresholds at any noise-sensitive locations adjacent to the proposed Temporary Bus Parking Site. While at times, noise levels may be elevated, these noise increases would be minimized by strict adherence to the revised 2005 NYC Noise Code and prevention measures that would be identified in the construction contracts. In addition, predicted worst-case noise levels for construction and temporary construction-period use of the proposed Temporary Bus Parking Site would last for less than one year and the sources of noise would migrate throughout the site; therefore, the effects of noise related to construction on the sensitive receptors would change depending on the location of particular noise sources. Note also that noise-generating activities would be intermittent and of short-term durations.

MTA NYCT construction contract specifications would require the contractor to meet the requirements set forth in the NYCDEP Noise Control Code (e.g., Construction Noise Mitigation Plans). Based on these requirements, the contractor must implement and adhere to the noise mitigation plan measures as required.

b. Vibration

Results of the vibration study indicate that projected vibration levels for construction equipment used for the proposed Temporary Bus Parking Site near adjacent sensitive receptors would not exceed the FTA damage criteria of 0.20 ips for the wood-framed residential buildings facing the southern edge of the site. MTA NYCT would use vibration control measures to minimize, to the extent possible, the vibration levels for all properties near the proposed Temporary Bus Parking Site.

The FTA vibration annoyance level would be exceeded at vibration-sensitive building locations closer than 140 feet from the proposed Temporary Bus Parking Site construction area. However, while these impacts could occur, they would be short-term since most construction activities would be intermittent, and the sources of vibration would migrate throughout the larger construction area. All efforts would be made by the contractor to schedule these types of activities during the least intrusive times. In addition, the contractor would inform the occupants of adjacent buildings in advance before proceeding with work associated with equipment such as rollers.

13. Neighborhood Character

This screening analysis assesses potential effects to neighborhood character that may result with the proposed Temporary Bus Parking Site. As described in relevant sections of this SEA, the temporary transformation of the proposed Temporary Bus Parking Site would not result in construction-period significant adverse impacts in the areas of land use, zoning, or public policy; socioeconomic conditions; shadows; historic and cultural resources; urban design and visual resources; or noise. Two significant adverse traffic impacts were identified at the intersections of Liberty Avenue and 165th Street and Merrick Boulevard and 107th Street during the PM peak hours. However, these impacts will be mitigated through

signal timing adjustments, a standard traffic mitigation practice. Therefore, the proposed Temporary Bus Parking Site does not have the potential for significant adverse impacts related to neighborhood character.

C. STAGE 2 CONSTRUCTION (TRANSPORTATION, AIR QUALITY, AND NOISE AND VIBRATION)

1. Introduction

Stage 2 construction would occur over a 38-month period for the construction of the Depot and temporary construction-period use of the proposed Temporary Bus Parking Site. The evaluation of Stage 2 construction comprises analyses of transportation, air quality, and noise and vibration. These analyses rely on the determination of a reasonable worst-case construction-period condition, including consideration of the change in build year; therefore, for the purposes of these detailed analyses, the construction period is concerned with Depot construction and the temporary construction-period use of the proposed Temporary Bus Parking Site.

2. Transportation (Traffic, Parking, Transit, & Pedestrians)

a. Traffic and Parking

Average daily construction worker and truck activities were projected for the full duration of construction. Construction worker and truck trips were estimated to peak in the first (Q1) and second (Q2) quarters of 2025, during Phase I of construction. The estimated daily vehicle trips for this peak period were distributed to various hours of the day based on projected work shift allocations and conventional arrival/departure patterns for construction workers and trucks. Vehicles generated by construction activities were then assigned to the street network to determine the increment of construction-related trips. Trucks making deliveries to the Depot were assigned using NYCDOT designated local truck routes in the area, which include Merrick Boulevard, 168th Street, and Liberty Avenue. (See Attachment D: Transportation for the full detailed analysis and methodology).

The analysis of the nine study intersections for the construction AM and PM peak hours indicates that a significant traffic impact would occur at two intersections in the 2025 construction period. These impacts will be mitigated through signal timing adjustments, a standard traffic mitigation practice.

No significant parking impacts would be expected on the streets within a ¼-mile radius of the Depot site from employee parking. Construction workers traveling to the site would increase the on-street parking demand by 173 vehicles, which would create a parking shortfall of 212 spaces. This shortfall is not be considered a significant impact for this project due to the availability and proximity of public transit in the area. As such, construction activities during the 2025 peak construction traffic period would not result in a significant adverse parking impact.

b. Transit and Pedestrians

According to the thresholds specified in the *CEQR Technical Manual*, detailed transit analyses are required if a proposed action is projected to result in an increase of 200 or more passengers at a single subway station or on a single subway line or if a proposed action would result in 50 or more bus passengers being

assigned to a single bus route (in one direction) during the AM and PM peak hours. (See **Attachment D: Transportation** for the full detailed analysis and methodology).

Construction worker travel demand is expected to generate a total of approximately 50 transit trips in both the 6-7 AM and 4-5 PM construction peak hours. Given that these transit trips would be served by multiple bus routes, no single bus route would experience an increase of 50 or more passenger trips; therefore, detailed analyses of transit conditions are not required, and the Proposed Project would not result in any significant adverse transit impacts.

During the 2025 peak analysis period for construction travel demand, it is estimated that there would be approximately 280 construction workers on-site daily. Approximately ten percent of these workers would be expected to walk to the Depot, in addition to the 22 percent who would be expected to travel to the Depot by transit, walking to and from area subway stations and bus stops. Therefore, construction worker travel demand on area sidewalks and crosswalks is expected to total approximately 72 trips in both the 6-7 AM and 3-4 PM construction peak hours.

As per the criteria established in the *CEQR Technical Manual*, quantitative pedestrian analyses are warranted if a proposed project results in more than 200 new peak hour pedestrian trips. Based on the increase of 72 new walk trips during construction, a detailed analysis of pedestrian conditions is not warranted, and construction of the Proposed Project would not result in any significant adverse pedestrian impacts.

3. Air Quality

As is typical with construction projects in New York City, construction activities related to the Proposed Project would require use of both non-road construction equipment and on-road vehicles. Non-road construction equipment includes equipment operating on-site such as excavators and compressors. On-road vehicles include construction delivery trucks, dump trucks, concrete trucks, and construction worker vehicles arriving at and departing from the construction site as well as operating on-site. Emissions from non-road construction equipment and on-road vehicles have the potential to affect air quality. In addition, emissions from dust-generating construction activities (i.e., truck loading and unloading operations) also have the potential to affect air quality. A quantitative analysis of the overall combined impact of both non-road and on-road sources of construction-related air emissions, including dust emissions, was performed to determine the potential for significant adverse impacts from these sources of air emissions generated during construction activities related to the Proposed Project. (For the full detailed analysis of Air Quality, see **Attachment E: Air Quality**).

An emissions reduction program would be implemented for construction activities related to the Proposed Project to minimize the effects of construction activities on the surrounding community. Measures would include dust suppression measures, use of ultra-low sulfur diesel ("ULSD") fuel, idling restrictions, diesel equipment reduction, the utilization of newer equipment, and best available tailpipe reduction technologies. With the implementation of these emission reduction measures, the dispersion modeling analysis of construction-related air emissions for both non-road and on-road sources determined that $PM_{2.5}$ and PM_{10}, annual-average NO_2, and CO concentrations would be below their corresponding NAAQS, respectively. Additionally, analysis determined that the maximum predicted CO and PM concentrations generated would not exceed standards. Therefore, construction activities related to Proposed Project would not result in significant adverse air quality impacts due to construction sources.

4. Noise and Vibration

The analysis considers noise emissions that might be generated during the construction period. Receptors include noise-sensitive buildings such as residences and school buildings that are located adjacent to the proposed Temporary Bus Parking Site. In addition, once the proposed Temporary Bus Parking Site is prepared and construction of the Depot is ongoing, MTA NYCT will store approximately 170 buses at the proposed Temporary Bus Parking Site.

A detailed noise analysis of Depot construction was conducted for the 2019 EIS based on FTA transit noise and vibration guidelines. Given that the depot building would remain the same as analyzed in the 2019 EIS, and the type and number of construction equipment expected to be used in each construction phase would be similar, the results in the 2019 EIS remain valid and no further analysis is warranted.

The Stage 2 construction-period noise analysis considers the potential for increased noise exposure to nearby sensitive receptors due to the introduction of bus parking at the proposed Temporary Bus Parking Site and travelling to and from it during the construction period, when the Proposed Project would introduce additional buses along Liberty Avenue and 165th Street. Utilizing the FTA spreadsheet application, an estimate of the Ldn in the future with the Proposed Project, based on average daily operations, is determined and compared to the existing conditions Ldn to establish whether the project generated noise exposure would result in an impact. With a monitored existing Ldn noise exposure level of 71.7 dBA, the FTA spreadsheet analysis yielded an Ldn project noise exposure level of 65 dBA, which is below the FTA minimum impact threshold. Therefore, no construction-period noise impacts would result, and no further analysis is warranted.

D. CONSTRUCTION-PERIOD CONDITION CONCLUSIONS

New information and assumptions presented in this SEA would not alter the conclusions of the 2019 EIS analyses with respect to the technical areas for which analyses were performed as reported in Section II.B: Stage 1 Construction (i.e., historic and cultural resources, social and economic conditions, urban design and visual resources, shadows, natural resources, coastal zone, contaminated and hazardous materials, infrastructure, energy, and solid waste, safety and security, displacement and relocation, and neighborhood character).

With regard to construction-period effects related to transportation, the transit trips associated with construction worker travel demand would be served by multiple bus routes, and the Proposed Project would result in less than 200 new peak hour pedestrian trips. Therefore, the Proposed Project would not result in any significant adverse transit or pedestrian activities impacts during the construction period. Additionally, the increase in on-street parking demand resulting from construction workers traveling to the Depot would not result in a significant impact due to the availability and proximity of public transit in the area. Signal timing adjustments, a standard traffic mitigation practice, will be implemented to avoid any potential impacts resulting from increased construction worker or truck trips and, therefore, the conclusions of the 2019 EIS construction-period analysis would remain valid with respect to transportation.

With regard to air quality, there would be no significant adverse construction-period air quality impacts and, therefore, the conclusions of the 2019 EIS construction-period analysis would remain valid with respect to air quality. An emissions reduction program would be implemented for construction activities related to the Proposed Project to minimize the effects of construction activities on the surrounding

community. Measures would include dust suppression measures, use of ULSD fuel, idling restrictions, diesel equipment reduction, the utilization of newer equipment, and best available tailpipe reduction technologies. With the implementation of these emission reduction measures, the dispersion modeling analysis of construction-related air emissions for both non-road and on-road sources determined that $PM_{2.5}$ and PM_{10}, annual-average NO_2, and CO concentrations would be below their corresponding NAAQS, respectively. Additionally, as described above, the maximum predicted CO and PM concentrations generated at the proposed Temporary Bus Parking Site would not exceed standards.

With regard to noise and vibration, there would be no significant adverse construction-period noise and vibration impacts and, therefore, the conclusions of the 2019 EIS construction-period analysis would remain valid with respect to noise and vibration. Projected noise levels for construction equipment related to the proposed Temporary Bus Parking Site would not exceed the FTA noise thresholds at any noise-sensitive locations adjacent to the site. Additionally, while the FTA vibration annoyance level would be exceeded at certain nearby vibration-sensitive building locations, they would be short-term since most construction activities would be intermittent, and the sources of vibration would migrate throughout the proposed Temporary Bus Parking Site. All efforts would be made by the contractor to schedule these types of activities during the least intrusive times. MTA NYCT would use vibration control measures to minimize, to the extent possible, the vibration levels for all properties near the proposed Temporary Bus Parking Site.

The Stage 2 construction-period noise analysis considers the potential for increased noise exposure to nearby sensitive receptors due to the introduction of bus parking at the proposed Temporary Bus Parking Site and travelling to and from it during the construction period, when the Proposed Project would introduce additional buses along Liberty Avenue and 165th Street. This activity would result in an estimated existing Ldn noise exposure level of 71.7 dBA, per FTA guidance an Ldn project noise exposure level of 65 dBA, which is below the FTA minimum impact threshold. Therefore, no construction-period noise impacts would result, and no further analysis is warranted.

III. Operational Condition – Depot (Reevaluation of the 2019 EIS)

A. INTRODUCTION

This section presents a reevaluation of the 2019 EIS operational analyses for the Proposed Project in light of new information and assumptions presented in this SEA. (For evaluations of potential effects associated with construction-period activities, including the construction and temporary construction-period use of the proposed Temporary Bus Parking Site, see Section II: Construction-Period Condition.)

Operational conditions would generally resemble the operational conditions described in the 2019 EIS with the exception of changes resulting from revised analysis years, refined Depot entry and exit points, minor street reconfiguration, and the use of a portion of Tuskegee Airmen Way and adjacent NYCDOT traffic island ("minor changes to operational assumptions") (see Section I.A.1: New Information and Assumptions for this SEA).

As presented in this section, the reevaluation analyses were complete at a screening level for all technical areas except for transportation, air quality, and noise and vibration, for which detailed analyses were conducted (see Section III.C: Detailed Analyses). All together, these reevaluation analyses confirm the findings of the 2019 EIS, and no new impacts are identified beyond what was disclosed in the 2019 EIS, except for two changes in traffic impacts predicted, which would be fully mitigated as in the 2019 EIS. Screening-Level Analyses

B. SCREENING-LEVEL ANALYSES

The following screening-level analyses reassess the findings of the 2019 EIS in light of the previously described minor changes to operational assumptions (i.e., revised analysis years, refined Depot entry and exit points, minor street reconfiguration, and the use of a portion of Tuskegee Airmen Way and adjacent NYCDOT traffic island). These analyses confirm that the minor changes to operational assumptions do not alter the respective findings of these analyses as disclosed in the 2019 EIS.

1. Historic and Cultural Resources

The minor changes to operational assumptions, as presented in this SEA, would not alter the conclusions of the 2019 EIS with respect to historic and cultural resources. Although the use of a portion of Tuskegee Airmen Way and an adjacent NYCDOT traffic island results in a slightly expanded Depot site and study area, this expansion does not change the findings of the historic and cultural resources analysis as presented in the 2019 EIS (see Figure 15: Reevaluation – Architectural and Archaeological APE and Figure 16: Reevaluation – Historic Resources in Attachment A: Figures). Since the 2019 EIS, there has been no change to the status of eligible or listed State/National Register of Historic Places ("S/NRHP") or New York City Landmarked resources. There are no architectural resources on or within a 400-foot radius of the Depot site that are eligible or listed in the S/NRHP or are a New York City Landmarked resource. The existing JBD does not appear to meet criteria for S/NRHP eligibility, nor do any of the buildings or structures within a 400-foot radius of the Depot site.

The findings of the Phase IA Cultural Resources Assessment, as presented in the 2019 EIS, would not be affected by the minor changes to operational assumptions, as presented in this SEA; there is little to no historic period archaeological sensitivity on the Depot site.[7] Therefore, the findings of the historic and cultural resources analysis in the 2019 EIS remain unchanged, and no further analysis is warranted.

2. Social and Economic Conditions

The minor changes to operational assumptions, as presented in this SEA, would not alter the conclusions of the 2019 EIS with respect to social and economic conditions. As described below, the reconstruction and expansion of the JBD would not result in any significant adverse impact related to social and economic conditions, which comprise land use, zoning, and public policy; socioeconomics; community facilities; open space/parklands; and environmental justice.

[7] An additional Phase IA Cultural Resources Assessment is currently underway for the proposed Temporary Bus Parking Site, the results of which will be presented in Section II.B.2: Historic and Cultural Resources of this SEA.

a. Land Use, Zoning, and Public Policy

The minor changes to operational assumptions, as presented in this SEA, would not alter the conclusions of the 2019 EIS with respect to land use, zoning, and public policy. Although the use of a portion of Tuskegee Airmen Way and adjacent NYCDOT traffic island results in a slightly expanded Depot site and study area, this expansion does not change the findings of the land use, zoning, and public policy analysis in the 2019 EIS. Land use as presented in the 2019 EIS remains largely unchanged, with only one lot in the 2019 EIS study area having changed land use; a formerly vacant lot along 104th Road (Block 10163, Lot 17) was developed with a three-story, multi-family residence (see **Figure 17: Reevaluation – Land Use Study Area** in **Attachment A: Figures**). Additionally, the 2019 EIS noted two projects that were under construction that have since been completed: an 89-unit mixed-use affordable housing development at 92-61 165th Street and a commercial structure with a mezzanine located at 104-32 Merrick Boulevard. However, neither of these construction projects resulted in a change in land use. Therefore, the findings of the land use assessment in the 2019 EIS remain unchanged, and no further analysis is warranted.

Zoning, as presented in the 2019 EIS, is unchanged and no changes are anticipated to zoning in the Depot site study area by the 2027 build year (see **Figure 18: Reevaluation – Zoning** in **Attachment A: Figures**). The Depot site is owned by MTA, a New York State public benefit corporation, and is therefore not subject to local zoning controls. Further, the reconstruction and expansion of the JBD would not change existing zoning controls in the Depot site study area. Therefore, the findings of the zoning assessment in the 2019 EIS remain unchanged, and no further analysis is warranted. Further, public policy, as presented in the 2019 EIS, is unchanged. No new public policy is anticipated to affect the expanded Depot site or study area by the 2027 build year. Therefore, the findings of the public policy assessment in the 2019 EIS remain unchanged, and no further analysis is warranted.

b. Socioeconomics

The minor changes to operational assumptions, as presented in this SEA, would not alter the conclusions of the 2019 EIS with respect to socioeconomics. Although the use of a portion of Tuskegee Airmen Way and adjacent NYCDOT traffic island results in a slightly expanded Depot site, the socioeconomics Census Tract study area remains unchanged (see **Figure 19: Reevaluation – Socioeconomic Conditions Study Area** in **Attachment A: Figures**).[8] The reconstruction and expansion of the JBD would not result in direct displacement of an existing residential population, nor would it result in indirect residential or business displacement in the Depot site study area or adverse effects on specific industries. Further, the minor changes to operational assumptions, as presented in this SEA, would not change the number of permanent acquisitions required for the reconstruction and expansion of the JBD, nor would it change the number of employees or businesses displaced. As was stated in the 2019 EIS, the reconstruction and expansion of the JBD would employ additional workers, which could benefit local businesses with an increase in patronage. Therefore, the findings of the socioeconomics analysis in the 2019 EIS remain unchanged, and no further analysis is warranted.

[8] Given that the most recent 2020 U.S. Census data have not yet been released for use, the 2010 U.S. Census data utilized in the 2019 EIS is assumed to remain accurate.

c. Community Facilities

The minor changes to operational assumptions, as presented in this SEA, would not alter the conclusions of the 2019 EIS with respect to community facilities. Although the use of a portion of Tuskegee Airmen Way and adjacent NYCDOT traffic island results in a slightly expanded Depot site and study area, this expansion does not change the findings of the community facilities analysis in the 2019 EIS (see **Figure 20: Reevaluation – Community Facilities** in **Attachment A: Figures**). Three additional community facilities have been identified in the Depot site study area since publication of the 2019 EIS: All My Children Day Care & Nursery School, located at 110-15 164th Place, New Dawn Elementary, located at 90-34 161st Street, and New York City Housing Authority ("NYCHA") South Jamaica I Public Safety, located at 106-44 159th Street. As described in the 2019 EIS, the reconstruction and expansion of the JBD would construct a new and expanded bus facility and would not directly displace a community facility or introduce new residents to the area, creating little new demand for community facilities and services (i.e., public schools, libraries, child care centers, health care facilities, fire protection, and police protection). Therefore, the findings of the community facilities analysis in the 2019 EIS remain unchanged, and no further analysis is warranted.

d. Open Space/Parklands

The minor changes to operational assumptions, as presented in this SEA, would not alter the conclusions of the 2019 EIS with respect to open space and parklands. Although the use of a portion of Tuskegee Airmen Way and adjacent NYCDOT traffic island results in a slightly expanded Depot site and study area, this expansion does not change the findings of the open space and parklands analysis in the 2019 EIS (see **Figure 21: Reevaluation – Open Space/Parkland** in **Attachment A: Figures**). The reconstruction and expansion of the JBD would not result in the physical loss or displacement of publicly-accessible open space, and would not cause increased emissions, odors, or shadows to a public open space or parkland. Therefore, the reconstruction and expansion of the JBD would not result in any direct effects on open space. Further, the minor changes to operational assumptions, as presented in this SEA, would not change the number of projected employees expected to be generated by the reconstruction and expansion of the JBD and, therefore, an indirect open space assessment is not necessary. Therefore, the findings of the open space/parklands analysis in the 2019 EIS remain unchanged, and no further analysis is warranted.

e. Environmental Justice

The minor changes to operational assumptions, as presented in this SEA, would not alter the conclusions of the 2019 EIS with respect to environmental justice. Although the use of a portion of Tuskegee Airmen Way and adjacent NYCDOT traffic island results in a slightly expanded Depot site and study area, this expansion does not change the findings of the environmental justice analysis in the 2019 EIS (see **Figure 22: Reevaluation – Potential Environmental Justice Areas** in **Attachment A: Figures**). Identified adverse impacts in the 2019 EIS and this SEA are generally capable of being mitigated and are expected to be reduced significantly with appropriate measures. Further, as described in **Section IV: Secondary and Cumulative Effects**, there would be no cumulative impacts resulting from the reconstruction and expansion of the JBD. Rather, the reconstruction and expansion of the JBD would represent an improvement to MTA NYCT bus operations in Queens. Therefore, the findings of the environmental justice analysis in the 2019 EIS remain unchanged, and no further analysis is warranted.

3. Urban Design and Visual Resources

The minor changes to operational assumptions, as presented in this SEA, would not alter the conclusions of the 2019 EIS with respect to urban design and visual resources. Although any potential de-mapping of Tuskegee Airmen Way, if it were to occur, would be a future separate action, the Depot design as currently contemplated would require reconfiguring the Tuskegee Airmen Way paved roadbed to support Depot operations. This change in roadbed configuration would include the removal of a parking area and some street trees and, therefore, would represent a minor change to the street pattern directly north of the Depot site. However, as this particular portion of the streetscape is characterized by Depot operations in existing and No-Build conditions, the change to street pattern would not represent a significant adverse impact to urban design with the reconstruction and expansion of the JBD.

Based on a November 11, 2021 site visit, it was determined that no change to urban design or visual resources has occurred within the Depot site study area since publication of the 2019 EIS (see **Figure 23: Reevaluation – Existing Conditions Photo Key**, **Figures 23a – 23k: Comparative Photo**, and **Figures 23l – 23m: Reevaluation – 2022 400-ft Study Area Expansion Photo** in **Attachment A: Figures** for updated photos of the Depot site and study area). Therefore as determined in the 2019 EIS, although the proposed Depot facilities and security/sound barrier wall would be visible from the sidewalks and adjacent properties along 165th Street, the form and use of the Depot site would generally resemble both the condition today and the condition if the reconstruction and expansion of the JBD were not undertaken in the future. Further, the overall pedestrian experience would remain fundamentally unchanged. Therefore, there would be no significant adverse impact related to urban design or visual resources as a result of the reconstruction and expansion of the JBD. Therefore, the findings of the urban design and visual resources assessment in the 2019 EIS remain unchanged, and no further analysis is warranted.

4. Shadows

The minor changes to operational assumptions, as presented in this SEA, would not alter the conclusions of the 2019 EIS with respect to shadows. The design of the reconstruction and expansion of the JBD as described in the 2019 EIS would be unchanged in terms of building design and configuration; the minor changes to operational assumptions, as presented in this SEA, would not create new structures, change building heights, etc. Therefore, as determined in the 2019 EIS, incremental shadows attributable to the reconstruction and expansion of the JBD would reach a NYC Greenstreets property and a portion of the Rose of Sharon Baptist Church; the increase in shadows would be minor, would not represent any substantial shadow effect, and would not extend to sunlight sensitive portions of the NYC Greenstreets property or any other potentially sunlight sensitive resource. Therefore, the reconstruction and expansion of the JBD would not result in significant adverse shadow impacts. Therefore, the findings of the 2019 EIS remain unchanged, and no further analysis is warranted.

5. Natural Resources

The minor changes to operational assumptions, as presented in this SEA, would not alter the conclusions of the 2019 EIS with respect to natural resources. Although the use of a portion of Tuskegee Airmen Way and adjacent NYCDOT traffic island results in a slightly expanded Depot site and study area, this expansion does not change the findings of the natural resources analysis in the 2019 EIS (see **Figure 24: Reevaluation – Water Resources and Wetlands** and **Figure 25: Reevaluation – Flood Zone** in **Attachment A: Figures**). No

unique geological features, surface water bodies, State or Federally-mapped wetlands or "Adjacent Areas," records of significant natural communities, or "Significant Coastal Fish and Wildlife Habitat" ("SCFWH") areas are present on the Depot site or within the Depot site study area. Further, the Depot site is not located within a 100- or 500-year floodplain. Additionally, as described in the 2019 EIS, the construction activities associated with the reconstruction and expansion of the JBD would disturb more than one acre and, therefore, would need to meet standards for coverage under the State Pollutant Discharge Elimination System ("SPDES") General Permit. A Stormwater Pollution Prevention Plan ("SWPPP") would be developed for the Depot site by the design-build contractor. With these measures in place, no significant adverse impacts to wetlands or water resources would occur as a result of the reconstruction and expansion of the JBD. Therefore, the findings of the natural resources analysis in the 2019 EIS remains unchanged, and no further analysis is warranted.

6. Coastal Zone

The minor changes to operational assumptions, as presented in this SEA, would not alter the conclusions of the 2019 EIS with respect to coastal zones. Although the use of a portion of Tuskegee Airmen Way and adjacent NYCDOT traffic island results in a slightly expanded Depot site and study area, this expansion does not change the findings of the coastal zone analysis in the 2019 EIS (see **Figure 26: Reevaluation – Coastal Zone** in **Attachment A: Figures**). The Depot site is not located within, or in close proximity to, a mapped coastal zone, and so no coastal zone management plans are required. Therefore, the findings of the coastal zone analysis in the 2019 EIS remain unchanged, and no further analysis is warranted.

7. Contaminated and Hazardous Materials

The minor changes to operational assumptions, as presented in this SEA, would not alter the conclusions of the 2019 EIS with respect to contaminated and hazardous materials. Although the use of a portion of Tuskegee Airmen Way and adjacent NYCDOT traffic island results in a slightly expanded Depot site, the findings of the Phase I Environmental Site Assessment ("ESA") and Phase II Environmental Site Investigation ("ESI") as presented in the 2019 EIS, which identified the potential presence of hazardous materials, remain applicable.[9] However, since publication of the 2019 EIS, Spill No. 9010039, located on Lots 46, 80, 84, 97, and 103, has been closed by the NYSDEC case manager, indicating that the necessary cleanup and removal actions have been completed and no further remediation activities are necessary.

As described in the 2019 EIS, contaminated materials would be identified and managed prior to construction. Once construction activities are completed, remaining subsurface contaminated materials would be contained in accordance with NYSDEC requirements using an engineering control such as pavement or other barriers, and would not present a hazard to the public or MTA NYCT workers. Therefore, the findings of the contaminated and hazardous materials analysis in the 2019 EIS remain unchanged, and no further analysis is warranted.

[9] An additional Phase I ESA and Phase II ESI were performed for the proposed Temporary Bus Parking Site, the results of which are presented in **Section II.B.8: Contaminated and Hazardous Materials** of this SEA.

8. Infrastructure, Energy, and Solid Waste

The minor changes to operational assumptions, as presented in this SEA, would not alter the conclusions of the 2019 EIS with respect to infrastructure, energy, and solid waste. Although the use of a portion of Tuskegee Airmen Way and adjacent NYCDOT traffic island results in a slightly expanded Depot site, the increase in the amount of material expected to be removed from the Depot site is negligible and, therefore, is not expected to result in significant adverse impacts. Further, as stated in the 2019 EIS, energy consumption with the reconstruction and expansion of the JBD is expected to increase as the building total floor area would increase as compared to the existing JBD; however, this increase in energy is considered minimal in terms of the annual energy demands of the surrounding area and New York City as a whole. Therefore, the findings of the infrastructure, energy, and solid waste analysis in the 2019 EIS remain unchanged, and no further analysis is warranted.

9. Safety and Security

The minor changes to operational assumptions, as presented in this SEA, would not alter the conclusions of the 2019 EIS with respect to safety and security. Construction and operational safety and security measures would be determined during design development and implemented for the reconstruction and expansion of the JBD during construction and in coordination with MTA NYCT Security Development for the Depot's perimeter, exterior, interior, equipment, and systems. All measures outlined in the 2019 EIS would be implemented; therefore, the findings of the safety and security analysis in the 2019 EIS remain unchanged, and no further analysis is warranted.

10. Displacement and Relocation

The minor changes to operational assumptions, as presented in this SEA, would not alter the conclusions of the 2019 EIS with respect to displacements and relocations. The reconstruction and expansion of the JBD has been designed to avoid and minimize the need for temporary disruptions with respect to the use of private property and/or permanent acquisitions of private property. However, as described in the 2019 EIS, the reconstruction and expansion of the JBD would require the acquisition of several commercial properties as well as attainment of temporary easements on adjoining private properties located on 165th Street. The minor changes to operational assumptions, as presented in this SEA, would not change the number of temporary easements or permanent acquisitions required, nor would it change the number of employees or businesses displaced by the reconstruction and expansion of the JBD. Therefore, the findings of the displacement and relocation analysis in the 2019 EIS remain unchanged, and no further analysis is warranted.

11. Neighborhood Character

As described in relevant sections of this SEA, the Proposed Project would not result in significant adverse impacts in the areas of land use, zoning, or public policy; socioeconomic conditions; shadows; historic and cultural resources; urban design and visual resources; shadows; or noise. A significant adverse traffic impact would occur at the intersection of Liberty Avenue and 165th Street during the AM and PM peak hours. However, this impact will be mitigated through signal timing adjustments, a standard traffic mitigation practice. Therefore, this analysis finds that the Proposed Project would not have a significant adverse neighborhood character impact.

C. DETAILED ANALYSES

1. Transportation (Traffic, Parking, Transit, & Pedestrians)

a. Context and Key Issues

As previously described in Section I.A.1: New Information and Assumptions for this SEA, since the publication of the 2019 EIS, changes to specific project design and operational assumptions, as well as construction-period assumptions have occurred. The 2019 EIS assumed the analysis year for operations (first day of operations) would be 2025. Given that the Depot construction was delayed because MTA NYCT had not selected a temporary bus parking location at the time of the 2019 EIS publication, this SEA is warranted to account for the construction and temporary construction-period use of the proposed Temporary Bus Parking Site and, subsequently, to reassess the analysis years. For the purposes of this SEA, the updated analysis year for operations would be 2027.

Although any potential de-mapping of Tuskegee Airmen Way, if it were to occur, would be a future separate action, the Depot design as currently contemplated would require reconfiguring the Tuskegee Airmen Way paved roadbed to support Depot operations. This change in roadbed configuration would include the removal of a parking area and some street trees and, therefore, would represent a minor change to the street pattern directly north of the Depot site. The Build analysis for the Proposed Project assumes traffic diversions resulting from the use of this portion of Tuskegee Airmen Way. Additionally, NYCDOT has implemented changes to the street configuration of Merrick Boulevard, Archer Avenue, and 168th Street to accommodate new bus-only lanes.

Traffic and transportation operations were examined in the 2019 EIS to assess the effect of the Proposed Project on local traffic, parking, transit, and pedestrian operations. The bus routing and circulation patterns of the Proposed Project, as evaluated in the 2019 EIS, remain unchanged. In addition to examining the effect of increased bus and employee trips for bus parking capacity, the analysis also considers bus routing, as evaluated in the 2019 EIS, for buses returning to the Depot at the end of their service runs to understand potential effect on traffic operations. Therefore, the traffic analysis examines:

- The effect of increased bus and employee trips generated by the Proposed Project on the Depot site study area roadway network; and
- The effect of changes to the Depot's entrance and exit locations on bus movements within the traffic study area.

The number of employees commuting to and from the facility each day would increase and potentially affect the demand for on-street parking near the Depot. A detailed assessment of on-street parking conditions has been performed and is described in this section.

This section also assesses the existing roadway crash history on the study area roadway network and the potential effect of increased bus operations on safety. The assessments are based on three years of crash data from NYCDOT, which were examined to determine predominant crash types (i.e., rear-end, sideswipe, pedestrian, etc.) that may be influenced by increased bus trips to and from the Depot.

b. Summary and Conclusions

i. Traffic and Parking

As described below, the Proposed Project would affect traffic volumes on the local study area street network as a result of:

- increased number of bus and employee trips to and from the Depot; and
- reconfiguration of bus movements and bus circulation on the street and within the Depot.

1. Increased Bus Trips

Bus parking capacity and number of employees would increase in the 2027 build year. With the Proposed Project, the number of physical buses parked on-site would increase from 200 to 240 buses. The Depot is estimated to employ additional bus operators, administrative staff, and vehicle maintainers. The number of additional daily employees is estimated to be 102 employees for the Proposed Project, which would generate up to 15 new vehicle trips on the adjacent street network during the AM and PM peak hours.

The traffic analysis findings indicate that a significant traffic impact would occur at the intersection of Liberty Avenue and 165th Street during the AM and PM peak hours. This impact will be mitigated through signal timing adjustments, a standard traffic mitigation practice.

Existing traffic and operational conditions at the intersection of Tuskegee Airmen Way at 165th Street meet traffic control signal needs studies as per the CEQR Traffic Signal Warrant Analysis (Warrant 3: Peak Hour Traffic Volumes). Installing a traffic signal would improve existing intersection operations to an acceptable Level of Service ("LOS") C conditions or better for all approaches. This intersection would not experience a significant traffic impact due to the Proposed Project; however, given the increase of buses projected to turn through this intersection during the 2027 build year, installation of a traffic signal at this intersection is recommended. This intersection has an offset configuration (i.e., the north and southbound approaches do not align) and, therefore, installing a traffic signal would help to improve safety and reduce conflicts between turning buses and through traffic on 165th Street.

2. Bus Routing

Buses returning to the Depot in the late afternoon or evening often form a queue in the existing bus parking area while waiting to enter the Depot's main entrance for fueling and washing. The Proposed Project would have three fueling/washing lanes to service the buses. This is an increase from the two lanes at the existing JBD and would result in a shorter queue.

The 2019 EIS analyzed a bus routing strategy that would direct all returning buses to southbound Merrick Boulevard to enter the Depot via the south Merrick Boulevard driveway. This routing strategy was preferred as all returning buses would be able to queue on the Depot property when waiting to enter the fueling lanes. Buses would move to the north end of the MTA NYCT property where they could turn into the fueling lanes using the Depot's north apron area, separate from the Tuskegee Airmen Way sidewalk and pedestrians. This preferred routing strategy was used for the traffic analyses in the 2019 EIS and this SEA.

3. Increased Employee Trips

No significant parking impacts resulting from employee parking would be expected on the streets within a ¼-mile radius of the Depot site. The Proposed Project would potentially increase on-street parking demand

by up to 21 vehicles for personal employee vehicles, which would increase the shortfall for available on-street parking to 41 spaces in the study area on a typical weekday. This shortfall is not considered a significant impact due to the availability and proximity of transit in the area. Further, MTA NYCT encourages their employees to use public transit to commute to work by providing a MetroCard as part of their employee compensation package. Alternative travel modes are available for the JBD employees including six local MTA NYCT bus routes that operate along Merrick Boulevard and Liberty Avenue. If feasible, future Depot management may also identify opportunities to provide some on-site parking at the Depot for employees during the day when buses are in service on their assigned bus routes.

ii. Transit and Pedestrians

According to the *CEQR Technical Manual*, detailed transit analyses are required if a proposed action is projected to result in an increase of 200 or more passengers at a single subway station or on a single subway line or if a proposed action would result in 50 or more bus passengers being assigned to a single bus route (in one direction) during the AM and PM peak hours. Quantitative pedestrian analyses are required if a proposed action results in more than 200 new pedestrian trips.

The number of daily employees at the Depot is projected to increase by up to 102 new employees. Given that the net increase in employees from current staff levels is less than 200 employees, of which only a portion are expected to travel during the AM and PM peak hours (the Proposed Project would utilize a staggered shift schedule that is similar to current operations), transit and pedestrian related activities generated by the Proposed Project would not exceed the *CEQR Technical Manual* screening criteria.

The use of a portion of Tuskegee Airmen Way and adjacent NYCDOT traffic island would eliminate the south sidewalk of Tuskegee Airmen Way west of Merrick Boulevard. Pedestrian counts collected as part of the data collection effort in 2021 indicate that in peak hours, less than 20 people per hour use this sidewalk. The volume of rerouted pedestrian trips that would be diverted to Liberty Avenue would be less than the *CEQR Technical Manual* threshold of 200 pedestrian trips and would not require a quantitative pedestrian analysis. Therefore, detailed analysis of transit and pedestrian conditions are not required, and the Proposed Project would not result in any significant adverse transit or pedestrian impacts.

2. Air Quality

a. Context and Key Issues

Operation of the Proposed Project has the potential to affect localized air quality conditions, which could result in potential effects to public health and the environment. Therefore, analyses were conducted in 2019 EIS in accordance with the *CEQR Technical Manual*, as well as other relevant guidance and protocols provided by NYSDEC, NYCDEP, and the United States Environmental Protection Agency ("USEPA"). In addition, the air quality characteristics of the Proposed Project are identified and discussed within the context of the Clean Air Act ("CAA") requirements and other applicable State and local air quality standards. The minor changes to operational assumptions since the 2019 EIS, as previously described in Section I.A.1: New Information and Assumptions for this SEA, necessitate a reevaluation of potential effects related to air quality. Potential effects related to construction-period air quality are discussed in Section II.C.3: Air Quality.

This section examines the potential for direct and indirect air quality impacts from the Proposed Project (for the full detailed analysis of Air Quality, see **Attachment E: Air Quality**). Direct impacts stem from emissions generated by stationary sources at the Depot, such as emissions from fossil fuels burned on-site for heating, ventilation, and air conditioning ("HVAC") systems. Indirect impacts can include emissions from mobile vehicle trips generated by a project or other changes to traffic conditions from a project.

The Proposed Project would include fossil fuel-fired HVAC systems to provide heating and cooling. Therefore, this section assesses the impacts of these systems to the surrounding community and the environment. The Proposed Project would increase traffic in the vicinity of the Depot resulting from the increase in future bus ridership demand. To meet the future ridership demand, MTA NYCT will require more buses, higher capacity buses, and additional employees to service and operate them than currently served by the existing Depot. Therefore, screening analyses for carbon monoxide ("CO") and particulate matter ("PM") were conducted to assess the impacts from mobile sources.

The Depot site is surrounded by both residential and commercial/industrial land uses. Residential homes dominate the Depot site study area west of the Depot site along 165th Street, whereas commercial and retail business dominate the land use east and north of the Depot site along Merrick Boulevard and Tuskegee Airmen Way, respectively. A high-rise senior citizen housing complex is located south of the Depot site study area.

b. Summary and Conclusion

The air quality analysis for the Proposed Project indicates that the maximum predicted pollutant concentrations and concentration increments from stationary and mobile sources would not result in any significant adverse air quality impacts.

The stationary source screening analysis determined that there would be no potential significant adverse air quality impacts from the emissions of pollutants from both the HVAC systems and bus parking activities associated with the Proposed Project.

Increases in mobile and stationary source resulting from the Proposed Project would not exceed the USEPA's National Ambient Air Quality Standards ("NAAQS") or the CEQR *de minimis* impact criteria.

- For mobile sources, the *CEQR Technical Manual* traffic screening threshold for CO would not be surpassed at any of the studied intersections; however, two intersections associated with the Proposed Project would exceed the *CEQR Technical Manual* screening criteria for fine respirable particulate matter ("$PM_{2.5}$") for increased heavy-duty diesel vehicle ("HDDV") equivalents. As a result, a detailed intersection analysis of $PM_{2.5}$ was conducted for the intersection with the greatest potential to exceed the CEQR *de minimis* impact criteria. The results of the detailed intersection analysis conducted for $PM_{2.5}$ indicate that there would be no exceedance of the CEQR *de minimis* impact criteria.
- For stationary sources, a detailed assessment of on-site emissions of nitrogen dioxide ("NO_2"), sulfur dioxide ("SO_2"), and $PM_{2.5}$ was conducted in the 2019 EIS for bus parking and maintenance activities, as well as the Proposed Project's heat and hot water systems. The results of the analyses indicate that the Proposed Project would not have a significant adverse air quality impact at any of the nearby residences (sensitive receptors). Concentrations of NO_2 and SO_2 would not exceed the USEPA's NAAQS criteria and $PM_{2.5}$ concentrations would not exceed the CEQR *de minimis* impact criteria.

The operational condition of the Proposed Project would be the same as that was proposed in the 2019 EIS. Therefore, the methodology and assessment results presented in the 2019 EIS, as shown below, are determined to be still valid.

The projected emission pollutant burdens calculated in the 2019 EIS would result in annual emissions that would categorize the Proposed Project as a minor source and, as a result, the Proposed Project would be eligible to obtain a State facility permit.

3. Noise and Vibration

a. Context and Key Issues

This section summarizes the potential for noise and vibration impacts from the operation of the Proposed Project (see Attachment F: Noise and Vibration for the detailed operational noise analyses) incorporating the updated noise monitoring data utilized to determine potential impacts at sensitive receptors and taking into consideration the project design and operational assumptions that have changed since the 2019 EIS. Project noise and vibration impacts are evaluated using the impact criteria defined in the FTA guidance manual, *Transit Noise and Vibration Impact Assessment (September 2018)*, as well as elements of the *CEQR Technical Manual*.

b. Summary and Conclusions

The Proposed Project would not result in any significant adverse noise or vibration impacts from either stationary or mobile sources to surrounding land uses. The Proposed Project would generate both stationary and mobile source noise. Stationary source noise would be generated by rooftop mechanical equipment, as well as by bus parking activities within the Depot building. Mobile source noise would be generated off-site by buses and passenger vehicles driving to and from the proposed Depot. In addition to roadway noise, on-site bus noise from the existing Depot may affect some nearby residences along 107th Avenue and 165th Street. Operations at the proposed Depot would not result in any significant noise impacts to sensitive noise receptors such as residences or community facilities in the vicinity of the Depot. Noise generated at the proposed Depot would not exceed the FTA noise criteria at adjacent sensitive noise receptors. In addition, the increase in the number of buses maintained at the Depot would not result in any exceedance of the *CEQR Technical Manual* noise criteria at nearby sites along the local traffic network.

Because buses are rubber-tired vehicles, there would be no significant vibration effects to any nearby vibration-sensitive receptors such as residences or community facilities.

The design for the Depot includes security/sound barrier walls at a minimum height of 20 feet, which is similar to the height of the existing wall that borders the properties along 165th Street. The height of the security/sound barrier wall along 165th Street would be increased to 31 feet so that the noise exposure levels for the JBD would not exceed the FTA's threshold criteria level. Given that the design for the Depot includes these security/sound barrier walls and rooftop parapet walls, which would control noise levels, no further mitigation would be warranted.

D. OPERATIONAL CONDITION CONCLUSIONS

The minor changes to operational condition assumptions (i.e., revised analysis years, refined Depot entry and exit points, minor street reconfiguration, and the use of a portion of Tuskegee Airmen Way and adjacent NYCDOT traffic island), as presented in this SEA, would not change the conclusions established in the 2019 EIS with respect to the technical areas for which screening-level analyses were performed (i.e., historic and cultural resources, social and economic conditions, urban design and visual resources, shadows, natural resources, coastal zone, contaminated and hazardous materials, infrastructure, energy, and solid waste, safety and security, displacement and relocation, and neighborhood character). Therefore, the conclusions of the 2019 EIS would remain valid with respect to these technical areas for Depot operational condition.

With regard to transportation, the reconstruction and expansion of the JBD would affect traffic volumes on the local study area street network as a result of an increased number of bus and employee trips to/from the Depot and a reconfiguration of bus movements/circulation on the street and within the Depot. Additionally, the net increase in employees from current staff levels would be less than 200 employees, of which only a portion are expected to travel during the AM and PM peak hours (the Depot would utilize a staggered shift schedule that is similar to current operations); therefore, the reconstruction and expansion of the JBD would not result in any significant adverse transit or pedestrian activities impacts. However, mitigation measures would be implemented to avoid any potential impacts resulting from increased bus and employee trips or bus rerouting and, therefore, the conclusions of the 2019 EIS would remain valid with respect to transportation analyses of Depot operations.

With regard to air quality, the maximum predicted pollutant concentrations and concentration increments from stationary and mobile sources would not result in any significant adverse air quality impacts. Increases in mobile and stationary source pollutants resulting from the reconstruction and expansion of the JBD would not exceed the USEPA's NAAQs or the NYSDEC *de minimis* impact criteria. Therefore, as described in the 2019 EIS, the projected emission pollutant burdens calculated for the reconstruction and expansion of the JBD would result in annual emissions that would categorize the Depot as a minor source and, as a result, the Proposed Project would be eligible to obtain a State facility permit.

The reconstruction and expansion of the JBD would generate both stationary and mobile source noise. However, noise from the Depot would not exceed the FTA noise criteria at adjacent sensitive receptors, and the increase in the number of buses maintained at the Depot would not result in any exceedance of the *CEQR Technical Manual* noise criteria at nearby sites along the local traffic network. In addition, because buses are rubber-tired vehicles, there would be no significant vibration effects to any nearby vibration sensitive receptors such as residences and community facilities. Given that the conceptual site designs for the Depot include security/sound barrier walls and rooftop parapet walls, which would control noise emissions, noise and vibration impacts are not predicted to occur, no additional mitigation measures would be required, and the conclusions of the 2019 EIS would remain valid with respect to noise and vibration.

IV. Secondary and Cumulative Effects

A. INTRODUCTION

This section summarizes the Proposed Project's secondary and cumulative effects when considered with other planned developments in the area.

Secondary effects generally refer to the potential for a proposed action to trigger additional development in areas outside the project site that would not occur without the proposed project. These can include growth-inducing effects as well as changes in land use, economic conditions, neighborhood character, traffic congestion, and their associated effects on air quality and noise, water resources, and other natural resources.

Cumulative effects result from the incremental consequences of a proposed action when added to other past and reasonably foreseeable future actions. Cumulative effects are two or more individual effects on environment that when considered together are significant or that compound or increase other environmental effects.

B. SUMMARY AND CONCLUSIONS

The Proposed Project, as described in Section I.B: Purpose and Need, is intended to facilitate ongoing bus service improvements but would not result in new bus routes or substantial new bus service. Therefore, the Proposed Project is not expected to encourage new residential or commercial growth. In consideration of the range of technical analyses and other future development projects presented in this SEA, the Proposed Project would not result in any significant adverse secondary or cumulative impacts as described below.

C. METHODOLOGY

This secondary and cumulative effects assessment considers past and present projects/actions as well as all foreseeable projects whose effects would be evident in the study area. A population growth factor (background growth) was included to account for traffic growth related to other smaller development projects that could occur in the study area by the analysis year. Analysis years for construction were identified based on anticipated levels of activity for the Proposed Project and used to estimate reasonable worst-case environmental impacts in the study area.

Aside from background growth, real-estate developments within the study area anticipated to be constructed and occupied prior to the 2027 build year have the potential to generate trips. Several No-Build projects (projects that would happen with or without the reconstruction and expansion of the JBD) were identified in the study area and their anticipated vehicle trip generation/assignments were developed and incorporated into the No-Build traffic volume network, including:

- 90-02 168th Street: 614-unit residential and 24,000 square foot commercial building
- 92-32 Union Hall Street: 110-room hotel
- 160-05 Archer Avenue: Mixed-use retail and 315-unit residential building
- 163-05 Archer Avenue: 605-unit residential building

In addition, based on a search In DCP's ZAP, there is a pending application from SBS to expand and amend the nearby Sutphin Boulevard (Downtown Jamaica) BID which is currently going through public review process.

The following subject areas were evaluated to assess the potential for cumulative effects, based on the preceding impact analyses contained in this SEA:

- Transportation,
- Social and Economic Conditions,
- Urban Design and Visual Resources,
- Air Quality, and
- Noise and Vibration.

These technical areas were identified as having the potential to contribute to interrelated effects, both exclusively as part of the Proposed Project or in combination with the above-mentioned projects. The construction of the above-mentioned projects is assumed to overlap for at least some portion of time with that of the Proposed Project or could add to incremental impacts when considered with the Proposed Project.

D. SECONDARY EFFECTS

As stated in the 2019 EIS,

> *"As a result of changing service demands and operational needs, the existing depot facility presents several critical functional deficiencies. These deficiencies have arisen as the demand for services have increased, necessitating a larger fleet, and as opportunities for improved bus stock have allowed MTA to invest in newer buses. Modern buses include larger buses than those for which the 1939 depot was designed. Modern buses also are designed to operate differently – such as relying upon clean diesel, hybrid-electric and electric buses. As a result, the service needs and the configuration of work space within a depot have evolved. The current depot cannot be expected to serve the forecast number of buses necessary to provide the density of bus service in this section of the City, nor could it handle new demands resulting from service changes that are not part of current forecasts (i.e., resulting from changes in depot/route assignment reconfigurations).*
>
> *The Proposed Project is intended to facilitate ongoing Queens bus service improvements but would not result in new bus routes or substantial new bus service. The Proposed Project is therefore, not expected to encourage new residential or commercial growth (i.e. secondary effects) in areas where new bus service would be implemented."*

E. CUMULATIVE EFFECTS

The Proposed Project would affect traffic volumes on the local study area street network as a result of:

- increased number of bus and employee trips to and from the Depot; and
- reconfiguration of bus movements and bus circulation on the street and within the Depot site.

Significant traffic impacts were identified at the intersections of Liberty Avenue and 165th Street and Merrick Boulevard and 107th Street during the PM peak hours. These impacts will be mitigated through signal timing adjustments, a standard traffic mitigation practice.

No significant parking impacts would be expected on the streets within a ¼-mile radius of the Depot site from employee parking. Construction workers traveling to the Depot would increase the on-street parking demand by 173 vehicles, which would create a parking shortfall of 212 spaces. This shortfall is not considered a significant impact for this project due to the availability and proximity of public transit in the area.

The Proposed Project would not be noticeably different than existing uses and activities in the area and would not result in any residential or business displacements. While the Proposed Project would not significantly affect the socioeconomic conditions and trends in the area, it would result in up to 721 employees daily, an incremental increase of up to 165 new employees. During construction of the Depot, the number of construction workers and trucks would peak in the first and second quarters of 2025, with an estimated 280 workers and 68 trucks per day. This influx of new employees and construction workers could benefit local businesses with an increase in patronage.

In addition, as described in the 2019 EIS, the Proposed Project would not result in any significant adverse impact to current and emerging urban design, including: building bulk, use, and type; street hierarchy, block form, and street pattern; streetscape elements; or visual resources. The proposed changes in the built environment as a result of the Proposed Project would not be of a magnitude that would be expected to amplify adverse conditions in a significant, cumulative way.

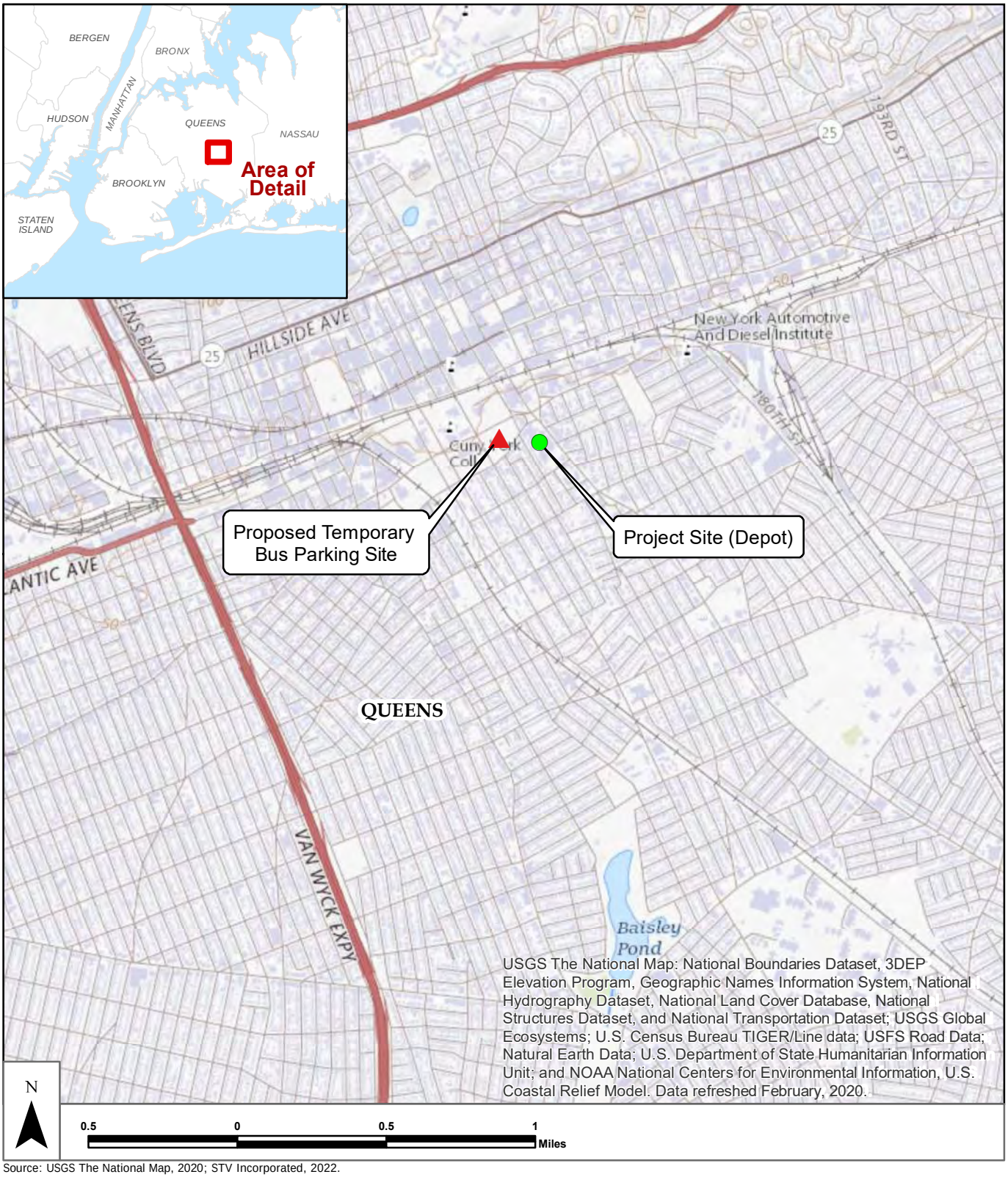
While the construction and temporary construction-period use of the proposed Temporary Bus Parking Site on what is currently a vacant, grass-covered 3.5-acre lot would be a noticeable change to pedestrians along the surrounding streets, this change would be temporary in nature and isolated to the proposed Temporary Bus Parking Site itself. The operation of the Proposed Project (new JBD) would not result in any significant air quality, noise or vibration impacts from mobile and stationary sources. Similarly, the construction of the Depot and the temporary construction-period use of the proposed Temporary Bus Parking Site would not result in any significant air quality, noise or vibration impacts during construction.

An emissions reduction program would be implemented for construction activities related to the Proposed Project to minimize the effects of construction activities on the surrounding community. Measures would include dust suppression measures, use of ULSD fuel, idling restrictions, diesel equipment reduction, the utilization of newer equipment, and best available tailpipe reduction technologies.

Projected noise levels related to the temporary use of the proposed Temporary Bus Parking Site would not exceed the FTA noise thresholds at any noise-sensitive location adjacent to the site. MTA NYCT would use vibration control measures to minimize, to the extent possible, the vibration levels for all properties near the proposed Temporary Bus Parking Site.

In summary, the Proposed Project in combination with the other future development projects evaluated in this SEA would not result cumulative significant adverse impacts during construction or operation of the Depot nor would it result in cumulative significant adverse impacts with respect to the temporary construction-period use of the proposed Temporary Bus Parking Site.

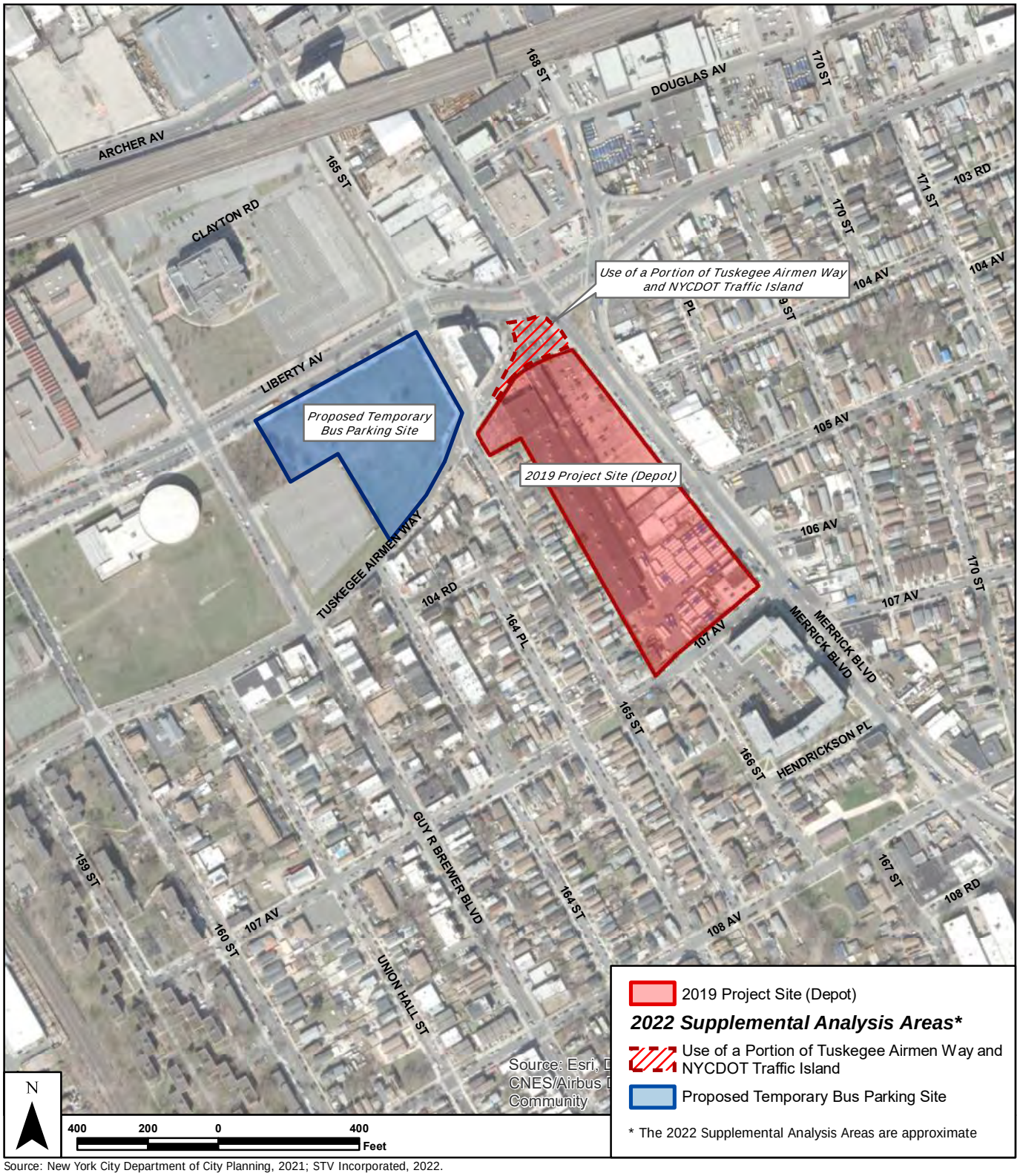
Attachment A: Figures



Source: USGS The National Map, 2020; STV Incorporated, 2022.

Figure 1

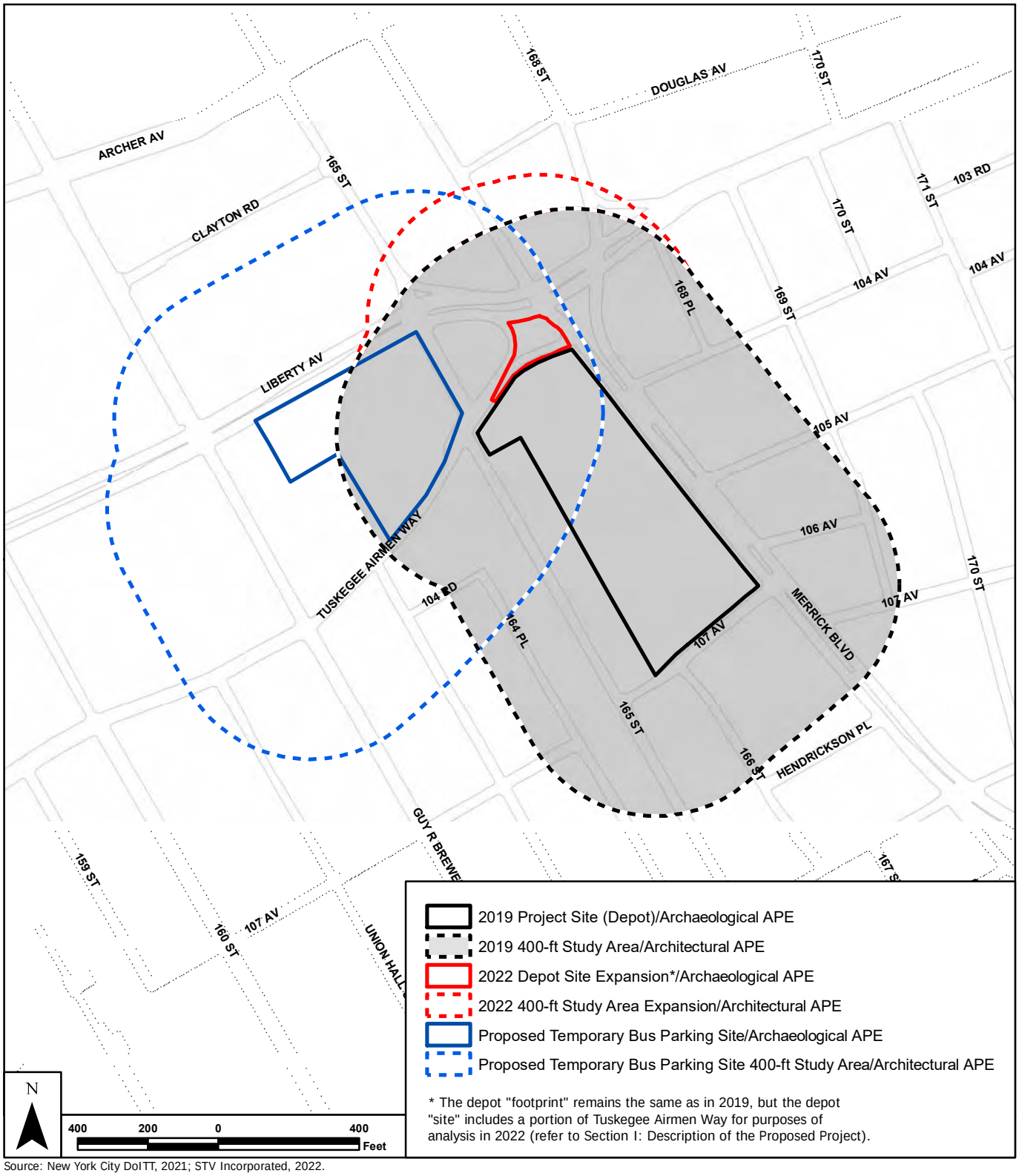
PROJECT LOCATION



Source: New York City Department of City Planning, 2021; STV Incorporated, 2022.

Figure 2

AERIAL VIEW

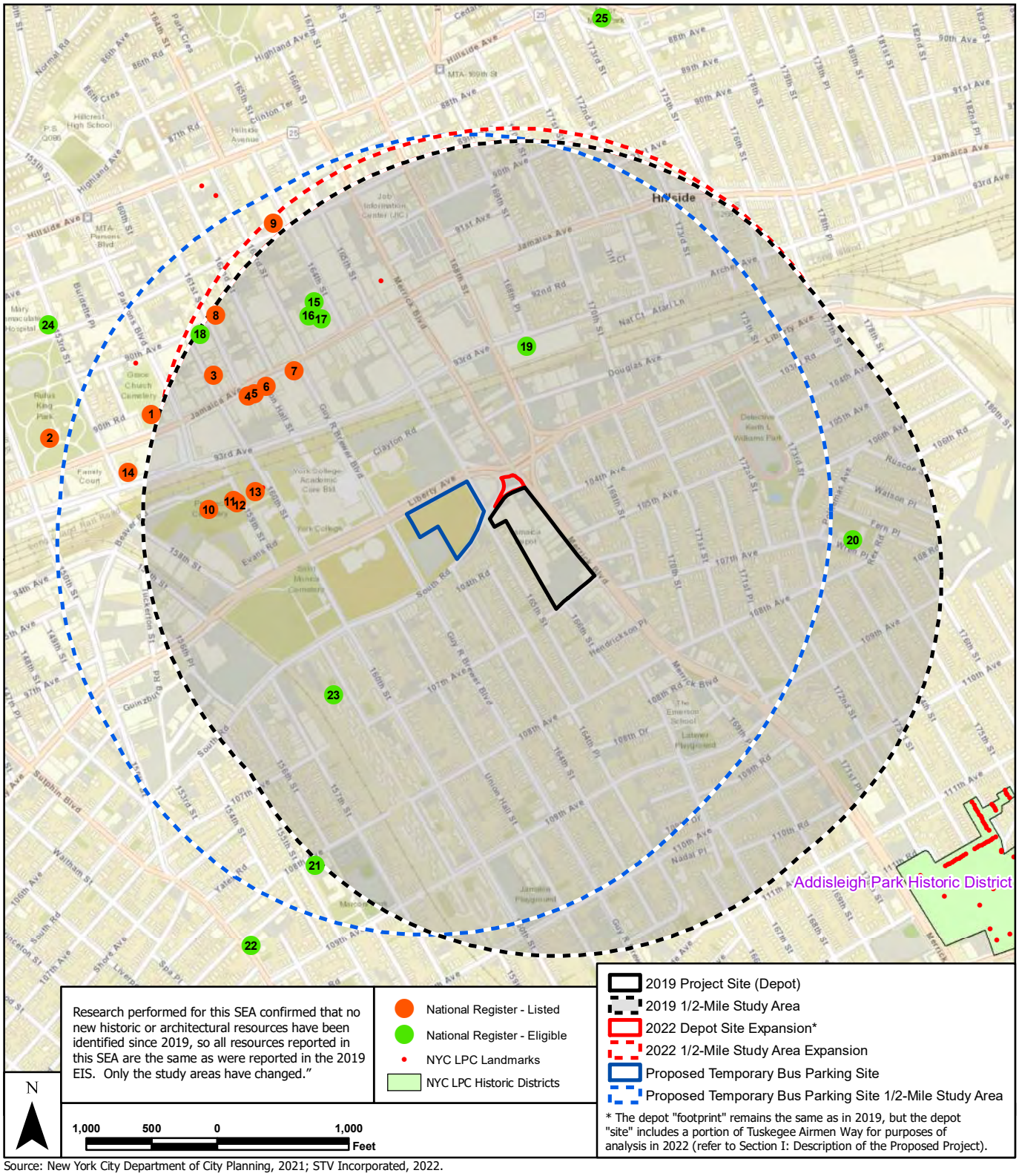


Source: New York City DoITT, 2021; STV Incorporated, 2022.

Figure 3

ARCHITECTURAL AND ARCHAEOLOGICAL APE

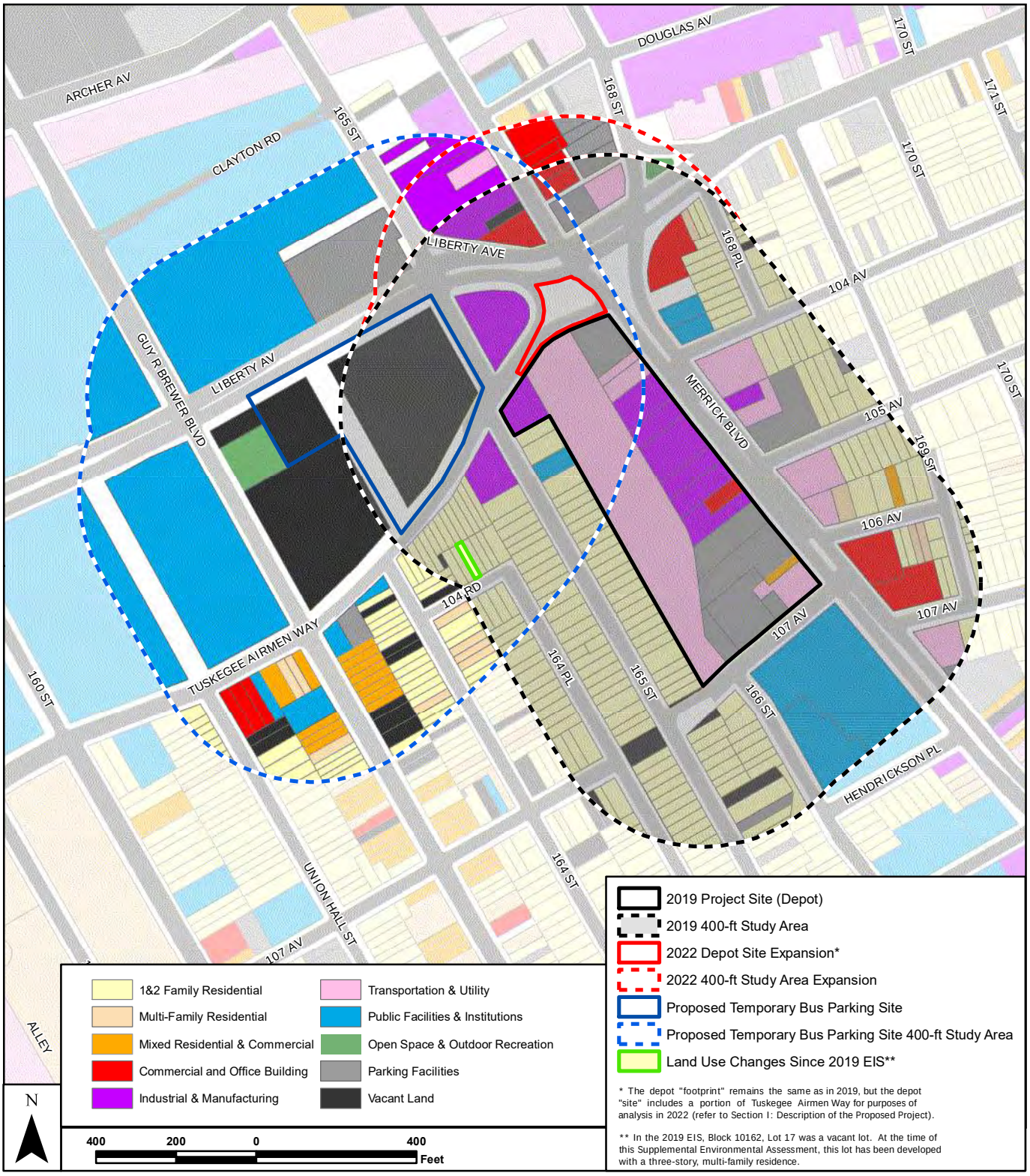
CONSTRUCTION-PERIOD



Source: New York City Department of City Planning, 2021; STV Incorporated, 2022.

Figure 4

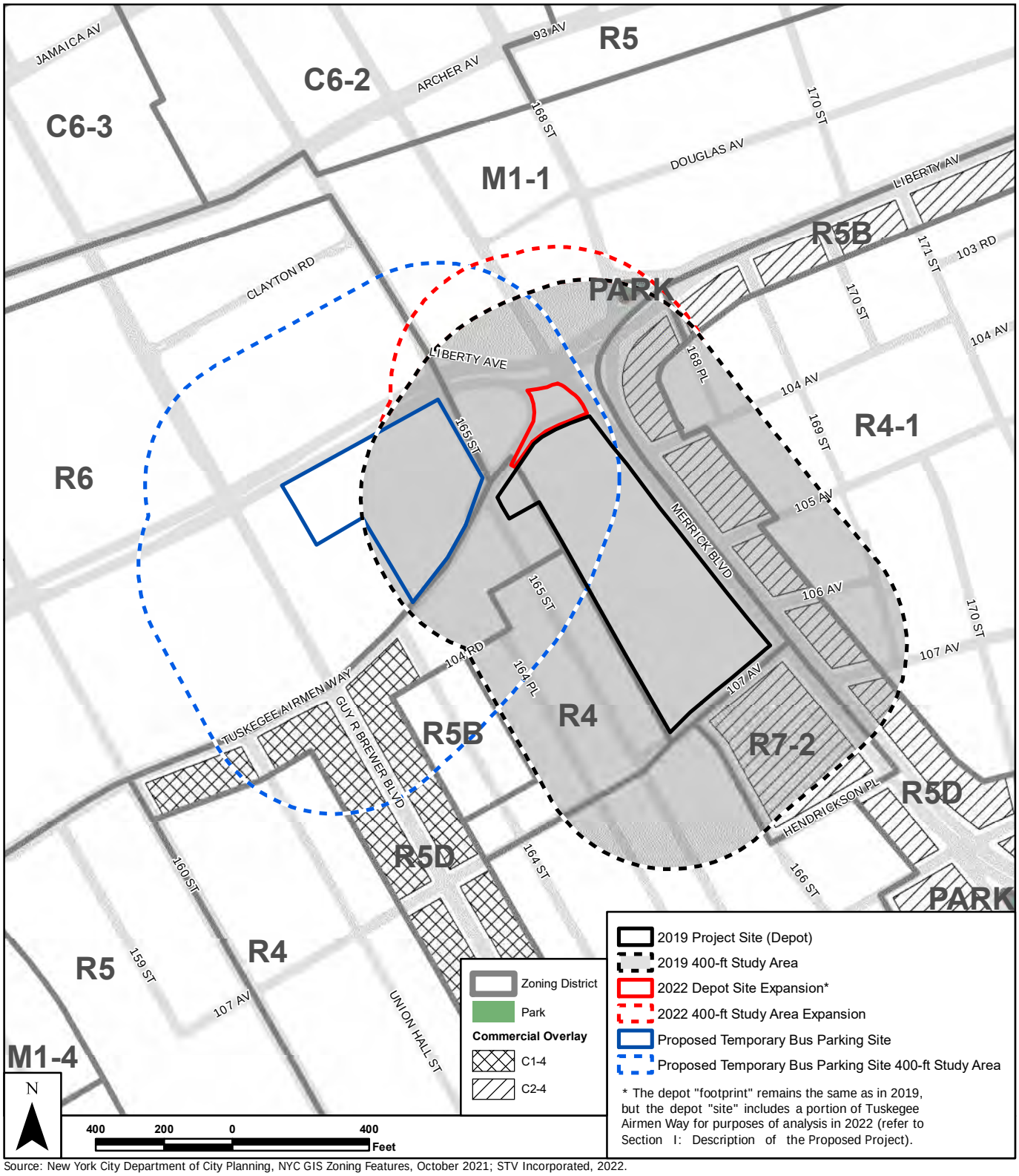
HISTORIC RESOURCES



Source: New York City Department of City Planning, MapPLUTO 21v3, 2021; STV Incorporated, 2022.

Figure 5

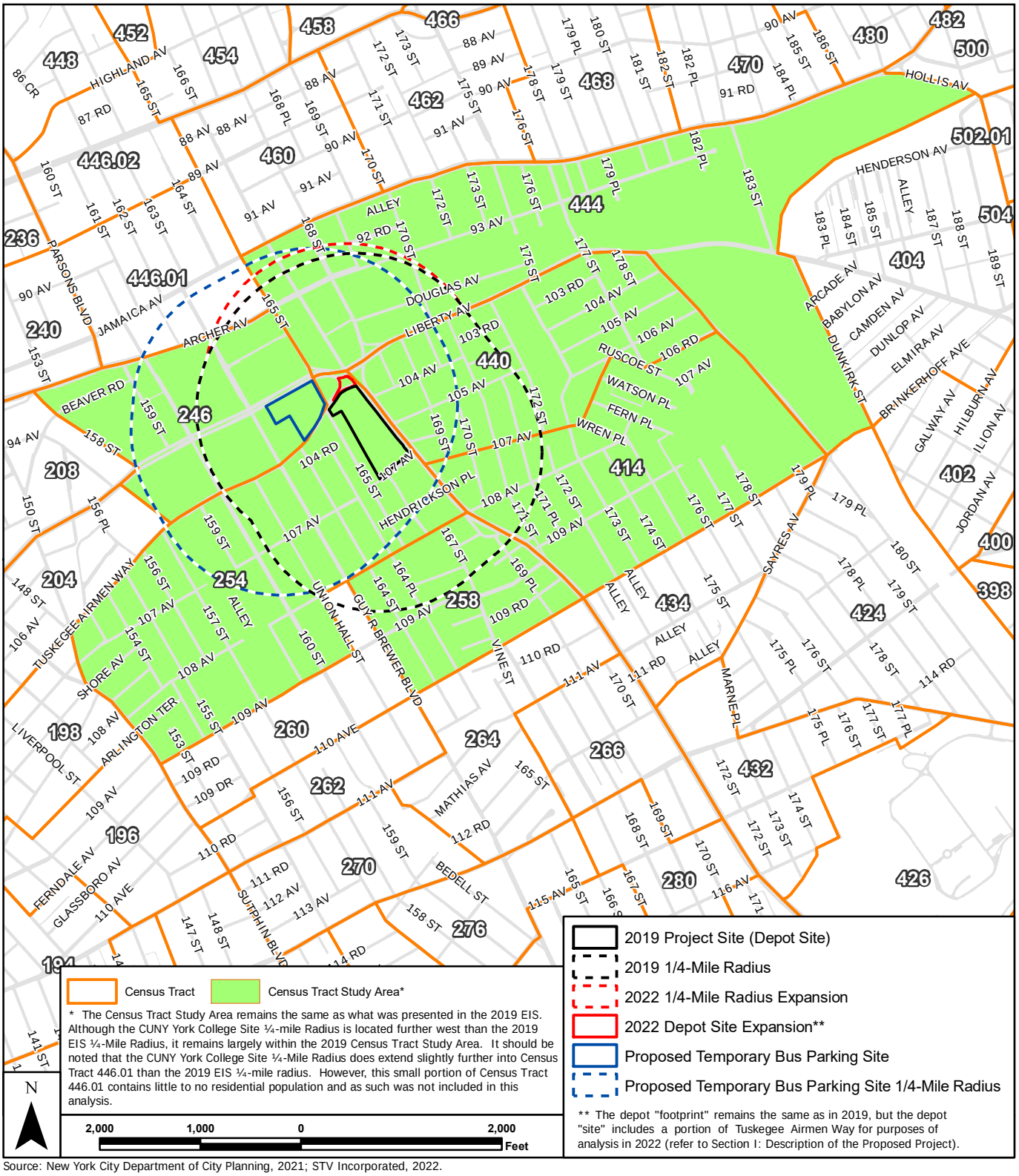
LAND USE STUDY AREA



Source: New York City Department of City Planning, NYC GIS Zoning Features, October 2021; STV Incorporated, 2022.

Figure 6

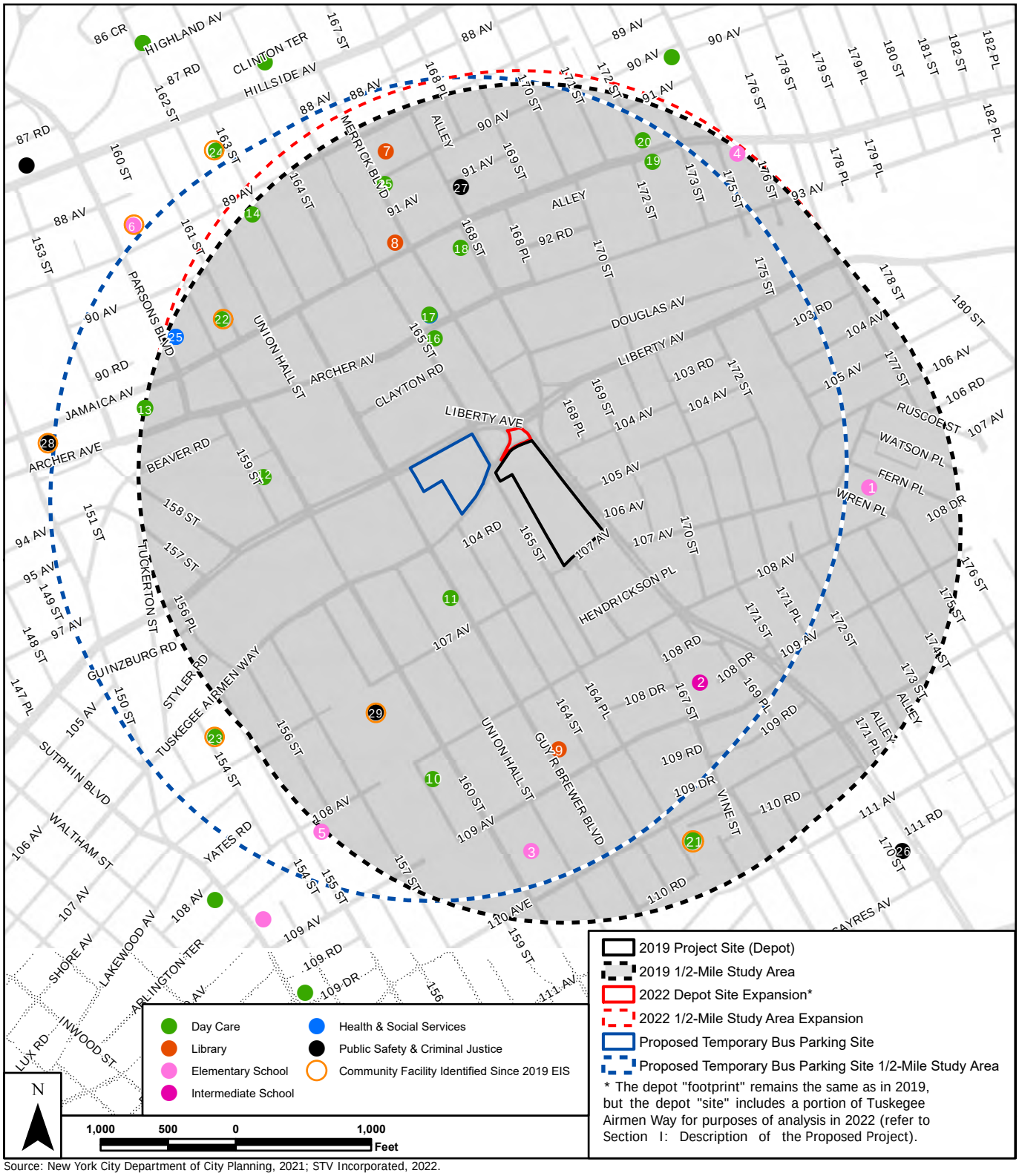
ZONING



Source: New York City Department of City Planning, 2021; STV Incorporated, 2022.

Figure 7

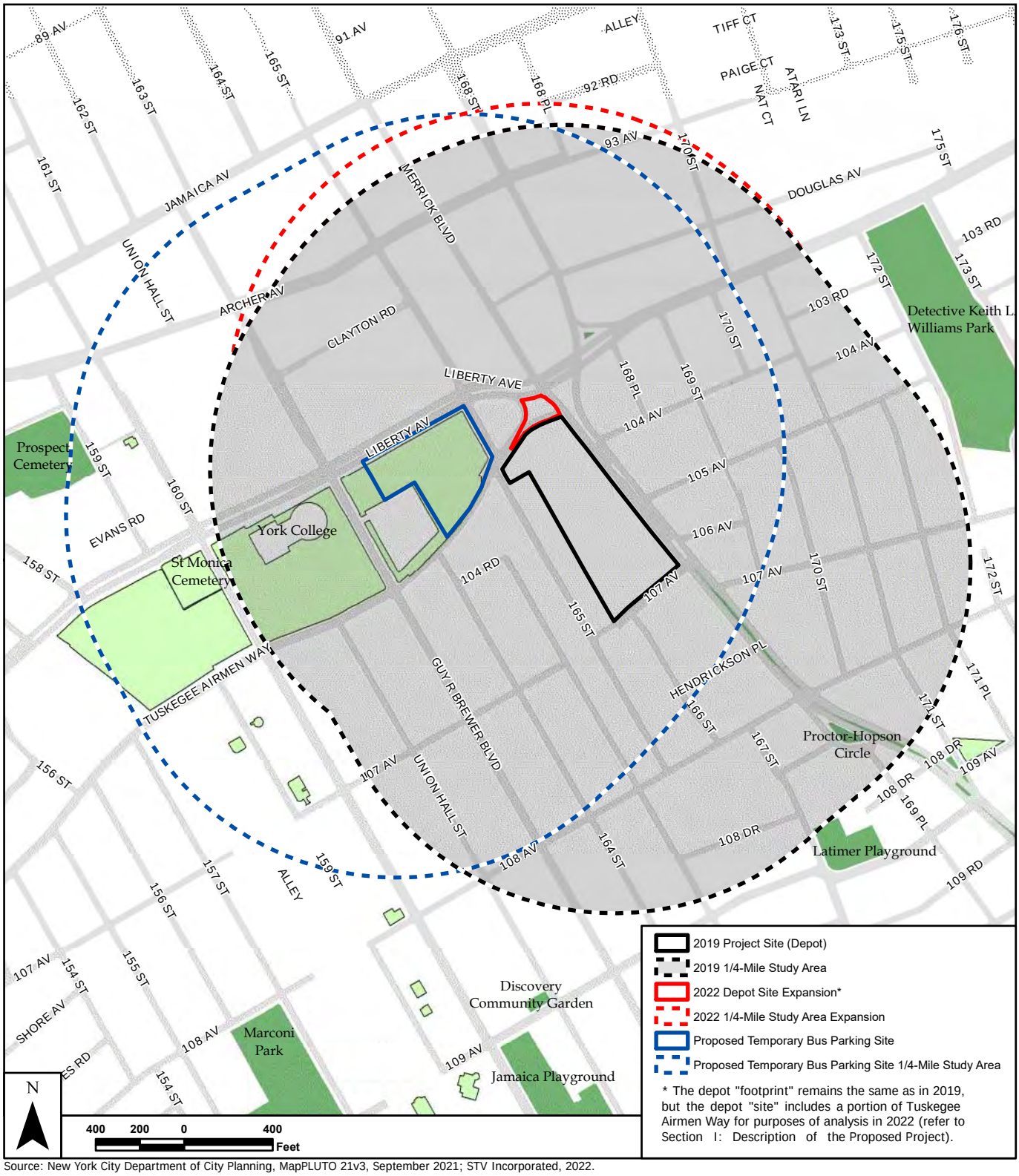
SOCIOECONOMIC CONDITIONS STUDY AREA



Source: New York City Department of City Planning, 2021; STV Incorporated, 2022.

Figure 8

COMMUNITY FACILITIES

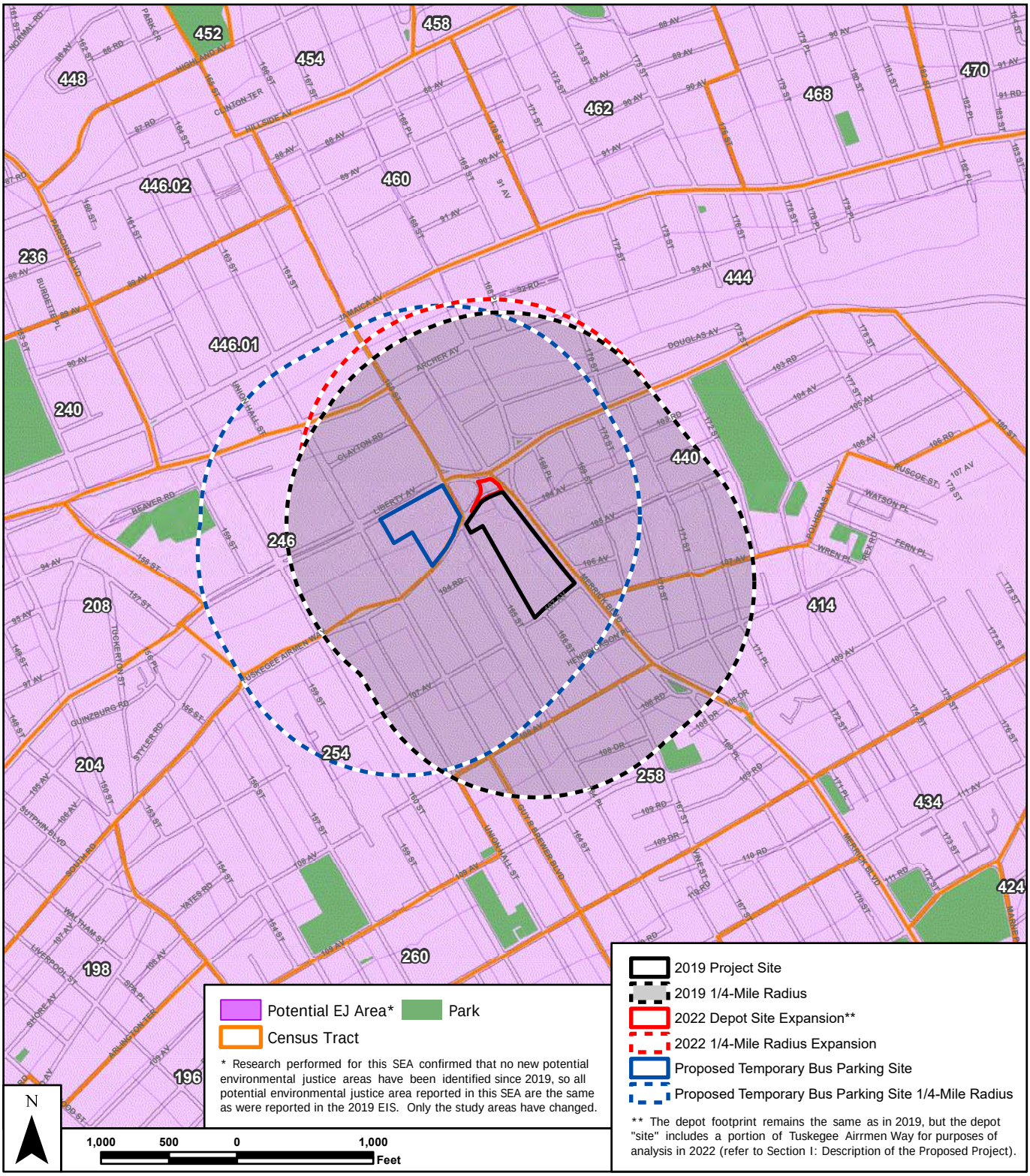


Source: New York City Department of City Planning, MapPLUTO 21v3, September 2021; STV Incorporated, 2022.

Figure 9

OPEN SPACE / PARKLAND

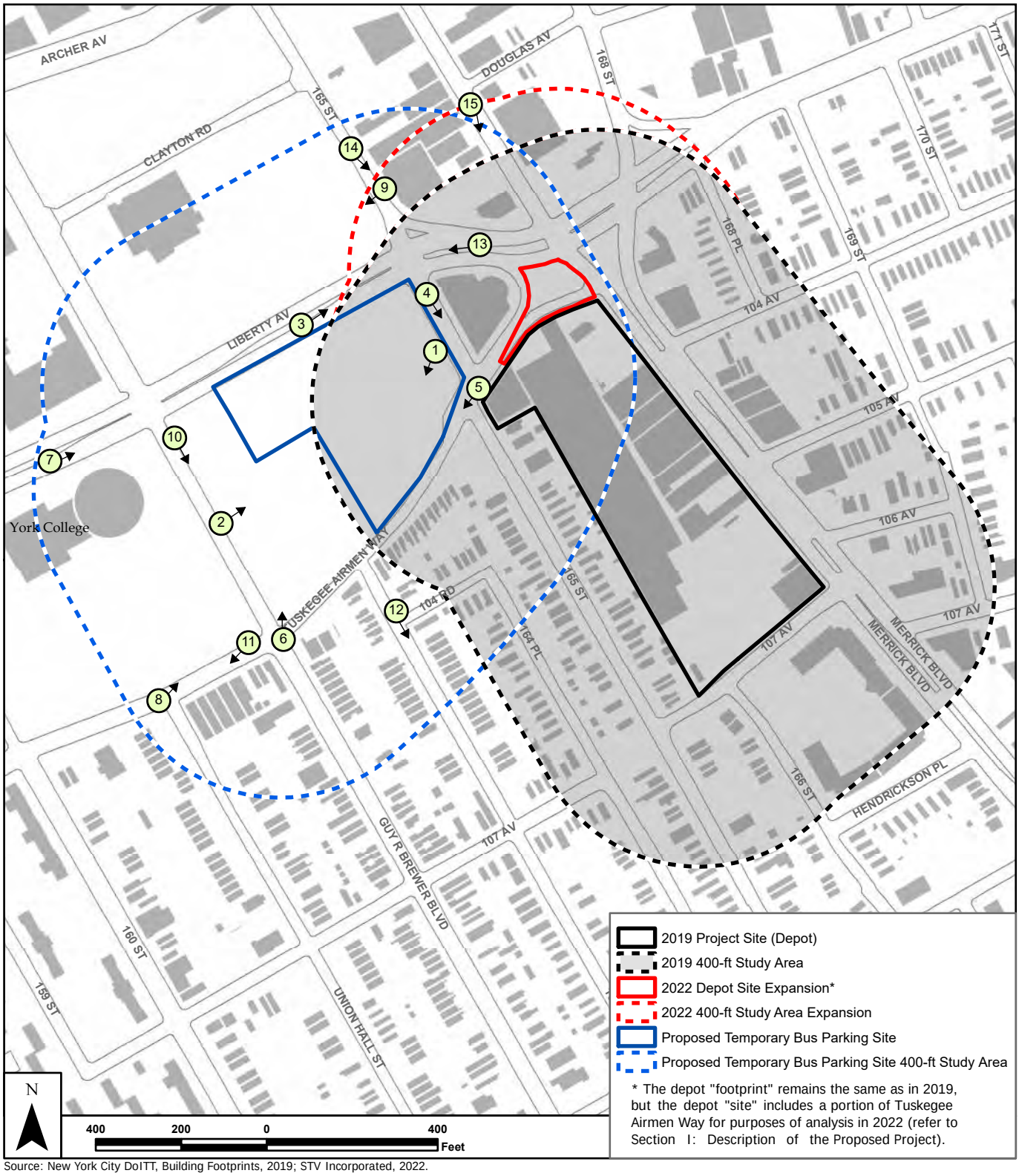
CONSTRUCTION-PERIOD



Source: New York State Department of Environmental Conservation, Potential Environmental Justice Areas, 12/14/2009; STV Incorporated, 2022.

Figure 10

POTENTIAL ENVIRONMENTAL JUSTICE AREAS



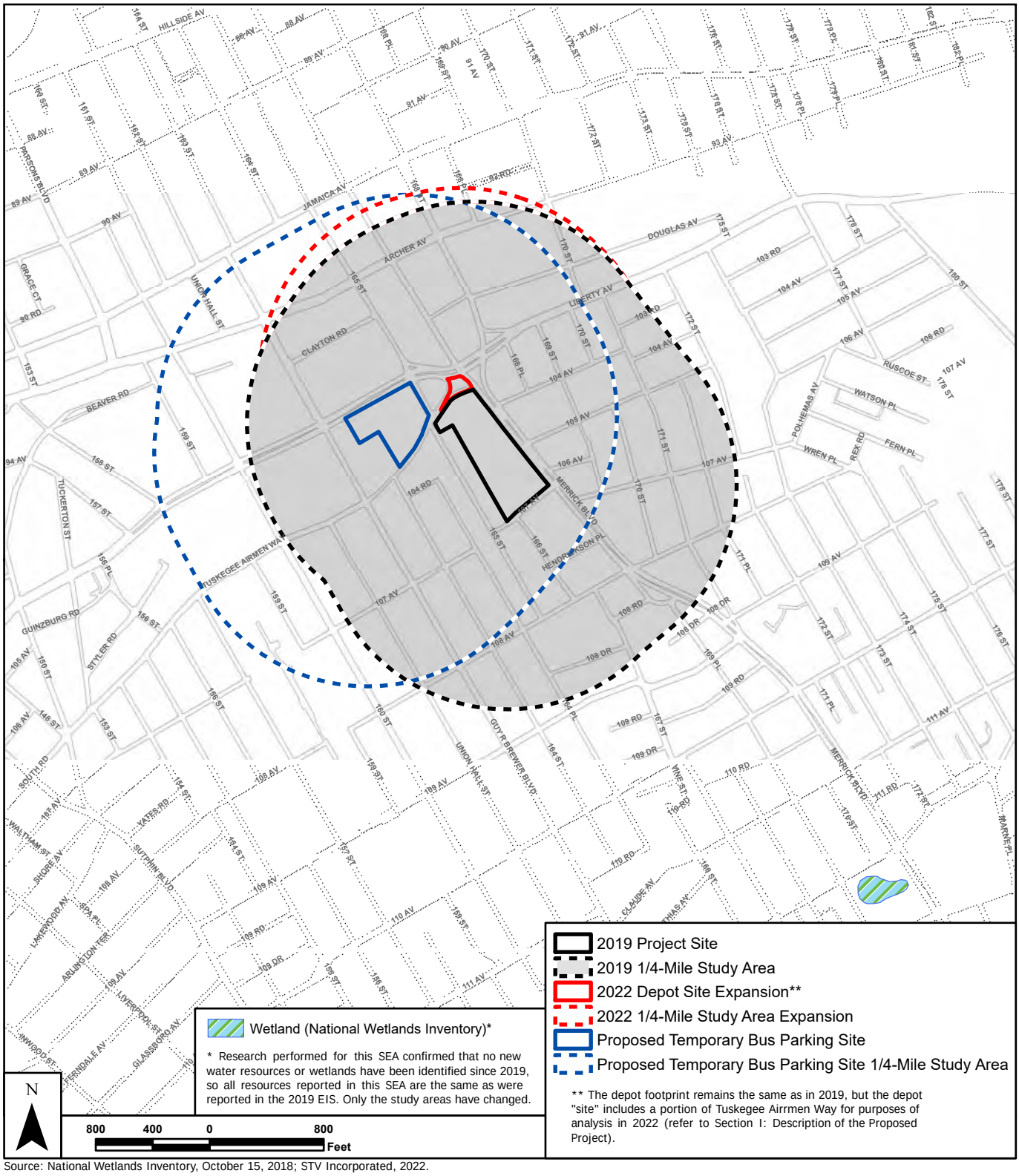
Source: New York City DoITT, Building Footprints, 2019; STV Incorporated, 2022.

Photo Location
Building Footprint

Figure 11

EXISTING CONDITIONS PHOTO KEY

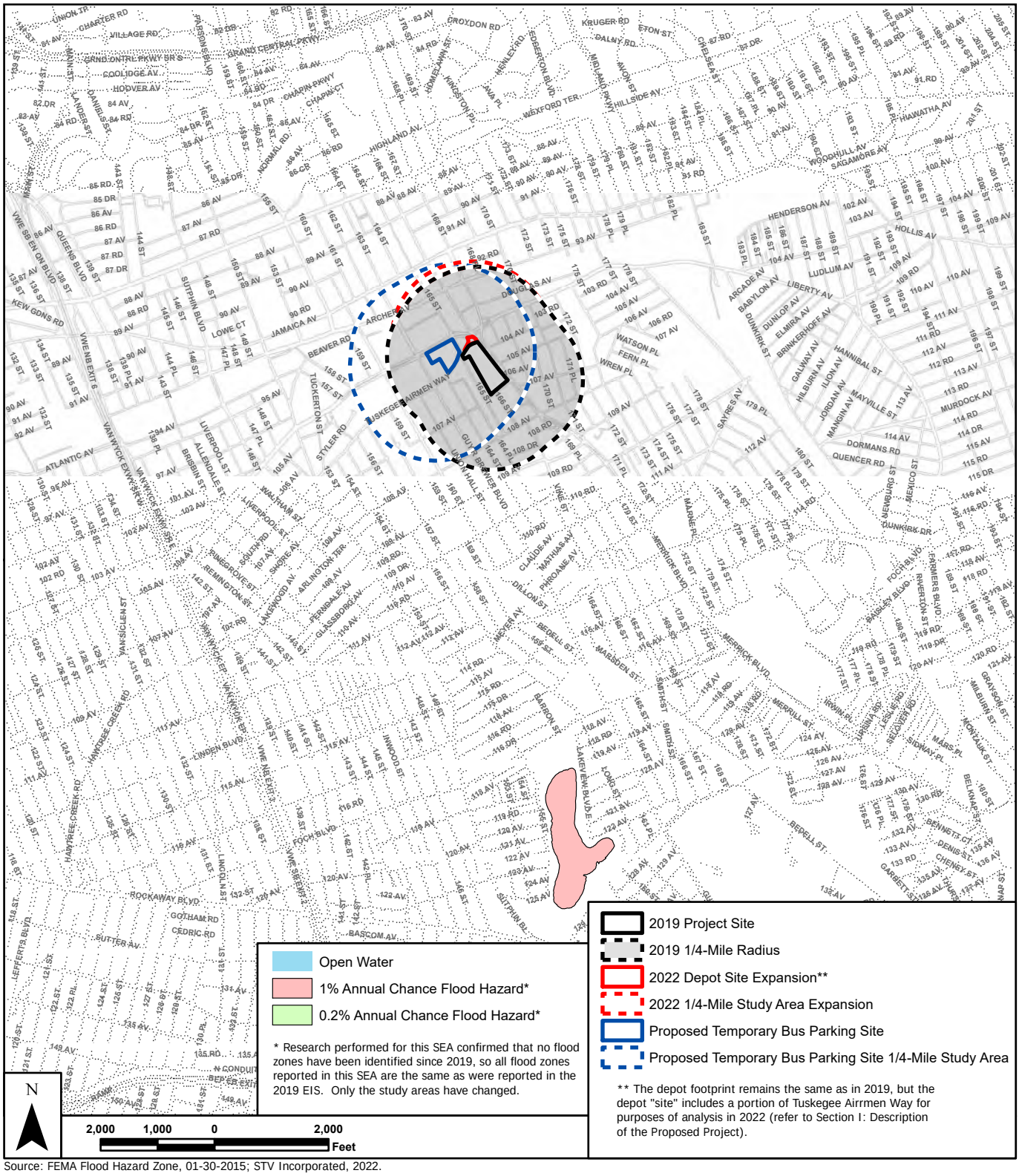
CONSTRUCTION-PERIOD



Source: National Wetlands Inventory, October 15, 2018; STV Incorporated, 2022.

Figure 12

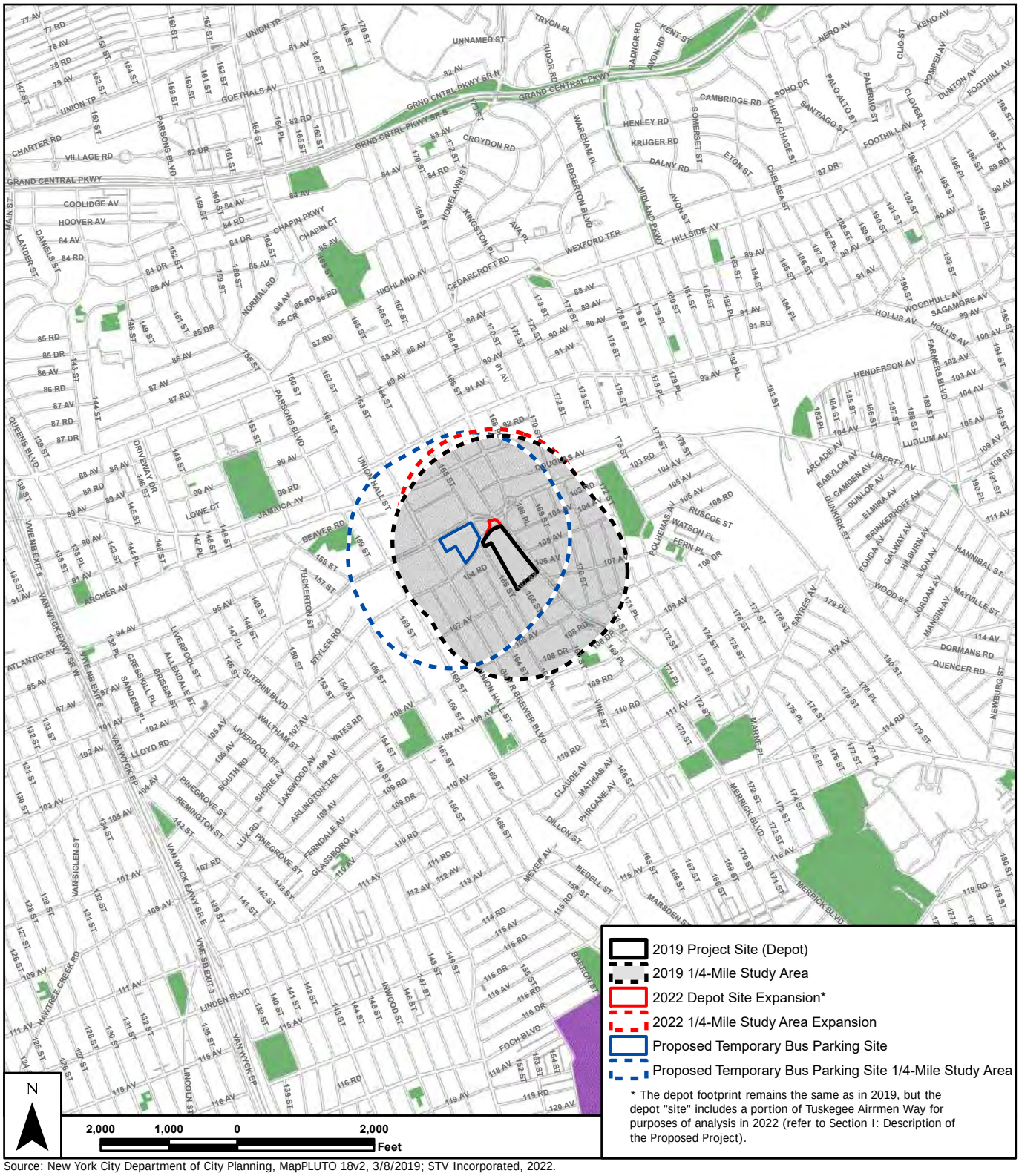
WATER RESOURCES AND WETLANDS



Source: FEMA Flood Hazard Zone, 01-30-2015; STV Incorporated, 2022.

Figure 13

FLOOD ZONES



Source: New York City Department of City Planning, MapPLUTO 18v2, 3/8/2019; STV Incorporated, 2022.

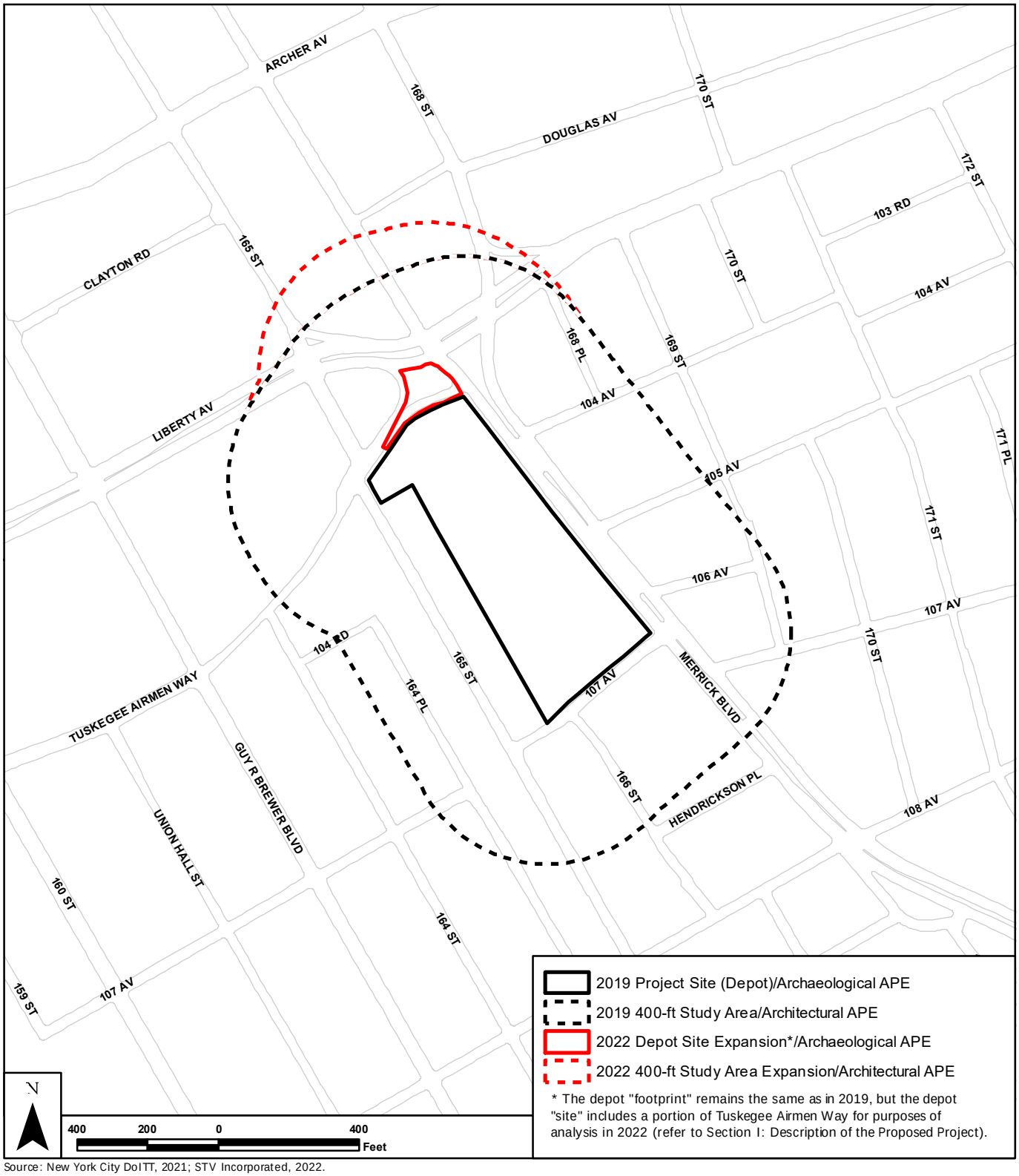
Coastal Zone**
Park

** Research performed for this SEA confirmed that there has been no change to the coastal zone since 2019, so any coastal zones reported in this SEA are the same as were reported in the 2019 EIS. Only the study areas have changed.

Figure 14

COASTAL ZONE

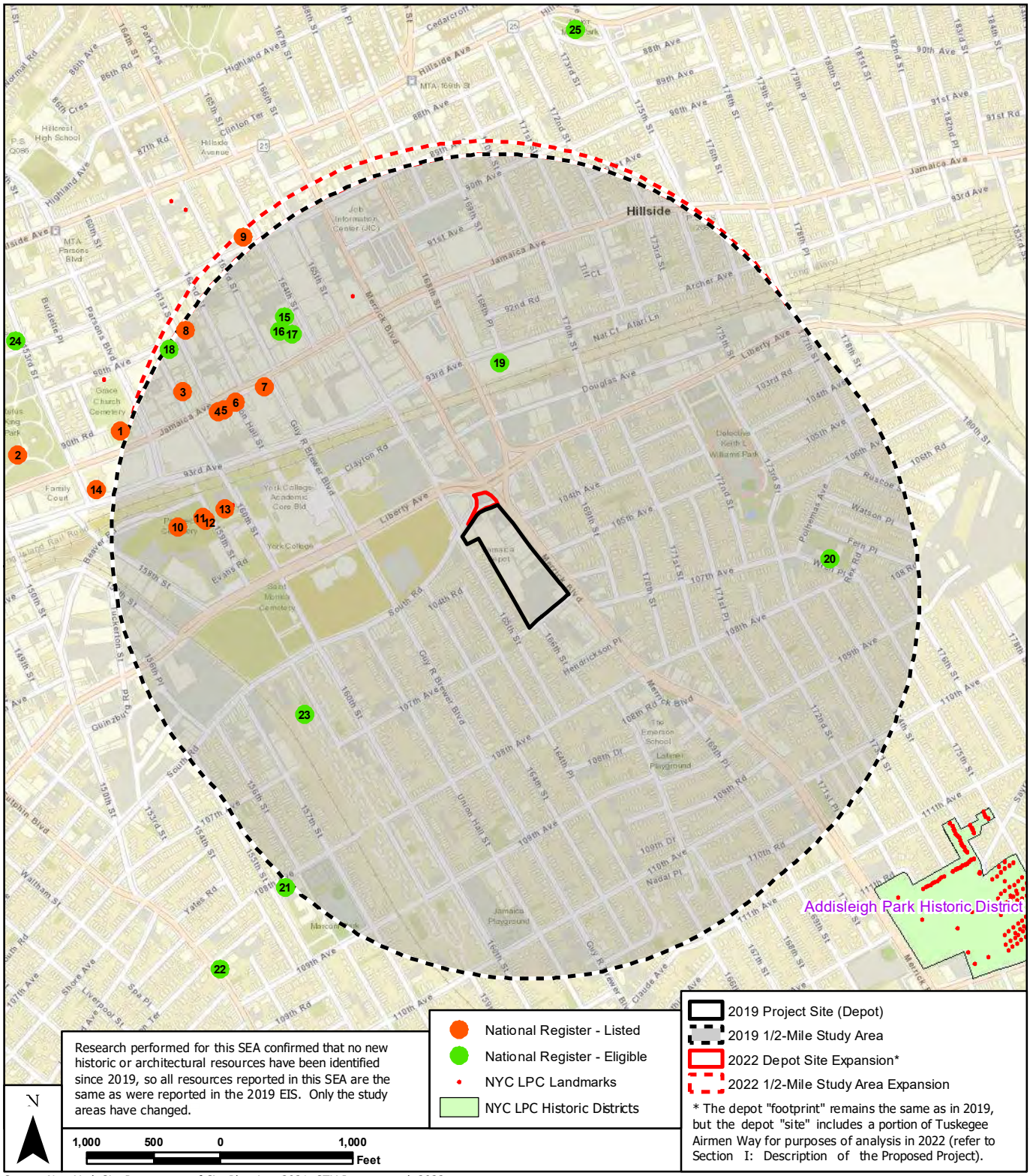
CONSTRUCTION-PERIOD



Source: New York City DoITT, 2021; STV Incorporated, 2022.

Figure 15

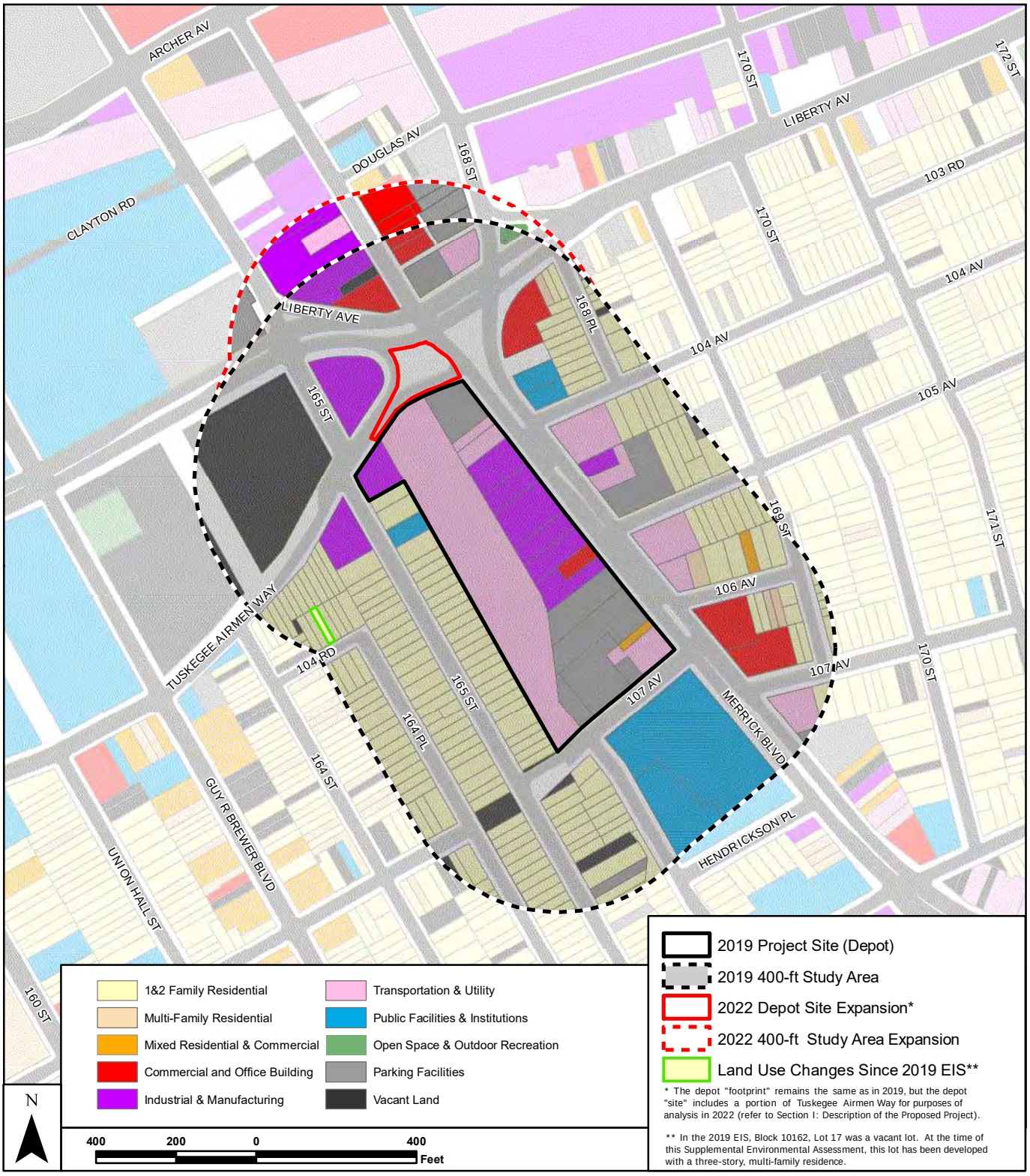
ARCHITECTURAL AND ARCHAEOLOGICAL APE



Source: New York City Department of City Planning, 2021; STV Incorporated, 2022.

Figure 16

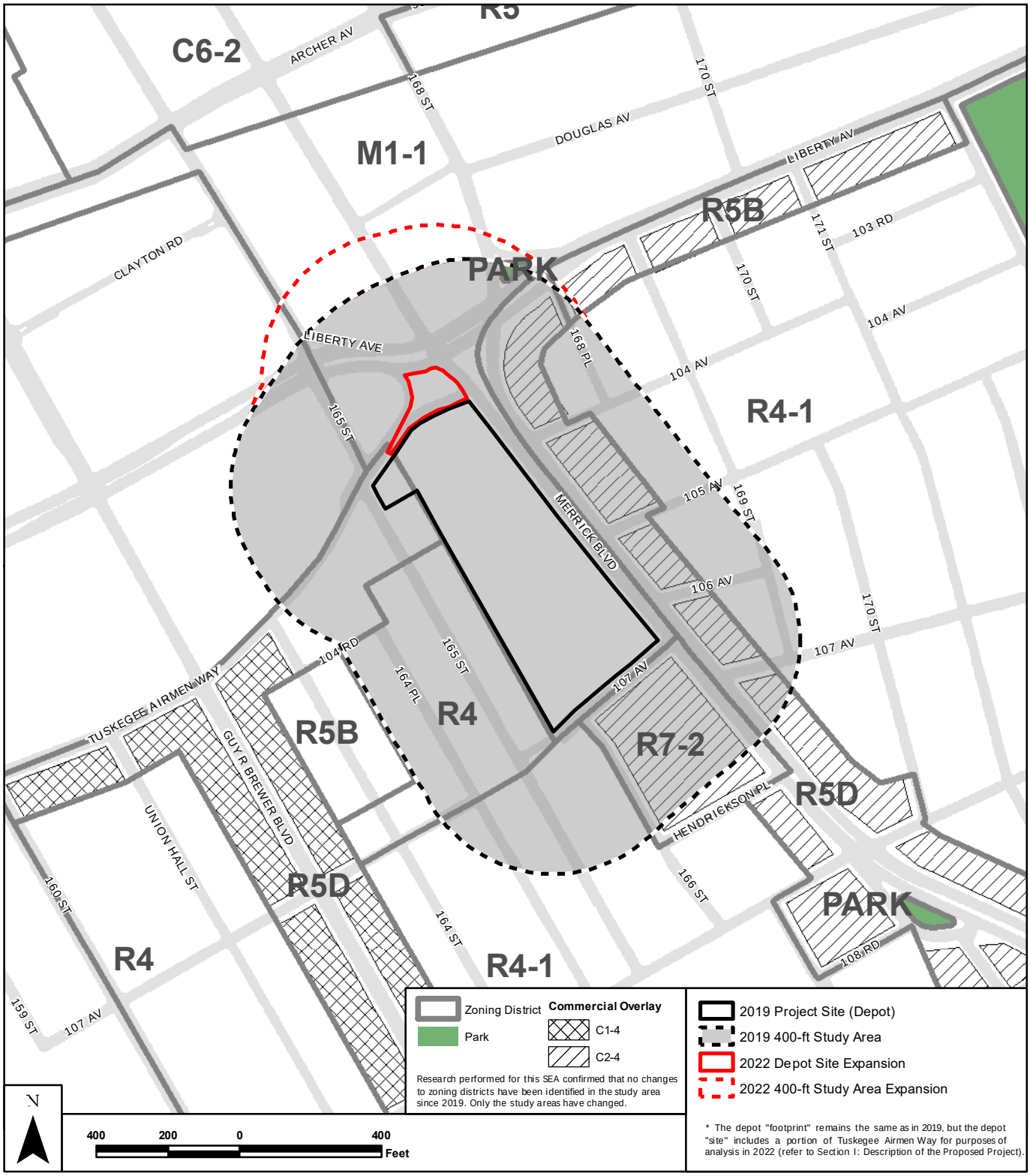
HISTORIC RESOURCES



Source: New York City Department of City Planning, MapPLUTO 21v3, 2021; STV Incorporated, 2022.

Figure 17

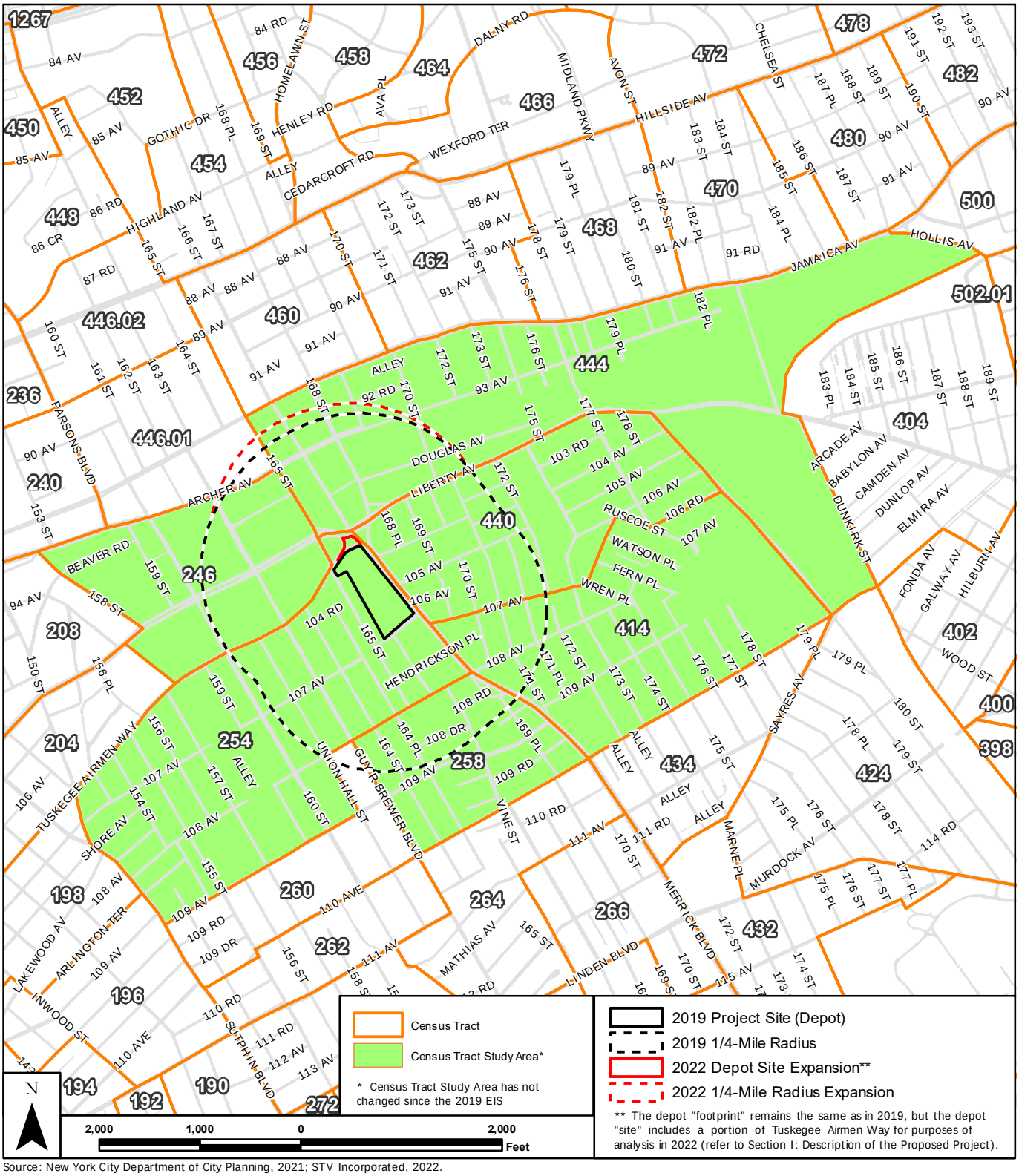
LAND USE STUDY AREA



Source: New York City Department of City Planning, NYC GIS Zoning Features, October 2021; STV Incorporated, 2022.

Figure 18

ZONING



Source: New York City Department of City Planning, 2021; STV Incorporated, 2022.

Figure 19

SOCIOECONOMIC CONDITIONS STUDY AREA

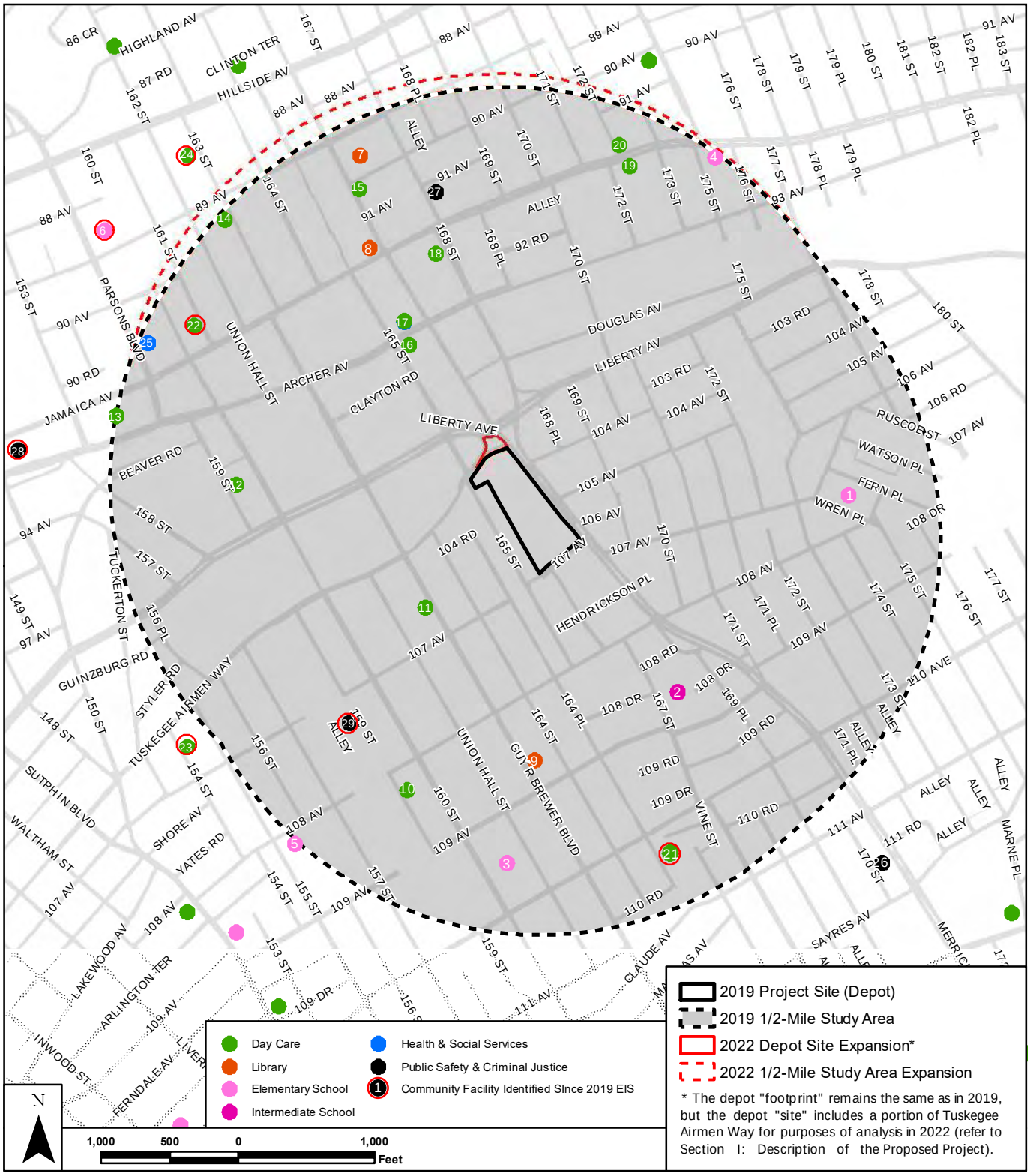
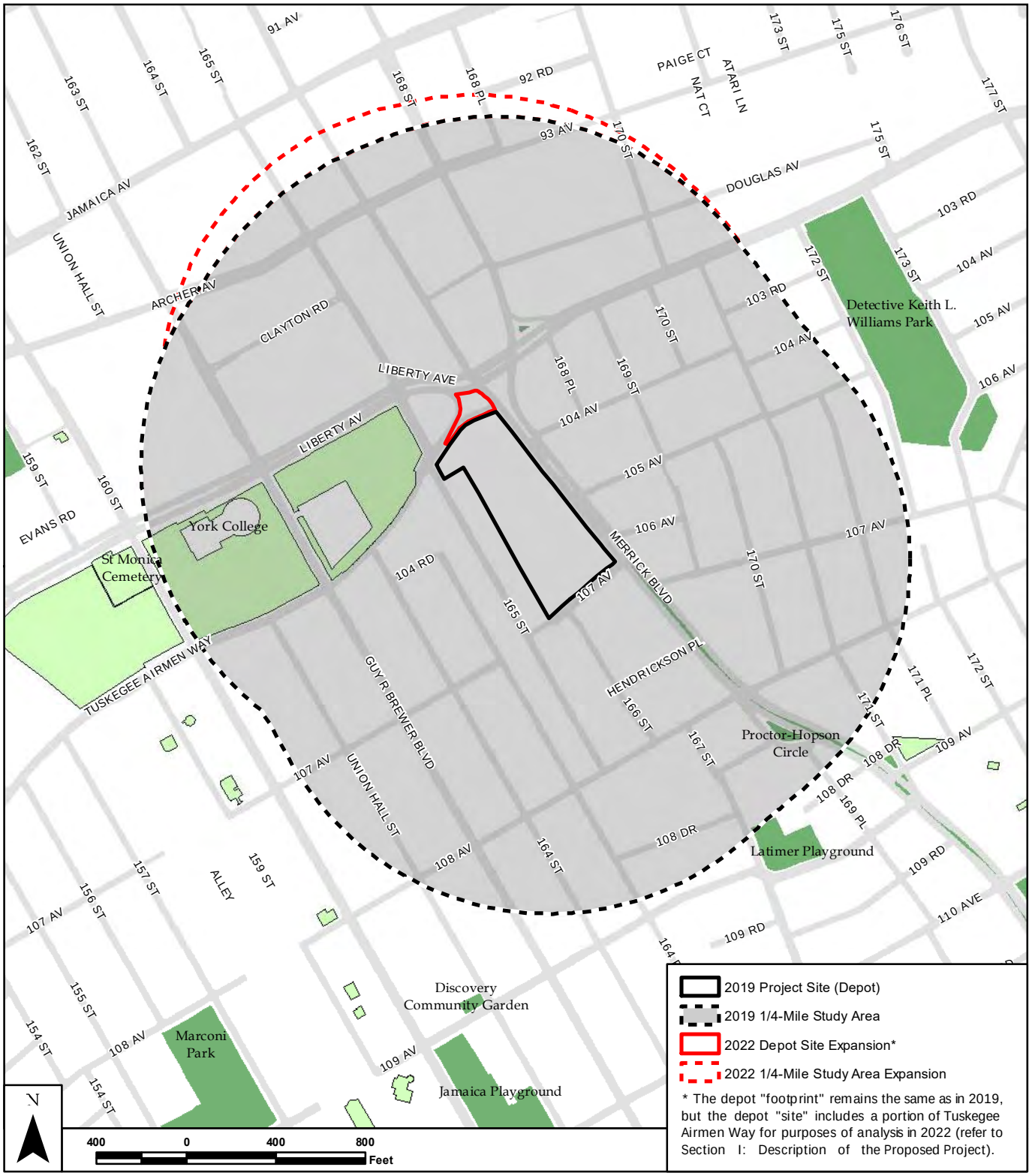


Figure 20

COMMUNITY FACILITIES



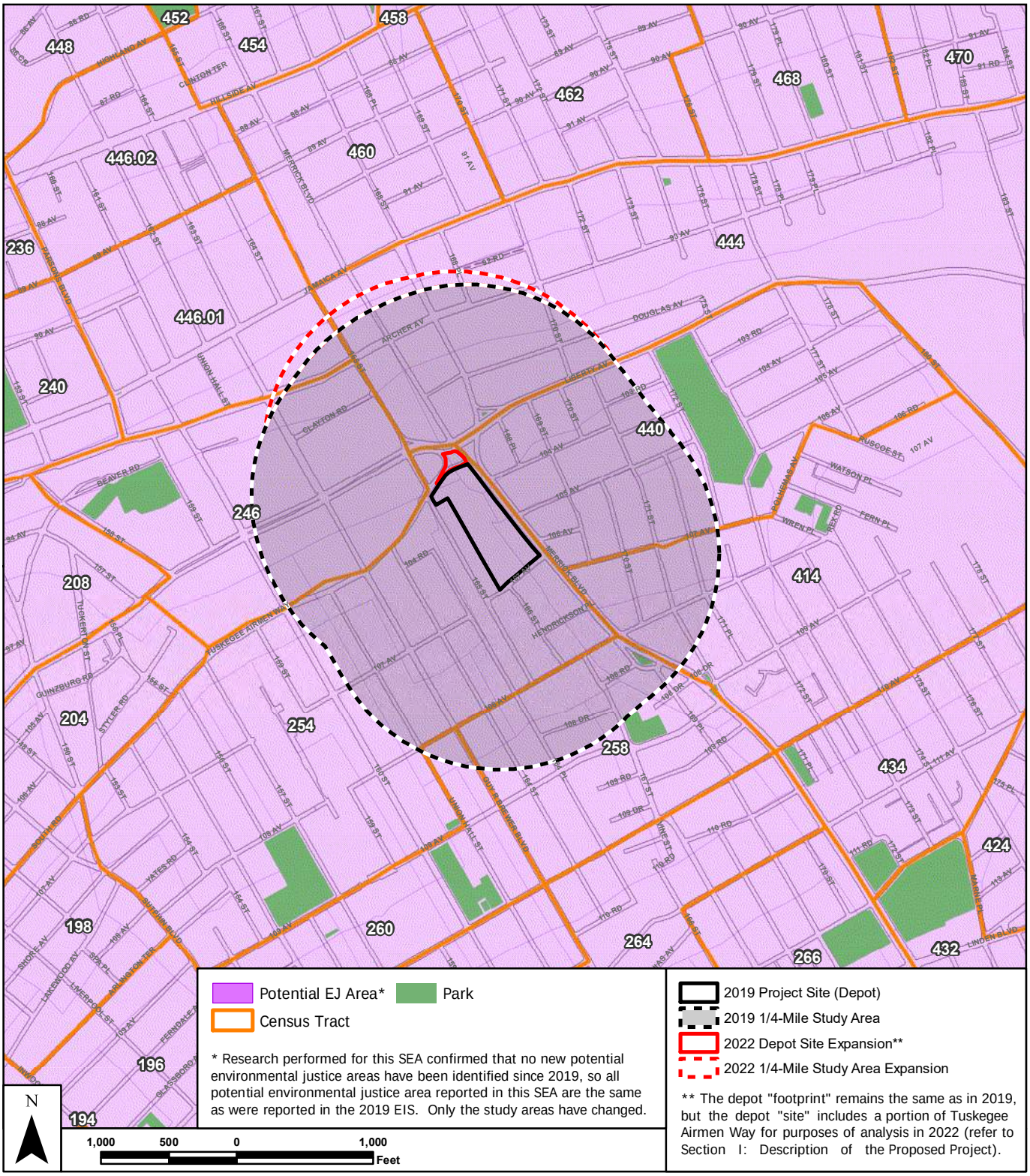
Source: New York City Department of City Planning, MapPLUTO 21v3, September 2021; STV Incorporated, 2022.

Park** Open Space**

** Research performed for this SEA confirmed that no new Park or Open Space resources have been identified since 2019, so all resources reported in this SEA are the same as were reported in the 2019 EIS. Only the study areas have changed.

Figure 21

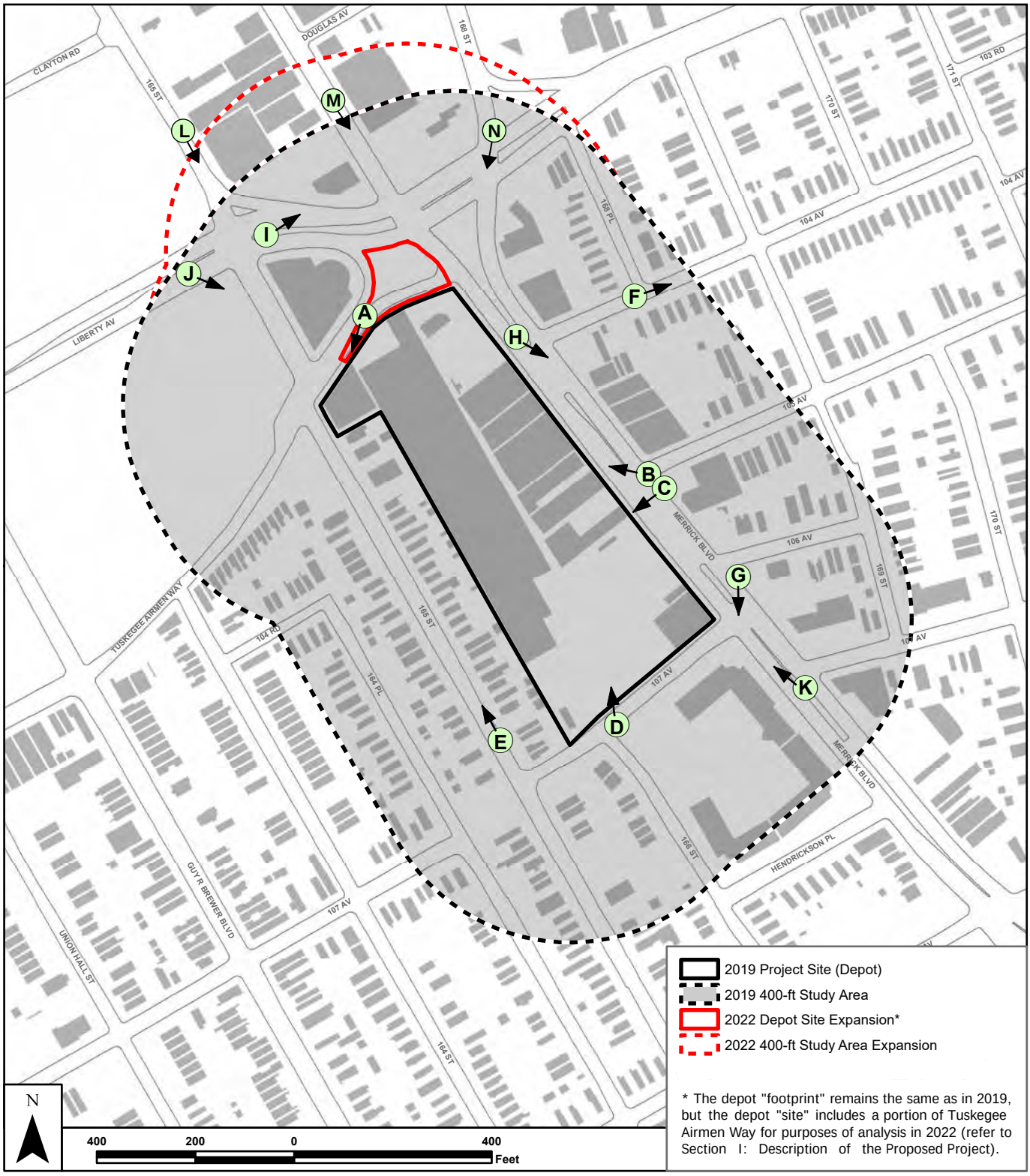
OPEN SPACE / PARKLAND



Source: New York State Department of Environmental Conservation, Potential Environmental Justice Areas, 12/14/2009; STV Incorporated, 2022.

Figure 22

POTENTIAL ENVIRONMENTAL JUSTICE AREAS



Source: New York City DoITT, Building Footprints, 2019; STV Incorporated, 2022.

View/Photo Location

Building Footprint

Figure 23

EXISTING CONDITIONS PHOTO KEY

View of the north side of the 2019 EIS Project Site and the existing JBD looking south from Tuskegee Airmen Way.

2019 View

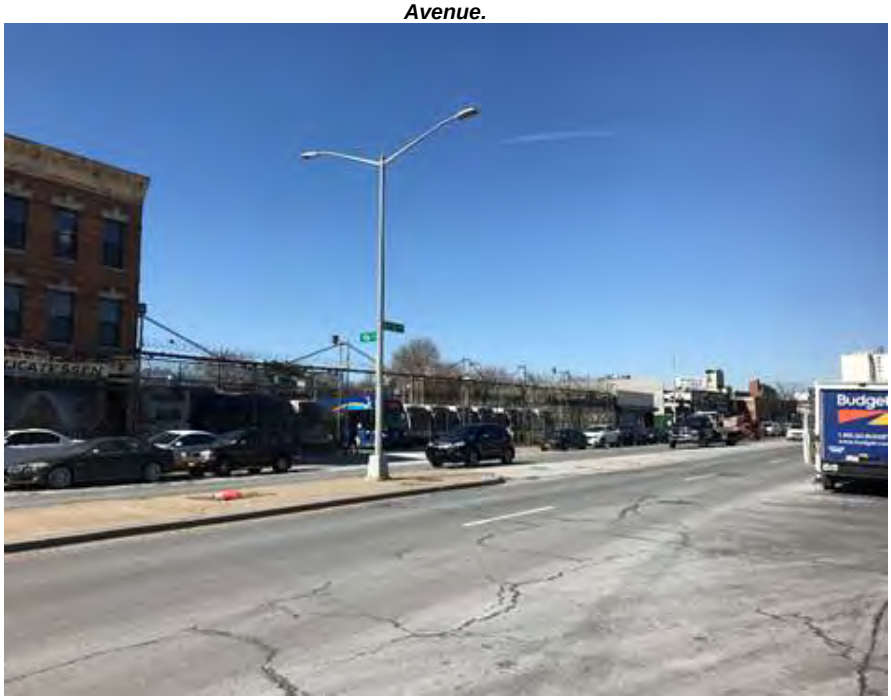
2021 View

Source: STV Incorporated, 2022.

Figure 23a

COMPARATIVE PHOTO

View of the 2019 EIS Project Site, looking north on Merrick Boulevard from 107th Avenue.



2019 View

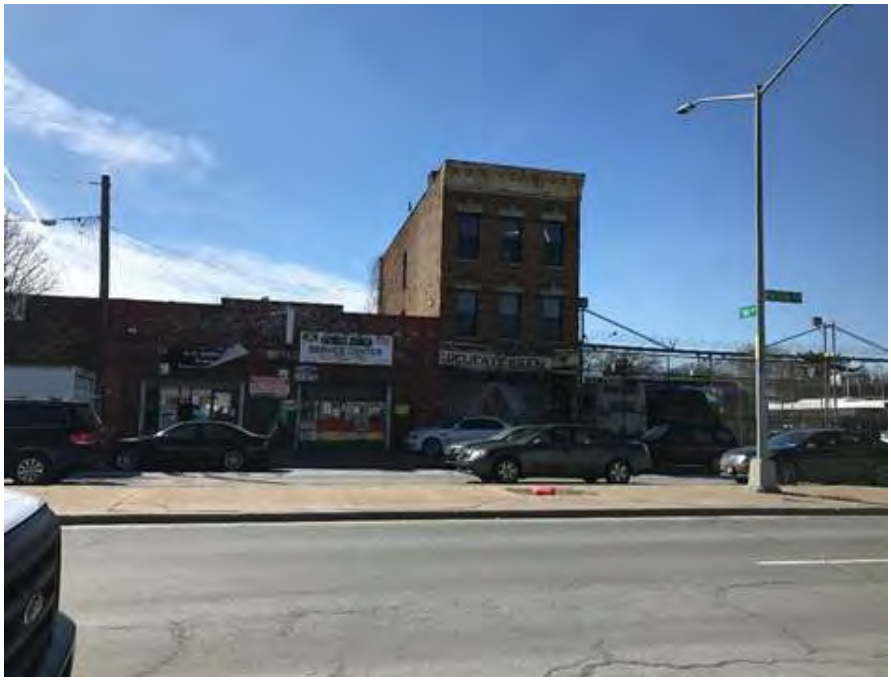
2021 View

Source: STV Incorporated, 2022.

Figure 23b

COMPARATIVE PHOTO

View of the 2019 EIS Project Site, looking west on Merrick Boulevard.



2019 View

2021 View

Source: STV Incorporated, 2022.

Figure 23c

COMPARATIVE PHOTO

View of the 2019 EIS Project Site, looking northeast on 107th Avenue.

2019 View

2021 View

Source: STV Incorporated, 2022.

Figure 23d

COMPARATIVE PHOTO

View of low-rise residences on 165th Street looking north from 107th Avenue.

2019 View

2021 View

Source: STV Incorporated, 2022.

Figure 23e

COMPARATIVE PHOTO

View of low-rise residences on 104th Avenue looking east from Merrick Boulevard near 168th Place.

2019 View

2021 View

Source: STV Incorporated, 2022.

Figure 23f

COMPARATIVE PHOTO

View of Allen Cathedral Senior Residences, looking west from the intersection of Merrick Boulevard and 107th Avenue.

2019 View

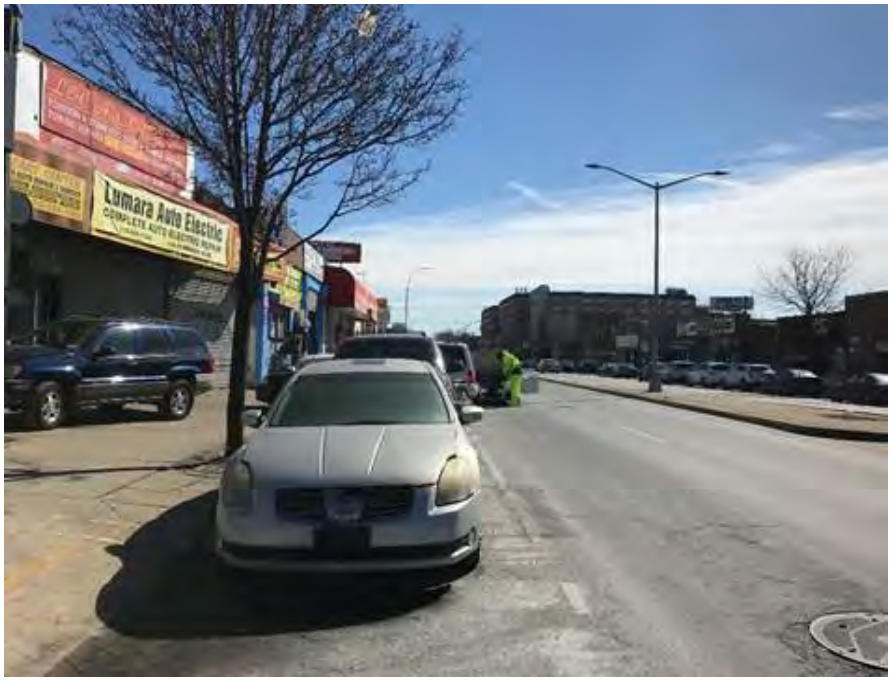
2021 View

Source: STV Incorporated, 2022.

Figure 23g

COMPARATIVE PHOTO

View looking south on east side of Merrick Boulevard across the street to the 2019 EIS Project Site. Low-rise auto-related businesses are visible on the left. The Project Site and Allen Cathedral Senior Residences are visible in the distance to the right.



2019 View

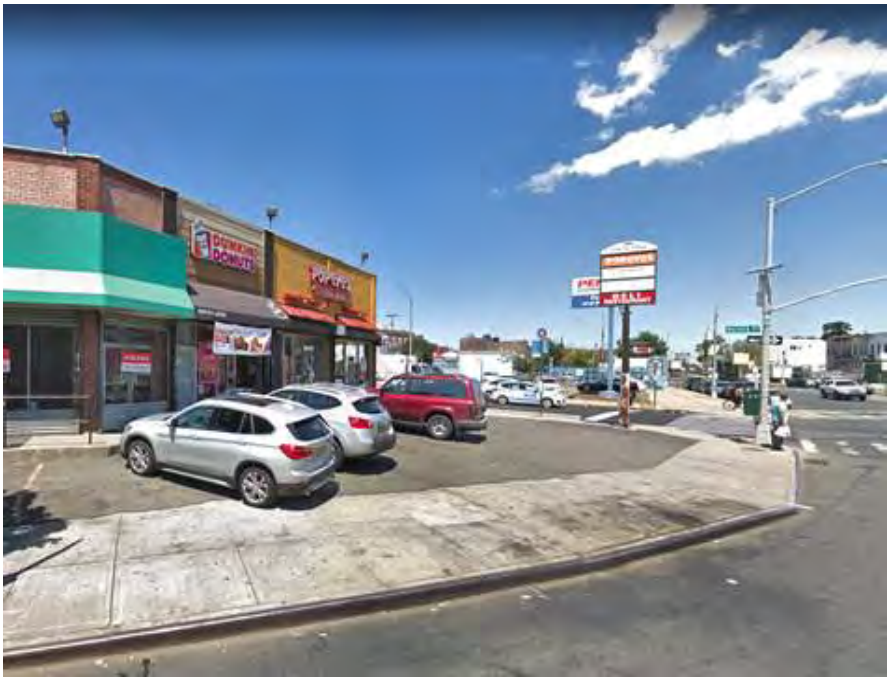
2021 View

Source: STV Incorporated, 2022.

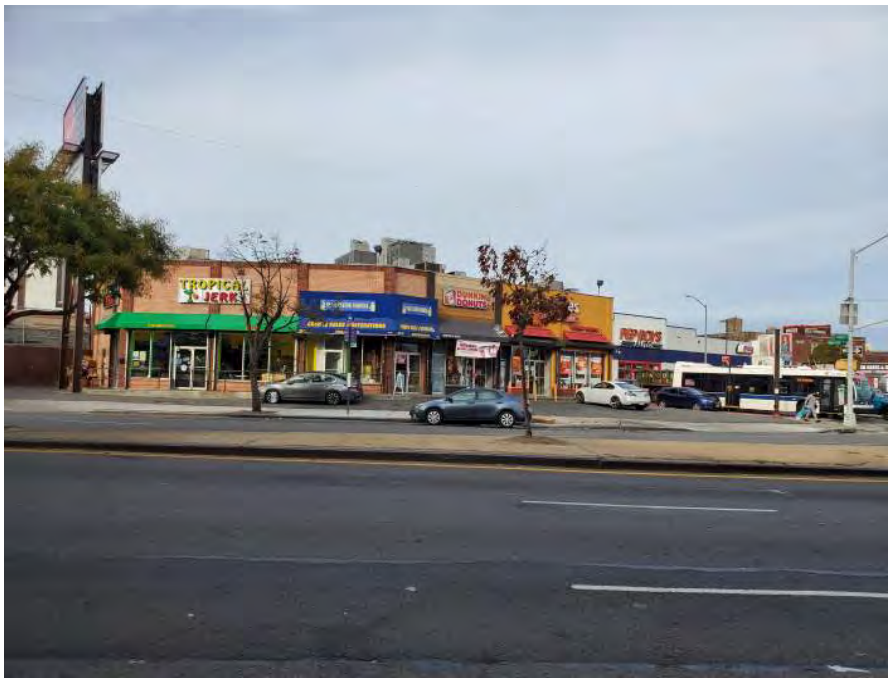
Figure 23h

COMPARATIVE PHOTO

View of low-rise commercial buildings looking northeast from Liberty Avenue.



2019 View



2021 View

Source: STV Incorporated, 2022.

Figure 23i

COMPARATIVE PHOTO

View of the CUNY York College Site in foreground, and the 2019 Project Site in background looking southeast from Liberty Avenue.

2019 View

2021 View

Source: STV Incorporated, 2022.

Figure 23j

COMPARATIVE PHOTO

View of NYC Greenstreets property median looking northwest from Merrick Boulevard. Allen Cathedral Senior Residences are visible in the background.

2019 View

2021 View

Source: STV Incorporated, 2022.

Figure 23k

COMPARATIVE PHOTO

View looking south on 165th Street, with the Temporary Bus Parking Site in the background to the west

Source: STV Incorporated, 2022.

Figure 23l

2022 400-FT STUDY AREA EXPANSION PHOTO

View looking south on Merrick Boulevard, with the 2022 Depot Site Expansion in the background

Source: STV Incorporated, 2022.

Figure 23m

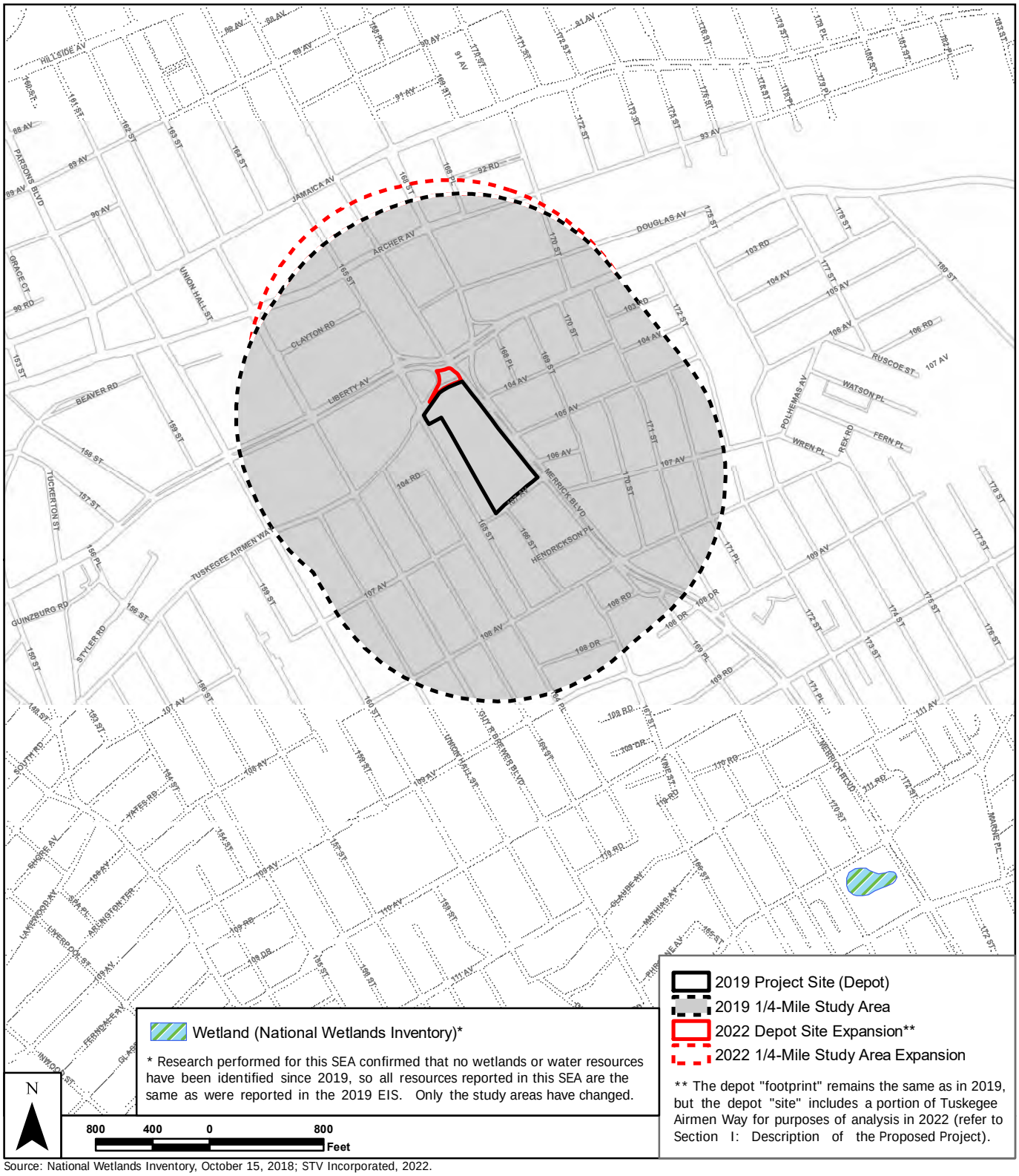
2022 400-FT STUDY AREA EXPANSION PHOTO

View looking south on 168th Street, with the 2022 Depot Site Expansion in the background to the west

Source: STV Incorporated, 2022.

Figure 23n

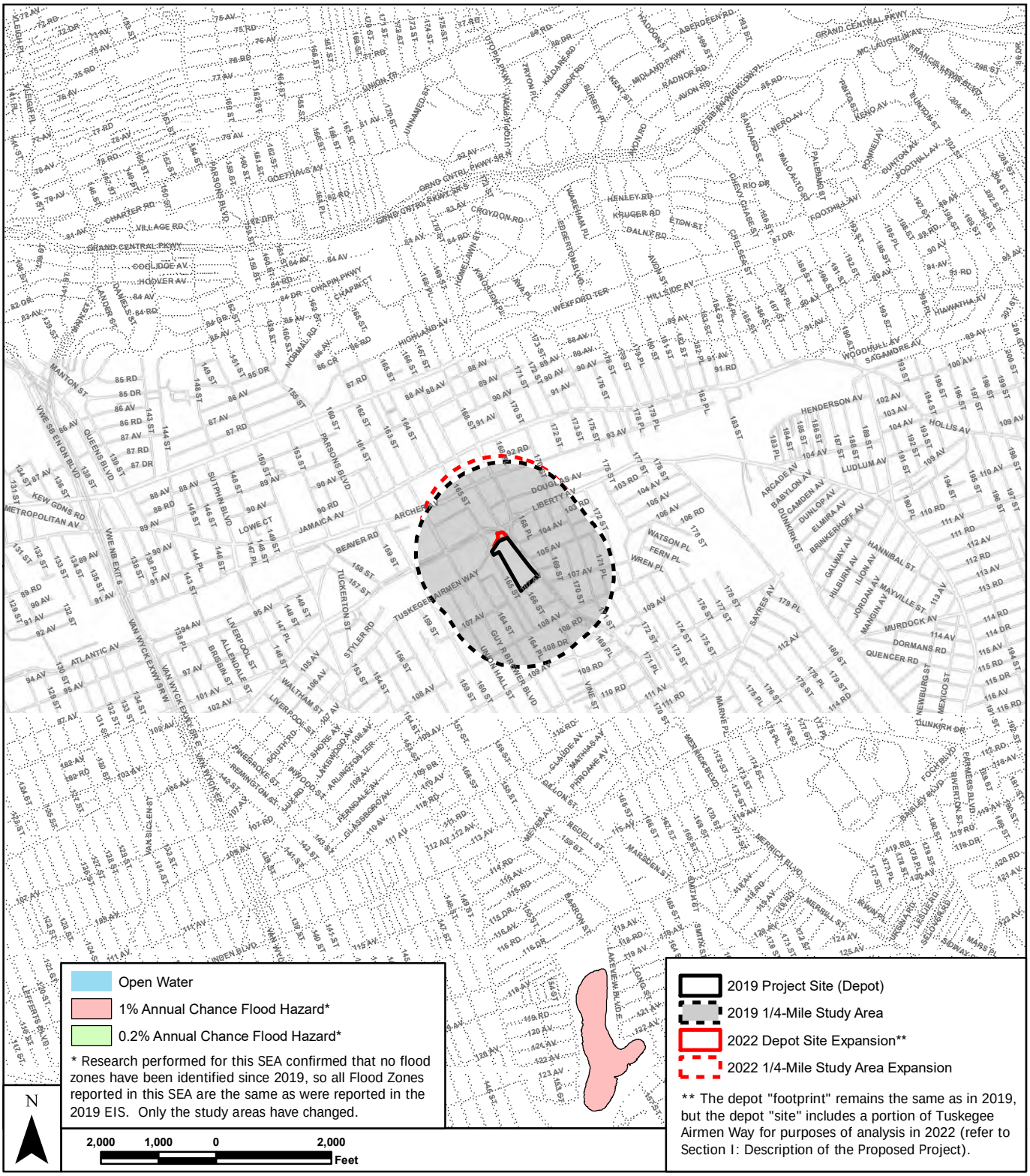
2022 400-FT STUDY AREA EXPANSION PHOTO



Source: National Wetlands Inventory, October 15, 2018; STV Incorporated, 2022.

Figure 24

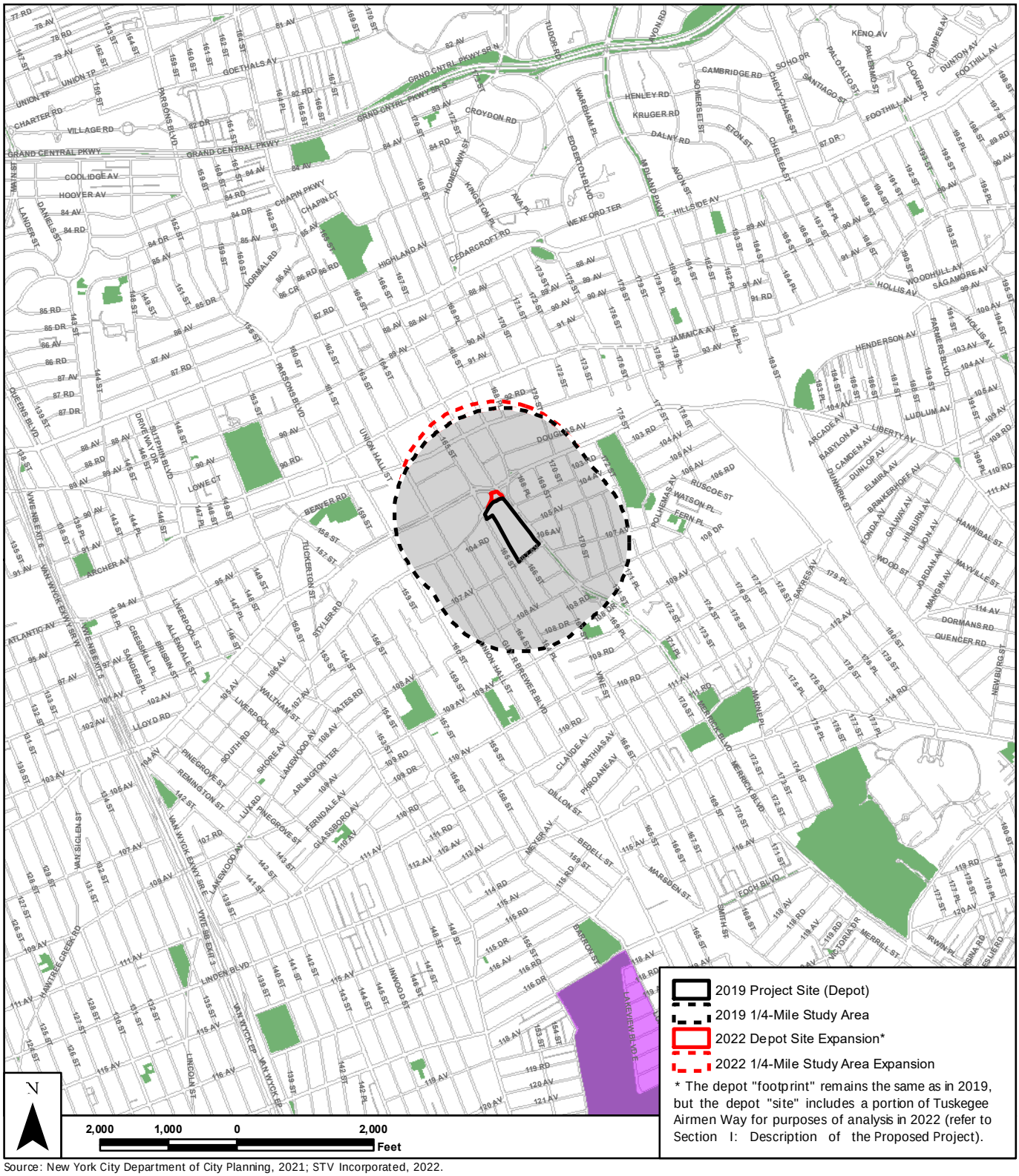
WATER RESOURCES AND WETLANDS



Source: FEMA Flood Hazard Zone, 01-30-2015; STV Incorporated, 2022.

Figure 25

FLOOD ZONE



Source: New York City Department of City Planning, 2021; STV Incorporated, 2022.

Coastal Zone**
Park

** Research performed for this SEA confirmed that there had been no change to the Coastal Zone since 2019, so the Coastal Zone as reported in this SEA is the same as was reported in the 2019 EIS. Only the study areas have changed.

Figure 26

COASTAL ZONE

Attachment B: Hazardous Materials

Phase I Environmental Site Assessment ("ESA")

PHASE I ENVIRONMENTAL SITE ASSESSMENT
OF

PROPOSED BUS PARKING AT YORK COLLEGE SITE 9
164-26 LIBERTY AVENUE
BLOCK 10160, LOT 1 & BLOCK 10159, PART OF LOT 3
QUEENS, NEW YORK 11433

CONTRACT NO.: CM-1411
TASK ORDER NO.:18
CONSULTANT PROJECT NO.: 40-17555-2000

JUNE 15, 2018

Prepared by:

STV Incorporated
225 Park Avenue South
New York, NY 10003
Phone: (212) 777-4400

Prepared for:

New York City Transit
2 Broadway
New York, NY 10004
Phone: 646-252-3608

TABLE OF CONTENTS

1.0 EXECUTIVE SUMMARY

At the request of Metropolitan Transportation Authority (MTA) New York City Transit (NYCT), STV Incorporated (STV) conducted a Phase I Environmental Site Assessment (ESA) of the Proposed Bus Parking at York College Site 9 located at 164-26 Liberty Avenue, Jamaica, Queens, New York 11433 (hereafter referred to as the "Site"). The legal description of the Site is Block 10160, Lot 1 and Block 10159, Part of Lot 3. NYCT is evaluating the feasibility of leasing and redeveloping the Site to accommodate bus parking during reconstruction of the Jamaica Bus Depot.

The Site block is bounded by Liberty Avenue, 165th Street, Tuskegee Airmen Way, and Guy R. Brewer Boulevard and consists of three tax lots (Block 10160, Lot 1; Block 10159, Lot 3; and Block 10159, Lot 54). The Site consists of an approximately 5.6 acre parcel of land and has been divided into two (2) areas:

- ~ 3.5 acre vacant, vegetated lot – Future NYCT Bus Parking (Block 10160, Lot 1).
- ~ 2.1 acre paved parking lot – Existing York College Parking Lot (Block 10159, Part of Lot 3).

The Site is bounded to the north by Liberty Avenue, followed by York College Performing Arts Center and parking lot, and the Long Island Rail Road (LIRR); to the northeast by Liberty Avenue and 165th Street, followed by a glass recycling facility; to the east by 165th Street, followed by a storage facility, a NYCT warehouse associated with the NYCT Jamaica Bus Depot; to the south by Tuskegee Airman Way, followed by contractor storage, residences, and commercial storefronts; to the west by a cemetery and vacant land (located on the Site block) and Guy R. Brewer Boulevard, followed by the York College Health and Physical Education Complex and associated grounds; and to the northwest by Guy R. Brewer Boulevard and Liberty Avenue, followed by the York College Academic Core Building.

Based on a review of historical documentation, the Site was vacant in 1891 with the first development on Lot 1 in 1897 and Lot 3 in 1901. Lot 1 was developed with a dwelling, a carriage house, and a 1-2 story unlabeled building between 1897 and 1901. In 1912, Lot 1 was developed with a dwelling, a wagon works and a lumber yard. In 1925, Lot 1 was developed as a baseball park which continued through 1942. In 1951, Lot 1 was developed with an auto sales and service station and an auto repair shop. In 1963, the auto sales and service station expanded to the south with the addition of a parts and service building and the auto repair shop also expanded to the south. The Site use remained the same in 1967 and up until sometime before 1981. From 1981 through 2006 Lot 1 was vacant.

Lot 3 was developed with Jamaica Hospital and dwellings in 1901. Additional dwellings, an ambulance shed and an auto garage were present in 1912. In 1925, Jamaica Hospital was no longer present and there were additional dwellings. In 1942, Lot 3 was developed with warehouses identified as Long Island Drug Co. Inc. and Saltsier and Weinsier Inc. plumbing supplies with one (1) suspect fuel oil underground storage tank (UST) and two (2) suspect gasoline USTs. There was also a dwelling, an auto garage, a store, and offices. In 1951, the plumbing supplies building expanded to the south with a warehouse and shipping building. In 1961 and 1967, the plumbing storage building expanded to the north towards Liberty Avenue. From 1981 through 2006 Lot 1 was vacant.

A 60 foot roadway identified as 164th Street [Evergreen] was shown extending through the center of the Site from Liberty Avenue to South Road (currently Tuskegee Airmen Way). The roadway separates the Site by tax lot lines and according to the New York City tax map was not shown as part of Lot 1 or 3. The roadway was apparent on historical maps from 1897 through 2006.

The main objective of the Phase I ESA is to identify *recognized environmental conditions (RECs)*. RECs are defined in ASTM International (ASTM) Standard Practice E 1527-13 as the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property. Note that *controlled recognized environmental conditions (CRECs)* are considered to be RECs and are listed in the Executive Summary and Conclusions of this Phase I ESA. Additionally, *vapor encroachment conditions (VECs)* were evaluated as per ASTM E 2600-10.

The Phase I ESA included a review of Federal, State, and local records, previous reports and historical documents; visual observation of the Site and adjoining properties; and, interviews with selected Site representatives.

The assessment requested by NYCT is intended to identify conditions that would have the potential to impact the redevelopment and use of the Site. The assessment was also conducted for purposes of environmental due diligence in order to qualify for the innocent landowner, a bona fide prospective purchaser or a contiguous property owner defense under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA).

Summary of RECs, CRECs, VECs and Environmental Concerns

This Phase I ESA has revealed the following RECs, CRECS, and/or VECs associated with the Site:

<u>On-Site RECs:</u>

- Based on the review of historical documentation, historic fill was placed throughout the Site sometime between 1967 and the mid- to late-1980s. In addition, structures were present on the Site and were demolished. Historic fill of unknown origin and suspect buried structures have the potential to impact the Site.

- Historic Site uses as:
  - Auto Sales and Service Facility from 1951-1970 (Lot 1).
  - Auto Repair Shop from 1951-1957 (Lot 1).
  - Lumber Yard and Wagon Works in 1912 (Lot 1).
  - Long Island Drug Co. Warehouse 1942-1967 (Lot 3).
  - Jamaica Hospital from 1901-1912 (Lot 3).
  - Saltser & Weinsier Inc. Plumbing / Drug Warehouse and Storage buildings from 1934-1970 (Lot 3).
  - Undertaker from 1942-1951 (Lot 3).
  - Historic fuel oil tank and gasoline tanks associated with former uses as Long Island Drug Co. and Saltser & Weinsier Inc. (Lot 3).
  - Auto Repair works in 1934 (Lot 3).

<u>Off-Site RECs:</u>

- The review of the regulatory agency database identified adjacent and nearby listings as RCRIS Gens/Trans facilities, solid waste management facilities, Petroleum Bulk Storage (PBS) Underground Storage Tank (UST) sites, spills, and an E-Designated site.

- The review of historical records identified surrounding property usage as automobile related (i.e., auto repair shops; garages, service stations, filling stations, and gasoline stations with gasoline

storage tanks; tire sales and service; auto painting), a woodworking plant, a lumber yard, a cemetery, a cleaners and dyers site, electronic parts manufacturing, an oil burner warehouse, a radio sales and service shop, a paint company, a petroleum supplier, fur storage, and roofing materials warehouse.

- Groundwater monitoring wells were observed during the Site reconnaissance along Guy R. Brewer Boulevard to the northwest of the Site and along Liberty Avenue and Merrick Boulevard to the east of the Site, and manufacturing facilities.

Recommendations

Based on the findings of the Phase I ESA, STV recommends the performance of a Phase II ESA consisting of a geophysical survey and the collection and laboratory analysis of soil, soil vapor, and groundwater samples to determine whether the identified RECs have impacted the environmental integrity of the Site.

2.0 INTRODUCTION

This report summarizes the results of the Phase I Environmental Site Assessment (ESA) of the Proposed Bus Parking at York College Site 9 located at 164-26 Liberty Avenue, Jamaica, Queens, New York 11433 (Block 10160, Lot 1 & Block 10159, Part of Lot 3) (hereafter referred to as the "Site"). Metropolitan Transportation Authority (MTA) New York City Transit (NYCT) is evaluating the feasibility of leasing and redeveloping the Site to accommodate bus parking during reconstruction of the Jamaica Bus Depot. A map showing the location of the Site is presented in *Appendix A*. A Site Plan showing the Site's physical layout including adjacent land use is presented in *Appendix B*.

The Site block is bounded by Liberty Avenue, 165th Street, Tuskegee Airmen Way, and Guy R. Brewer Boulevard and consists of three tax lots (Block 10160, Lot 1; Block 10159, Lot 3; and Block 10159, Lot 54). The Site consists of an approximately 5.6 acre parcel of land and has been divided into two (2) areas:

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The Site is bounded to the north by Liberty Avenue, followed by York College Performing Arts Center and parking lot and the Long Island Rail Road (LIRR); to the northeast by Liberty Avenue and 165th Street, followed by a glass recycling facility; to the east by 165th Street, followed by a storage facility, a NYCT warehouse associated with the NYCT Jamaica Bus Depot; to the south by Tuskegee Airman Way, followed by contractor storage, residences, and commercial storefronts; to the west by a cemetery and vacant land located on the Site block and Guy R. Brewer Boulevard, followed by the York College Health and Physical Education Complex and associated grounds; and to the northwest by Guy R. Brewer Boulevard and Liberty Avenue, followed by the York College Academic Core Building.

The Site walkthrough was performed on April 4, 2018 after a meeting was held at York College with representatives of York College, NYCT, and STV. Mr. Matthew Mankovich of STV performed the Site walkthrough, and was accompanied by York representatives Mr. Joseph Gioffredo and Mr. Noel Gamboa. Also present during the Site walkthrough were Mr. Emil Dul, Ms. Mary Kong, and Mr. James Barry Lumsden of NYCT, and Mr. Richard Wetherbee of STV. The weather was approximately 55º Fahrenheit and cloudy; there were no limitations caused by the weather.

A supplemental Site walkthrough was performed by Mr. Mankovich on April 9, 2018 and included the Site and an inspection of the surrounding properties. The weather was approximately 45º Fahrenheit and partly cloudy; there were no limitations caused by the weather.

2.1 Selected Definitions

The following terms are used throughout this report and, for the purpose of clarity, corresponding definitions are provided. These terms are fully defined in ASTM E 1527-13 and ASTM E 2600-10.

Controlled Recognized Environmental Condition (CREC) – A recognized environmental condition resulting from a past *release* of *hazardous substances* or *petroleum products* that has been addressed to the satisfaction of the applicable regulatory authority (for example, as evidenced by the issuance of a no further action letter or equivalent, or meeting risk-based criteria established by regulatory authority) with *hazardous substances* or *petroleum products* allowed to remain in place subject to the implementation of

required controls (for example, *property use restrictions*, *activity and use limitations, institutional controls, or engineering controls*).

Historical Recognized Environmental Condition (HREC) – A past *release* of any *hazardous substances* or *petroleum products* that occurred in connection with the *property* and has been addressed to the satisfaction of the applicable regulatory authority, without subjecting the *property* to any required controls (for example, *property use restrictions*, *activity and use limitations, institutional controls, or engineering controls*).

Recognized Environmental Condition (REC) – The presence or likely presence of any *hazardous substances* or *petroleum products* in, on, or at a *property:* (1) due to any *release* to the *environment*; (2) under conditions indicative of a *release* to the *environment*; or, (3) under conditions that pose a *material threat* of a future *release* to the *environment*.

Environmental Professional - A person meeting the education, training, and experience requirements as set forth in 40 CFR § 312.10(b), necessary to conduct a *site reconnaissanc*e, *interview*s, and other activities in accordance with this practice, and from the information generated by such activities, having the ability to develop opinions and conclusions regarding conditions indicative of releases or threatened releases on, at, in, or to a property, sufficient to meet the objectives and performance factors in 40 CFR § 312.20(e) and (f).

Vapor Encroachment Condition (VEC) - The presence or likely presence of chemical of concern vapors in the subsurface of the target property caused by the release of vapors from contaminated soil or groundwater or both either on or near the target property.

2.2 Purpose and Scope

The purpose of this assessment is to identify RECs, CRECs, VECs, and certain other environmental issues or concerns as they existed at the Site at the time of the Site visit. The assessment is intended to identify conditions that would have the potential to impact the value of the Site or the redevelopment and use of the Site. The assessment was also conducted for purposes of environmental due diligence in order to qualify for the innocent landowner, a bona fide prospective purchaser, or a contiguous property owner defense under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA).

This evaluation was conducted by qualified *environmental professionals* utilizing a standard of good commercial and customary practice in accordance with ASTM E 1527-13. The scope of work completed for this evaluation meets all requirements of ASTM E 1527-13 and includes the following:

- Documenting the physical characteristics of the Site through a review of available topographic, geologic, wetland, flood plain, groundwater data and Site observations.

- Researching the Site history through a review of reasonably ascertainable standard sources such as land deeds, fire insurance maps, city directories, aerial photographs, prior reports and interviews.

- Documenting current Site conditions, via observations and interviews, regarding the presence or absence of hazardous substances/petroleum products; the generation, treatment, storage, or disposal of hazardous, regulated, or medical wastes; the presence of electrical equipment that utilizes oils which potentially contain PCBs; and, the presence of storage tanks (above and below ground), floor drains, drains that discharge to subsurface, former septic tanks and drywells.

- Determining the usage of adjoining and nearby properties to identify the likelihood for environmental conditions (if present and/or suspected) and concerns to migrate onto the Site.

- Evaluating information contained within Federal and State environmental databases and other local environmental records, within specific search distances.

2.3 Additions, Deviations, Deletions, Data Failures, and Data Gaps

No environmental issues that are outside the scope of ASTM E 1527-13 were evaluated:

The following deviations, data gaps, and deletions from ASTM E 1527-13 were necessary in conducting this assessment:

- The Site area history was not conducted in five-year intervals.
- There were no interviews with current or historic Site owners conducted as part of the Phase I ESA.

Sufficient information about the history of the Site and surrounding area was obtained from the available historical Sanborn Maps, aerial photographs, city directories, and local records, and the data gaps identified above are not likely to alter the conclusions of this report.

2.4 Limitations and Exceptions

STV has prepared this Phase I ESA using reasonable efforts in each phase of its work to identify RECs associated with hazardous substances, wastes and petroleum products at the Site. The methodology of the Phase I ESA was consistent with the ASTM E 1527-13. Findings within this report are based on information collected from observations made on the day of the Site investigation and from reasonably ascertainable information obtained from governing public agencies and private sources.

This report is not definitive and should not be assumed to be a complete or specific definition of the conditions above or below grade. Information in this report is not intended to be used as a construction document and should not be used for demolition, renovation, or other construction purposes. STV makes no representation or warranty that the past or current operations at the Site are or have been in compliance with all applicable Federal, State and local laws, regulations and codes.

Regardless of the findings stated in this report, STV is not responsible for consequences or conditions arising from facts that were concealed, withheld, or not fully disclosed at the time the evaluation was conducted.

This report does not warrant against future operations or conditions, nor does it warrant against operations or conditions present of a type or at a location not investigated.

The regulatory database report provided is based on an evaluation of the data collected and compiled by a contracted data research company. The report focuses on the Site and neighboring properties that could impact the Site. Neighboring properties listed in governmental environmental records are identified within specific search distances. The search distance varies depending upon the particular government record being checked. The regulatory research is designed to meet the requirements of ASTM E 1527-13. The information provided in the regulatory database report is assumed to be correct and complete.

3.0 SITE DESCRIPTION

3.1 Site Location and Legal Description

The Site is located at 164-26 Liberty Avenue, Jamaica, Queens, New York 11433 (Block 10160, Lot 1 and Block 10159, Part of Lot 3). The Site consists of an approximately 5.6 acre parcel of land and is located between Liberty Avenue, 165th Street, Tuskegee Airmen Way, and Guy R. Brewer Boulevard. The Site has been divided into two (2) areas:

- ~ 3.5 acre vacant, vegetated lot – Future NYCT Bus Parking (Block 10160, Lot 1).
- ~ 2.1 acre paved parking lot – Existing York College Parking Lot (Block 10159, Part of Lot 3).

The Site is located in the Jamaica neighborhood of Queens. The review of New York City Department of City Planning (NYCDCP) records indicates that Site is not identified with an "E" Designation or Restrictive Declaration. A map showing the location of the Site is presented in *Appendix A*. A Site Plan showing the Site's physical layout including adjacent land use is presented in *Appendix B*. Photographs of the Site and surrounding areas are included in *Appendix C*.

The Site is bounded to the north by Liberty Avenue, followed by York College Performing Arts Center and parking lot and the LIRR; to the northeast by Liberty Avenue and 165th Street, followed by a glass recycling facility; to the east by 165th Street, followed by a storage facility, a NYCT warehouse associated with the NYCT Jamaica Bus Depot; to the south by Tuskegee Airman Way, followed by contractor storage, residences, and commercial storefronts; to the west by a cemetery and vacant land located on the Site block and Guy R. Brewer Boulevard, followed by the York College Health and Physical Education Complex and associated grounds; and to the northwest by Guy R. Brewer Boulevard and Liberty Avenue, followed by the York College Academic Core Building. The immediate surrounding area is primarily characterized by educational (the York College campus), residential and commercial properties, the NYCT Jamaica Bus Depot, and the LIRR.

According to information obtained through the NYCDCP website, the Site is currently located within zone "R-6", which designates a residential district. According to historical zoning maps dated December 15, 1961 through June 17, 1971, the Site and surrounding area were zoned "M1-1", which designates a manufacturing district that typically includes light industrial uses, such as woodworking shops, repair shops, and wholesale services and storage facilities. The Site was rezoned R6 on the June 22, 1972 zoning map. A copy of zoning maps are included in *Appendix J*.

3.2 Physical Setting

3.2.1 Topography

Based on a review of the topographic survey prepared as part of the concurrent Phase II ESA, the elevation of the Site ranges from 36 to 50 feet (North American Vertical Datum 1988 [NAVD88]) and slopes in an easterly direction. A copy of the topographic survey is presented in *Appendix I.*

3.2.2 Geology

The geology of Queens County can be characterized as a wedge-shaped layer of Cretaceous and Pleistocene unconsolidated sediments, thickening to the south-southeast. Several impermeable clay layers are found within this sediment package, generally creating three distinct aquifers. Consolidated

crystalline bedrock is of Precambrian age. The thickness of the unconsolidated sequence ranges from zero to approximately 1,300 feet below ground surface (bgs) from north to south. The southernmost portions of Queens, including portions of the Rockaways, consist of glaciofluvial sediments derived from melt-water of the retreating glaciers. Depth to bedrock within the vicinity of the Site is at least 600 feet bgs (as per "Ground-Water Resources of Kings and Queens Counties, Long Island, New York, by Herbert Buxton and Peter Schernoff, dated 1999).

3.2.3 Soils

According to the GeoCheck Section of the regulatory agency database report (*Appendix I*), the soil in the area of the Site is described as Urban Land. Urban Land refers to soils that have been altered by human activities thus making them unidentifiable. Typically, these soils have been mixed with other materials, such as brick and concrete (urban fill), and characteristics can only be determined by on-site investigation. Other surficial soil types in the area of the Site consist of silt loam, loamy sand, sandy loam, and fine sandy loam. Sandy loam refers to a soil that's made of sand, silt, and clay.

A Phase II Environmental Site Investigation (ESI) was previously prepared by Langan Engineering and Environmental Services, P.C. (Langan) for the northern one-acre portion of Lot 1 along Liberty Avenue (refer to Section 5.6). According to the Langan Phase II ESI, soil samples were collected to a maximum of 30 feet bgs during the Phase II ESI and it was reported that historic fill consisting of fine- to coarse-grained sand with some silt, gravel, and fragments of metal, wood, brick, glass, coal and plastic material was observed from surface grade to depths ranging from approximately 6.5 feet to 15 feet bgs. Native soil consisting of tan fine- to coarse-grained sand was reported to be encountered below the historic fill at all sampling locations. Bedrock was not reported to be encountered during the Phase II ESI.

The concurrent STV Phase II ESA identified historic fill consisting of sand, silt, gravel, and fragments of brick, concrete, metal, plastic material, and debris throughout the Site. The maximum depth of the historic fill was observed at 18 feet below sidewalk grade. Native material consisted of fine to medium sands with gravel to a terminal depth of approximately 36 feet below sidewalk grade.

3.2.4 Hydrology

Generally, groundwater contour lines mimic the surface topography and groundwater flow direction is perpendicular to these contour lines flowing from higher to lower elevation. The concurrent Phase II ESA identified groundwater ranging throughout the Site from depths of 15 to 25 feet below sidewalk grade and the measured groundwater flow direction is to the southeast.

According to the Environmental Data Resources, Inc. (EDR) regulatory agency database, there is a public water supply well located approximately 1,870 feet southeast of the Site. Between 1887 and 1996, the privately owned Jamaica Water Supply Company (JWS) operated a group of wells that served the communities of southeastern Queens and portions of Nassau County. In 1996, New York City purchased the Queens portion of the JWS and took responsibility for the delivery of drinking water to those communities served by the groundwater wells. After acquiring the JWS wells, the New York City Department of Environmental Protection (NYCDEP) renamed the group of wells the groundwater supply system. Located in southeastern Queens, the groundwater supply system consists of 68 supply wells at 44 well stations and several water storage tanks. Most of the system has not operated in more than 14 years, but the groundwater system provided water to a limited portion of the City's distribution system in Queens until 2007. When online, residents within the service area received groundwater or a mix of ground water and surface water depending on demand and supply availability. None of the 68 wells

which comprise the groundwater supply system are currently or were used for drinking water distribution in 2017.

Estimated groundwater levels and/or flow direction(s) may vary due to seasonal fluctuations in precipitation, local usage demands, geology, underground structures, or dewatering operations.

STV did not observe retention ponds or other surface water bodies on the Site. The nearest surface water body is a pond in Captain Tilly Park, located approximately 3,950 feet north-northwest of the Site. Another pond, Baisley Pond, is located approximately 1.4 miles south of the Site. Bergen Basin, an inlet on Jamaica Bay, is located approximately 3.0 miles south-southwest of the Site.

STV reviewed the United States Fish and Wildlife Service National Wetlands Inventory (NWI) map for the area of the Site to determine if the Site is located in a regulated wetlands area. Based on a review of the map, the Site is not located within a regulated wetlands area. A copy of the wetlands map is included in *Appendix D*.

The Federal Emergency Management Agency (FEMA) Region II Coastal Analysis and Mapping Preliminary Flood Maps & Data website (http://www.region2coastal.com/view-flood-maps-data/view-preliminary-flood-map-data/) was reviewed to assess whether the Site is located within a designated flood plain or flood zone. According to the revised preliminary FIRM Panel 3604970233G (effective date January 30, 2015), the Site is not located within a 100-year flood zone. A copy of the flood insurance map for the Site area is included in *Appendix E*.

3.2.5 Radon

Radon is a colorless, odorless radioactive gas that results from the natural breakdown of uranium minerals in soil, rock, and water, which subsequently enters the atmosphere. It can concentrate in buildings, entering through cracks and other penetrations of a building foundation. Some areas are more likely to have elevated concentrations of radon than others, reflecting subsurface lithologic conditions.

The New York State Department of Health (NYSDOH) maintains a database of radon test results on a local and county level. According to the NYSDOH, 545 radon tests have been conducted in basements in Queens County. The average radon level was found to be 1.24 picoCuries per liter (pCi/L). According to Federal Area Radon Information presented in the EDR regulatory agency report (*Appendix I*), radon concentrations were tested at 81 locations in Queens County. The average radon concentration in Queens County, New York was 0.620 pCi/L in living areas tested and 0.970 pCi/L in basements tested. In addition, Queens County is in United States Environmental Protection Agency (USEPA) Radon Zone 3, where the indoor average radon level is less than 2 pCi/L. These results are below the USEPA Action Level of 4.0 pCi/L.

4.0 ADJOINING AND SURROUNDING PROPERTIES

The general area of the Site consists of primarily of educational, residential, commercial land uses. The following table summarizes the adjoining property uses:

Direction	Facility Name/ Description	Street Address/Location	Current Use
North	Liberty Avenue One-story educational building	NA 92-90 165th Street	Public Street York College Performing Arts Center and associated grounds and parking
Northeast	Liberty Avenue 165th Street Commercial	NA NA 94-29 165th Street	Public Street Public Street EWG – Glass Recovery and Recycling Corp.
East	165th Street Three-story commercial building	NA 165-08 Liberty Avenue	Public Street Storage Building and Office
Southeast	Tuskegee Airman Way (formerly South Road) 165th Street One-story commercial warehouse building Two-story bus depot	NA NA 104-01 165th Street 165-18 Tuskegee Airmen Way	Public Street Public Street NYCT warehouse NYCT Jamaica Bus Depot
South	Open lot used as a contractor storage yard Residential Two-story commercial building Unimproved lots with trailers	164-30 Tuskegee Airman Way 164-02 – 164-28 Tuskegee Airman Way 104-04 164th Street 163-10 Tuskegee Airmen Way and 106-01 Guy R. Brewer Boulevard	Contractor Storage Yard One (1) three-story and 12 two-story residences Church Religious/Residential
West	Cemetery and Vacant Land Guy R. Brewer Boulevard Two-story educational building and associated grounds	NA (located on Site block) NA 105-08 Guy R Brewer Boulevard	Vacant Public Street York College Health and Physical Education Complex
Northwest	Guy R. Brewer Boulevard and Liberty Avenue Four-story educational building	NA 94-20 Guy R. Brewer Boulevard	Public Street York College Academic Core Building

Based on the Site inspection of the adjacent and surrounding properties, the following properties shown in the table above were listed in one or more regulatory agency databases and are discussed further in Section 6.0, as applicable: 94-20 Guy R. Brewer Boulevard; 165-08 Liberty Avenue; 164-30 Tuskegee Airmen Way; 104-04 164th Street; 163-10 Tuskegee Airmen Way; 106-01 Guy R. Brewer Boulevard; and 94-29 165th Street.

In addition, the Jamaica Bus Depot, 165-18 South Road (renamed Tuskegee Airmen Way), is identified on the multiple databases and an open petroleum spill case is currently being investigated and remediated under the oversight of the NYSDEC. NYCT provided information regarding the petroleum release to STV and based on our review, the petroleum release is not considered a REC for the Site.

5.0 HISTORICAL USE RESEARCH

5.1 Land Title Records and Tax Records

STV reviewed prior ownership information for the Site presented in the Environmental Lien and AUL Search report provided by Environmental Data Resources, Inc. (EDR) of Shelton, Connecticut. Additionally, STV reviewed deed records provided by the New York City Department of Finance Automated City Register Information System (ACRIS) on-line website Office of the City Registrar. The Site consists of Block 10160, Lot 1 and Block 10159, part of Lot 3. The Site is currently owned by the "Dormitory Authority of the State of New York". A summary of the deed records for each block and lot is presented below:

Year	Deed Listings – Block 10160, Lot 1 Party 1 to Party 2
1970	Schildkraut Sol (Extr Of) to Schildkraut Foundation LLC
1987	City of New York to State of New York
1990	State of New York to Dormitory Authority of the State of New York

Year	Deed Listings – Block 10159, Lot 3 Party 1 to Party 2
1967	Desousa Alpino V to Charalambos Pambukos
	Pambukos Charalambos to Alpino V Desousa
1968	Desousa Alpino V to Bennie C Parks
1987	City of New York to State of New York
1990	State of New York to Dormitory Authority of the State of New York

No environmental liens or AULs were identified for the Site. The review of current and historical ownership and tax records information did not reveal evidence of RECs, CRECs, HRECs, or VECs associated with prior use of the Site. Supporting documentation is found in *Appendix J*.

5.2 Historical USGS Topographic Quadrangles

STV reviewed available historical United States Geological Survey (USGS) Topographic Quadrangles for information regarding past uses of the Site and surrounding area for the following years: 1897, 1898, 1900, 1947, 1957, 1966, 1979, 1994, and 2013. The following table presents descriptions and interpretations from review of the historical USGS topographic quadrangles:

Year (Scale and Quadrangle)	Comments
1897 (1:62,500) Brooklyn	**Site:** Elevation contour lines are depicted on the map and show the Site is approximately 40 feet above mean sea level (amsl). The Site appears to be located amongst developed streets. The eastern portion of the Site (Lot 1) appears to be developed with one (1) structure along Liberty Avenue and the remainder of Lot 1 is vacant. There is a roadway depicted that separates the Site lots. The western portion of the Site (Lot 3) appears to be developed with a small structure on the northwestern portion along Liberty Avenue and multiple additional small structures on the central and southern portions of Lot 3. Due to scale of the map, no

Year (Scale and Quadrangle)	Comments
	further information can be obtained. **Surrounding Properties:** Surrounding properties appear to be located amongst developed streets. The western adjoining properties on the same Site block (Lot 54 and part of Lot 3) appear to be vacant. The surrounding properties to the north and west appear to be developed with small structures along roadways. There is more sporadic development to the east, south, and southwest. Railroad tracks are depicted to the north, east, and west of the Site. There is the terminus of a stream to the southeast of the Site that appears to be connected to a marsh area to the south of the Site. A pond is depicted to the west of the Site on the south side of the railroad tracks that is connected to the marsh area to the south of the Site. Due to scale of the map, no further information can be obtained.
1898 (1:62,500) Brooklyn	**Site:** No significant changes are apparent to the Site from the 1897 topographic map. **Surrounding Properties:** No significant changes are apparent to the adjacent and surrounding properties from the 1897 topographic map.
1900 (1:62,500) Brooklyn	**Site:** No significant changes are apparent to the Site from the 1898 topographic map. **Surrounding Properties:** No significant changes are apparent to the adjacent and surrounding properties from the 1898 topographic map.
1947 (1:24,000) Jamaica	**Site:** The elevation of the Site appears to be approximately 40 feet amsl. The Site is shown with a large structure (shown in black) located on the central and southern part of Lot 3 and the remainder of the Site is vacant. **Surrounding Properties:** The western adjoining properties on the same Site block (Lot 54 and part of Lot 3) appear to be either a portion of the large structure (shown in black) or vacant. The surrounding areas to the north, east, south, and west of the Site have been significantly developed with streets and structures. The adjoining block to the north is developed with four structures; the adjoining block to the northeast with several structures; the adjoining block east with one structure; the adjoining block to the southeast with several structures; and the adjoining blocks to the south and west with several structures. Details regarding use are not shown. The railroad tracks are identified as Long Island Railroad. Prospect Cemetery and the Jamaica Station are shown to the west of the Site. Water Supply Company Tank No. 2 is located east of the Site. The stream, pond, and marsh shown on the previous topographic map are no longer shown. Baisleys Pond is shown further south of the Site.
1957 (1:24,000) Jamaica	**Site:** The Site is shaded indicating a built up area. No Site specific features are provided. There is a dotted contour interval that traverses Lot 3. According to the topographic map key, this dotted contour interval indicates an approximate or indefinite contour. The contours appear to have changed; however, the elevation appears to be between 40 and 50 feet amsl. The roadway that traverses the center of the Site remains present. No other significant changes are apparent to the Site from the 1947 topographic map. **Surrounding Properties:** The surrounding properties are shaded indicating a built up area. A railroad station, an armory, and a post office are shown to the north of the Site. Grand Army Plaza is located to the east of the Site. A pumping station and a water tank are shown to the southeast of the Site and additional water tanks are shown south-southeast of the Site. Cemeteries and a large water tank are shown to the west of the Site. No other significant changes are apparent to the surrounding properties from the 1947 topographic map.
1966 (1:24,000) Jamaica	**Site:** No significant changes are apparent to the Site property from the 1957 topographic map. **Surrounding Properties:** No significant changes are apparent to the adjacent and surrounding properties from the 1957 topographic map.
1979 (1:24,000) Jamaica	**Site:** No significant changes are apparent to the Site property from the 1966 topographic map. **Surrounding Properties:** No significant changes are apparent to the adjacent and surrounding properties from the 1966 topographic map except the water tower that was west of Site near Prospect Cemetery is no longer depicted.

Year (Scale and Quadrangle)	Comments
1994 (1:24,000) Jamaica	**Site:** No significant changes are apparent to the Site property from the 1979 topographic map. **Surrounding Properties:** No significant changes are apparent to the adjacent and surrounding properties from the 1979 topographic map.
2013 (1:24,000) Jamaica	**Site:** No significant changes are apparent to the Site property from the 1979 topographic map. **Surrounding Properties:** No significant changes are apparent to the adjacent and surrounding properties from the 1979 topographic map.

Based on STV's review of historical USGS Topographic Quadrangles, the Site appears to have been developed prior to 1897. The review of historical USGS Topographic Quadrangles revealed the presence of the following REC/VEC at the Site:

- Structures were present on the Site and were demolished. Historic fill of unknown origin and suspect buried structures have the potential to impact the Site and is considered a REC/VEC.

The review of historical USGS Topographic Quadrangles did not indicate RECs, CRECs, HRECs, or VECs at the surrounding properties. Copies of historical USGS Topographic Quadrangles are included in *Appendix F*.

5.3 Historical Aerial Photographs

STV reviewed historical aerial photographs of the Site and surrounding areas provided by EDR in order to identify historical land use that may have involved hazardous substances and petroleum products. Aerial photographs were obtained for the following years: 1924, 1951, 1954, 1961, 1966, 1985, 1994, 1996[1], 2011, and 2015. The following table summarizes descriptions and interpretations from the historical aerial photograph reviews:

Year	Comments
1924 1" – 500'	**Site:** The eastern portion of the Site (Lot 1) appears to be developed with two (2) small structures and a pile of small rectangular structures on the northern portion and the remainder of Lot 1 is vacant disturbed land. The western portion of the Site (part of Lot 3) appears to be developed with a few small structures on the northwestern portion along Liberty Avenue and multiple low-rise structures on the southern portion. There appears be an unpaved roadway separating the lots. Due to scale of the photograph, no further details can be discerned. **Surrounding Properties:** The adjoining properties on the northwest portion of the Site block are developed with several low-rise structures and a vacant vegetated lot (this appears to be the cemetery that is noted on other historical records). The surrounding properties north, east, south, and west are developed with low-rise buildings. The block to the north is developed with buildings and is used for parking. Railroad tracks are located to the north of the Site. Due to scale of the photograph, no further details can be discerned.

[1] The 1996 aerial photograph was reviewed online to supplement the 1994 aerial photograph review which was of poor quality. Link to 1996 aerial photograph: http://gis.nyc.gov/doitt/nycitymap/?z=9&p=1041700,194653&c=GIS1996&s=a:164-26,LIBERTY+AVENUE,QUEENS

Year	Comments
1951 1" – 500'	**Site:** The eastern portion of the Site (Lot 1) appears to be developed with a building on the northeast portion, two (2) rectangular buildings on the central portion and the remainder of Lot 1 appears to be automobile parking and trailer storage. The western portion of the Site (part of Lot 3) was developed with a warehouse building on the central portion that fronts Guy R. Brewer Boulevard, four (4) adjoining warehouse buildings that fronts the de-mapped street that separates the Lots, and multiple low rise buildings on the southern and northern portions of the Lot. No other significant changes are discernible on the Site from the 1924 aerial photograph. **Surrounding Properties:** The adjoining properties to the west and on the same Site block (Lot 54 and part of Lot 3) are developed with a structure and a vacant lot that front Guy R. Brewer Boulevard. The northern adjoining block has been redeveloped with two (2) warehouse/mid-size buildings and parking areas; the eastern adjoining block with a warehouse building; and the southeastern adjoining block with two (2) large structures and multiple low-rise buildings. A large circular structure is located to the west of the Site (approximately 4 city blocks on this photograph) and a circular structure located to the south-southeast of the Site (just over 3 city blocks on this photograph). In addition, there is an elevated tank located to the southeast of the Site (just over 2 city blocks on this photograph). These tanks appear to be water tanks based on the review of other historical records. Due to scale of the photograph, no further details can be discerned.
1954 1" – 500'	**Site:** There is an addition to the building on the northeastern portion of Lot 1. The remainder of Lot 1 appears unchanged; however, there appears to be an increase in trailer storage. There is an additional low-rise building developed in the northeastern portion of Lot 3. No other significant changes are discernible on the Site from the 1951 aerial photograph. **Surrounding Properties:** No significant changes are discernible to the adjacent and surrounding properties from the 1951 aerial photograph.
1961 1" – 500'	**Site:** The trailer storage on Lot 1 is no longer shown and the area appears to be used for automobile parking. There appears to be automobile parking on the roadway. No other significant changes are discernible on the Site from the 1954 aerial photograph. **Surrounding Properties:** The adjoining block to the north is now shown with trailer storage along Liberty Avenue. There is an additional large circular structure located to the south-southeast of the Site adjacent to the aforementioned circular structure. No other significant changes are discernible to the adjacent and surrounding properties from the 1954 aerial photograph.
1966 1" – 500'	**Site:** There is an addition to the rectangular shaped building on the central portion Lot 1. No other significant changes are discernible on the Site from the 1961 aerial photograph. **Surrounding Properties:** A structure east of the Site on the same block is gone and the area appears to be used as storage for truck trailers or cargo containers. No other significant changes are discernible to the adjacent and surrounding properties from the 1961 aerial photograph.
1985 1" – 500'	**Site:** The Site has undergone redevelopment including the demolition of all Site structures. The Site appears to be vacant disturbed land (both lots). There appears to be mounding on Lot 1 which could be indicative of the import of unknown fill material to the Site. The roadway appears to be present. **Surrounding Properties:** The adjoining properties to the west and on the same Site block (Lot 54 and part of Lot 3) appear to be vacant partially wooded land. The surrounding blocks to the north, northwest, and west have undergone redevelopment. Most of the buildings on the northern adjoining and western adjoining blocks have been demolished and the area appears to be vacant disturbed land. A large building has been constructed on the northwest adjoining block (associated with York College based on review of other historical documents). No other significant changes are discernible to the adjacent and surrounding properties from the 1966 aerial photograph.
1994 1" – 500'	**Site:** The image is of poor quality. The Site appears to be vacant disturbed land. No significant changes are discernible on the Site from the 1985 aerial photograph. **Surrounding Properties:** The image is of poor quality. The north adjoining block and east adjoining block have undergone redevelopment and the structures and grounds are configured similar to existing layout and use by York College. No other significant changes are discernible to the adjacent and surrounding properties from the 1985 aerial photograph.

Year	Comments
1996 Reviewed online. See footnote above.	**Site:** The Site appears to be vacant disturbed land. There appears to be significant mounding on Lot 1. There is an area of white debris located on the southwestern portion of the Lot 3 as well as soil disturbance on the southern and northern portion. There appears to be a truck (either leaving or entering) along South Road. No other significant changes are discernible on the Site from the 1994 aerial photograph. **Surrounding Properties:** No significant changes are discernible to the adjacent and surrounding properties from the 1994 aerial photograph.
2006 1" – 500'	**Site:** A parking lot is developed on the southern portion of Lot 3. There are rectangular structures/trailers located adjacent to the parking lot. The northeastern portion of Lot 3 and all of Lot 1 is grassy vacant land. Based on a comparison with the previous aerial photograph, the Site appears to have been regraded when the parking lot was constructed. The mounding that was previously observed is not shown. No significant changes are discernible on the Site from the 1996 aerial photograph. **Surrounding Properties:** The area of Lot 54 and the small part of Lot 3 located on the Site block appear to be wooded land. No other significant changes are discernible to the adjacent and surrounding properties from the 1996 aerial photograph.
2011 1" – 500'	**Site:** No significant changes are discernible on the Site from the 2006 aerial photograph. **Surrounding Properties:** No significant changes are discernible to the adjacent and surrounding properties from the 2006 aerial photograph.
2015 1" – 500'	**Site:** No significant changes are discernible on the Site from the 2009 aerial photograph. **Surrounding Properties:** No significant changes are discernible to the adjacent properties from the 2009 aerial photograph.

The review of historical aerial photographs revealed the presence of the following RECs and VECs at the Site:

- Structures were present on the Site and were demolished. Historic fill of unknown origin and suspect buried structures have the potential to impact the Site.
- Fill material was imported sometime between 1966 and 1985, possibly continuing through the mid-1990s.

The review of historical aerial photographs did not indicate RECs, CRECs, HRECs, or VECs at the surrounding areas. Copies of reproducible historical aerial photographs are included in *Appendix G*.

5.4 Historical Fire Insurance Maps (Sanborn® Maps)

A search for historical fire insurance maps for the Site and adjoining properties was conducted by EDR. These maps were obtained for the following years: 1891, 1897, 1901, 1911, 1912, 1925, 1926, 1942, 1951, 1963, 1967, 1981, 1982, 1985, 1986, 1987, 1988-1993, 1995, 1996, 1999, and 2001-2006. The following table presents descriptions and interpretations from historical fire insurance map review.

Year	Comments
1891	**Site:** The Site is not shown on the Sanborn Map. **Surrounding Properties:** The surrounding properties to the north and south are not shown on the Sanborn Map. Locust Street is identified east of the Site and there is an avenue to the west of the Site (name not shown). The surrounding properties to the east, west, and northwest are depicted as dwellings and there is a wagon house located to the west of the Site.

Year	Comments
1897	**Site:** The eastern portion of the Site (Lot 1) is depicted with a dwelling, a carriage house, and 1-2 story unlabeled building located on the northern portion and the remainder of Lot 1 is vacant. A roadway identified as "Evergreen" traverses the central portion of the Site separating the Lots. The western portion of the Site (part of Lot 3) is depicted as vacant land. **Surrounding Properties:** Linden Street is identified to the north of the Site. The surrounding properties consist of the following: North – dwellings, a lumber shed, vacant lots, and a cultivated field; East – dwellings, a hotel, a building labeled "candy", a building labeled "pool", and vacant lots; South – the area to the south is not shown on this map; and West – dwellings and wagon house. No other significant changes have occurred to the adjacent and surrounding properties from the 1891 map.
1901	**Site:** The eastern portion of the Site (Lot 1) is depicted with a dwelling, a carriage house, and a 2-story unlabeled building located on the northern portion and the remainder of Lot 1 is vacant. The roadway identified as "Evergreen" depicted through the Site from street to street. The western portion of the Site (Lot 3) is depicted with a **2 ½-story building identified as Jamaica Hospital with a kitchen and laboratory in the basement** on the west-central portion south-adjacent to the off-site **cemetery**. There are dwellings located in the central and southern portions of Lot 3 and vacant lots are depicted on the northeastern portion of the Lot 3. No other significant changes have occurred to the Site from the 1897 map. **Surrounding Properties:** A street is now shown to the south of the Site. The surrounding properties consist of the following: North – dwellings, a **Woodworking & Turning Co. with railroad tracks, a lumber shed, and lumber piles**, and vacant lots; East – dwellings, stores, and vacant lots; South – dwellings and vacant lots; and West – adjoining properties to the west and on the same Site block (Lot 54 and part of Lot 3) are depicted as a **cemetery** and vacant lots, and further west are dwellings. No other significant changes have occurred to the adjacent and surrounding properties from the 1897 map.
1911	**Site:** The Site is not shown on this map. Coverage is only available to the west of the Site. **Surrounding Properties:** The surrounding properties to the west are depicted as dwellings, stores, and vacant lots. Coverage is not available to the north, east, and south of the Site.
1912	**Site:** The eastern portion of the Site (Lot 1) is depicted with the aforementioned dwelling, a **wagon works** is present where the carriage house was located. The central portion is developed with **J.R. Carpenter Co. – Lumber Yard** and the southern portion is vacant. The western portion of the Site (part of Lot 3) depicts the aforementioned **Jamaica Hospital**, an ambulance shed and an auto garage on the central portion. There are additional dwellings depicted on the southern portion of the Site and a small structure on the northern portion of the Site. **Surrounding Properties:** The surrounding properties consist of the following: North – **Woodworking Plant with railroad tracks, lumber sheds, a planning mill, a carpenter shop, and lumber storage**, dwellings, and vacant lots; East – a carriage shed, dwellings, a lumber shop, stores, and vacant lots; South – dwellings, stores, and vacant lots; and West – adjoining properties to the west and on the same Site block (Lot 54 and part of Lot 3) are depicted as a **cemetery** and five dwellings. The surrounding properties to the west beyond Guy R. Brewer Boulevard are not shown on this map.

Year	Comments
1925	**Site:** The eastern portion of the Site (Lot 1) is depicted as a baseball park with grandstands, bleachers, and fences. The western portion of the Site (part of Lot 3) depicts the **area of Jamaica Hospital as a vacant lot**. There are five (5) dwellings depicted on northeastern portion of Lot 3 along Liberty Avenue. The roadway identified as "Evergreen" is now identified as 164th Street Evergreen). No other significant changes have occurred to the Site from the 1912 map. **Surrounding Properties:** The surrounding properties consist of the following: North – **Woodworking Plant with railroad tracks, lumber sheds, a planning mill, a carpenter shop, and lumber storage** and dwellings; East – office with an auto garage, a **garage with a gasoline tank**, a **tailor**, stores, and dwellings; South – the area to the south is not shown on this map; and West – adjoining properties to the west and on the same Site block (Lot 54 and part of Lot 3) are depicted as a **cemetery** and dwellings and further west are dwellings and vacant lots. No other significant changes have occurred to the adjacent and surrounding properties from the 1912 map.
1926	**Site:** The Site is not shown on this map. Coverage is only available to the south of the Site. **Surrounding Properties:** The surrounding properties to the south are depicted as dwellings, stores, a lumber shed, and vacant lots. Coverage is not available to the north, east, and west of the Site. No other significant changes have occurred to the adjacent and surrounding properties from the 1912 map.
1942	**Site:** The eastern portion of the Site (Lot 1) is depicted as a baseball park. The western portion of the Site (part of Lot 3) is depicted as **Long Island Drug Co. Inc. warehouse** on the central portion where part of Jamaica Hospital was formerly located. The warehouse is shown with a **fuel oil tank** at the northwest corner and a **gasoline tank** at the central portion of the building, both along New York Avenue. Three (3) **warehouse buildings identified as Saltsier and Weinsier Inc. plumbing supplies and storage** are located east of the Long Island Drug Co. Inc. warehouse on the central portion of the Lot. There is a **gasoline tank** shown in the east-central portion of the building along 164th Street. An **undertaker** is present at the southwest corner of Lot 3. There are two (2) offices along Liberty Avenue and additional dwellings on the southern portion of the Lot. The map depicts 6 inch water pipes extending south from Liberty Avenue into a portion of the roadway. There is a double hydrant shown adjacent to the water pipes. No other significant changes have occurred to the Site from the 1925 map. **Surrounding Properties:** The surrounding properties consist of the following: North – a vacant lot where the woodworking plant was formerly located, lumber piles, and dwellings; East/Northeast – used car sales and a **garage and service station with a gasoline tank**, a **filling station with two (2) gasoline tanks**, **gasoline service station with six (6) gasoline tanks**, stores, and dwellings; South – the area to the south is not shown on this map; and West – adjoining properties to the west and on the same Site block (Lot 54 and part of Lot 3) are depicted with a **cemetery** (the cemetery appears to have expanded to the north where two [2] dwellings were present**)**, a dwelling, an auto garage, a store dwellings and further west are dwellings, an office, a courthouse, an **oil burner warehouse**, and vacant lots. No other significant changes have occurred to the adjacent and surrounding properties from the 1925 and 1926 maps.

Year	Comments
1951	**Site:** The eastern portion of the Site (Lot 1) is depicted with an **auto sales and service facility** on the northeastern portion, an **auto repair shop** on the central portion of the Lot, and the remainder of the Lot is vacant. The western portion of the Site (part of Lot 3) depicts the use of an existing **plumbing supply warehouse as a drug warehouse** and there is an additional **south-adjoining building identified as warehouse and shipping associated with the aforementioned buildings.** No other significant changes have occurred to the Site from the 1942 map. **Surrounding Properties:** The surrounding properties consist of the following: North – **fur storage**, vacant lots, and dwellings; East/Northeast – **auto sales and service with a gasoline tank** and showroom, a **garage**, **gasoline service station with six (6) gasoline tanks**, **auto repair shops**, **roofing materials warehouse**, stores, and dwellings; South – dwellings, a church, stores, and two (2) paint shops; and West – adjoining properties to the west and on the same Site block (Lot 54 and part of Lot 3) remain the same and further west are dwellings, an office, stores, a courthouse, an **oil burner warehouse**, and vacant lots. No other significant changes have occurred to the adjacent and surrounding properties from the 1942 map.
1963	**Site:** The eastern portion of the Site (Lot 1) depicts the **auto sales and service facility** with an expansion to the south identified as a **parts and service building**. The **auto repair shop** on the central portion of the Lot has also undergone an expansion to the south. The western portion of the Site (part of Lot 3) depicts an additional plumbing storage building associated with the aforementioned buildings and a small storage building, both on the northeastern portion of the Lot 3 along Liberty Avenue. No other significant changes have occurred to the Site from the 1951 map. **Surrounding Properties:** The surrounding properties consist of the following: North – **fur storage**, **auto service station**, vacant lots, and dwellings; East/Northeast – **electronic parts manufacturing** replaced the auto sales and service, **auto sales and service**, **gasoline service station with six (6) gasoline tanks**, stores, and dwellings; South – dwellings, a church, stores, and two (2) paint shops; and West – use of adjoining properties to the west and on the same Site block (Lot 54 and part of Lot 3) remain the same and further west are dwellings, an office, stores, a courthouse, an **oil burner warehouse**, and vacant lots. No other significant changes have occurred to the adjacent and surrounding properties from the 1951 map.
1967	**Site:** No significant changes have occurred to the Site from the 1963 map. **Surrounding Properties:** The surrounding properties consist of the following: North – the adjoining block to the north is labeled bus parking; East/Northeast – the auto sales and service building is shown as vacant; South – the area to the south is not shown on this map; and West – an **auto repair shop** is depicted on the adjoining property to west along Liberty Avenue (part of Lot 3) and further west there is an additional **auto repair shop** and **tires sales and service**. No other significant changes have occurred to the adjacent and surrounding properties from the 1963 map.
1981	**Site:** The Site is depicted as vacant land with all of the **former Site buildings have been razed**. **Surrounding Properties:** With the exception of six buildings, all of the other buildings depicted on the west-adjoining block have been razed. The vacant auto sales and service building to the northeast is now depicted as **auto painting**. The gasoline service station to the east is now depicted as a **filling station**. The adjoining property to the east that was depicted as electrical manufacturing is now depicted as a warehouse. There is an **auto repair shop** depicted to the south of the Site. No other significant changes have occurred to the adjacent and surrounding properties from the 1967 map.

Year	Comments
1982	**Site:** No significant changes have occurred to the Site from the 1981 map. **Surrounding Properties:** Dwellings to the north of the Site have been razed. No other significant changes have occurred to the adjacent and surrounding properties from the 1981 map.
1985	**Site:** No significant changes have occurred to the Site from the 1982 map. **Surrounding Properties**: Part of the adjoining block to the northeast that is shown appears to have undergone redevelopment and is depicted with three (3)-story building with a basement (according to other municipal records is associated with York College). No other significant changes have occurred to the adjacent and surrounding properties from the 1982 map. The area to the south of the Site is not shown on this map.
1986	**Site:** No significant changes have occurred to the Site from the 1985 map. **Surrounding Properties**: No significant changes have occurred to the adjacent and surrounding properties from the 1982 and 1985 maps.
1987	**Site:** No significant changes have occurred to the Site from the 1986 map. **Surrounding Properties**: The auto service station to the north is no longer depicted and the remaining buildings to the west have been razed. No other significant changes have occurred to the adjacent and surrounding properties from the 1986 map.
1988	**Site:** No significant changes have occurred to the Site from the 1987 map. **Surrounding Properties**: No significant changes have occurred to the adjacent and surrounding properties from the 1987 map.
1989	**Site:** The Site is not shown on this map. **Surrounding Properties**: The areas to the north, northeast, and west are not shown on this map. No significant changes have occurred to the adjacent and surrounding properties from the 1988 map.
1990	**Site:** No significant changes have occurred to the Site from the 1988 map. **Surrounding Properties**: The adjoining block to the west is depicted with an auditorium and there is part of a building depicted on the adjoining block to the north (according to other municipal records both are associated with York College).
1991	**Site:** No significant changes have occurred to the Site from the 1990 map. **Surrounding Properties:** No significant changes have occurred to the adjacent and surrounding properties from the 1990 map.
1992	**Site:** No significant changes have occurred to the Site from the 1991 map. **Surrounding Properties:** The auto painting building to the northeast is now identified as a **recycling.** No other significant changes have occurred to the adjacent and surrounding properties from the 1991 map.
1993	**Site:** No significant changes have occurred to the Site from the 1992 map. **Surrounding Properties:** No significant changes have occurred to the adjacent and surrounding properties from the 1992 map.
1995-1996	**Site:** No significant changes have occurred to the Site from the 1993 map. **Surrounding Properties:** No significant changes have occurred to the adjacent and surrounding properties from the 1993 map.
1999	**Site:** No significant changes have occurred to the Site from the 1996 map. **Surrounding Properties:** No significant changes have occurred to the adjacent and surrounding properties from the 1996 map.
2001-2006	**Site:** No significant changes have occurred to the Site from the 1999 map. **Surrounding Properties:** No significant changes have occurred to the adjacent and surrounding properties from the 1999 map.

The review of Sanborn Maps revealed the presence of the following RECs and VECs at the Site:

- Structures were present on the Site and were demolished. Historic fill of unknown origin and suspect buried structures have the potential to impact the Site.

- Historical Site uses as:
  - Auto Sales and Service Facility from 1951-1970 (Lot 1).
  - Auto Repair Shop from 1951-1957 (Lot 1).
  - Lumber Yard and Wagon Works in 1912 (Lot 1).
  - Long Island Drug Co. Warehouse 1942-1967 (Lot 3).
  - Jamaica Hospital from 1901-1912 (Lot 3).
  - Saltser & Weinsier Inc. Plumbing / Drug Warehouse and Storage buildings from 1934-1970 (Lot 3).
  - Undertaker from 1942-1951 (Lot 3).
  - Historic fuel oil tank and gasoline tanks associated with former uses as Long Island Drug Co. and Saltser & Weinsier Inc. (Lot 3).

The review of Sanborn Maps revealed the presence of the following RECs and VECs at the surrounding areas:

- Current and historical surrounding property uses as automobile related (i.e., auto repair shops; garages, service stations, filling stations, and gasoline stations with gasoline storage tanks; tire sales and service; auto painting), a woodworking plant, a cemetery, electronic parts manufacturing, an oil burner warehouse, fur storage, and roofing materials warehouse.

Copies of the historical fire insurance maps are provided in *Appendix H*.

5.5 City Directories

A review of historical city directories for the Site and surrounding areas was conducted by EDR. The following table presents descriptions and interpretations from the historical city directory reviews.

Year	Comments
1934	**Site:** The Site address was listed with multiple residential listings 103-32 164th Street: **"Saltser & Weinsier Inc NY Michl Weinsler pres Abr Wohl v pres Henry Gasner sec Julius Cohen treas plmbr supplies", " Cohen Julius treas Saltser & Weinsier Inc", " Weinsier Michl pres Saltser & Weinsier Inc"**. 103-42 164th Street: "**Greidinger Sol Paula Greidingers Auto Repair Works**", "**Greidinger Auto Repair Works Sol Greidinger**" **Surrounding Properties:** Surrounding properties included residential and commercial listings and food establishments.
1939	**Site:** The Site address was listed with multiple residential listings 103-32 164th Street: **"Saltser & Weinsier Inc plumbrs sup"** **Surrounding Properties:** Surrounding properties included residential listings, **a woodworking co**., and storage companies.
1945	**Site:** The Site address was listed with multiple residential listings. **Surrounding Properties:** Surrounding properties included residential listings, **an auto repair shop**, and a beverage corp.
1950	**Site:** The Site address was listed with multiple residential listings. 103-28 164th Street: "**Saltser & Welnsler Inc. Plmbrs Sup**" 163-02 Liberty Avenue: food establishment 163-14 Liberty Avenue: "**Di Loreto Jos Genl Contr**" 163-20 Liberty Avenue: "**Agnello Bros Plmbng contrs**" **Surrounding Properties:** Surrounding properties included residential listings, an establishment called "Harry's Glass Co.", an establishment called "**Flamingo Paint Co**.", a nursing home, **an**

Year	Comments
	auto repair shop, an establishment called "Schildkraut sol inc. autos", an establishment called "**expert rayon co inc**", an establishment called "**Jamaica Lincoln and mercury corp.**", "N Y City of Transportation BD of Transit System Queens Bus Div Jamaica Garag", an establishment called "Lib-circle svce inc.", **Radio sales and service shop**, Cesspool and Sewer Co., an excavating co. **Oil Burner Service**, and a garage.
1962	**Site:** The site address was listed with multiple residential listings 164-26 Liberty Avenue: "SCHILDKRAUT SOL INC autos Exec oflice & Showrms", "Schildkraut Sol Inc used cars", **"Svce & Parts",** "Used Cars" (164-26 Liberty Ave), 103-28 164th Street: "**Saltser & Weinsier Inc plumbrs sup**" 163-02 Liberty Avenue: food establishments **Surrounding Properties:** Surrounding properties included residential and commercial listings, a delicatessen and grocery, a nursing home, food establishments, an establishment called "Central Store Front Co Inc", a funeral home, **"Prince Cleanrs & Dyers",** a beauty lounge, and a candy store.
1967	**Site:** The site address was listed with multiple residential listings 164-26 Liberty Avenue: "New cars", "SCHILDKRAUT SOL INC autos Exec oflice & Showrms", **"Svce & Parts**". 163-02 Liberty Avenue: food establishments **Surrounding Properties:** Surrounding properties included residential and commercial listings, a delicatessen and grocery, an establishment called "South Queens Demncrtic Club", a Jewish Center, an establishment called "Howard Beach Community Volunteer Ambulance Corps Inc", food establishments, a furniture store, an **auto supply store**, an establishment called "Central Store Front Co Inc", a bargain store, and an upholstery store.
1970	**Site:** The site address was listed with multiple residential listings 164-26 Liberty Avenue: "SCHILDKRAUT SOL INC autos Exec oflice & Showrms", " **Svce & Parts**", "Used Cars" 103-28 164th Street: "**Fairway Plumbing and Heating Supl Corp**" 163-02 Liberty Avenue: food establishments **Surrounding Properties:** Surrounding properties included residential and commercial listings, a grocery store, an **auto body shop**, food establishments, a storage company, an establishment called "Central Store Front Co Inc", and a delicatessen.
1976	**Site:** The Site address was not listed. **Surrounding Properties:** Surrounding properties included residential listings, a grocery store, **a service station**, an establishment called "Central Store Front Co Inc", and a food establishment.
1983	**Site:** The Site address was not listed. **Surrounding Properties:** Surrounding properties included residential listings, a grocery, a service station, a furniture corp., and a mental health establishment.
1991	**Site:** The Site address was not listed. **Surrounding Properties:** Surrounding properties included residential and commercial listings, a grocery, mental health establishment, food establishments, and an Amalgamated Transit Union.
1996	**Site:** The Site address was not listed. **Surrounding Properties:** Surrounding properties included residential listings.
2000	**Site:** The Site address was not listed. **Surrounding Properties:** Surrounding properties included residential listings, an establishment called "Zuky Contr Inc.", an establishment called "Godian Fllwshp Inc.", food establishments, and a furniture corp.
2005	**Site:** The Site address was not listed. **Surrounding Properties:** Surrounding properties included residential and commercial listings, a church, an establishment called " Godian Fellowship", a food establishment, a locksmith , an establishment called "Concerned Parents Child", a furniture corp., an alcohol treatment establishment, a beauty salon, a grocery store, Amalgamated Transit Union, and an establishment called "**Sprague Energy**".

Year	Comments
2010	**Site:** The Site address was not listed. **Surrounding Properties:** Surrounding properties included residential and commercial listings, "Taylors Cleaning Plus", a cosmetic establishment, an establishment called "Mortal Productions", an establishment called "Water Infection Control in Afr.", a church, an establishment called "Frankies enterprises", an establishment called " Godian Fellowship Inc.", an establishment called "Enovativetv Inc.", an establishment called " Finesse African Hair Brai", an establishment called "Aeneas Capital", an establishment called "West African Inc.", food establishments, an establishment called "Concerned Parents of Children", an establishment called "Another chance at life Inc.", an establishment called "Novelties unlimited", a realty establishment, an establishment called "**Liberty Gas Inc.",** an alcohol treatment establishment, a mental health establishment , a laundromat, a beauty salon, a grocery store, an establishment called "K J C incorporated", and New York City Transit Authority.
2014	**Site:** The Site address was not listed. **Surrounding Properties:** Surrounding properties included residential and commercial listings, "Taylors Cleaning Plus", a cosmetic establishment, a church, a hair salon, an establishment called "Enovativetv Inc.", an establishment called "Finesse African Hair Brai", an establishment called "Aeneas Capital", food establishments, an establishment called "PK Brothers Inc.", an establishment called "Novelties unlimited", a realty establishment, an alcohol treatment establishment, a mental health establishment, a laundromat, a grocery store, New York City Transit Authority, and MTA New York Transit.

The review of the historical city directories revealed the presence of the following RECs and VECs at the Site and surrounding areas:

- The historic Site use as automobile related (e.g., auto repair works, service and parts), a woodworking company, and a plumbing a contractor/warehouse.

- The historic use of the adjacent and surrounding properties as an auto repair shop, an auto body shop, a gasoline station, a cleaners and dyers site, a paint company, oil burner service, radio sales and service shop, "Sprague Energy", a petroleum supplier, and manufacturing facilities ("Jamaica Lincoln and Mercury Corp." and "Expert Rayon Co Inc").

Copies of the historical city directories are provided in *Appendix J.*

5.6 Prior Reports

A prior Phase I Environmental Site Assessment (ESA) was prepared for the Site and a prior Phase II Environmental Site Investigation (ESI) was prepared for the northern one-acre portion of Lot 1 along Liberty Avenue that is currently vacant and vegetated. Both reports were prepared for the Industrial and Environmental Hygiene (IEH) Division at the New York City School Construction Authority (NYCSCA) by Langan Engineering and Environmental Services, P.C. (Langan Phase I ESA and Langan Phase II ESI).

For the Langan Phase I ESA, only Section 9.0 Summary of Findings and Section 10.0 Conclusions and Recommendations were provided. It was reported that the NYCSCA was considering purchasing the Site for the development of a high school. The Langan Phase I ESA identified the following:

On-Site RECs:

- Historic presence of one fuel oil and two gasoline tanks from 1942 to 1967 (Block 10159, Lot 3);
- Presence of five dry wells;

- Historic Site usage as a lumber yard and wagon works facility (1912) and an automobile repair, sales, and service facility (1951 - 1970); and
- Presence of undocumented fill material utilized to bring the Site to the present grade.

Off-Site RECs:

- Historic usage of Block 10159, Lot 3 as a hospital (1901 - 1912), laboratory (1901), furnishing facility (1934), undertaker (1934 - 1957), and an automobile repair, sales, and services facility (1934 - 1962);
- Historic and current usage of Block 10159, Lot 54 as a cemetery (1816 to present);
- A closed NYSDEC spill at York College to the northwest at 94-20 Guy R. Brewer Boulevard;
- An active solid waste management facility, Jamaica Recycling, which adjoins the Site to the northeast at 165-01 Liberty Avenue;
- An open NYSDEC Spill and ongoing subsurface remediation at the Jamaica Bus Depot located southeast of the Site at 165-18 South Road;
- A fill port and vent pipe on the sidewalk at 162-24 South Road to the southwest;
- Monitoring wells indicative of a previous environmental investigation at the following locations:
    - Northwest of the Site, on the sidewalk at the southeast corner of Liberty Avenue and Guy R. Brewer Boulevard;
    - North of the Site at the property located at 163-01 Liberty Avenue;
    - Northeast of the Site in the parking lot of 162-25 Liberty Avenue; and,
    - East of the Site on the south sidewalk of Liberty Avenue, between 165th Street and Merrick Boulevard.
- Historical use of properties north of the Site as a cobbler, lumber yard, woodworking facility, garages, filling stations with gasoline tanks, cemeteries, and automobile repair, painting recycling, roofing, glass manufacturing, and waste disposal facilities;
- Historical use of properties south of the Site as automobile repair, starch and adhesives, and electronics manufacturing facilities;
- Historical use of properties east of the Site as a garage and service station, automobile repair facilities with gasoline tanks, an electronics manufacturing facility, an industrial property, and a furniture company; and
- Historical use of properties west of the Site as automobile sales, repair, service, and painting facilities and an oil burner warehouse.

The Langan Phase II ESI, dated April 1, 2010 was prepared for the northern portion of Lot 1 along Liberty Avenue. The Langan Phase II ESI provided for review as part of the Phase I ESA was partial and included text, figures, tables, and a remediation cost estimate, but did not include the geophysical survey, boring logs, sample logs, photographs, waste disposal manifest, and laboratory reports.

The Langan Phase II consisted of a geophysical survey, the completion of five (5) soil borings, the installation of five (5) temporary monitoring wells and four (4) soil vapor sampling points, and the excavation of five (5) test pits. A total of 10 grab soil samples, two (2) composite soil samples, five (5) groundwater samples, seven (7) soil vapor samples, and one (1) ambient air sample were collected for laboratory analysis. Three (3) confirmatory soil vapor samples were collected for vinyl chloride analysis

The review of the Langan Phase II ESI indicated that soil samples were collected to a maximum of 30 feet below ground surface and encountered historic fill consisting of fine- to coarse-grained sand with some silt, gravel, and fragments of metal, wood, brick, glass, coal and plastic material from surface grade to depths ranging from approximately 6.5 feet to 15 feet below ground surface. Native soil consisting of

tan fine- to coarse-grained sand was reported to be encountered below the historic fill at the sampling locations. Bedrock was not encountered during the Langan Phase II ESI. The Langan Phase II ESI reported groundwater for the portion of Lot 1 investigated from depths ranging from 21 to 26.2 feet below ground surface.

The results of the Phase II ESI were presented as follows:

Soil and Groundwater

- USTs or other significant subsurface anomalies were not identified at the Site.
- Historic fill, which contains construction debris, extends from surface grade to depths of up to 15 feet below ground surface throughout the Site.
- Acetone, semi-volatile organic compounds (SVOCs), metals, and polychlorinated biphenyls (PCBs) were detected in soil samples at concentrations above the Part 375 Unrestricted Use Soil Cleanup Objectives (SCOs).
- Volatile organic compounds (VOCs), SVOCs, PCBs, and metals were not detected in groundwater samples at concentrations above the New York State Class GA Ambient Water Quality Standards.

Soil Vapor and Air

- Several VOCs were detected in soil vapor samples above background indoor database concentrations. VOC concentrations did not exceed the New York State Department of Health (NYSDOH) Air Guideline Values.
- Radon was detected at a concentration below the USEPA Action Level.

Based on the Phase II ESI results, Langan concluded the following:

- Detected concentrations of acetone, SVOCs, and metals in soil are attributable to background conditions in historic fill and not indicative of an on-site release.
- Radon is not an environmental concern.
- Analyses of groundwater samples did not indicate any compounds at concentrations above comparison criteria.
- Detections of VOCs in soil vapor samples are attributable to either an off-site source or background conditions in historic fill and are not indicative of an on-site release.
- Excess soil that will be generated during the proposed construction should be classified as non-hazardous excavated material.

Based on the results of the Phase II ESI, the remediation and environmental control measures listed below were recommended to make the Site suitable for use as a public school facility:

- A soil vapor barrier should be integrated into the new school foundation design, including integration with any proposed damp-proofing or waterproofing components.
- All material excavated during construction activities should be properly characterized prior to transportation to an off-site disposal facility. Characterization may include collection and analysis of additional samples, as required by the contractor-selected solid waste management facilities.
- Construction dewatering, if required, should be performed in accordance with applicable local, state and federal regulations. Dewatering required during construction should be minimized to mitigate potential influx of contaminated water from off-site sources toward the Site.
- Potential ACM, LBP and suspect PCB-containing materials encountered within buried construction debris should be properly managed.

- After the proposed new building and grounds are constructed, any exposed soil (landscaped areas) should be covered with at least two feet of environmentally clean fill meeting the requirements of Part 375 for unrestricted use.

5.7 Historical Use Interviews

Mr. Joseph Gioffredo, Chief Administrative Superintendent Buildings and Grounds Main Operations, was available during the Site reconnaissance for interview. The following is a summary of information obtained:

- The area of the parking lot was formerly used for salt storage by the New York City Department of Sanitation.
- The central portion of the vacant, vegetated lot was formerly used for soil/material processing. Reportedly, the activities consisted of receipt of soil/material from unknown sources. The soil/material was screened on-site and was distributed off-site or disposed of on-site.

No other historical sources were available for interview.

6.0 REGULATORY AGENCY RECORD REVIEWS

The databases discussed in this section, provided by EDR, were reviewed for information regarding documented and/or suspected releases of regulated hazardous substances and/or petroleum products on or near the Site (*Appendix I*). STV also reviewed the "unmappable" (also referred to as "orphan") listings within the database report, cross-referencing available address information and facility names. Unmappable sites are listings that cannot be plotted with confidence, but are identified as being located within the general area of the Site based on the partial street address, city name, or zip code. In general, a listing cannot be mapped due to inaccurate or incomplete address information in the database that was supplied by the corresponding regulatory agency. Any listings from the unmappable summary which were identified by STV as a result of the area reconnaissance and/or cross-referencing to mapped listings are included in the corresponding database discussion within this section.

6.1 Federal and State Regulatory Agency Database Reviews

A review of federal and state records for the Site was accomplished by contacting offices of Federal and State regulatory agencies and review of the regulatory listings compiled in the regulatory agency database report (*Appendix I*). The results of the review of the Federal and State records are presented below. Copies of the correspondences are included in *Appendix K*.

United States Environmental Protection Agency (USEPA)
The USEPA is responsible for protecting human health and the environment. To that end, the USEPA develops and enforces regulations that implement environmental laws enacted by Congress. A Freedom of Information Law (FOIL) request dated March 2, 2018 was filed with the USEPA to determine if the agency holds additional records pertaining to the Site property. USEPA acknowledged the request on March 2, 2018. At the time this report was issued, STV had not yet received any further responses from USEPA. Upon receipt of this information, STV will review the response and, if conclusions contained within this report are affected, will submit an addendum to this report.

The status of the Site was also checked on USEPA's MyPropertyInfo website on March 2, 2018. A search of the databases did not locate any environmental records. A copy of the MyPropertyInfo result is included in *Appendix K*.

New York State Department of Environmental Conservation (NYSDEC)
The NYSDEC maintains files of incidents involving environmentally regulated materials, spill incidents, and state regulated cleanups. The records maintained by NYSDEC include reports of spills of hazardous chemicals and petroleum, petroleum bulk storage information, and site-specific environmental data. NYSDEC information concerning the Site property was requested in a FOIL records access application dated March 1, 2018. NYSDEC acknowledged the request on March 1, 2018. According to an email response, there are no NYSDEC records for the Site.

New York State Department of Health (NYSDOH)
The NYSDOH Records Access Office maintains files of health-related environmental incidents in the State of New York. These incidents may include spills of hazardous chemicals, citizen's complaints regarding asbestos issues, or reports of chemical odors or fumes. NYSDOH information concerning the Site property was requested in a formal letter dated March 2, 2018. NYSDOH acknowledged the request on March 6, 2018 and has issued monthly extension letters. At the time this report was issued, STV had not yet received any further responses from NYSDOH. Upon receipt of this information, STV will review the response and, if conclusions contained within this report are affected, will submit an

addendum to this report.

A summary of sites identified through the Federal and State regulatory agency database review is provided in the following table:

Federal and State List	Last Updated	Search Radius*	No. of Sites within Search Radius	Site Appears on List	RECs, CRECs, or VECs Identified
National Priorities List for Federal Superfund Cleanup (NPL)	12/11/2017	1 mile	0	No	No
Delisted NPL Site List	12/11/2017	1 mile	0	No	No
Superfund Enterprise Management System (SEMS) (Formerly CERCLIS), including SEMS-ARCHIVE sites (Formerly CERCLIS-NFRAP Sites)	12/11/2017	½ mile	0/0	No	No
Resource Conservation and Recovery Information System – Corrective Action Activity (RCRIS CORRACTS) and Non-CORRACTS Treatment, Storage, or Disposal Facilities (RCRS-TSD)	12/11/2017	1 mile / ½ mile	0/0	No	No
Resource Conservation and Recovery Information System Generators/Transporters (RCRIS Gen/Trans) – Large Quantity Generator, Small Quantity Generator, Conditionally Exempt Small Quantity Generator	12/11/2017	¼ mile	4/4/2	No	**Yes**
RCRA Non-Generator	12/11/2017	¼ mile	55	No	**Yes**
Federal Institutional Control/Engineering Control Registries	11/13/2017	½ mile	0/0	No	No
Emergency Response Notification System (ERNS)	09/18/2017	Site	NA[1]	No	No
State Toxic Release Inventory System (TRIS)	12/31/2016	¼ mile	0	No	No
Hazardous Substance Waste Disposal Site Inventory (HSWDS)	01/01/2003	½ mile	0	No	No
New York State Inactive Hazardous Waste Disposal Sites (SHWS)	12/08/2017	1 mile	4	No	No
Solid Waste Management Facilities Sites (SWF/LF)	04/06/2016	½ mile	23	No	**Yes**
Vapor Reopened	05/01/2017	½ mile	0	No	No
New York State Spills Information (NY Spills)/Leaking Underground Storage Tanks (LTANKS)	10/31/2017	1/8 mile / ¼ mile	17/56	No	**Yes**
Petroleum Bulk Storage Tanks (USTs/ASTs)	12/22/2017	¼ mile	10/19	No	**Yes**
NY Chemical Bulk Storage Database (NY CBS USTs/ASTs)	01/01/2002	¼ mile	0/1	No	No
NY Chemical Bulk Storage Tanks (NY CBS)	12/22/2017	¼ mile	2	No	No

Federal and State List	Last Updated	Search Radius*	No. of Sites within Search Radius	Site Appears on List	RECs, CRECs, or VECs Identified
Facility Index / Registry System (FINDS)	07/23/2017	Site	0	No	No
New York State Voluntary and Brownfield Cleanup Program Sites (VCP/BCP)	08/15/2017	1 mile	1/3	No	No
NY SWRCY	04/06/2016	½ mile	4	No	No
E-Designation Sites	10/31/2017	1/8 mile	39	No	**Yes**
Registered Dry Cleaners	11/22/2017	½ mile	0	No	No
EDR US Hist Auto Stat	NA	¼ mile	2	No	**Yes**
EDR US Hist Cleaners	NA	½ mile	0	No	**Yes**
NY Manifest	10/01/2017	¼ mile	76	No	**Yes**
Manufactured Gas Plant Sites (Coal Gas)	NA[2]	1 mile	1	No	No

* The surrounding area search radius indicates the radial area (measured from the perimeter of the Site) for which the database review was performed.
[1]NA – Not Applicable
[2] This database consists of a compilation of historic resources (as early as the late 1800s) prepared by EDR that does not require updates. The last MGP in New York State ceased operations in 1972.

The Site is not listed in the prescribed search radius of any of the regulatory agency databases reviewed.

National Priorities List of Federal Superfund Cleanup (NPL)

The NPL is a subset of the CERCLIS, and lists properties that are ranked as high priority for cleanup under the federal Superfund program.

Neither the Site nor any other facility within one mile of the Site is listed in the NPL Site List.

Delisted NPL Site List

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the USEPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425 (e), sites where no further response is appropriate may be deleted from the NPL.

Neither the Site nor any other facility within one mile of the Site is listed in the Delisted NPL Site List.

Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS)

The Superfund Enterprise Management System (SEMS) list, formerly CERCLIS, is a compilation of known and suspected uncontrolled or abandoned hazardous waste sites which are, or were, under investigation by USEPA but have not been elevated to the status of a Superfund (NPL) site. Former SEMS sites that have been granted the status of No Further Remedial Action Planned NFRAP are also included in the database and known as SEMS-ARCHIVE (Formerly CERCLIS-NFRAP Sites).

Neither the Site nor any other facility within one-half mile of the Site is listed in the SEMS or CERCLIs NFRAP databases.

Resource Conservation and Recovery Information System (RCRIS) – Treatment, Storage, or Disposal Facilities (TSD) and RCRIS Corrective Action Activity (CORRACTS)

The RCRA program identifies and tracks hazardous waste from the point of generation to the point of disposal. The RCRIS database tracks facilities that treat, store, and/or dispose of hazardous waste as defined by RCRA (referred to as TSD facilities). The RCRIS CORRACTS database identifies TSD facilities that have conducted, or are currently conducting, corrective action(s) as regulated under RCRA.

Neither the Site nor any other facility within one mile of the Site is listed in the RCRIS CORRACTS database and neither the Site nor any other facility within one-half mile of the Site is listed in the RCRIS-TSD database.

Resource Conservation and Recovery Information System Generators/Transporters (RCRIS Gen/Trans)

This list includes operations that generate or transport hazardous waste for which a hazardous waste generator identification number or transporter permit is required. The RCRIS Gen/Trans listing is merely a listing of all facilities that, due to the amount of hazardous waste generated, are required to register with the USEPA for tracking purposes, but are not necessarily those with reported contamination incidents.

The Site is not listed in the RCRIS Gen/Trans database. The database search identified four (4) large quantity generators (LQG), two (2) conditionally exempt small quantity generators (CESQG), four (4) small quantity generators (SQG), and 55 non-generators within one-quarter mile of the Site. The following sites listed in the RCRIS Gens/Trans database have the potential to impact the Site and are considered RECs/VECs:

Listing	Distance / Direction	Assumed Hydraulic Gradient	Map ID Number	Regulatory Site ID #/ Status/Available Data
York College CUNY 94-20 Guy R. Brewer Blvd Jamaica, NY 11451	< 1/8 mile Northwest (Adjacent)	Upgradient	J94	RCRA SQG. EPA ID: NYD982535056. The facility is identified with waste code F002 – spent halogenated solvents: tetrachloroethene, methylene chloride, trichloroethene, 1,1,1-trichloroethene, chlorobenzene and other compounds; F003 – spent non-halogenated solvents: xylene, acetone, ethyl acetate, ethylbenzene and other compounds; and F005 – spent non-halogenated solvents: toluene, methyl ethyl ketone, carbon disulfide and other compounds. The facility received violations that achieved compliance. Based on the proximity to the Site and wastes

Listing	Distance / Direction	Assumed Hydraulic Gradient	Map ID Number	Regulatory Site ID #/ Status/Available Data
				generated, this facility is considered a REC/VEC.
Jamaica Recycling Inc. 94-29 165th Street Jamaica, NY 11433	< 1/8 mile Northeast (Adjacent)	Crossgradient	I51	RCRA Non-Gen. EPA ID: NYN008011702. The facility is listed as a Conditionally Exempt Small Quantity Generator in 2003 and a non-generator in 2006. The facility identified with a violation that has achieved compliance.
Amoco Service Station 165-25 Liberty Avenue Jamaica, NY 11433	< 1/8 mile Northeast	Crossgradient	D37	RCRA Non-Gen. EPA ID: NYD986903763. The facility is listed as a large quantity generator in 1990 and a non-generator in 1999 and 2006. The Site is also listed on the NY Manifest database. The facility is a former retail gasoline filling station.
Liberty Ashes Inc. 94-24 Merrick Blvd. Jamaica, NY 11433	< 1/8 mile Northeast	Crossgradient	I67	RCRA Non-Gen. EPA ID: NYD987031143. The facility is listed with as non-generator with The Site is also listed on the US AIRS database. The facility generates ignitable waste, corrosive waste, reactive waste, arsenic, barium, cadmium, lead, mercury, spent non-halogenated solvents, parathion, and waste oils. No violations found.

The RCRIS Gen/Trans listing is merely a listing of all facilities that, due to the amount of hazardous waste generated, are required to register with the USEPA for tracking purposes, but are not necessarily those with reported contamination incidents. Based on distances, current regulatory status and the absence of reported releases, the remaining RCRIS Gens/Trans listings are unlikely to have an impact on the environmental integrity of the Site.

Federal Institutional Control/Engineering Control Registries

The Federal Institutional Control/Engineering Control Registries are listings of sites with engineering controls and/or institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining at a site. Engineering controls

include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or affect human health.
Neither the Site nor any other facility within one-half mile of the Site is listed in the Federal Institutional Control/Engineering Control Registries.

Emergency Response Notification System (ERNS)

The Emergency Response Notification System (ERNS) is a national database used to collect information on reported releases of oil and hazardous substances.

The Site is not listed in the ERNS database.

New York State Toxic Release Inventory System (TRIS)

The Toxic Release Inventory System (TRIS) is a database used to collect information and report releases of toxic chemicals to the air, water, and land in reportable quantities.

Neither the Site nor any other facility within one-quarter mile of the Site is listed in the TRIS database.

Hazardous Substance Waste Disposal Site Inventory (HSWDS)

The list includes any known or suspected hazardous substance waste disposal sites. Also included are sites delisted from the Registry of Inactive Hazardous Waste Disposal Sites and non-Registry sites that USEPA Preliminary Assessment (PA) reports or Site Investigation (SI) reports were prepared. Hazardous Substance Waste Disposal Sites are eligible to be Superfund sites. The sites on the list will not automatically be made Superfund sites; rather each site will be further evaluated for listing on the Registry.

Neither the Site nor any other facility within one-half mile of the Site is listed in the HSWDS database.

New York State Inactive Hazardous Waste Disposal Sites (SHWS)

The New York State Inactive Hazardous Waste Disposal Sites database, compiled by the NYSDEC, maintains information regarding the investigation and cleanup of suspected hazardous waste sites.

The Site is not listed in the SHWS database.

Four (4) SHWS facilities were listed within a one-mile radius of the Site. Based on their distances from the Site and/or inferred downgradient or crossgradient groundwater flow direction, these SHWS facilities are not anticipated to have affected the environmental integrity of the Site.

Solid Waste Management Facilities Sites (SWF/LF)

The SWF/LF database is a comprehensive listing of State permitted/recorded solid waste management facilities. The Site is not listed in the SWMF database.

Twenty-three (23) SWF/LF facilities were listed within a one-half mile radius of the Site. The following SWF/LF facilities have the potential to impact the environmental integrity of the Site and are considered as RECs/VECs:

Listing	Distance / Direction	Assumed Hydraulic Gradient	Map ID Number	Regulatory Site ID #/ Status/Available Data
Jamaica Recycling (Liberty) 94-29 165th Street Jamaica, NY 11433	< 1/8 mile Northeast (Adjacent)	Crossgradient	I50	The site is identified as an active transfer station for the following waste types: "petroleum contaminated soil, MSW (residential/ institutional & commercial); industrial" and inactive for construction & demolition (C&D) debris processing.
S&S Super Sports Auto Care Inc. 94-40 Merrick Blvd. Jamaica, NY 11433	< 1/8 mile North-northeast	Crossgradient	I53	The site is an inactive vehicle dismantling facility with no additional pertinent information provided.
Greenbay Sanitation Corp. 94-10 Merrick Blvd	< 1/8 mile North	Crossgradient	K86	The site is an inactive transfer station with no additional pertinent information provided.

Based on their distances from the Site and/or inferred downgradient or crossgradient groundwater flow direction, the other SWF/LF facilities are not anticipated to have affected the environmental integrity of the Site.

Vapor Reopened

New York is currently re-evaluating previous assumptions and decisions regarding the potential for soil vapor intrusion exposures at sites. As a result, all past, current, and future contaminated sites will be evaluated to determine whether these sites have the potential for exposures related to soil vapor intrusion.

Neither the Site nor any other facility within one-half mile of the Site is listed in the Vapor Reopened database.

New York State Spills Information Database (NY Spills)/Leaking Storage Tank Incident Reports (LTANKS)

The NY Spills database, including LTANKS sites, was researched to identify listings within one-eighth mile of the Site for NY Spills and one-quarter mile of the Site for LTANKS.

The Site is not listed in the NY Spills or LTANKS databases.

The database search identified 17 reported NY Spills and 56 LTANKS incidents within the aforementioned prescribed search radius. The following sites listed in the NY Spills/LTANKs database have the potential to impact the Site and are considered RECs/VECs:

Listing	Distance / Direction	Assumed Hydraulic Gradient	Map ID Number	Regulatory Site ID #/ Status/Available Data
York College 94-20 Guy R. Brewer Blvd. Jamaica, NY 11433	< 1/8 mile Northwest (Adjacent)	Upgradient	J58, J91, J93	The site is identified with three spill cases. Spill No. 1706479 was reported on 10/3/2017 due to a tank test failure. Tank 002 passed tank tightness test and Tank 001 failed. The remarks indicate to repair and retest. The spill case remains open. Spill No. 0700361 was reported on 4/11/2007. The spill was the result of a tank test failure of a 20,000 gallon No. 2 fuel oil tank. Spill was closed on the same day. Spill No. 0511961 was reported on 1/17/2006. A large tank and oil contaminated soil was encountered during excavation activities. Endpoint soil samples were collected and no groundwater was encountered. Spill case was closed on 3/21/2006

Based on distance from the Site combined with the assumed hydraulic relationship and/or the nature of the incident/regulatory status, none of the remaining facilities identified in the NY Spills/LTANKS databases are expected to impact the environmental integrity of the Site.

Petroleum Bulk Storage Tanks (USTs/ASTs)

The NYSDEC PBS tank database was researched to identify listings for the Site and adjacent properties. The PBS Tank database is a listing of all facilities that are required to register their storage tanks for tracking purposes and not necessarily those with reported contamination incidents.

The Site is not listed in the PBS UST and AST tank databases.

A total of 29 other facilities (10 UST sites and 19 AST sites) were identified within one-quarter mile from the Site. The following facilities have the potential to impact the environmental integrity of the Site and are considered RECs/VECs:

Listing	Distance / Direction	Assumed Hydraulic Gradient	Map ID Number	Regulatory Site ID #/ Status/Available Data
165-08 Liberty Ave. 165-08 Liberty Avenue Jamaica, NY 11433	< 1/8 mile East (Adjacent)	Crossgradient	D12	PBS No. 2-608605. The site is listed with one closed in-place No. 6 fuel oil UST.

Listing	Distance / Direction	Assumed Hydraulic Gradient	Map ID Number	Regulatory Site ID #/ Status/Available Data
				Tank closure date is listed 2/1/2003.
CUNY York College 94-20 Guy R. Brewer Blvd. Jamaica, NY 11451	< 1/8 mile Northwest (Adjacent)	Upgradient	J92	PBS No. 2-333638. The site is listed with two in-service 20,000 gallon No. 2 fuel oil USTs that were installed on 12/1/1982 and one closed-removed 5,000 gallon diesel fuel UST.
BP Service Station #11009 165-25 Liberty Avenue Jamaica, NY 11433	< 1/8 mile Northeast	Crossgradient	D35	PBS No. 2-241865. The facility is a former retail gasoline filling station. The facility is listed five (5) closed-removed 4,000 gallon gasoline USTs, five (5) 550 gallon gasoline USTs, and one (1) 550 gallon No. 2 fuel oil UST.

Based on distance from the Site, assumed hydraulic relationship, the lack of known releases with the potential to affect the Site, and/or current regulatory status, none of the other facilities identified within one-quarter mile of the Site in the PBS database are expected to impact the environmental integrity of the Site.

Chemical Bulk Storage Tanks (USTs/ASTs)

The NYSDEC chemical bulk storage (CBS) tank database was researched to identify facilities storing hazardous substances in aboveground tanks with capacities of 185 gallons or greater, and/or in underground tanks of any size. This database lists facilities registered (and closed) since effective date of CBS regulations (July 15, 1988) through the date request is processed for the Site and properties located within ¼ mile from the Site.

The Site is not listed in the NYSDEC CBS tank database.

Two facilities were listed within a one-quarter mile from the Site. Based on their distances from the Site and/or inferred downgradient or crossgradient groundwater flow direction, these facilities listed in the NYSDEC CBS tank database are not anticipated to have affected the environmental integrity of the Site.

Facility Index System / Facility Registry System (FINDS)

The Facility Index System / Facility Registry System (FINDS) contain both facility information and 'pointers' to other sources that contain more detail.

The Site is not listed in the FINDS database.

New York State Voluntary and Brownfield Cleanup Program Sites (VCP/BCP)

The Voluntary and Brownfield remedial programs involve mostly private entities and private funds to remediate contaminated sites and return the properties to productive use. The NYSDEC VCP/BCP database was researched to identify listings for the Site and within a one-mile radius of the Site.

The Site is not listed in the VCP/BCP databases.

One (1) VCP facility and three (3) BCP facilities are listed within one mile of the Site. Based on their distances from the Site and/or inferred downgradient or crossgradient groundwater flow direction, these VCP/BCP facilities are not anticipated to have affected the environmental integrity of the Site.

E-Designation Site Listing (E-Designation)

E-(Environmental) Designations are assigned to properties by the City of New York to ensure that sampling and remediation takes place on the properties, and to avoid any significant impacts related to hazardous materials at these locations. The E-designations require that the owner of the sites conduct a testing and sampling protocol; and remediation where appropriate, to the satisfaction of city agencies.

The Site is not identified on the E-Designation Site Listing database.

The database identified 39 E-Designation listings within a one-eighth-mile radius of the Site. The following adjoining site has the potential to impact the environmental integrity of the Site and is considered a REC:

Listing	Distance/ Direction	Assumed Hydraulic Gradient	Map ID Number	Regulatory Site ID #/ Status/Available Data
Lot 51, Tax Block 10163 164-30 Tuskegee Airman Way Jamaica, NY 11433	< 1/8 mile South (Adjacent)	Downgradient	B3	The site is listed with E-No. E-175 effective date 9/10/2007. The description is identified as "underground gasoline storage tanks testing protocol".

The remaining listings are not considered RECs based on distance, inferred downgradient or Crossgradient groundwater flow direction, description (window wall attenuation and alternate ventilation), and/or absence of reported releases.

Registered Dry Cleaners

The NYSDEC registered dry cleaners database was researched to identify listings within one-quarter mile of the Site.

Neither the Site nor any other facility within one-quarter mile of the Site is listed in the dry cleaners database.

EDR US Historic Auto Stations

The EDR US Historic Auto Stations are listings compiled by EDR of potential gas station / filling station / service station sites. According to the database, "the categories reviewed included, but were not limited

to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station etc."

The Site is not listed in the EDR US Historic Auto Stations database.

The database search identified two listings within one-quarter mile of the Site. The following facility has the potential to impact the environmental integrity of the Site and is considered a REC:

Listing	Distance/ Direction	Assumed Hydraulic Gradient	Map ID Number	Regulatory Site ID #/ Status/Available Data
Kingston Service Station 165-25 Liberty Avenue Jamaica, NY 11433	< 1/8 mile Northeast	Cross-gradient	D36	The site is a former gasoline filling station and identified as "Kingston Service Station" from 1983, 1986, and 1987; "165 Liberty Corp." in 1995; "Sew Mark Enterprises" in 1996-2000; "Rug Gas 2" in 1996 and 1997; and Liberty Gas Inc." from 2001- 2012.

The remaining listing is not considered a REC/VEC based on distance, inferred downgradient or Crossgradient groundwater flow direction, description (window wall attenuation and alternate ventilation), and/or absence of reported releases.

EDR US Historic Cleaners

The EDR US Historic Cleaners are listings compiled by EDR of potential dry cleaner sites. According to the database, "the categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, Laundromat, cleaning/laundry, wash & dry etc."

Neither the Site nor any other facility within one-quarter mile of the Site is listed in the EDR US Historic Cleaners database.

NY Manifest

The NY Manifest database is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

The Site was listed on the NY Manifest database.

There are 76 NY Manifest facilities listed in the regulatory agency database search report within one-quarter mile of the Site. The following facility listed in the NY Manifest database has the potential to impact the environmental integrity of the Site and is considered a REC:

Listing	Distance / Direction	Assumed Hydraulic Gradient	Map ID Number	Regulatory Site ID #/ Status/Available Data
York College CUNY 94-20 Guy R. Brewer Blvd Jamaica, NY 11451	< 1/8 mile Northwest (Adjacent)	Upgradient	J94	The facility is listed on the NY Manifest database with the following waste codes identified: D001, D002, D004, D005, D006, D007,

Listing	Distance / Direction	Assumed Hydraulic Gradient	Map ID Number	Regulatory Site ID #/ Status/Available Data
				D008, D009, D011, D022, D027, D028, F002, F003, P022, P068, P105, P112, U012, U041, U122, U123, U070, U080, U133, U188, U225, and others. The site is also listed as a RCRA SQG with violations that have achieved compliance.
Amoco Service Station 165-25 Liberty Avenue Jamaica, NY 11433	< 1/8 mile Northeast	Crossgradient	D37	The facility is listed in the NY Manifest with the following waste codes identified: D001, The site is also listed as a RCRA non-generator. The facility is a former retail gasoline filling station.

Due to their distances from the Site, lack of reported violations, and/or the presumed groundwater flow direction none of the other NY Manifest facilities are expected to impact the environmental integrity of the Site.

NY SWRCY
The SWRCY database contains a list of registered recycling facilities.

The Site is not listed in the SWRCY database.

Four SWRCY facilities were identified within one-half mile of the Site. Based on their distances from the Site and/or inferred downgradient or crossgradient groundwater flow direction, these SWRCY facilities are not anticipated to have affected the environmental integrity of the Site.

Manufactured Gas Plant Sites (Coal Gas)
Manufactured gas sites were used in the United States from the 1800's to the 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water and produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils, and other compounds are potentially hazardous to human health and the environment. The byproducts were frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination. The Manufactured Gas Plant (MGP) Sites database was researched to identify any listings for the Site and within a one-mile radius of the Site.

The Site is not listed in the MGP database.

One (1) facility within one mile of the Site is listed in the MGP database. The facility is identified as Jamaica Gas and Light and is located approximately 1,798 feet to the west of the Site at Beaver Road and 158th Street. Due to its distance from the Site and/or the presumed groundwater flow direction this facility is not considered a REC with respect to the Site.

6.2 Local Regulatory Agency Research

A review of local records for the Site was accomplished by contacting offices of New York City regulatory agencies including the NYCDOB, NYCDEP, Department of Health and Mental Hygiene (NYCDOHMH), NYCDCP, and the Fire Department (FDNY). The results of the review of local records are presented below. Copies of the correspondences are included in *Appendix K*.

New York City Department of Buildings (NYCDOB)
The NYCDOB records were reviewed to determine whether there are references to buildings, tanks or other structures, property use or inspection reports that indicate the presence, past use, or release of hazardous substances, wastes, or petroleum products at the Site. The review did not identify any NYCDOB records for the Site. Copies of the NYCDOB Property Profile Overviews are included in *Appendix J*.

New York City Department of Environmental Protection (NYCDEP)
The NYCDEP maintains files of incidents involving environmentally regulated materials. The records maintained by NYCDEP include reports of spills of hazardous chemicals and citizen's complaints on environmental issues. NYCDEP information concerning the Site was requested in a formal application for records dated March 2, 2018. An acknowledgement letter was received on March 2, 2018 that indicated that a response is anticipated to take between 120-150 days. At the time this report was issued, STV had not yet received a response from NYCDEP. Upon receipt of this information, STV will review the response and, if conclusions contained within this report are affected, will submit an addendum to this report.

New York City Department of Health and Mental Hygiene (NYCDOHMH)
The NYCDOHMH, Bureau of Environmental Investigations (BEI) maintains files of health-related environmental incidents in the City of New York. These incidents may include spills of hazardous chemicals, citizen's complaints regarding asbestos issues, or reports of chemical odors or fumes. NYCDOHMH information concerning the Site was requested in a formal FOIL request form dated March 2, 2018. At the time this report was issued, STV had not yet received any response from NYCDOHMH. Upon receipt of this information, STV will review the response and, if conclusions contained within this report are affected, will submit an addendum to this report.

New York City Department of City Planning (NYCDCP)
According to information obtained through the New York City Department of City Planning (NYCDCP) website, the Site is currently located within zone "R-6", which designates a residential district. According to historical zoning maps dated 12/15/1961 through 6/17/1971, the Site and surrounding area was zoned "M1-1", which designates a manufacturing district that typically includes light industrial uses, such as woodworking shops, repair shops, and wholesale services and storage facilities. As of 6/22/1972, the Site was rezoned R6. A copy of zoning maps are included in *Appendix J*.

New York City Fire Department (FDNY)
The FDNY maintains information concerning petroleum USTs. STV submitted a Fuel Tank Special Search Request Form to the FDNY on March 2, 2018 for information concerning the Site. At the time this report was issued, STV had not yet received a response from FDNY. Upon receipt of this information, STV will review the response and, if conclusions contained within this report are affected, will submit an addendum to this report.

7.0 USER RESPONSIBILITIES

7.1 Environmental Liens or Activity and Use Limitations

An Environmental Lien Search Report was obtained from EDR for the Site. The Environmental Lien Search Report provides results from a search of available and current land title records for environmental liens and other activity and use limitations, such as engineering controls and institutional controls. A review of the report indicates that no environmental liens or other activity and use limitations were found for the Site. A copy of the environmental lien search report is included in *Appendix J*.

7.2 Valuation Reduction for Environmental Issues

No information was available at the time of the assessment regarding the relationship of the purchase price of the property to the fair market value of the property. If information is received regarding valuation reduction for environmental issues which changes the conclusions or recommendations presented in this report, an addendum will be submitted to NYCT.

7.3 Knowledge or Experience of the User

No person with specialized knowledge or experience that is material to RECs and/or the screening of VECs in connection with the Site was available at the time of the assessment. If further information is received regarding RECs and/or VECs which changes the conclusions or recommendations presented in this report, an addendum will be submitted to NYCT.

7.4 Commonly Known or Reasonably Ascertainable Information

No person within the local community with commonly known or reasonably ascertainable information about the property that is material to RECs and/or the screening of VECs in connection with the Site was available at the time of the assessment. If further information is received regarding RECs and/or VECs which changes the conclusions or recommendations presented in this report, an addendum will be submitted to NYCT.

7.5 The Degree of Obviousness of the Presence or Likely Presence of Contamination at the Property

NYCT is not currently aware of any obvious indicators that point to the presence or likely presence of new or imminent releases at the property. Additionally, NYCT is not currently aware of any obvious indicators important to the screening of VECs in connection with the property.

8.0 SITE RECONNAISSANCE AND INTERVIEWS

8.1 Methodology and Limiting Conditions

The inspection of the Site included observations of the property and surrounding area (Site reconnaissance) that were made to identify potential sources or indications of hazardous substances, including: ASTs; USTs; tank vents and fill ports; transformers and other items that could contain PCBs; waste storage areas; hazardous materials usage, storage, and disposal; stained surfaces and soils; stressed vegetation; leaks; and, odors. In addition, readily-observable portions of the properties immediately adjacent to the Site were viewed from public rights-of-way to identify or determine the likelihood of any of the aforementioned potential sources of contamination being present. There were no limiting conditions with respect to impact on the accuracy of the Site reconnaissance.

8.2 Site Reconnaissance

The Site walkthrough was performed on April 4, 2018 after a meeting was held at York College with representatives of York College, NYCT, and STV. Mr. Matthew Mankovich of STV performed the Site walkthrough, and was accompanied by York representatives Mr. Joseph Gioffredo and Mr. Noel Gamboa. Also present during the Site walkthrough were Mr. Emil Dul, Ms. Mary Kong, and Mr. James Barry Lumsden of NYCT, and Mr. Richard Wetherbee of STV. The weather was approximately 55º Fahrenheit and cloudy; there were no limitations caused by the weather. A supplemental Site walkthrough was performed by Mr. Mankovich on April 9, 2018 and included the Site and an inspection of the surrounding properties. The weather was approximately 45º Fahrenheit and partly cloudy; there were no limitations caused by the weather. *Appendix C* provides representative photographs of the Site.

The Site block is bounded by Liberty Avenue, 165th Street, Tuskegee Airmen Way, and Guy R. Brewer Boulevard and consists of three lots (Block 10160, Lot 1; Block 10159, Lot 3; and Block 10159, Lot 54). The Site consists of an approximately 5.6 acre parcel of land and has been divided into two (2) areas:

- ~ 3.5 acre vacant, vegetated lot – Future NYCT Bus Parking (Block 10160, Lot 1).
- ~ 2.1 acre paved parking lot – Existing York College Parking Lot (Block 10159, Part of Lot 3).

The Site is accessed from Tuskegee Airman Way, Liberty Avenue, Guy R. Brewer Boulevard, and from the adjoining parking lot. The Site is bounded to the north by Liberty Avenue, followed by York College Performing Arts Center and parking lot, and the LIRR; to the northeast by Liberty Avenue and 165th Street, followed by a glass recycling facility; to the east by East by 165th Street, followed by a storage facility, a NYCT warehouse associated with the NYCT Jamaica Bus Depot; to the south by Tuskegee Airman Way, followed by contractor storage, residences, and commercial storefronts; to the west by a cemetery and vacant land located on the Site block and Guy R. Brewer Boulevard, followed by the York College Health and Physical Education Complex and associated grounds; and to the northwest by Guy R. Brewer Boulevard and Liberty Avenue, followed by the York College Academic Core Building.

The vacant, vegetated lot is currently being used for storage of York College materials in the southwest portion along Tuskegee Airman Way and the remainder of the lot as vacant, vegetated land. The existing parking lot is currently active and used by York College.

Based on observations, the elevation of the Site is higher than street grade indicating the placement of fill material. The elevation throughout the Site ranged from approximately 4 feet above street grade to

approximately 10-12 feet above street grade. The highest elevation was in the center of the Site and decreased in elevation towards the surrounding streets.

There are five (5) dry wells located in Lot 1 (4 on the eastern portion and 1 on the western portion near the parking lot) and four (4) dry wells located in Lot 3 (located in the north/northeastern portion of the parking lot). The dry wells are constructed of a concrete perforated structure and a small cylindrical pipe at their base. The depths of the dry wells ranged from 16 to 19 feet bgs. According to the geophysical survey performed as part of the concurrent Phase II ESA, three (3) of the dry wells located in Lot 1 appear to be connected and the four (4) dry wells in the parking lot (Lot 3) and the nearby one (1) in Lot 1 appear to be connected. There is no apparent connection between the two groups of dry well and the dry wells are not connected to the NYCDEP combined storm/sanitary sewer system.

Stormwater at Lot 1 infiltrates the natural ground cover, flows to dry wells or discharges via runoff to the surrounding streets. Stormwater at the York College parking lot discharges via surface runoff into dry wells located in the north/northeastern portion, the unpaved land surrounding the parking lot to the north and east and to the surrounding streets to the south and west. Stormwater surrounding the Site is collected from catch basins located on paved areas of the surrounding streets and is conveyed into the NYCDEP combined storm/sanitary sewer system.

Groundwater monitoring wells were observed during the Site reconnaissance along Guy R. Brewer Boulevard to the northwest of the Site and along Liberty Avenue and Merrick Boulevard to the east of the Site.

8.3 Current and Historical Use Interviews

The following knowledgeable persons were interviewed with regard to the Site pursuant to ASTM 1527-13 Section 10:

8.3.1 Current Property Owner

There was no current property owner available for interviews. However, sufficient information about the Site and surrounding area could be obtained from the available records, and this data gap is not likely to alter the conclusions of this report.

8.3.2 Current Site Operator or Key Site Manager

Mr. Joseph Gioffredo, Chief Administrative Superintendent Buildings and Grounds Main Operations, was available during the Site reconnaissance for interview. The following is a summary of information obtained:

- The area of the parking lot was formerly used for salt storage by the New York City Department of Sanitation.
- The central portion of the vacant, vegetated lot was formerly used for soil/material processing. Reportedly, the activities consisted of receipt of soil/material from unknown sources. The soil/material was screened on-site and was distributed off-site or disposed of on-site.

8.3.3 Site Occupants

Mr. Joseph Gioffredo, Chief Administrative Superintendent Buildings and Grounds Main Operations, was available during the Site reconnaissance for interview. The following is a summary of information obtained:

- The area of the parking lot was formerly used for salt storage by the New York City Department of Sanitation.
- The central portion of the vacant, vegetated lot was formerly used for soil/material processing. Reportedly, the activities consisted of receipt of soil/material from unknown sources. The soil/material was screened on-site and was distributed off-site or disposed of on-site.

8.3.4 Past Owners, Operators and Occupants

Past owners or occupants of the Site were not available to interview during this assessment. STV was unable to obtain contact information from any previous owners or occupants.

8.3.5 Report User

Name	Title/Company	Years Associated with Site
Mr. Emil Dul, P.E.	NYCT Environmental Engineering	<1

According to the ASTM E 1527-13 User Questionnaire provided by Mr. Emil Dul, P.E. of NYCT's Environmental Engineering Department, NYCT is not aware of any environmental liens, land use limitations, specialized knowledge, or past uses of the Site. Detailed information provided during the above-listed interviews is referenced in applicable sections of this report and a copy of the completed ASTM E1527-13 User Questionnaire is included in *Appendix K*.

8.4 Hazardous Substances and Petroleum Products Storage and Handling

8.4.1 Hazardous Substances

There was no evidence of hazardous substance and/or chemical storage observed on Site or in surrounding areas during the reconnaissance.

8.4.2 Petroleum Products Storage and Handling

There was no evidence of petroleum products storage and handling on Site.

8.5 Solid Waste Generation, Storage and Disposal

Solid waste generated during typical Site operations is containerized in dumpsters and removed periodically by the New York City Department of Sanitation. There was no evidence of dumping or material mismanagement observed during the Site reconnaissance. Based on information obtained throughout the Phase I ESA, there is historic fill placed at the Site and is considered a REC.

9.0 SUMMARY OF FINDINGS

This report summarizes the results of the Phase I Environmental Site Assessment (ESA) of the Proposed Bus Parking at York College Site 9 located at 164-26 Liberty Avenue, Jamaica, Queens, New York 11433 (Block 10160, Lot 1 & Block 10159, Part of Lot3) (hereafter referred to as the "Site"). NYCT is evaluating the feasibility of leasing and redeveloping of the Site to accommodate bus parking during the reconstruction of the Jamaica Bus Depot.

The Site block is bounded by Liberty Avenue, 165th Street, Tuskegee Airmen Way, and Guy R. Brewer Boulevard and consists of three lots (Block 10160, Lot 1; Block 10159, Lot 3; and Block 10159, Lot 54). The Site consists of an approximately 5.6 acre parcel of land and has been divided into two (2) areas:

- ~ 3.5 acre vacant, vegetated lot – Future NYCT Bus Parking (Block 10160, Lot 1).
- ~ 2.1 acre paved parking lot – Existing York College Parking Lot (Block 10159, Part of Lot 3).

The Site is bounded to the north by Liberty Avenue, followed by York College Performing Arts Center and parking lot and the LIRR; to the northeast by Liberty Avenue and 165th Street, followed by a glass recycling facility; to the east by East by 165th Street, followed by a storage facility, a NYCT warehouse associated with the NYCT Jamaica Bus Depot; to the south by Tuskegee Airman Way, followed by a contractor's storage, residences, and commercial storefronts; to the west by a cemetery and vacant land located on the Site block and Guy R. Brewer Boulevard, followed by the York College Health and Physical Education Complex and associated grounds; and to the northwest by Guy R. Brewer Boulevard and Liberty Avenue, followed by the York College Academic Core Building.

The review of NYCDCP zoning map indicates that the Site is currently located within zone "R-6", which designates a residential district. According to historical zoning maps dated December 15, 1961 through June 17, 1971, the Site and surrounding area was zoned "M1-1", which designates a manufacturing district that typically includes light industrial uses, such as woodworking shops, repair shops, and wholesale services and storage facilities. The Site was rezoned R6 on June 22, 1972.

According to the topographic survey prepared as part of the concurrent Phase II ESA, the elevation of the Site ranges from 36 to 50 feet (NAVD88) and slopes in an easterly direction. The concurrent Phase II ESA identified groundwater ranging throughout the Site from depths of 15 to 25 feet below sidewalk grade and the measured groundwater flow direction is to the southeast.

10.0 CONCLUSIONS AND RECOMMENDATIONS

STV has performed a Phase I ESA in conformance with the scope and limitations of ASTM Practice E 1527-13 and the requirements of NYCT. Any additions to, exceptions to, or deletions from this practice are described in Section 2.0 of this report.

The Phase I ESA has revealed the following RECs, CRECs, and/or VECs associated with the Site:

On-Site RECs:

- Based on the review of historical documentation, historic fill was placed throughout the Site sometime between 1967 and the mid- to late-1980s. In addition, structures were present on the Site and were demolished. Historic fill of unknown origin and suspect buried structures have the potential to impact the Site.

- Historic Site uses as:
  - Auto Sales and Service Facility from 1951-1970 (Lot 1).
  - Auto Repair Shop from 1951-1957 (Lot 1).
  - Lumber Yard and Wagon Works in 1912 (Lot 1).
  - Long Island Drug Co. Warehouse 1942-1967 (Lot 3).
  - Jamaica Hospital from 1901-1912 (Lot 3).
  - Saltser & Weinsier Inc. Plumbing / Drug Warehouse and Storage buildings from 1934-1970 (Lot 3).
  - Undertaker from 1942-1951 (Lot 3).
  - Historic fuel oil tank and gasoline tanks associated with former uses as Long Island Drug Co. and Saltser & Weinsier Inc. (Lot 3).
  - Auto Repair works in 1934 (Lot 3).

Off-Site RECs:

- The review of the regulatory agency database identified adjacent and nearby listings as RCRIS Gens/Trans facilities, solid waste management facilities, PBS UST sites, spills, and an E-Designated site.

- The review of historical records identified surrounding property usage as automobile related (i.e., auto repair shops; garages, service stations, filling stations, and gasoline stations with gasoline storage tanks; tire sales and service; auto painting), a woodworking plant, a lumber yard, a cemetery, a cleaners and dyers site, electronic parts manufacturing, an oil burner warehouse, a radio sales and service shop, a paint company, a petroleum supplier, fur storage, roofing materials warehouse, and manufacturing facilities.

- Groundwater monitoring wells were observed during the Site reconnaissance along Guy R. Brewer Boulevard to the northwest of the Site and along Liberty Avenue and Merrick Boulevard to the east of the Site.

Recommendations

Based on the findings of the Phase I ESA, STV recommends the performance of a Phase II ESA consisting of a geophysical survey and the collection and laboratory analysis of soil, soil vapor, and

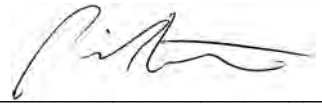
groundwater samples to determine whether the identified RECs have impacted the environmental integrity of the Site.

11.0 SIGNATURES OF ENVIRONMENTAL PROFESSIONALS

STV Incorporated (STV) has performed a Phase I ESA of the Proposed Bus Parking at York College Site 9 located at 164-26 Liberty Avenue, Jamaica, Queens, New York 11433 (Block 10160, Lot 1 & Block 10159, Part of Lot 3). The scope of the Phase I ESA was consistent with the requirements of ASTM Standard Practice E 1527-13. Signatures of the Environmental Professionals who participated in conducting this Phase I ESA are provided below. Qualifications for these individuals are provided in *Appendix L*. STV declares that to the best of their professional knowledge and belief, they meet(s) the definition of Environmental Professional as defined in § 312.10 of 40 CFR 312. STV has the specific qualifications based on education, training and experience to assess the subject property. STV has developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

STV Inc.

Prepared By:
Matthew Mankovich
Environmental Project Manager



Reviewed By:
Richard Wetherbee, P.G.
Vice President, Director – Environmental

12.0 REFERENCES

Persons Interviewed:

- Mr. Joseph Gioffredo, Chief Administrative Superintendent Buildings and Grounds Main Operations, York College, April 4, 2018.

Resources Consulted:

- Environmental Data Resources, Inc. (EDR) Regulatory Agency Database Search Report, February 27, 2018.
- EDR – Historical Sanborn® Maps: 1891 - 2006.
- EDR – Aerial Photographs: 1924 - 2015.
- EDR – USGS Historical Topographic Maps: 1897 - 2013.
- EDR – City Directories: 1922 - 2014.
- EDR - Environmental Lien Search dated February 27, 2018.
- FEMA Map Services Center Website - www.msc.fema.gov
- FEMA Preliminary Flood Maps & Data: Region II Coastal Analysis and Mapping – www.region2coastal.com/view-flood-maps-data/view-preliminary-flood-map-data/
- National Wetlands Inventory Website - www.fws.gov/nwi/
- NYC Office of Environmental Remediation – SPEED Portal.
- Oasis Website - www.oasisnyc.net/OASISMap.htm.
- USGS New York Water Science Center: Long Island Depth to Water Viewer 2013 (http://ny.water.usgs.gov/maps/li-dtw13/) and Groundwater Conditions on Long Island, New York in 2013 (http://ny.water.usgs.gov/maps/li-gc13/)

Regulatory Agencies Contacted:

- New York City Department of Buildings, March 2, 2018.
- New York City Fire Department, March 2, 2018.
- New York City Planning and Zoning Department, March 2, 2018.
- New York City Department of Environmental Protection, March 2, 2018.
- New York City Department of Health and Mental Hygiene, March 2, 2018.
- New York State Environmental Conservation March 1, 2018.
- New York State Department of Health, March 2, 2018.
- Unites States Environmental Protection Agency, March 2, 2018.

Documents and Maps:

- ASTM International (ASTM) 2013, "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process," ASTM Designation E 1527-13.
- ASTM E 2600-10 "Standard Practice for Assessment of Vapor Intrusion into Structures on Property Involved in Real Estate Transactions."
- STV, Potential Property Acquisition Eight Properties Near Jamaica Bus Depot, Jamaica, New York, dated February 17, 2012.
- USGS, Ground-Water and Geohydrologic Conditions in Queens County, Long Island, New York, Julian Soren, 1971. USGS Water Supply Paper 2001-A.

- USGS, Ground-Water Resources of Kings and Queens Counties, Long Island, New York by Herbert Buxton and Peter Schernoff. 1999. Water Supply Paper 2498.
- USGS LI Depth-to Water Tool for Long Island (USGS, 2013).

The full Phase I ESA Is available upon request

Phase II Environmental Site Investigation ("ESI")

PHASE II ENVIRONMENTAL SITE ASSESSMENT

OF

PROPOSED BUS PARKING AT YORK COLLEGE SITE 9
164-26 LIBERTY AVENUE
BLOCK 10160, LOT 1 & BLOCK 10159, PART OF LOT 3
QUEENS, NEW YORK 11433

CONTRACT NO. CM-1411
TASK ORDER NO.: 18

STV PROJECT NO. 40-17555-2000

JUNE 22, 2018

Prepared by:

STV Inc.
225 Park Avenue South
New York, NY 10003
Phone: (212) 777-4400

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2 Broadway
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EXECUTIVE SUMMARY

At the request of Metropolitan Transportation Authority (MTA) New York City Transit (NYCT), STV Incorporated (STV) conducted a Phase II Environmental Site Assessment (ESA) of the Proposed Bus Parking at York College Site 9 located at 164-26 Liberty Avenue, Jamaica, Queens, New York 11433 (hereafter referred to as the "Site"). The legal description of the Site is Block 10160, Lot 1 and Block 10159, Part of Lot 3. NYCT is evaluating the feasibility of leasing and redeveloping the Site to accommodate bus parking during reconstruction of the Jamaica Bus Depot.

The Site block is bounded by Liberty Avenue, 165th Street, Tuskegee Airmen Way, and Guy R. Brewer Boulevard and consists of three tax lots (Block 10160, Lot 1; Block 10159, Lot 3; and Block 10159, Lot 54). The Site consists of an approximately 5.6 acre parcel of land and has been divided into two (2) areas:

- ~ 3.5 acre vacant, vegetated lot – Future NYCT Bus Parking (Block 10160, Lot 1).
- ~ 2.1 acre paved parking lot – Existing York College Parking Lot (Block 10159, Part of Lot 3).

The Site is bounded to the north by Liberty Avenue, followed by York College Performing Arts Center and parking lot, and the Long Island Rail Road (LIRR); to the northeast by Liberty Avenue and 165th Street, followed by a glass recycling facility; to the east by 165th Street, followed by a storage facility, a NYCT warehouse associated with the NYCT Jamaica Bus Depot; to the south by Tuskegee Airman Way, followed by contractor storage, residences, and commercial storefronts; to the west by a cemetery and vacant land (located on the Site block) and Guy R. Brewer Boulevard, followed by the York College Health and Physical Education Complex and associated grounds; and to the northwest by Guy R. Brewer Boulevard and Liberty Avenue, followed by the York College Academic Core Building.

The Site is located in an area that is primarily characterized by residential, institutional, and commercial properties. Based on a review of historical documentation, the Site was vacant in 1891 with the first development on Lot 1 in 1897 and Lot 3 in 1901. Lot 1 was developed with a dwelling, a carriage house, and a 1-2 story unlabeled building between 1897 and 1901. In 1912, Lot 1 was developed with a dwelling, a wagon works and a lumber yard. In 1925, Lot 1 was developed as a baseball park which was present through 1942. In 1951, Lot 1 was developed with an auto sales and service station and an auto repair shop. In 1963, the auto sales and service station expanded to the south with the addition of a parts and service building and the auto repair shop also expanded to the south. The Site use remained the same in 1967 and up until sometime before 1981. From 1981 through 2006 Lot 1 was vacant. Lot 3 was developed with Jamaica Hospital and dwellings in 1901. Additional dwellings, an ambulance shed and an auto garage were present in 1912. In 1925, Jamaica Hospital was no longer present and there were additional dwellings. In 1942, Lot 3 was developed with warehouses identified as Long Island Drug Co. Inc. and Saltsier and Weinsier Inc. plumbing supplies with one (1) suspect fuel oil underground storage tank (UST) and two (2) suspect gasoline USTs. There was also a dwelling, an auto garage, a store, and offices. In 1951, the plumbing supplies building expanded to the south with a warehouse and shipping building. In 1961 and 1967, the plumbing storage building expanded to the north towards Liberty Avenue. From 1981 through 2006 Lot 1 was vacant.

STV prepared a Phase I Environmental Site Assessment (ESA) dated June 15, 2018. The Phase I ESA revealed the following recognized environmental conditions (RECs) associated with the Site:

On-Site RECs:

- Based on the review of historical documentation, fill was placed throughout the Site sometime between the late-1960s through the late-1980s/early 1990s. In addition, structures were present on the Site and were demolished. Historic fill of unknown origin and suspect buried structures have the potential to impact the Site.
- Historic Site uses as:
    - Auto Sales and Service Facility from 1951-1970 (Lot 1).
    - Auto Repair Shop from 1951-1957 (Lot 1).
    - Lumber Yard and Wagon Works in 1912 (Lot 1).
    - Long Island Drug Co. Warehouse 1942-1967 (Lot 3).
    - Jamaica Hospital from 1901-1912 (Lot 3).
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    - Undertaker from 1942-1951 (Lot 3).
    - Historic fuel oil tank and gasoline tanks associated with former uses as Long Island Drug Co. and Saltser & Weinsier Inc. (Lot 3).
    - Auto Repair works in 1934 (Lot 3).

Off-Site RECs:

- The review of the regulatory agency database identified adjacent and nearby listings as Resource Conservation and Recovery Information System Generators/Transporters (RCRIS Gen/Trans) facilities, solid waste management facilities, Petroleum Bulk Storage (PBS) Underground Storage Tank (UST) sites, spills, and an E-Designated site.
- The review of historical records identified surrounding property usage as automobile related (i.e., auto repair shops; garages, service stations, filling stations, and gasoline stations with gasoline storage tanks; tire sales and service; auto painting), a woodworking plant, a lumber yard, a cemetery, a cleaners and dyers site, electronic parts manufacturing, an oil burner warehouse, a radio sales and service shop, a paint company, a petroleum supplier, fur storage, roofing materials warehouse, and manufacturing facilities.
- Groundwater monitoring wells were observed during the Site reconnaissance along Guy R. Brewer Boulevard to the northwest of the Site and along Liberty Avenue and Merrick Boulevard to the east of the Site.

Based on the findings of the Phase I ESA, STV recommended the performance of a Phase II ESA consisting of a geophysical survey and the collection and laboratory analysis of soil, soil vapor, and groundwater samples to determine whether the identified RECs have impacted the environmental integrity of the Site. The purpose of the Phase II ESA is to confirm the presence/absence of potential environmental conditions identified in the Phase I ESA.

Phase II ESA activities were performed on April 9 through 27, 2018, May 9, and May 15 through 18, 2018 and consisted of the following:

- Performance of a geophysical survey;
- Performance of a topographical survey;
- Collection of two rounds of synoptic groundwater level measurements;

- Advancement of soil borings;
- Excavation of test pits;
- Installation of temporary monitoring wells;
- Installation of temporary soil vapor probes; and
- Collection and laboratory analysis of soil, groundwater, and soil vapor samples.

The findings of the Phase II ESA indicate the following:

- The geophysical survey did not identify anomalies consistent with underground storage tanks (USTs). The results of the geophysical survey identified several anomalies throughout the Site that were indicative of subsurface metallic features and metallic debris, reinforced concrete slab, void spacing, and/or non-metallic area of fill material.

- The Site is underlain by fill material consisting of sand, silt, gravel, and fragments of brick, concrete, metal, plastic material, and debris throughout the Site. The maximum depth of historic fill was observed at approximately 25 feet below ground surface (bgs) (correlates to 18 feet below street grade [BSG]). Native material consisting of fine to medium sand with gravel was observed to a terminal depth of approximately 25 feet bgs (correlates 36 feet BSG).

- Groundwater at the Site was encountered at depths ranging from approximately 18 to 30 feet bgs (correlates to 15 to 25 feet BSG). The review of groundwater elevations indicates groundwater flow is to the southeast.

- Soils in the vicinity of test pit TP-06 at depths between 3 and 13 feet bgs are Resource Conservation and Recovery Act (RCRA) hazardous waste for the toxicity characteristic of lead.

- Tetrachloroethene (PCE) was detected in groundwater samples at temporary monitoring well TWP-03 marginally below the New York State Department of Environmental Conservation (NYSDEC) Division of Water Technical and Operational Guidance Series (TOGS) Class GA Value.

- Trichloroethene (TCE) was detected in soil vapor at soil vapor probe SV-06 above its New York State Department of Health (NYSDOH) Air Guideline Value (AGV).

- Semi-volatile organic compounds (SVOCs), metals, and polychlorinated biphenyls (PCBs) were detected in soil samples at concentrations that exceed the Commercial Use Soil Cleanup objectives (SCOs) found in 6 New York Codes, Rules and Regulations (NYCRR) 375-6, Remedial Program Soil Cleanup Objectives.

- Manganese and sodium were detected in groundwater samples at concentrations above the NYSDEC TOGS Class GA Values in the filtered samples.

Based on the results of the Phased II ESA, STV recommends the following:

- Environmental conditions should be considered and incorporated into the bus parking design. Specification 12R should be implemented during construction.

- Soil excavated during development of the bus parking lot should be characterized to identify appropriate material handling, reuse, and/or disposal requirements (including collection and analysis of additional samples if required by the contractor-selected disposal facility). Excavated material should be managed in accordance with applicable federal, state, and local laws and regulations. Based on the analysis of soil samples collected during the Phase II ESA, material excavated from the Site is expected to be the following:
    - Hazardous waste for the toxicity characteristic of lead in the vicinity of TP-06.
    - Non-Hazardous Excavated Material.

- If possible, planned construction/excavation activities should avoid the area of hazardous waste. If subsurface work is required in this area, a supplemental investigation should be conducted to further delineate the horizontal limits of hazardous waste for the toxicity characteristic of lead.

- Appropriate Health and Safety Provisions should be employed in accordance with the laws and regulations of the Occupational Safety and Health Administration (OSHA).

- Based on soil sampling results, a Community Air Monitoring Program (CAMP) should be conducted during excavation activities as part of construction activities.

- If landscaped areas are incorporated into the development of the Site, exposed soil should be covered by a minimum 2-foot thick layer of environmentally clean fill.
- Although not anticipated, if dewatering is necessary during construction activities, dewatering should be minimized to mitigate potential influx of contaminated water from off-site sources toward the Site.

1.0 INTRODUCTION

1.1 Purpose

At the request of Metropolitan Transportation Authority (MTA) New York City Transit (NYCT), STV Incorporated (STV) conducted a Phase II Environmental Site Assessment (ESA) of the Proposed Bus Parking at York College Site 9 located at 164-26 Liberty Avenue, Jamaica, Queens, New York 11433 (hereafter referred to as the "Site"). The legal description of the Site is Block 10160, Lot 1 and Block 10159, Part of Lot 3. NYCT is evaluating the feasibility of leasing and redeveloping the Site to accommodate bus parking during reconstruction of the Jamaica Bus Depot. A Site Location Map is included as *Figure 1* and a Site Plan is included as *Figure 2*.

1.2 Site Description and History

The Site block is bounded by Liberty Avenue, 165th Street, Tuskegee Airmen Way, and Guy R. Brewer Boulevard and consists of three tax lots (Block 10160, Lot 1; Block 10159, Lot 3; and Block 10159, Lot 54). The Site consists of an approximately 5.6 acre parcel of land and has been divided into two (2) areas:

- ~ 3.5 acre vacant, vegetated lot – Future NYCT Bus Parking (Block 10160, Lot 1).
- ~ 2.1 acre paved parking lot – Existing York College Parking Lot (Block 10159, Part of Lot 3).

The Site is bounded to the north by Liberty Avenue, followed by York College Performing Arts Center and parking lot, and the Long Island Rail Road (LIRR); to the northeast by Liberty Avenue and 165th Street, followed by a glass recycling facility; to the east by 165th Street, followed by a storage facility, a NYCT warehouse associated with the NYCT Jamaica Bus Depot; to the south by Tuskegee Airman Way, followed by contractor storage, residences, and commercial storefronts; to the west by a cemetery and vacant land (located on the Site block) and Guy R. Brewer Boulevard, followed by the York College Health and Physical Education Complex and associated grounds; and to the northwest by Guy R. Brewer Boulevard and Liberty Avenue, followed by the York College Academic Core Building.

The Site is located in an area that is primarily characterized by residential, institutional, and commercial properties. Based on a review of historical documentation, the Site was vacant in 1891 with the first development on Lot 1 in 1897 and Lot 3 in 1901. Lot 1 was developed with a dwelling, a carriage house, and a 1-2 story unlabeled building between 1897 and 1901. In 1912, Lot 1 was developed with a dwelling, a wagon works and a lumber yard. In 1925, Lot 1 was developed as a baseball park which was present through 1942. In 1951, Lot 1 was developed with an auto sales and service station and an auto repair shop. In 1963, the auto sales and service station expanded to the south with the addition of a parts and service building and the auto repair shop also expanded to the south. The Site use remained the same in 1967 and up until sometime before 1981. From 1981 through 2006 Lot 1 was vacant. Lot 3 was developed with Jamaica Hospital and dwellings in 1901. Additional dwellings, an ambulance shed and an auto garage were present in 1912. In 1925, Jamaica Hospital was no longer present and there were additional dwellings. In 1942, Lot 3 was developed with warehouses identified as Long Island Drug Co. Inc. and Saltsier and Weinsier Inc. plumbing supplies with one (1) suspect fuel oil underground storage tank (UST) and two (2) suspect gasoline USTs. There was also a dwelling, an auto garage, a store, and offices. In 1951, the plumbing supplies building expanded to the south with a warehouse and shipping building. In 1961 and 1967, the plumbing storage building expanded to the north towards Liberty Avenue. From 1981 through 2006 Lot 1 was vacant.

1.3 Site Setting

The current Site configuration consisting of a graded vacant, vegetated lot and a paved parking lot was first apparent in 2006 and does not appear to have changed since that time. Based on a review of aerial photographs, historic fill material was imported to the Site sometime between the late-1960s through the late-1980s/early 1990s raising the grade of the Site above the existing street level. Based on this change in elevation, Site elevation datum will be discussed as follows:

1. Existing Grade – the existing elevation of the Site after the placement of historic fill material.
    - For the investigation of the historic fill material, depths are referenced as feet below existing grade (BEG) or below ground surface (bgs).
2. Street Grade – the original elevation of the Site prior to placement of historic fill material that is consistent with the existing network of streets.
    - For the historic Site use and surrounding property use investigation, depths will be referenced as feet below street grade (BSG).

This Phase II ESA was performed concurrently with the Phase I Environmental Site Assessment (ESA) prepared for the Site (draft report dated June 15, 2018). Its purpose is to confirm the presence/absence of recognized environmental conditions (RECs) identified in the Phase I ESA. To accomplish the objectives, Phase II ESA field activities were performed on April 9 through 27, 2018, May 9, and May 15 through 18, 2018 and consisted of the following:

- Performance of a geophysical survey;
- A topographical survey;
- Collection of two rounds of synoptic groundwater level measurements;
- Advancement of soil borings;
- Excavation of test pits;
- Installation of temporary monitoring wells;
- Installation of temporary soil vapor probes; and
- Collection and laboratory analysis of soil, groundwater, and soil vapor samples.

1.4 Phase I Environmental Site Assessment

The Phase I ESA was completed by STV in June 2018 (draft report dated June 15, 2018). The Phase I ESAs revealed of the presence of the following on- and off-Site RECs:

<u>On-Site RECs:</u>

- Based on the review of historical documentation, fill was placed throughout the Site sometime between the late-1960s through the late-1980s/early 1990s. In addition, structures were present on the Site and were demolished. Historic fill of unknown origin and suspect buried structures have the potential to impact the Site.

- Historic Site uses as:
    - Auto Sales and Service Facility from 1951-1970 (Lot 1).
    - Auto Repair Shop from 1951-1957 (Lot 1).

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- The review of the regulatory agency database identified adjacent and nearby listings as Resource Conservation and Recovery Information System Generators/Transporters (RCRIS Gen/Trans) facilities, solid waste management facilities, Petroleum Bulk Storage (PBS) Underground Storage Tank (UST) sites, spills, and an E-Designated site.

- The review of historical records identified surrounding property usage as automobile related (i.e., auto repair shops; garages, service stations, filling stations, and gasoline stations with gasoline storage tanks; tire sales and service; auto painting), a woodworking plant, a lumber yard, a cemetery, a cleaners and dyers site, electronic parts manufacturing, an oil burner warehouse, a radio sales and service shop, a paint company, a petroleum supplier, fur storage, and roofing materials warehouse.

- Groundwater monitoring wells were observed during the Site reconnaissance along Guy R. Brewer Boulevard to the northwest of the Site and along Liberty Avenue and Merrick Boulevard to the east of the Site.

2.0 PHASE II ESA FIELD ACTIVITIES

Phase II ESA field activities were performed on April 9 through 27, 2018, May 9, and May 15 through 18, 2018 and included the following:

- Performance of a geophysical survey.
- Excavation of 14 test pits, advancement of 16 soil borings, and collection of 73 soil samples for laboratory analysis to assess historic fill.
- Advancement of 17 soil borings and collection of 35 soil samples for laboratory analysis to assess the historic Site use.
- Collection of nine (9) soil samples for laboratory analysis from on-Site dry wells.
- Installation of seven (7) temporary monitoring wells and collection of eight (8) groundwater samples for laboratory analysis.
- Installation of seven (7) temporary soil vapor points and collection of seven (7) soil vapor samples for laboratory analysis.
- Collection of two (2) synoptic rounds of water level measurements.
- Performance of a topographic well survey, including temporary monitoring well casing elevations.
- Decommissioning of the temporary monitoring wells.
- Removal of two (2) 55-gallon drums containing investigation-derived waste (i.e., soil and water).

A Site Plan showing Site and surrounding property use is provided as *Figure 2*. Representative photographs of field investigation activities including the condition of the Site prior to and following the investigation are included in *Appendix A*.

The Phase II ESA field activities were conducted in accordance with STV's Phase II ESA Amended Scope of Work dated April 24, 2018, with the following exceptions:

- A second groundwater sample was collected from temporary monitoring well TWP-04 to confirm analytical results.
- Two additional borings (SB-A4 and SB-A8) were added to investigation anomalies and boring designation IDs were revised based on the final Geophysical Survey Report.
- Due to lack of recovery and/or nature of the material recovered in the borings, only on soil sample collected from soil borings SB-102 and SB-A5, and only two soil samples were collected from soil borings SB-101, SB-103, and SB-A4.

The samples were collected and containerized in accordance with New York State Department of Environmental Conservation (NYSDEC) / United States Environmental Protection Agency (USEPA) protocols. Each container was properly labeled, preserved, and placed in a chilled cooler for transport via courier to Hampton-Clarke of Fairfield, NJ. Hampton-Clarke is a New York State Department of Health (NYSDOH) Environmental Laboratory Accreditation Program (ELAP)-certified analytical laboratory. Hampton-Clarke's current ELAP certification has been verified by STV. Standard chain-of-custody procedures were followed.

2.1 Geophysical Survey

The geophysical survey was performed on April 9 through 17, 2018 by Delta Geophysics, Inc. (Delta) of Catasauqua, PA 18032, to locate, trace, and mark the presence of subsurface utilities, documented or undocumented structures, and/or subsurface anomalies (e.g., USTs and associated ancillary piping, suspect drywells, subsurface piping and utility lines, buried structures, etc.), and to verify that the proposed sample locations were clear of subsurface structures and utilities. The geophysical survey equipment consisted of a Geonics Limited EM-31, Geonics EM-61 Mark II, Trimble GPS Pathfinder XRS Geophysical Survey Systems Inc. SIR-3000 cart-mounted Ground Penetrating Radar (GPR) unit with a 400 Megahertz (Mhz) antenna, Radiodetection RD7000 precision utility locator, and Fisher M-Scope TW-6 pipe and cable locator. The survey was comprised of a series of single-line GPR traverses, and multiple radiofrequency (RF) traces. A copy of the geophysical survey report is provided in *Appendix B*.

2.2 Subsurface Soil Investigation

A soil sampling program was conducted as part of the Phase II ESA. Soil samples were collected to determine if the Site has been impacted from RECs identified in the Phase I ESA. Soil sampling was conducted in accordance with the applicable guidelines presented in NYSDEC DER-10 (Technical Guidance for Site Investigation and Remediation), NYSDEC CP-51 (Soil Cleanup Guidance), and ASTM Standard E 1903-11 (Standard Practice for Environmental Site Assessments: Phase II Environmental Site Assessment Process). *Figure 3A, Figure 3B, and Figure 3C* show the locations of the test pits and soil borings advanced at the Site as part of the Phase II ESA soil sampling program.

Soil samples were collected and screened for evidence of field contamination (e.g., staining, odors, etc.) continuously from the ground surface to the terminal depth of each test pit and boring. A description of the soils retained in each acetate sleeve was logged by STV's representative and were screened in the field for the presence of VOCs with a photoionization detector (PID). Test pit logs and soil boring logs are provided in *Appendix C* and *Appendix D*, respectively. The following test pit and soil boring sections are organized with the discussion of test pits and soil borings advanced to investigate historic fill followed by soil borings advanced to investigate the historic use of the Site and surrounding properties.

The following table presents the number of test pits and soil borings advanced to investigate the RECs associated with historic fill and historic use of the Site and surrounding properties.

Summary of Sampling Locations

Recognized Environmental Condition	Method	Number of Sampling Locations at Proposed Bus Parking	Number of Sampling Locations at Existing York Parking Lot	Designation
Historic Fill	Test Pits	14	0	TP-01 to TP-14
	Direct Push Soil Borings	0	9	SB-101 to SB-109
	Direct Push Soil Borings (supplemental based on field identified anomalies)	5	2	SB-A1A, SB-A1B, SB-A2A, SB-A2B, AB-A3, AB-A7, SB-A6

Recognized Environmental Condition	Method	Number of Sampling Locations at Proposed Bus Parking	Number of Sampling Locations at Existing York Parking Lot	Designation
Historic use of the Site and Surrounding Properties	Direct Push Soil Borings	9	8	SB-01 to SB-14 and UST-01 to UST-03
Dry Wells	Manual techniques consisting of a hand auger and extensions	5	4	DW-01 TO DW-09

2.2.1 Test Pit Excavation

The excavation of test pits for subsurface soil sampling was performed on April 16 through 20, 2018. AARCO Environmental Services Corp. (AARCO) of Lindenhurst, New York was retained as a subcontractor by STV for drilling services. A backhoe was utilized to excavate 14 test pits (TP-01 – TP-14) to a maximum depth of 15 feet below existing grade (BEG).

Soil was excavated in 1- to 2-foot lifts into discrete segregated piles correlating to the excavated depth. Excavated soils were inspected and screened with a PID. Test pit locations were selected to provide spatial coverage across the Site to investigate potential impacts from historic fill at the Site. Up to three or four samples were selected from each test pit for laboratory analysis. Following excavation and sample collection, each test pit was backfilled with the excavated material. Test pit logs, including PID screening results, are presented in *Appendix C*.

Fill material was observed in the test pits as follows:

- TP-01 – Sand, silt, gravel, and debris (metal pipes, concrete blocks) to a depth of 15 feet bgs.
- TP-02 – Sand, silt, gravel, and debris (tires, plastic, large wooden plank) to a depth of 7 feet bgs.
- TP-03 – Sand, silt, gravel, and debris (railroad tie) to a depth of 9 feet bgs.
- TP-04 – Sand, silt, gravel, and debris (brick fragments, tire, rubber, cans) to a depth of 8 feet bgs.
- TP-05 – Sand, silt, gravel, and debris (tires, concrete blocks, bricks, trash, metal, wood) to a depth of 9 feet bgs.
- TP-06 – Sand, silt, gravel, and debris (tires, railroad ties, metal, plastic, concrete structures, pipes, wire metal chain link fence, asphalt fragments, wood chips) to a depth of 15 feet bgs.
- TP-08 – Silt, sand, gravel and debris. A concrete structure was encountered at 5 feet bgs that encompassed the entire test pit and the test pit was moved 10 feet to the north.
- TP-08A – Sand, silt, gravel, and debris (concrete) to a depth of 8.5 feet bgs.
- TP-09 – Sand, silt, gravel, and debris (trash, pipes, concrete, and brick fragments) to a depth of 6 feet bgs.
- TP-10 – Sand, gravel, debris and a black gravel (asphalt-like) to a depth of 7 feet bgs.
- TP-11 – Sand, silt, gravel, and debris (concrete, brick fragments, pipes, plastic) to a depth of 5 feet bgs.
- TP-12 – Sand, gravel, and debris (concrete and brick) to a depth of 7 feet bgs.

- TP-13 – Sand and gravel to a depth of 9 feet bgs.
- TP-14 – Sand, gravel, and debris (metal, rubber, pipes, asphalt-like gravel) to a depth of 6.5 feet bgs.

The procedure for selection of soil samples from test pits is presented in the following table.

Historic Fill Sampling Rationale

Layer	Type of Historic Fill Material Encountered	Sample Collection Interval		
Each Layer	If layer is undifferentiated and greater than 4 feet with no impacts	One (1) sample from 0-2 feet BEG of the boring / test pit	One (1) sample from the 2 foot interval at the midpoint depth of the boring / test pit	One (1) sample from the 2 foot interval at the terminal depth of the boring / test pit
	If layer is undifferentiated and less than 4 feet with no impacts	One (1) sample from 0-2 feet BEG of the boring / test pit	NA	One (1) sample from the 2 foot interval at the terminal depth of the boring / test pit
	If layer is undifferentiated and less than 2 feet with no impacts	One (1) sample from 0-2 feet BEG of the boring / test pit	NA	NA
Contamination*	If signs of contamination are noted based on field observations	One (1) soil sample will be collected from the most apparent impacted interval	One (1) soil sample will be collected from the first apparent non-impacted interval below the contamination or the 2 foot interval above the water table, whichever is shallower	

Notes:
*These samples were collected in addition to the samples each layer described above.
NA – Not Applicable

Based on the rationale, above soil samples were collected as follows:

- Test pits TP-02 through TP-05, TP-07 through TP-11, and TP-13 showed no evidence of impacts based on field observations and undifferentiated fill was observed; therefore, three soil samples were collected.

- Test pits TP-01, TP-10, TP-12, and TP-14 showed no evidence of impacts based on field observations; however, a separate unique fill layer was encountered in addition to the undifferentiated fill and an additional soil sample was collected for a total of four.

- Test Pit TP-06 showed evidence of impacts based on PID readings and four samples were collected (one from the shallow interval and three at intervals exhibiting elevated PID readings).

The selected discrete soil samples were analyzed for the following parameters: Target Compound List (TCL) plus tentatively identified compounds (TICs) and Final Commissioner Policy (CP-51) VOCs per USEPA Method 5035/8260, TCL plus TICs and CP-51 semi-volatile organic compounds (SVOCs) per USEPA Method 8270, Target Analyte List (TAL) metals per USEPA Method 6010/7000 series, Total Petroleum Hydrocarbons (TPH) Diesel Range Organics (DRO) and Gasoline Range Organics (GRO) per EPA Method 8015, Pesticides per USEPA Method 8081, Polychlorinated Biphenyls (PCBs) per USEPA Method 8082, and

Herbicides per USEPA Method 8151. Based on the total analyte concentrations, select soil samples from test pits were analyzed for lead and chlordane by the Toxicity Characteristic Leaching Procedure (TCLP).

PID responses from each test pit interval selected for laboratory analysis and the laboratory analyses performed on the soil samples are summarized in the table below.

Test Pit Depths, Summary of PID Screening Results and Soil Sample Analytical Plan

Test Pit ID. No.	Test Pit Depth (feet bgs)	Depth of Sample Interval Selected for Analysis (feet bgs)	Maximum PID Reading (ppm)	TCL/CP-51 VOCs+TICs	TCL/CP-51 SVOCs+TICs	TAL Metals	PCBs	TCL Pesticides	Herbicides	TPH DRO/GRO	TCLP chlordane	TCLP Lead
TP-01	15	0-2	0.0	X	X	X	X	X	X	X		
		2-6	0.0	X	X	X	X	X	X	X		X
		6-10	0.0	X	X	X	X	X	X	X		
		10-15	0.0	X	X	X	X	X	X	X		
TP-02	7	0-2	0.0	X	X	X	X	X	X	X		X
		3-5	0.0	X	X	X	X	X	X	X		X
		5-7	0.0	X	X	X	X	X	X	X		
TP-03	9	0-3	0.0	X	X	X	X	X	X	X		
		3-6	0.0	X	X	X	X	X	X	X		X
		6-9	0.0	X	X	X	X	X	X	X		X
TP-04	8	0-3	0.0	X	X	X	X	X	X	X		
		3-6	0.0	X	X	X	X	X	X	X		
		6-8	0.0	X	X	X	X	X	X	X		
TP-05	9	0-3	0.0	X	X	X	X	X	X	X		X
		3-6	0.0	X	X	X	X	X	X	X		X
		6-9	0.0	X	X	X	X	X	X	X		X
TP-06	15	0-2	0.0	X	X	X	X	X	X	X		X
		2-3	25.1	X	X	X	X	X	X	X		X
		8-10	18.5	X	X	X	X	X	X	X		X
		13-15	10.2	X	X	X	X	X	X	X		X
TP-07	5	0-2	0.0	X	X	X	X	X	X	X		
		2-4	0.0	X	X	X	X	X	X	X		X
		4-5	0.0	X	X	X	X	X	X	X		X
TP-08A	8.5	0-3	0.0	X	X	X	X	X	X	X		
		3-6	0.0	X	X	X	X	X	X	X		X
		6-8	0.0	X	X	X	X	X	X	X		X
TP-09	6	0-2	0.0	X	X	X	X	X	X	X		X
		2-4	0.0	X	X	X	X	X	X	X		X
		4-6	0.0	X	X	X	X	X	X	X		X

Test Pit ID. No.	Test Pit Depth (feet bgs)	Depth of Sample Interval Selected for Analysis (feet bgs)	Maximum PID Reading (ppm)	TCL/CP-51 VOCs+TICs	TCL/CP-51 SVOCs+TICs	TAL Metals	PCBs	TCL Pesticides	Herbicides	TPH DRO/GRO	TCLP chlordane	TCLP Lead
TP-10	7	0-1	0.0	X	X	X	X	X	X	X	X	X
		2-3	0.0	X	X	X	X	X	X	X		X
		4-6	0.0	X	X	X	X	X	X	X		X
		6-7	0.0	X	X	X	X	X	X	X		X
TP-11	5	0-1	0.0	X	X	X	X	X	X	X		X
		2-3	0.0	X	X	X	X	X	X	X		X
		4-5	0.0	X	X	X	X	X	X	X		X
TP-12	7	0-2	0.0	X	X	X	X	X	X	X		X
		2-3	0.0	X	X	X	X	X	X	X		X
		3-4	0.0	X	X	X	X	X	X	X		X
		5-7	0.0	X	X	X	X	X	X	X		X
TP-13	9	0-3	0.0	X	X	X	X	X	X	X		X
		3-6	0.0	X	X	X	X	X	X	X		X
		6-9	0.0	X	X	X	X	X	X	X		X
TP-14	6.5	0-1	0.0	X	X	X	X	X	X	X		X
		2-3	0.0	X	X	X	X	X	X	X		X
		4-5.5	0.0	X	X	X	X	X	X	X		X
		5.5-6.5	0.0	X	X	X	X	X	X	X		

X - Sample analysis performed
BEG – Below Existing Grade
PPM – Parts Per Million
TICs – Tentatively identified compounds, TPH – Total petroleum hydrocarbons, DRO – Diesel range organics, GRO – Gasoline range organics

2.2.2 Soil Boring Advancement

The advancement of soil borings for subsurface soil sampling was performed on April 16 through 27, 2018. AARCO was retained as the subcontractor by STV for drilling services. Direct push drilling methods, utilizing a track-mounted Geoprobe, were used to retrieve soil samples. Soil boring locations were selected to investigate potential impacts from 1) historic fill at the Site, and 2) historic use of the Site and surrounding properties.

2.2.2.1 Historic Fill

Nine (9) soil borings (SB-101 to SB-109) were advanced with a direct push drill rig from ground surface through the fill material to the original street grade on the existing York College Parking Lot. Based on findings of the geophysical survey, nine supplemental soil borings (SB-A1A, SB-A2A, SB-A1B, SBA2B, SB-A3, SB-A4, AB-A5, SB-A7, and SB-A8) were advanced to investigate anomalies. Soil samples were collected continuously from the ground surface to the terminal depth of each boring.

Historic fill was observed consisting of sand, silt gravel, concrete and brick fragments. The depth of historic fill ranged from grade to 18 feet bgs. There were no indications of contamination (staining/odors) or PID readings in the borings. Native material consisted of fine to medium sands with gravel was observed to a terminal depth of approximately 20 feet bgs. There were no indications of contamination (staining/odors) or elevated PID readings in the borings.

Soil samples were collected as follows:

- Soil borings SB-104 to SB-109, A2A, and A2B exhibited no evidence of impacts based on field screening and undifferentiated fill was observed; therefore, three soil samples were collected.

- Soil borings SB-101 to SB-103, SB-A4, and SB-A5 exhibited no evidence of impacts based on field screening and distinct fill layer as well as undifferentiated fill; however, due to the lack and/or nature of recovery one soil sample was collected from SB-102 and SB-A5 and two soil samples were collected from SB-101, SB-103, and SB-A4.

The selected discrete soil samples were analyzed for the following parameters: TCL plus TICs and CP-51 VOCs per USEPA Method 5035/8260, TCL plus TICs and CP-51 SVOCs per USEPA Method 8270, TAL metals per USEPA Method 6010/7000 series, TPH DRO and GRO per USEPA Method 8015, Pesticides per USEPA Method 8081, PCBs per USEPA Method 8082, and Herbicides per USEPA Method 8151. Based on the total analyte concentrations, select soil samples from soil borings were analyzed for lead by TCLP.

PID responses from soils of each boring interval selected for analysis and the laboratory analyses performed on the soil samples are summarized in the table below.

Boring Depths, Summary of PID Screening Results and Soil Sample Analytical Plan

Soil Boring ID. No.	Boring Depth (feet bgs)	Depth of Sample Interval Selected for Analysis (feet bgs)	Maximum PID Reading (ppm)	TCL/CP-51 VOCs+TICs	TCL/CP-51 SVOCs+TICs	TAL Metals	PCBs	TCL Pesticides	Herbicides	TPH DRO/GRO	TCLP Lead
SB-101	5	0-2	0.0	X	X	X	X	X	X	X	X
		4-5	0.0	X	X	X	X	X	X	X	
SB-102	10	0-7	0.0	X	X	X	X	X	X	X	X
SB-103	10	0-2	0.0	X	X	X	X	X	X	X	X
		5-7	0.0	X	X	X	X	X	X	X	X
SB-104	10	0-2	0.0	X	X	X	X	X	X	X	X
		4-6	0.0	X	X	X	X	X	X	X	X
		8-10	0.0	X	X	X	X	X	X	X	X
SB-105	10	0-2	0.0	X	X	X	X	X	X	X	X
		4-6	0.0	X	X	X	X	X	X	X	X
		8-10	0.0	X	X	X	X	X	X	X	
SB-106	17	0-2	0.0	X	X	X	X	X	X	X	X
		8-10	0.0	X	X	X	X	X	X	X	X

Soil Boring ID. No.	Boring Depth (feet bgs)	Depth of Sample Interval Selected for Analysis (feet bgs)	Maximum PID Reading (ppm)	TCL/CP-51 VOCs+TICs	TCL/CP-51 SVOCs+TICs	TAL Metals	PCBs	TCL Pesticides	Herbicides	TPH DRO/GRO	TCLP Lead
		13-15	0.0	X	X	X	X	X	X	X	X
SB-107	20	0-2	0.0	X	X	X	X	X	X	X	X
		9-11	0.0	X	X	X	X	X	X	X	X
		16-18	0.0	X	X	X	X	X	X	X	X
SB-108	15	0-2	0.0	X	X	X	X	X	X	X	X
		4-6	0.0	X	X	X	X	X	X	X	X
		8-10	0.0	X	X	X	X	X	X	X	X
SB-109	15	0-2	0.0	X	X	X	X	X	X	X	X
		4-6	0.0	X	X	X	X	X	X	X	X
		9-11	0.0	X	X	X	X	X	X	X	X
SB-A1A	20	0-4	0.0	X	X	X	X	X	X	X	X
		6-10	0.0	X	X	X	X	X	X	X	X
		13-17	0.0	X	X	X	X	X	X	X	X
SB-A1B	15	0-2	0.0	X	X	X	X	X	X	X	X
		2-4	0.0	X	X	X	X	X	X	X	X
		5-7	0.0	X	X	X	X	X	X	X	
SB-A2A	15	0-2	0.0	X	X	X	X	X	X	X	X
		4-6	5.2	X	X	X	X	X	X	X	X
		9-11	8.1	X	X	X	X	X	X	X	X
SB-A2B	15	0-2	2.2	X	X	X	X	X	X	X	X
		2-4	0.0	X	X	X	X	X	X	X	X
		4-6	0.0	X	X	X	X	X	X	X	X
SB-A3	15	0-3	0.0	X	X	X	X	X	X	X	
		3-6	0.0	X	X	X	X	X	X	X	
		9-12	0.0	X	X	X	X	X	X	X	X
SB-A4	15	0-4	0.0	X	X	X	X	X	X	X	X
		4-8	0.0	X	X	X	X	X	X	X	X
SB-A5	15	0-10	0.0	X	X	X	X	X	X	X	
SB-A7	15	0-4	0.0	X	X	X	X	X	X	X	X
		5-9	0.0	X	X	X	X	X	X	X	X
		10-14	0.0	X	X	X	X	X	X	X	X
SB-A8	15	0-2	0.0	X	X	X	X	X	X	X	
		2-4	0.0	X	X	X	X	X	X	X	X
		4-6	0.0	X	X	X	X	X	X	X	X

X - Sample analysis performed
bgs – Below Ground Surface
PPM – Parts Per Million
TICs – Tentatively identified compounds, TPH – Total petroleum hydrocarbons, DRO – Diesel range organics, GRO – Gasoline range organics

2.2.2.2 Historic Site Use / Surrounding Properties

Fourteen (14) soil borings (SB-01 to SB-14) were advanced to target the historic use and three borings (UST-01 to UST-03) were advanced to investigate the potential presence of former USTs. Soil borings were advanced with a direct push drill rig until groundwater was encountered at depths ranging from approximately 15 to 25 feet BSG correlating to 18 to 30 feet BEG.

Soil sampling began below the historic fill at the original street grade which ranged from 3 to 8 feet BEG. Sampling depths were established at original street grade as 0 feet and were reported as feet BSG.

Historic fill was observed consisting of sand, silt, gravel, and fragments of brick, concrete, metal, plastic material, and debris throughout the Site. The depth of historic fill ranged from street grade to approximately 25 feet bsg (correlates to 18 feet BSG). Native material consisted of fine to medium sands with gravel was observed to a terminal depth of approximately 25 feet bsg (correlates 36 feet BSG). There were no indications of contamination (staining/odors) or elevated PID readings in the borings.

The procedure for selection of soil samples from the soil boring targeting historic Site use / surrounding properties is presented in the following table.

Based on the rationale above, soil samples were collected as follows:

- Soil borings SB-01 to SB-14 exhibited no evidence of impacts based on field screening; therefore, one soil sample was collected from the two foot interval corresponding to 0 to 2 feet below street grade and the second soil sample from the interval above the water table.

- Soil borings UST-01, UST-02, UST-03 exhibited no evidence of impacts based on field screening; therefore, one sample was collected from each boring.

The soil samples selected from soil borings SB-01 to SB-14 were analyzed for the following parameters: TCL plus TICs and CP-51 VOCs per USEPA Method 5035/8260, TCL plus TICs and CP-51 SVOCs per USEPA Method 8270, TAL metals per USEPA Method 6010/7000 series, Pesticides per USEPA Method 8081, PCBs per USEPA Method 8082, and Herbicides per USEPA Method 8151, and formaldehyde per USEPA Method 8315A. Soil samples from the UST borings were analyzed for CP-51 VOCs and CP-51 SVOCs. Based on the total analyte concentrations, select soil samples from soil borings were analyzed for lead and chromium by TCLP.

PID responses from soils of each boring interval selected for analysis and the laboratory analyses performed on the soil samples are summarized in the table below.

Boring Depths, Summary of PID Screening Results and Soil Sample Analytical Plan

Soil Boring ID. No.	Boring Depth (feet bgs)	Sample Interval Selected for Analysis (feet)*	Depth of Sample Interval Selected for Analysis (feet bgs)	Maximum PID Reading (ppm)	TCL/CP-51 VOCs+TICs	TCL/CP-51 SVOCs+TICs	TAL Metals	PCBs	TCL Pesticides	Herbicides	TCLP Lead	TCLP Chromium
SB-01	30	0-2	3-5	0.0	X	X	X	X	X	X		
		15-17	18-20	0.0	X	X	X	X	X	X		
SB-02	30	0-2	3-5	2.4	X	X	X	X	X	X		
		14-16	17-19	0.0	X	X	X	X	X	X		
SB-03	30	0-2	3-5	3.5	X	X	X	X	X	X	X	
		15-17	18-20	0.0	X	X	X	X	X	X		
SB-04	40	0-2	4-6	2.2	X	X	X	X	X	X	X	
		23-25	27-29	0.0	X	X	X	X	X	X		
SB-05	40	0-2	4-6	2.8	X	X	X	X	X	X	X	
		22-24	26-28	0.0	X	X	X	X	X	X		
SB-06	40	0-2	8-10	3.2	X	X	X	X	X	X		
		20-22	28-30	0.0	X	X	X	X	X	X		
SB-07	35	0-2	7-9	3.5	X	X	X	X	X	X		
		15.5-17.5	22.5-24.5	0.0	X	X	X	X	X	X		
SB-08	30	0-2	4-6	1.2	X	X	X	X	X	X		
		19-21	23-25	0.0	X	X	X	X	X	X		
SB-09	25	0-2	4-6	0.0	X	X	X	X	X	X		
		18-19	22-23	0.0	X	X	X	X	X	X		
SB-10	25	0-2	3-5	0.0	X	X	X	X	X	X	X	
		15-17	19-20	0.0	X	X	X	X	X	X		
SB-11	30	0-2	11-13	0.0	X	X	X	X	X	X		
		2-4	26-28	0.0	X	X	X	X	X	X		
SB-12	25	0-2	7-9	4.4	X	X	X	X	X	X		
		12-13	19-21	1.2	X	X	X	X	X	X	X	X
SB-13	30	0-2	7-9	0.0	X	X	X	X	X	X		
		15-17	27-19	0.0	X	X	X	X	X	X		
SB-14	35	0-2	8-10	0.0	X	X	X	X	X	X		
		25-27	33-35	0.0	X	X	X	X	X	X		
UST-01	30	--	18-20	0.0	X	X	X	X	X	X		
UST-02	30	--	28-30	0.0	X	X	X	X	X	X		
UST-03	30	--	14-16	0.0	X	X	X	X	X	X		

X - Sample analysis performed
*The sample interval correlates to the approximate depth below street grade.
BGSQ – Below Ground Surface
PPM – Parts Per Million
TICs – Tentatively identified compounds

2.2.2.3 Dry Wells

Soil samples were collected from nine (9) dry wells located on Site. Five (5) dry wells are located in Lot 1 (4 on the eastern portion and 1 on the western portion near the parking lot) and four (4) dry wells are located in Lot 3 (located in the north/northeastern portion of the parking lot). The dry wells are constructed of pre-cast, perforated concrete rings with gravel and a small outlet pipe at their base. The depths of the dry wells ranged from 16 to 19 feet BEG. According to the geophysical survey, three (3) of the dry wells located in Lot 1 appear to be connected and the four (4) dry wells in the parking lot (Lot 3) and the nearby one (1) in Lot 1 appear to be connected. There is no apparent connection between the two groups of dry wells and the dry wells are not connected to the New York City Department of Environmental Protection (NYCDEP) combined storm/sanitary sewer system. The dry well locations are shown on *Figure 2*.

Soil samples were collected by manual techniques consisting of a hand auger with extensions and analyzed for the following parameters: TCL plus TICs and CP-51 VOCs per USEPA Method 5035/8260, TCL plus TICs and CP-51 SVOCs per USEPA Method 8270, TAL metals per USEPA Method 6010/7000 series, Pesticides per USEPA Method 8081, PCBs per USEPA Method 8082, and Herbicides per USEPA Method 8151.

2.3 Groundwater Investigation

A groundwater sampling program was conducted as part of the Phase II ESA. Groundwater samples were collected to assess current groundwater environmental quality at the Site. *Figure 3C* shows the locations of the groundwater samples collected at the Site during the Phase II ESA. Groundwater samples were collected from temporary monitoring wells TWP-01 through TWP-07.

The temporary monitoring wells were installed April 17-19 and 26, 2018. Each well was constructed of threaded 1-inch diameter Schedule 40 polyvinyl chloride (PVC) well casing and riser pipe and 10 feet of 20-slot well screen. Each PVC well screen was installed to span between approximately 5 feet above and 5 feet below the water table. The annulus of each well borehole was packed with Morie No. 1 sand, a two foot bentonite seal above the sand pack, a grout collar, and a flush-mounted protective manhole cover. Well construction logs are presented in *Appendix E*. Wells were allowed to equilibrate for 24 hours prior to sampling.

The temporary well point location and hydraulic gradient relative to the Site are presented in the table below.

Temporary Well Point Locations

Soil Boring	Location	Hydraulic Gradient Relative to Site
TWP-01	Lot 1, Vacant Lot – East Portion	Downgradient
TWP-02	Lot 1, Vacant Lot – East Portion	Crossgradient
TWP-03	Lot 1, Vacant Lot – Central-West Portion	Upgradient
TWP-04	Lot 1, Vacant Lot – West Portion	Upgradient

Soil Boring	Location	Hydraulic Gradient Relative to Site
TWP-05	Lot 3, Parking Lot – North Portion	Crossgradient
TWP-06	Lot 3, Parking Lot – South Portion	Crossgradient
TWP-07	Lot 1, Vacant Lot – South Portion	Downgradient

Immediately after opening each monitoring well, a "head space" organic vapor reading was collected using a PID. Groundwater sampling was performed in general accordance with the USEPA "Low Stress (low flow) Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells", January 19, 2010 revision. Polyethylene tubing and a peristaltic or submersible pump system were utilized to purge groundwater. Conductivity, turbidity, dissolved oxygen, pH, temperature, and turbidity were monitored using a Horiba™ U-52 water quality meter equipped with a flow-through chamber during well purging. Data was recorded on low-flow sampling forms. Once groundwater conditions stabilized and groundwater levels recovered, the samples were collected. There were no visual or olfactory indications of contamination (odor/sheen) identified in the groundwater samples collected. Groundwater sampling logs are provided in *Appendix F*.

The location and elevation of the top of PVC casing of each monitoring well were surveyed by a licensed land surveyor (refer to Section 2.5). Following groundwater sampling, monitoring wells were allowed to equilibrate for at least one week prior to collection of a synoptic round of water level measurements, which was conducted on May 9 and 15, 2018.

A summary of groundwater field screening results and the groundwater sample analytical plan is presented in the table below.

Groundwater Sample Analytical Plan

Groundwater Sample Identification Number	Date Sample Collected	Depth to Water – 5/9/2018 (feet bgs)	Depth to Water – 5/15/2019 (feet bgs)	Sheen or Odor	Headspace Reading (ppm)	TCL/CP-51 VOCs+TICs	TCL/CP-51 SVOCs+TICs	TAL Metals (unfiltered)	TAL Metals (filtered)
TWP-01	4/19/2018	18.66	18.70	No	0.0	X	X	X	X
TWP-02	4/19/2018	19.26	19.29	No	0.0	X	X	X	X
TWP-03	4/20/2018	21.84	21.87	No	0.0	X	X	X	X
	5/15/2018			No	0.0	X			
TWP-04	4/26/2018	27.91	27.95	No	0.0	X	X	X	X
REP042618*						X	X	X	X
TWP-05	4/26/2018	28.63	28.66	No	0.0	X	X	X	X
TWP-06	4/26/2018	29.78	29.82	No	0.0	X	X	X	X
TWP-07	4/20/2018	23.96	24.03	No	0.0	X	X	X	X

X - Sample analysis performed
*Sample REP042618 is a Quality Assurance / Quality Control duplicate of sample TWP-04.

Groundwater samples were analyzed for TCL/CP-51 listed VOCs plus TICs, CP-51/TCL listed SVOCs plus TICs, and TAL metals (both unfiltered and laboratory filtered). Additionally, based on the concentration of one VOC (tetrachloroethene [PCE]) detected in TWP-03, a second groundwater sample was collected from TWP-03 on May 15, 2018 to confirm the result.

In accordance with the NYSDEC Commissioner Policy 43 (CP-43): Groundwater Monitoring Well Decommissioning Policy dated November 3, 2009, following completion of groundwater sampling and gauging, monitoring wells were grouted in place. The well decommissioning activates were completed on May 16, 2018 and the bore holes capped using soil or asphalt to match the existing conditions.

2.4 Soil Vapor Sampling

A soil vapor survey was conducted as part of the Phase II ESA to evaluate the potential for vapor intrusion at the Site. Seven soil vapor samples (SV-01 through SV-07) were collected for laboratory analysis for VOCs.

The soil vapor sampling program was completed on April 18 and 19, 2018 in conformance with the applicable procedures described in ASTM E 2600-10 "Standard Guide for Vapor Encroachment Screening on Property Involved in Real Estate Transactions" and the October 2006 New York State Department of Health (NYSDOH) "Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York" (NYSDOH Vapor Intrusion Guidance Document) protocols. AARCO was retained as a subcontractor by STV for drilling services. A description of the temporary well point locations and rationale is presented in the table below.

Temporary soil vapor points were installed by advancing a 1-inch diameter hollow probe rod fitted with an expendable 6-inch diameter stainless steel screened drive point to a depth of 5 feet bgs. Dedicated polyethylene tubing with threaded fittings was then connected to the probe. The hollow probe rod was then removed, the annular space was filled with clean sand, and an air tight seal was created at the surface using hydrated bentonite. A typical soil vapor probe construction detail is presented in Appendix G.

The adequacy of each seal was tested using a 5-gallon bucket placed over the borehole and sealed from the ambient air by use of hydrated bentonite. Helium tracer gas was then pumped into the bucket. The above grade end of the tubing, which is the sample collection point, was then attached to a helium gas detector. The adequacy of the seal was verified by direct helium readings of less than 10 percent. Each of the temporary soil vapor probes were then purged using a PID to evacuate three volumes of soil vapor. PID readings were detected in each soil vapor points as follows:

Sample Designation	PID Readings (ppm)
SV-01	6.3
SV-02	6.4
SV-03	4.4
SV-04	2.8
SV-05	5.1
SV-06	5.7
SV-07	3.8

After purging, each probe was connected with polyethylene tubing to a laboratory-supplied individually certified clean 6-liter Summa® canister equipped with a 0.1 liter per minute (L/min) flow regulator and the samples were collected for a period of one hour. Immediately after opening each Summa® canister, the initial vacuum (inches of mercury) was noted. After one hour, final vacuum readings (inches of mercury) were noted and the Summa® canisters were closed.

During sampling, there were no activities being performed in the immediate vicinity which would interfere with the soil vapor sampling. Soil vapor sampling logs are presented in *Appendix H*.

After collection, the Summa® canisters were properly labeled and transported via courier under standard chain-of-custody procedures to SGS North America (SGS) of Dayton, New Jersey. SGS is a NYSDOH Environmental Laboratory Approval Program (ELAP)-certified analytical laboratory for air quality sample analyses. The seven soil vapor samples were analyzed for VOCs by USEPA Method TO-15. Except where dilution was required, in accordance with the NYSDOH Vapor Intrusion Guidance Document, detection limits of 0.20 micrograms per cubic meter ($\mu g/m^3$) were achieved for carbon tetrachloride, cis-1,2-dichloroethene, 1,1-dichloroethene, trichloroethene (TCE), and vinyl chloride, and detection limits of at least 1.0 $\mu g/m^3$ were achieved for all other analytical analytes.

Upon completion of soil vapor sampling, soil vapor points were removed, boreholes were backfilled to near grade with bentonite chips, and the ground surface was restored (i.e., patched with concrete or asphalt, as applicable).

2.5 Topographic Survey

A topographic survey was completed by Manhattan Surveying P.C. (M.S.P.C) of New York, NY (Manhattan Surveying) and consisted of:

- Establish horizontal and vertical control, based upon NY State Plane Coordinate System (L.I. Zone) and North American Vertical Datum (NAVD88).
- Establish property line of Site and tie in surrounding fences.
- Topographical survey of Site within chain link fenced area.
- Survey seven temporary monitoring wells and establish elevation at each location.

The topographic survey is included in *Appendix I*.

2.6 Investigation-Derived Waste

Soil from soil borings advanced at the Site were containerized in one 55-gallon steel drum. Additionally, purge water generated was containerized in one 55-gallon steel drums. Drums were stored in a designated area of the Site pending results of laboratory analysis.

Upon receipt of laboratory analytical results, the soil and groundwater drums were removed from the Site on May 3, 2018 by AARCO and transported under a Non-Hazardous Manifest to Dale Transfer Corp of West Babylon, New York. A copy of the waste disposal manifest is presented in *Appendix K*.

3.0 SITE DESCRIPTION AND PHYSICAL CHARACTERISTICS

The Site block is bounded by Liberty Avenue, 165th Street, Tuskegee Airmen Way, and Guy R. Brewer Boulevard and consists of three tax lots (Block 10160, Lot 1; Block 10159, Lot 3; and Block 10159, Lot 54). The Site consists of an approximately 5.6 acre parcel of land and has been divided into two (2) areas:

- ~ 3.5 acre vacant, vegetated lot – Future NYCT Bus Parking (Block 10160, Lot 1).
- ~ 2.1 acre paved parking lot – Existing York College Parking Lot (Block 10159, Part of Lot 3).

The future NYCT bus parking (Lot 1) is an approximately 152,460 square foot vacant, vegetated lot surrounded by a chain link fence. This lot can be accessed from three gates located along Tuskegee Airman Way, Liberty Avenue, and the adjoining York College parking lot. The ground cover consists of bare ground and grass and there are several trees located throughout the Site. There is an area in the southwest portion along Tuskegee Airman Way that is was being used for the storage of materials.

The existing parking lot (Lot 3) is an approximately 91,476 square foot asphalt-paved parking lot. The parking lot is surrounding by a chain link fence with a security guard booth located on the northwest portion along Guy R. Brewer Boulevard. Access is provided from Guy R. Brewer Boulevard and the parking lot contains approximately 180 parking spaces and aboveground lighting.

3.1 Topography

Based on a review of the topographical survey prepared by Manhattan Surveying, the elevation of the Site ranges from 36 to 50 feet (NAVD88) and slopes in an easterly direction. A copy of the topographic survey is presented in *Appendix I.*

3.2 Geology

The geology of Queens County can be characterized as a wedge-shaped layer of Cretaceous and Pleistocene unconsolidated sediments, thickening to the south-southeast. Several impermeable clay layers are found within this sediment package, generally creating three distinct aquifers. Consolidated crystalline bedrock is of Precambrian age. The thickness of the unconsolidated sequence ranges from zero to approximately 1,300 feet below bgs from north to south. The southernmost portions of Queens, including portions of the Rockaways, consist of glaciofluvial sediments derived from melt-water of the retreating glaciers. Depth to bedrock within the vicinity of the Site is at least 600 feet bgs (as per "Ground-Water Resources of Kings and Queens Counties, Long Island, New York, by Herbert Buxton and Peter Schernoff, dated 1999).

Phase II ESA test pits and soil boring results reveal that the Site is underlain by fill material consisting of sand, silt, gravel, and fragments of brick, concrete, metal, plastic material, and debris throughout the Site. The maximum depth of historic fill was observed at approximately 25 feet bgs (correlates to 18 feet BSG). Native material consisting of fine to medium sands with gravel was observed to a terminal depth of approximately 25 feet bgs (correlates 36 feet BSG). Bedrock was not encountered during the Phase II ESA. Cross sections of the Site are presented in Figure 4.

3.3 Hydrology

Generally, groundwater contour lines mimic the surface topography and groundwater flow direction is perpendicular to these contour lines flowing from higher to lower elevation. Based on a review of the USGS topographic map, groundwater was inferred to flow to the southeast towards Jamaica Bay.

Based on water level measurements taken May 9 and 15, 2018 from the temporary monitoring wells (TWP-01 to TWP-07), groundwater was encountered at depths ranging from approximately 18 to 30 feet bgs. The Groundwater Surface Elevation Contour Map is included as *Figure 5* and presents the contours from the two rounds of synoptic water level measurements which are shown in the table below. There is not much difference from the two event and the measured groundwater flow direction is to the southeast.

Depth to Water – 5/9/2018 (feet bgs)	Depth to Water – 5/15/2019 (feet bgs)
18.66	18.70
19.26	19.29
21.84	21.87
27.91	27.95
28.63	28.66
29.78	29.82
23.96	24.03

Estimated groundwater levels and/or flow direction(s) may vary due to seasonal fluctuations in precipitation, local usage demands, geology, underground structures, or dewatering operations.

STV did not observe retention ponds or other surface water bodies on the Site. The nearest surface water body is a pond in Captain Tilly Park, located approximately 3,950 feet north-northwest of the Site. Another pond, Baisley Pond, is located approximately 1.4 miles south of the Site. Bergen Basin, an inlet on Jamaica Bay, is located approximately 3.0 miles south-southwest of the Site.

4.0 DISCUSSION OF FINDINGS

This section presents a discussion of the findings of the Phase II ESA. A summary of the laboratory analytical results for detections is presented in *Tables 1* through *11*. The laboratory analytical data packages are presented in *Appendix K*.

4.1 Geophysical Survey Overview

The geophysical survey was conducted for the entire Site and included an assessment of whether the proposed sampling locations conflicted with subsurface structures or utilities, and determining the location and extent of subsurface anomalies. During the investigation, Delta Geophysics conducted frequency domain electromagnetic (EM-31), time domain electromagnetic (EM-61), metal detection (TW-6), and ground penetrating radar (GPR) surveys. Accessible areas within the Site were surveyed with the EM-31 and TW-6. Anomalous areas detected with the EM-31 were then surveyed with the EM-61. Site data was mapped using a standard gridding method for the EM-61 and EM-31. The data was contoured and included on site plots (041618-1), (041618-2), and (041618-3). The Geophysical Survey Report is included in *Appendix B*.

The geophysical survey did not identify anomalies consistent with USTs. The results of the geophysical survey identified several anomalies throughout the Site that were indicative of subsurface metallic features and metallic debris, reinforced concrete slab, void spacing, and/or non-metallic area of fill material. The following table presents the anomaly location and corresponding boring / test pit location.

Anomaly Location and Corresponding Boring / Test Pit

Anomaly ID	Location	Corresponding Boring / Test Pit Location
Anomaly #1	Lot 3, Parking Lot	A1A, A1B
Anomaly #2	Lot 3, Parking Lot	A2A, A2B
Anomaly #3	Lot 3, Parking Lot	A3
Anomaly #4	Lot 1, Vacant Lot, West Portion	A4
Anomaly #5	Lot 1, Vacant Lot, West Portion	A5
Anomaly #6	Lot 1, Vacant Lot, West Portion	TP-08, TP-08A
Anomaly #7	Lot 1, Vacant Lot, West Portion	A7, TP-06
Anomaly #8	Lot 1, Vacant Lot, West Portion	A8

The review of the soil boring logs identified fill material consisting of sand, silt, gravel, and concrete and brick fragments. Test pit TP-06 corresponding to Anomaly #7 identified fill material consisting of sand, silt, gravel, and debris (tires, old railroad ties, metal parts, plastic, large concrete structures, pipes, wire metal chain link fence, asphalt fragments, wood chips) to a depth of 15 feet bgs. Test pit TP-08 corresponding to Anomaly #8 consisted of silt, sand, gravel and debris and a large concrete structure was encountered at 5 feet bgs that encompassed the entire test pit and the test pit was moved 10 feet to the north. Test pit TP-08A

corresponding to Anomaly #8 identified fill material consisting sand, silt, gravel, and debris (concrete structures) to a depth of 8.5 feet bgs.

4.2 Analytical Results Overview

Matrix	Criteria	Parameter Category						
		VOCS	SVOCs	Metals	PCBs	Pesticides	Herbicides	TPH DRO/GRO
Soil	Commercial Use SCO		X	X	X			NC
Groundwater	Class GA Values			X				--
Soil Vapor	AGV	X	--	--	--	--	--	--

Notes:
X – At least one result detected at concentration exceeding applicable criteria.
-- – Not analyzed
AGV – Air Guideline Value
NC – No Criterion

A complete list of parameters that were analyzed is included in *Table 1*.

4.2.1 Soil Results Overview

Commercial Use Soil Cleanup Objectives (SCOs) found in 6 New York Codes, Rules and Regulations (NYCRR) 375-6, Remedial Program Soil Cleanup Objectives are the appropriate standards for use in evaluating the results of the analyses of the Phase II ESA soil samples. The soil results were compared to Commercial Use SCOs listed in NYSDEC Part 375 unless investigating petroleum impacts. Commercial Use SCOs are applicable based on the current Site use and the proposed use as bus parking. NYSDEC Part 375 identifies "Commercial Use" as the land use category which shall only be considered for the primary purpose of buying, selling or trading of merchandise or services. Commercial use includes passive recreational uses, which are public uses with limited potential for soil contact.

For investigating petroleum impacts, soil results from the borings advanced to investigate potential USTs were compared to the Soil Cleanup Levels included in Tables 2 and 3 of NYSDEC CP-51.

Volatile Organic Compounds (VOCs)

VOCs were detected in 48 out of 133 samples analyzed. No VOCs were detected at concentrations above the Commercial Use SCOs.

Three soil samples collected for UST borings (UST-01, UST-02, and UST-03) were analyzed for CP-51 Tables 2 and 3-listed VOCs. The results of the analysis indicate that no VOCs were detected in the soil samples at concentrations greater than their CP-51 Soil Cleanup Levels.

Semi-Volatile Organic Compounds (SVOCs)

SVOCs were detected in 115 out of 133 samples analyzed. Five SVOCs (benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenzo(a,h)anthracene, indeno(1,2,3-cd)pyrene) were detected at concentrations above their Commercial Use SCOs. The concentrations of SVOCs above the Commercial Use SCOs are attributed to the characteristics of the historic fill.

Metals

Metals were detected in each of the 133 soil samples analyzed. Four metals (arsenic, barium, copper, and lead) were detected at concentrations above their Commercial Use SCOs. The concentrations of metals above the Commercial Use SCOs are attributed to characteristics of the historic fill, no as metals were detected at concentrations exceeding the Commercial Use SCOs in the historic Site use borings.

Based on the total analyte concentrations, select soil samples were analyzed for lead and chromium. A total of 89 soil samples contained total lead concentrations that exceed the 100 mg/kg 20X Resource Conservation and Recovery Act (RCRA) toxicity regulatory limit for lead. Eighty-four (84) samples were collected from samples to assess the historic fill and five samples were collected from samples to assess historic Site use. Test pit sample TP-06 (8-10) contained a lead concentration of 5.3 milligrams per liter (mg/L) which is above the USEPA Regulatory Limit of 5 mg/L. The remaining 88 samples analyzed for TCLP lead were below the USEPA Regulatory Limit of 5 mg/L. One sample contained total chromium concentrations that exceeds the 100 mg/kg 20X RCRA toxicity regulatory limit for chromium. The sample was analyzed for TCLP chromium and was below the USEPA Regulatory Limit of 5 mg/L.

Polychlorinated Biphenyls (PCBs)

PCBs were detected in 91 of 133 soil samples analyzed. Two samples (SB-12 [12-13] and SB-107 [0-2]) contained total PCB concentrations above their Commercial Use SCOs. The elevated concentrations of PCBs are attributed to the characteristics of historic fill.

Pesticides

Pesticides were not detected in 133 samples analyzed above the laboratory method detection limit.

Herbicides

One herbicide (2,4-D) was detected in one of the 133 samples analyzed, at a concentration below the Commercial Use SCO.

Total Petroleum Hydrocarbons (TPH) Diesel Range Organics (DRO) / Gasoline Range Organics (GRO)

TPH DRO / GRO was analyzed in 105 samples that were collected from sample locations to assess historic fill. of TPH DRO was detected in 80 out of 105 samples with the maximum concentration of 1,600 mg/kg. TPH GRO was detected in five out of 105 samples at a maximum concentration of 570 mg/kg. There are no applicable regulatory comparison criteria for TPH. TPH results provide information regarding soil disposal options for soil excavated for construction, since regional disposal facilities typically require TPH analyses prior to accepting soil for disposal. The TPH results will not impact potential soil disposal options.

4.2.2 Groundwater Results Overview

Analytical results for groundwater were compared to New York State Class GA groundwater standards and guidance values published in the NYSDEC Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1, "Ambient Water Quality Standards and Guidance Values." Ambient water quality standards are enforceable regulatory limits. Where ambient water quality standards do not exist, ambient water quality guidance values were used to evaluate the groundwater results.

Volatile Organic Compounds (VOCs)

The results of the analysis indicates that VOCs were detected in four of the eight groundwater samples analyzed. None of the detected concentrations were above the NYSDEC TOGS Class GA Values. PCE was detected in one groundwater sample (TWP-03) collected during the initial groundwater sampling event and in second groundwater sample collected during a confirmatory resampling event. PCE was detected in the initial sampling at 4.0 micrograms per liter (µg/L) and the resampling at 3.6 µg/L. The results are below the corresponding Class GA Value of 5 µg/L.

Semi-Volatile Organic Compounds (SVOCs)

The results of the analysis indicates that with the exception of SVOC TICs, SVOCs were not detected in the groundwater samples analyzed. The maximum concentration of SVOC TICs was 4.1 micrograms per liter (ug/L).

Metals

The results of the analysis indicates that metals were detected in each of the filtered and unfiltered groundwater samples analyzed. Manganese and sodium were detected at concentrations above the NYSDEC TOGS Class GA Values in the filtered samples.

4.2.3 Soil Vapor Results Overview

The analytical results for the soil vapor samples were compared to the NYSDOH Air Guideline Values (AGVs) presented in the Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York, dated October 2006 ("NYSDOH Vapor Intrusion Guidance Document"), the NYSDOH's Tetrachloroethene (Perc) in Indoor and Outdoor Air September 2013 Fact Sheet ("NYSDOH Perc Fact Sheet") and the NYSDOH's Trichloroethene (TCE) in Indoor and Outdoor Air August 2015 Fact Sheet ("NYSDOH TCE Fact Sheet").

The results of the analysis indicates that VOCs were detected in each of the soil vapor samples. Soil vapor sample SV-06 exhibited TCE at a concentration of 2.6 micrograms per cubic meter (µg/m^3), marginally above its NYSDOH Air Guideline Value (AGV).

4.3 Areas of Environmental Concern

4.3.1 Historic Fill

The results of the soil sampling identified parameters detected in historic fill as shown in the following table.

Summary of Soil Sampling Analytical Results for Historic Fill-Related Parameters

Parameter	Commercial Use SCO	Number of Soil Sample Analytical Results >Commercial Use SCO	Average Concentration (mg/kg)	Maximum Concentration (mg/kg)	95% Percentile Concentration (mg/kg)
Benzo(a)anthracene	5.6	11	1.3	14	5.1
Benzo(a)pyrene	1	38	1.1	12	4.2
Benzo(b)fluoranthene	5.6	11	1.5	16	5.5
Dibenzo(a,h)anthracene	0.56	53	0.24	1.9	0.79
Indeno(1,2,3-cd)pyrene	5.6	14	0.59	6.7	2.3
Arsenic	16	8	5.5	50	18
Barium	400	4	98	1,100	230
Copper	270	4	57	400	150
Lead	1,000	20	260	2,300	1,100

Notes:
SCO – Soil Cleanup Objective
mg/kg – milligrams per kilogram

The results of the soil sampling identified SVOCs and metals detected in soil consistent with historic fill. The table provides a summary of the historic fill-related parameters detected in concentrations above the Commercial Use SCOs. The table provides the number of soil sample analytical results greater than the Commercial Use SCO as well as the average concentration, maximum concentration, and 95% Percentile Concentration.

4.3.2 Hazardous Waste

The review of soil sampling results identified soil characterized as hazardous waste for lead toxicity in the central portion of the vacant, vegetated lot at test pit location TP-06. The three soil samples collected from TP-06 each contained a total lead concentration that exceeded the 20X RCRA toxicity regulatory limit of 100 mg/kg. Test pit sample TP-06 (8-10) contained a TCLP lead concentration of 5.3 mg/L which is above the USEPA Regulatory Limit of 5 mg/L. Test pit samples TP-06 (2-3) and TP-06 (13-15) were analyzed for TCLP lead and the concentrations did not exceed the USEPA Regulatory Limit of 5 mg/L. Within the test pit the hazardous lead has been vertically delineated between 3 to 13 feet BEG. The nearest soil borings and test pits (SB-A7, SB-09, TP-02, and SB-04) do not exhibit hazardous lead concentrations.

Summary of TCLP Lead Analysis and Results

Number of Samples with Total Lead Concentration >100 ppm	Number of Samples with TCLP Lead Concentration 5 mg/L	Maximum TCLP Lead Concentration
89	1	5.3

Notes:
ppm – parts per million
mg/L – milligrams per liter

Figure 4 presents the geological cross section for the limits of hazardous waste.

4.3.3 Tetrachloroethene (PCE) in Groundwater

PCE was detected in one groundwater sample (TWP-03) during the initial groundwater sampling event performed in April 2018. PCE was detected in TWP-03 at a concentration of 4.0 micrograms per liter (µg/L). Although the result did not exceed the corresponding Class GA Value of 5 µg/L, since the result was only marginally below the Class GA Value, a second groundwater sample was collected from TWP-03 on May 15, 2018 to confirm the result. The result of analysis of TWP-03 collected on May 15, 2018 was 3.6 µg/L, which is within an acceptable duplicate recovery range.

PCE was not detected in the remaining groundwater samples collected at the Site. TWP-03 is located in a hydraulic upgradient location relative to the Site and since PCE was not detected in the other groundwater samples it appears that the detection of PCE is migrating on Site from an off-site source.

Summary of Groundwater Sampling Analytical Results for Tetrachloroethene (PCE)

Parameter	Class GA Value	Number of Groundwater Samples with Detections	Average Concentration (µg/L)	Maximum Concentration (µg/L)
PCE	5	2*	3.5	4.0

Notes:
µg/L – micrograms per liter
*Two samples collected from TWP-03 had PCE detections.

Figure 5 presents summary of PCE detected in groundwater.

4.3.4 Trichloroethene in Soil Vapor

Trichloroethene (TCE) was detected in soil vapor sample SV-06 at a concentration of 2.6 ug/m^3 which is above its NYSDOH AGV of 2.0 ug/m^3. TCE was detected at a concentration range of 0.22 to 2.4 ug/m^3.

Summary of Soil Vapor Sampling Analytical Results for Trichloroethene (TCE)

Parameter	AGV	Number of Soil Sample Analytical Results >AGV	Average Concentration ($\mu g/m^3$)	Maximum Concentration ($\mu g/m^3$)
TCE	2	1	1.2	2.6

Notes:
AGV – Air Guideline Value
$\mu g/m^3$ – micrograms per cubic meter

TCE was not detected in soil or groundwater at concentrations above comparison criteria.

Figure 5 presents summary of TCE detected in soil vapor.

5.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the results of the Phase II ESA, STV concludes the following:

- The geophysical survey did not identify anomalies consistent with USTs. The results of the geophysical survey identified several anomalies throughout the Site that were indicative of subsurface metallic features and metallic debris, reinforced concrete slab, void spacing, and/or non-metallic area of fill material.

- The Site is underlain by fill material consisting of sand, silt, gravel, and fragments of brick, concrete, metal, plastic material, and debris throughout the Site. The maximum depth of historic fill was observed at approximately 25 feet bgs (correlates to 18 feet BSG). Native material consisting of fine to medium sand with gravel was observed to a terminal depth of approximately 25 feet bgs (correlates 36 feet BSG).

- Groundwater at the Site was encountered at depths ranging from approximately 18 to 30 feet bgs (correlates to 15 to 25 feet BSG). The review of groundwater elevations indicates groundwater flow is to the southeast.

- Soils in the vicinity of test pit TP-06 at depths between 3 and 13 feet bgs are RCRA hazardous waste for the toxicity characteristic of lead.

- PCE was detected in groundwater samples at temporary monitoring well TWP-03 marginally below the NYSDEC TOGS Class GA Value.

- TCE was detected in soil vapor at soil vapor probe SV-06 above its NYSDOH AGV.

- SVOCs, metals, and PCBs were detected in soil samples at concentrations that exceed the Commercial Use SCOs found in 6 NYCRR 375-6, Remedial Program Soil Cleanup Objectives.

- Manganese and sodium were detected in groundwater samples at concentrations above the NYSDEC TOGS Class GA Values in the filtered samples.

Based on the results of the Phased II ESA, STV recommends the following:

- Environmental conditions should be considered and incorporated into the bus parking design. Specification 12R should be implemented during construction.

- Soil excavated during development of the bus parking lot should be characterized to identify appropriate material handling, reuse, and/or disposal requirements (including collection and analysis of additional samples if required by the contractor-selected disposal facility). Excavated material should be managed in accordance with applicable federal, state, and local laws and regulations. Based on the analysis of soil samples collected during the Phase II ESA, material excavated from the Site is expected to be the following:
    - Hazardous waste for the toxicity characteristic of lead in the vicinity of TP-06.

  - Non-Hazardous Excavated Material.

- If possible, planned construction/excavation activities should avoid the area of hazardous waste. If subsurface work is required in this area, a supplemental investigation should be conducted to further delineate the horizontal limits of hazardous waste for the toxicity characteristic of lead.

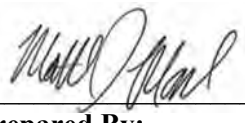
- Appropriate Health and Safety Provisions should be employed in accordance with the laws and regulations of the Occupational Safety and Health Administration (OSHA).

- Based on soil sampling results, a Community Air Monitoring Program (CAMP) should be conducted during excavation activities as part of construction activities.

- If landscaped areas are incorporated into the development of the Site, exposed soil should be covered by a minimum 2-foot thick layer of environmentally clean fill.
- Although not anticipated, if dewatering is necessary during construction activities, dewatering should be minimized to mitigate potential influx of contaminated water from off-site sources toward the Site.

6.0 SIGNATURES OF ENVIRONMENTAL PROFESSIONALS

STV Incorporated has performed a Phase II ESA for the site of the Proposed Bus Parking at York College Site 9 located at 164-26 Liberty Avenue, Jamaica, Queens, New York 11433 (hereafter referred to as the "Site"). The legal description of the Site is Block 10160, Lot 1 and Block 10159, Part of Lot 3. The scope of the Phase II ESA was consistent with the amended scope of work dated April 24, 2018 as stated in Section 2.0.



Prepared By:
Matthew Mankovich
Environmental Project Manager

Reviewed By:
Richard Wetherbee, PG, PMP, LEED AP
Vice President, Director - Environmental

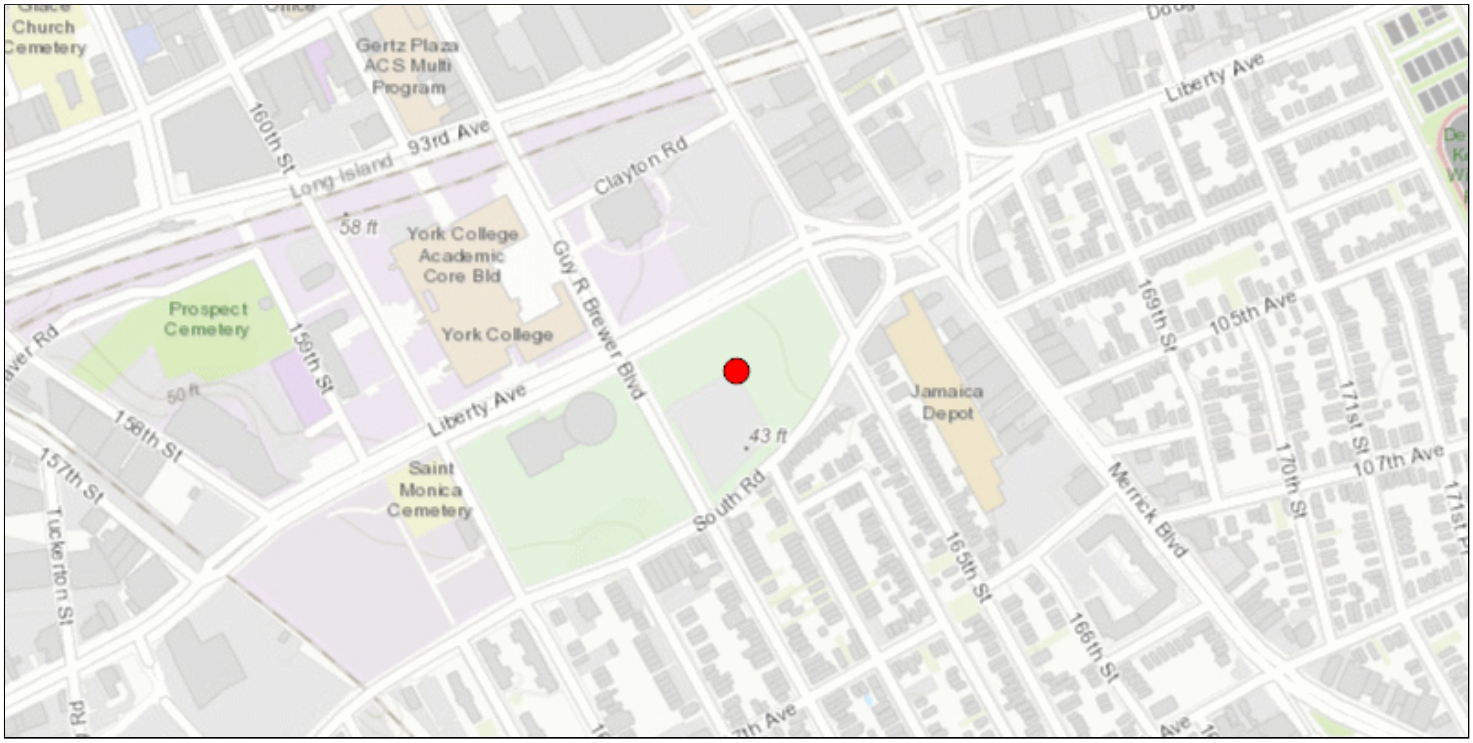
7.0 REFERENCES

- 6 NYCRR § 375, effective December 14, 2006; New York State Department of Environmental Conservation Rules and Regulations, Remedial Program Requirements.
- 6 NYCRR Chapter X § 700 – 706; New York State Department of Environmental Conservation Water Quality Regulations, Surface Water and Ground Water Classifications and Standards.
- ASTM E 2600-10 "Standard Guide for Vapor Encroachment Screening on Property Involved in Real Estate Transactions".
- ASTM Standards Related to the Phase II Environmental Site Assessment Process, 2nd Edition.
- Groundwater in Bronx, New York, and Richmond Counties with Summary Data on Kings and Queens Counties New York City, New York (1958) USGS Bulletin GW-32, by Nathaniel Perlmutter and Theodore Arnow.
- NYSDEC, CP-51/Soil Cleanup Guidance; October 21, 2010.
- NYSDEC, DER-10 Technical Guidance for Site Investigation and Remediation; May 3, 2010.
- NYSDOH, Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York; October 2006.
- NYSDOH, Tetrachloroethene (PERC) in Indoor and Outdoor Air, Fact Sheet, September, 2013.
- NYSDOH, Trichloroethene (TCE) in Indoor and Outdoor Air, Fact Sheet, August, 2015.
- STV Inc., Investigation Work Plan for Phase I & II Environmental Site Assessment of Proposed Bus Parking at York College Site 9, 164-26 Liberty Avenue, Block 10160, Lot 1 & Block 10159, Park of Lot 3), Queens, NY 11433, Amended April 24, 2018.
- STV Inc., Phase I Environmental Site Assessment Report of Proposed Bus Parking at York College Site 9, 164-26 Liberty Avenue, Block 10160, Lot 1 & Block 10159, Park of Lot 3), Queens, NY 11433, dated June 15, 2018.
- USGS, 1999. Ground-water Resources of Kings and Queens Counties, Long Island, New York by Herbert Buxton and Peter K. Schernoff, USGS Water Supply Paper 2498.

The full Phase II ESI is available upon request

Attachment C: Natural Resources

Environmental Resource Mapper



The coordinates of the point you clicked on are:

UTM 18	**Eas ng:**	601947.6008030382	**Northing:**	4506272.992319758
Longitude/La tude	**Longitude:**	-73.79325396579164	**La tude:**	40.70106900321044

The approximate address of the point you clicked on is:
163-00-163-98 Liberty Ave, Jamaica, New York, 11433

County: Queens
City: New York
USGS Quad: JAMAICA

If your project or ac on is within or near an area with a rare animal, a permit may be required if the species is listed as endangered or threatened and the department determines the ac on may be harmful to the species or its habitat.

If your project or ac on is within or near an area with rare plants and/or significant natural communi es, the environmental impacts may need to be addressed.

The presence of a unique geological feature or landform near a project, unto itself, does not trigger a requirement for a NYS DEC permit. Readers are advised, however, that there is the chance that a unique feature may also show in another data layer (ie. a wetland) and thus be subject to permit jurisdic on.

Please refer to the "Need a Permit?" tab for permit informa on or other authoriza ons regarding these natural resources.

Disclaimer: If you are considering a project or ac on in, or near, a wetland or a stream, a NYS DEC permit may be required. The Environmental Resources Mapper does not show all natural resources which are regulated by NYS DEC, and for which permits from NYS DEC are required. For example, Regulated Tidal Wetlands, and Wild, Scenic, and Recrea onal Rivers, are currently not included on the maps.

JBD_Update 2022

Biological Assessment

Prepared using IPaC

Generated by Dorothy Daly (dorothy.daly@stvinc.com)

January 4, 2022

The purpose of this Biological Assessment (BA) is to assess the effects of the proposed project and determine whether the project may affect any Federally threatened, endangered, proposed or candidate species. This BA is prepared in accordance with legal requirements set forth under Section 7 of the Endangered Species Act (16 U.S.C. 1536 (c)).

In this document, any data provided by U.S. Fish and Wildlife Service is based on data as of January 4, 2022.

Prepared using IPaC version 5.69.0

JBD_Update 2022 Biological Assessment

Table Of Contents

1 Description Of The Action

1.1 Project Name
JBD_Update 2022

1.2 Executive Summary
Reconstruction of the Jamaica Bus Depot and temporary parking at York College in Queens.

Effect determination summary

1.3 Project Description

1.3.1 Location

LOCATION
Queens County, New York

1.3.2 Description of project habitat

Urban site, Greenstreets boulevard nearby but overall no vegetation beyond a few street trees.

1.3.3 Project proponent information

Provide information regarding who is proposing to conduct the project, and their contact information. Please provide details on whether there is a Federal nexus.

Requesting Agency
STV Inc.

FULL NAME
Dorothy Daly

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1818 Market Street Suite 2300

CITY
Philadelphia

STATE
PA

ZIP
19103

PHONE NUMBER
(484) 269-1174

E-MAIL ADDRESS
dorothy.daly@stvinc.com

Lead agency
MTA NYCT (C&D)

1.3.4 Project purpose

Environmental clearance for the reconstruction of the Jamaica Bus Depot in Queens.

1.3.5 Project type and deconstruction

This project is a transportation project.

1.3.5.1 Project map

LEGEND

Project footprint

Project Area: Reconstruction of the jamaica bus depot

1.3.5.2 reconstruction of the jamaica bus depot

Activity start date
December 01, 2022

Activity end date
November 30, 2027

Stressors
This activity is not expected to have any impact on the environment.

Description
All within existing urban footprint of the existing bus depot and conversion and expansion of a parking lot at the York College site.

1.3.6 Anticipated environmental stressors

Describe the anticipated effects of your proposed project on the aspects of the land, air and water that will occur due to the activities above. These should be based on the activity deconstructions done in the previous section and will be used to inform the action area.

1.4 Action Area

1.5 Conservation Measures

Describe any proposed measures being implemented as part of the project that are designed to reduce the impacts to the environment and their resulting effects to listed species. To avoid extra verbiage, don't list measures that have no relevance to the species being analyzed.

No conservation measures have been selected for this project.

1.6 Prior Consultation History

Coordination with USFWS in April 24, 2019. No effects determination,

1.7 Other Agency Partners And Interested Parties

None

1.8 Other Reports And Helpful Information

No critical habitat identified in DEC EnviroMapper.

2 Species Effects Analysis

This section describes, species by species, the effects of the proposed action on listed, proposed, and candidate species, and the habitat on which they depend. In this document, effects are broken down as direct interactions (something happening directly to the species) or indirect interactions (something happening to the environment on which a species depends that could then result in effects to the species).

These interactions encompass effects that occur both during project construction and those which could be ongoing after the project is finished. All effects, however, should be considered, including effects from direct and indirect interactions and cumulative effects.

2.1 Monarch Butterfly

This species has been excluded from analysis in this environmental review document.

Relevant documentation

Site survey showed no habitat within the project area for the monarch butterfly.

Justification for exclusion

No habitat.

2.2 Piping Plover

This species has been excluded from analysis in this environmental review document.

Relevant documentation

Urban site. Wide flat sandy beaches with little vegetation or lakes are the habitat. No beach or water on the site.

Justification for exclusion

See above.

2.3 Red Knot

This species has been excluded from analysis in this environmental review document.

Relevant documentation

Red knot's habitat is shorelines. This is an urban site.

Justification for exclusion

See above.

2.4 Seabeach Amaranth

This species has been excluded from analysis in this environmental review document.

Relevant documentation

A plant with beach habitat, not present in this urban site.

Justification for exclusion

Habitat, see above.

3 Critical Habitat Effects Analysis

No critical habitats intersect with the project action area.

4 Summary Discussion, Conclusion, And Effect Determinations

4.1 Effect Determination Summary

SPECIES (COMMON NAME)	SCIENTIFIC NAME	LISTING STATUS	PRESENT IN ACTION AREA	EFFECT DETERMINATION
Monarch Butterfly	Danaus plexippus	Candidate	Excluded from analysis	Excluded from analysis
Piping Plover	Charadrius melodus	Threatened	No	NE
Red Knot	Calidris canutus rufa	Threatened	No	NE
Seabeach Amaranth	Amaranthus pumilus	Threatened	No	NE

4.2 Summary Discussion

No effect anticipated since there is no habitat.

4.3 Conclusion

No impacts expected, since there is no habitat.

Attachment D: Transportation

Table of Contents

List of Figures

List of Tables

I. Depot Operations

A. INTRODUCTION

This section analyzes potential effects from the operation of the Proposed Project on transportation, taking into consideration the specific project design and operational assumptions that have changed since the 2019 EIS.

The objective of the transportation analyses is to determine whether the Proposed Project may have a potential significant impact on traffic operations and mobility, public transportation facilities and services, pedestrian elements and flow, safety of roadway users (pedestrians, cyclists, transit users, and motorists), on- and off-street parking, or goods movement. This section discusses:

- Traffic and Parking
- Transit and Pedestrians

Section I.D: Traffic and Parking evaluates the traffic operations, travel characteristics, and parking conditions within the traffic study area, which includes:

- The roadway network within the study area;
- Methodologies used to evaluate traffic and parking;
- Characteristics of the existing traffic and parking conditions; and,
- Evaluation finding for the potential impact of the Proposed Project on intersection operations and parking supply.

Similarly, Section I.E: Transit and Pedestrians describes the transit and pedestrian characteristics of the traffic study area and:

- Identifies the existing transit service and pedestrian network; and,
- Outlines the criteria and methodology required for analysis.

Possible mitigation measures to address potential traffic impacts are also identified in this chapter.

B. CONTEXT AND KEY ISSUES

Since the publication of the 2019 EIS, changes to specific project design and operational assumptions, as well as construction-period assumptions have occurred. The 2019 EIS assumed the analysis year for operations (first day of operations) would be 2025. Given that the Depot construction was delayed because the Metropolitan Transportation Authority ("MTA") New York City Transit ("NYCT") had not secured a temporary bus parking location at the time of the 2019 Environmental Impact Statement ("EIS") publication, the Supplemental Environmental Assessment ("SEA") is warranted to account for the new temporary bus parking at the City University of New York ("CUNY") York College ("proposed Temporary Bus Parking Site") and, subsequently, to reassess the analysis years. For the purposes of the SEA, the analysis year for operations would be 2027.

Although any potential de-mapping of Tuskegee Airmen Way, if it were to occur, would be a future separate action, the Depot design as currently contemplated would require reconfiguring the Tuskegee Airmen Way

paved roadbed to support Depot operations. This change in roadbed configuration would include the removal of a parking area and some street trees and, therefore, would represent a minor change to the street pattern directly north of the Depot site. The Build analysis for the Proposed Project assumes traffic diversions resulting from the use of this portion of Tuskegee Airmen Way. Additionally, New York City Department of Transportation ("NYCDOT") has implemented changes to the street configuration of Merrick Boulevard, Archer Avenue, and 168th Street to accommodate new bus-only lanes.

Traffic and transportation operations were examined in the 2019 EIS to assess the effect of the Proposed Project on local traffic, parking, transit, and pedestrian operations. The scope of analysis in the SEA is limited to the assessment of the Preferred Jamaica Bus Depot ("JBD") Alternative, as advanced per the 2019 EIS (i.e., this SEA does not consider multiple build alternatives for the Depot), and as revised in accordance with these new assumptions. The Proposed Project can accommodate a bus parking capacity of 240 buses (305 Standard Bus Equivalents ("SBEs"[1])).

The bus routing and circulation patterns of the Proposed Project, as evaluated in the 2019 EIS, remain unchanged. In addition to examining the effect of increased bus and employee trips for bus parking capacity, the analysis also considers bus routing, as evaluated in the 2019 EIS, for buses returning to the Depot at the end of their service runs to understand potential effect on traffic operations. Therefore, the traffic analysis examines:

- The effect of increased bus and employee trips generated by the Proposed Project on the Depot site Study Area roadway network; and,
- The effect of changes to the Depot's entrance and exit locations on bus movements within the traffic study area.

The number of employees commuting to and from the facility each day would increase and potentially affect the demand for on-street parking near the Depot. A detailed assessment of on-street parking conditions has been performed and is described in this section.

This section also assesses the existing roadway crash history on the study area roadway network and the potential effect of increased bus operations on safety. The assessments are based on three years of crash data from NYCDOT, which were examined to determine predominant crash types (i.e., rear-end, sideswipe, pedestrian, etc.) that may be influenced by increased bus trips to and from the Depot.

C. TRANSPORTATION STUDY AREA

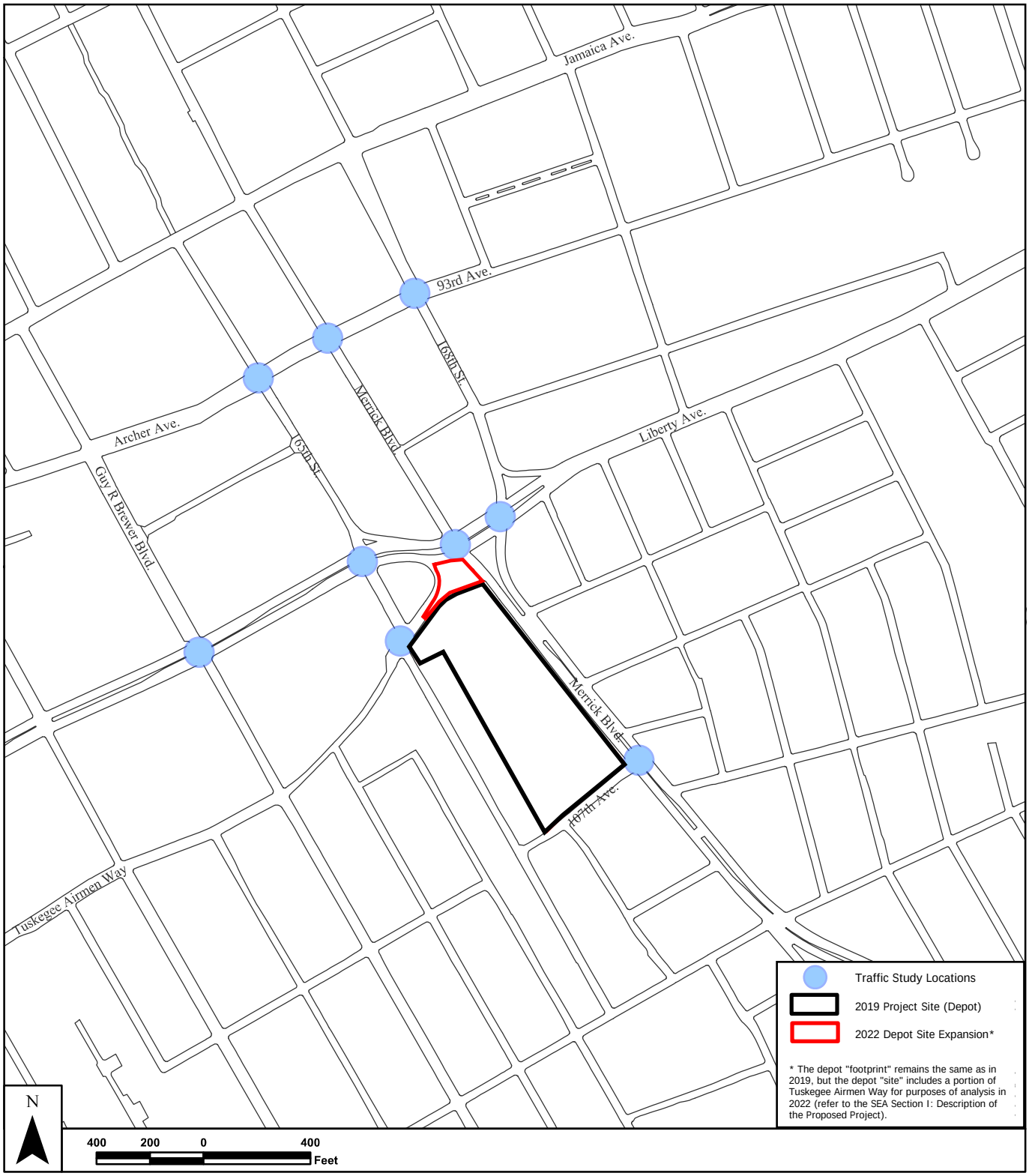
The study area for the transportation analyses is illustrated on Figure 1: Reevaluation – Traffic Study Area and generally extends between Archer Avenue/93rd Avenue to the north, 168th Avenue to the east, 107th Avenue to the south, and 165th Street to the west. The traffic study analyzes the operational condition of the same intersections completed as part of the 2019 EIS, analyzing the operational condition for the new Depot focused on the following nine intersections:

- Archer Avenue at 165th Street

[1] An SBE represents a standard bus configuration (standard 40-foot-long, single-unit bus). A 60-foot-long articulated bus is normalized to 1.5 SBEs and a 45-foot-long express bus is normalized to 1.15 SBEs.

- Liberty Avenue at 165th Street
- Archer Avenue/93rd Avenue at 168th Street
- Liberty Avenue at 168th Street
- Merrick Boulevard at 107th Avenue
- Archer Avenue at Merrick Boulevard
- Merrick Boulevard at Liberty Avenue
- 165th Street at Tuskegee Airmen Way
- Guy Brewer Boulevard and Liberty Avenue

Traffic and pedestrian data were collected at these key intersections as discussed in **Section I.D: Traffic and Parking** and **Section I.E: Transit and Pedestrians** below.



Source: STV Incorporated, 2022.

Figure 1

TRAFFIC STUDY AREA

D. TRAFFIC AND PARKING

1. Introduction

This section describes:

- the traffic operations, travel characteristics, and parking conditions within the traffic study area as related to the operation of the Proposed Project;
- the roadway network of the traffic study area; and
- the methodology used to evaluate traffic and parking.

The following sections characterize the existing traffic and parking conditions, summarize the potential impact of the Proposed Project in the Build Year on intersections and parking supply, and identify possible mitigation measures, as appropriate.

2. Roadway Network

The existing roadway network has remained the same as described in Section 4.5.2 of the 2019 EIS except for the following changes:

- The configuration of Merrick Boulevard has changed since the completion of the 2019 EIS as dedicated bus lanes have been added to the boulevard in each direction. This reduced the number of general traffic lanes from two to one along the corridor within the study area. The bus lane regulations are in effect from 6 AM to 7 PM.
- Archer Avenue became an eastbound busway from 150th Street to 160th Street. Only buses and emergency vehicles may travel eastbound on this portion of Archer Avenue. Simultaneously, Jamaica Avenue, located north of the study area, became a busway in both directions from Sutphin Boulevard to 168th Street.

3. Methodology

Data were compiled in the study area for existing conditions as described below. Intersection capacity analyses were conducted at the nine key intersections in the study area, as identified in Section I.C: Transportation Study Area, using the analytical procedures described in the *Highway Capacity Manual 2000 ("HCM 2000")*, published by the Transportation Research Board, National Research Council, Washington, D.C., and modeled using Synchro (Version 10) software. The analysis was performed consistent with the analytical procedures of the *New York City Environmental Quality Review ("CEQR") Technical Manual*, which meet the acceptance of NYCDOT. Level of Service ("LOS") is the measure used to analyze intersections and roadway operations by categorizing traffic flows within quality levels based on vehicle speeds, density, and congestion. The criteria used to define LOS for each type of facility and impact criteria are described below in the following sections.

a. *Data Collection*

As discussed previously, the intersection configuration of Merrick Boulevard and Archer Avenue has changed since the completion of the 2019 EIS, with dedicated bus lanes reducing the number of general traffic lanes. New traffic counts were performed at each of the nine study intersections identified in the 2019 EIS to capture the changes in travel patterns through the study area as a result of these roadway

changes. Additionally, the use of Tuskegee Airmen Way south of the NYCDOT traffic island at Liberty Avenue will result in a rerouting of westbound Tuskegee Airmen Way traffic to Liberty Avenue and 165th Street to access westbound Tuskegee Airmen Way. The intersection of Tuskegee Airmen Way and Merrick Boulevard was not analyzed as part of the 2019 EIS and a new traffic count was performed at this intersection to assess the potential effect of this street closure and traffic rerouting.

Turning movement counts ("TMCs"), including manual turning movement and vehicle classification counts, as well as 24-hour automatic traffic recorder ("ATR") machine counts and pedestrian counts were collected for the study area. ATR counts were conducted over a nine-day period, from Saturday, November 6, 2021 through Monday, November 15, 2021, to provide continuous 24-hour traffic data recorded in 15-minute intervals. The ATR count data was used to confirm the validity of the one-day TMCs.

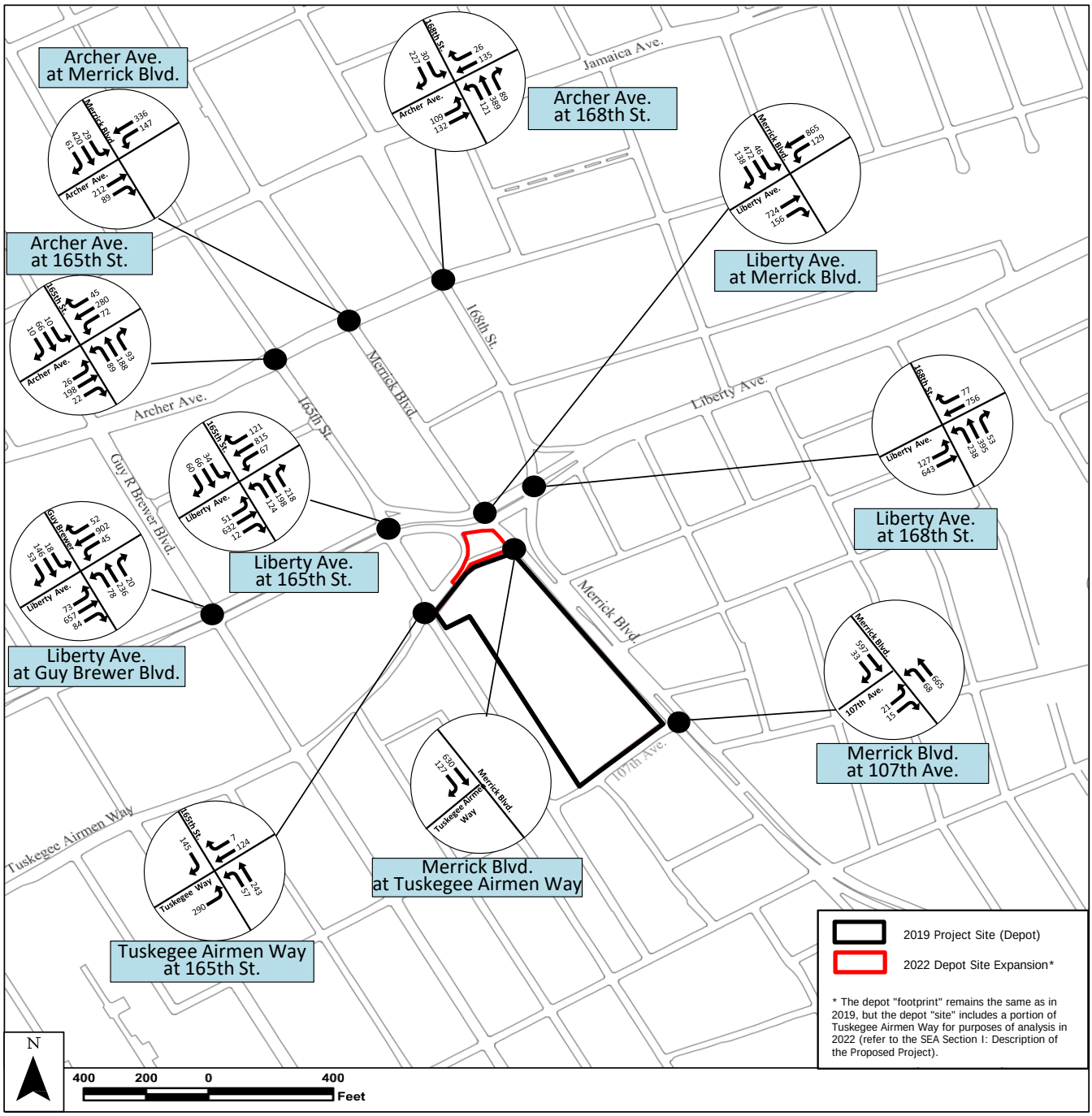
The TMCs were collected at the study area intersections concurrently with the ATR counts on Tuesday, November 9, 2021 for the morning and evening peak periods of 6-9 AM and 3-6 PM. The counts were collected in 15-minute intervals and classified into three vehicle types: passenger cars, buses, and heavy-duty trucks. The peak hour within each peak period was identified by summing the total of the four highest consecutive 15-minute intervals for all study intersections. Pedestrian counts were also collected simultaneous to the TMCs at selected study intersections.

A physical inventory of each study intersection was performed. Field reconnaissance surveys were conducted at these intersections to establish the existing physical characteristics including roadway and lane widths, the number of travel lanes, crosswalk widths, curb parking regulations, lane utilization (turn prohibitions), bus stop locations and signal timing/phasing data. Official intersection signal timing data was obtained from NYCDOT's Traffic Signal Bureau. The timings were field checked at the signalized intersections to verify actual traffic operation conditions.

Figure 2: Reevaluation – Existing Condition Traffic Volume AM Peak Hour and Figure 3: Existing Condition Traffic Volume PM Peak Hour present the existing AM and PM peak hour traffic volumes through the study area for an average weekday. The highest traffic volumes in the study area were identified on Merrick Boulevard and Liberty Avenue. Traffic volumes along Merrick Boulevard/168th Street generally range between 500 and 950 vehicles per hour ("vph") per direction and are generally balanced during the AM peak hour (750 vph per direction) and higher in the southbound direction during the PM peak hour (950 vph).

Traffic volumes along Liberty Avenue range between 800 and 1,000 vph per direction and are higher in the westbound direction in the AM peak hour (peaking at 1,000 vph) and nearly balanced (1,000 vph per direction) during the PM peak hour.

Volumes along Archer Avenue/93rd Avenue are generally lower than along Liberty Avenue and Merrick Boulevard and range from 300 to 550 vph during the AM and PM peak hours. The higher volumes are eastbound during both peak periods.



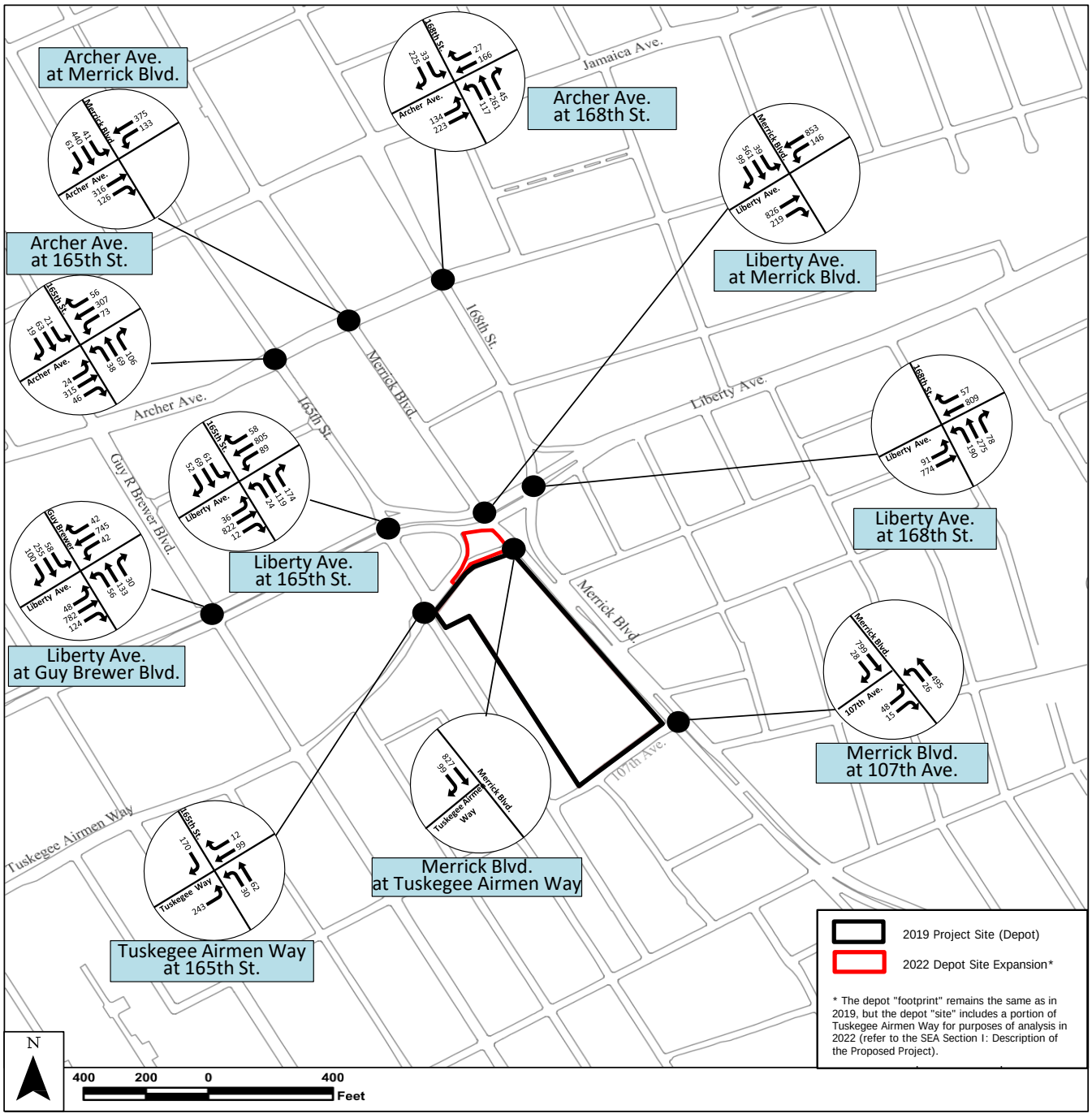
Source: STV Incorporated, 2022.

Figure 2

EXISTING CONDITION TRAFFIC VOLUME
AM PEAK HOUR

Reconstruction and Expansion of Jamaica Bus Depot

REEVALUATION



Source: STV Incorporated, 2022.

Figure 3

EXISTING CONDITION TRAFFIC VOLUME
PM PEAK HOUR

b. *Signalized Intersections*

The *HCM 2000* procedures were used to determine the capacities and levels of service for each of the intersections comprising the study area. For a signalized intersection, levels of service are determined for the intersection and its individual lane groups and defined in terms of the average control delays experienced by all vehicles that arrive in the analysis period, including delays incurred beyond the analysis period when the intersection or lane group is saturated.

The delay levels for signalized intersections are detailed below and in Table 1: Signalized Intersection LOS Criteria.

- LOS A describes operations with very low delay, i.e., less than ten seconds per vehicle. This occurs when signal progression is extremely favorable, and most vehicles arriving during the green phase would not have to stop at all.
- LOS B describes operations with delays in the range of 10.1 to 20.0 seconds per vehicle. This generally occurs with good progression and/or short cycle lengths. Again, most vehicles would not have to stop at the intersection.
- LOS C describes operations with delays in the range of 20.1 to 35.0 seconds per vehicle. These higher delays may result from fair progression (i.e., about half of the vehicles approaching the intersection arrive on the green signal indication) and/or longer cycle lengths. The number of vehicles stopping at an intersection would be significant at this level, although many would still pass through without stopping.
- LOS D describes operations with delays in the range of 35.1 to 55.0 seconds per vehicle. At LOS D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high volume-to-capacity ("v/c") ratios. Many vehicles stop, and the proportion of vehicles that do not stop declines.
- LOS E describes operations with delays in the range of 55.1 to 80.0 seconds per vehicle. This is considered the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high volume-to-capacity ratios.
- LOS F describes operations with delays in excess of 80.0 seconds per vehicle. This is considered unacceptable to most drivers. This condition often occurs with over-saturation (i.e., when arrival flow rates exceed the capacity of the intersection). It may also occur at high volume-to-capacity ratios with cycle failures. Poor progression and long cycle lengths may also contribute to such delays, and often vehicles would not pass through the intersection in one signal cycle.

Table 1: Signalized Intersection LOS Criteria

Level of Service	Average Delay per Vehicle (Seconds)
A	less than 10.1
B	10.1 to 20.0
C	20.1 to 35.0
D	35.1 to 55.0
E	55.1 to 80.0
F	greater than 80.0

Source: HCM 2000

c. *Unsignalized Intersections*

The LOS thresholds for unsignalized intersections differ slightly from those for signalized intersections. Delay levels for unsignalized intersections are detailed below and in Table 2: Unsignalized Intersection LOS Criteria.

- LOS A describes operations with very low delay, i.e., up to 10 seconds per vehicle. This generally occurs when little or no delay is experienced at the intersection.
- LOS B describes operations with delays in the range of 10 to 15 seconds per vehicle. This generally occurs when short traffic delays are experienced at the intersection.
- LOS C describes operations with delays in the range of 15 to 25 seconds per vehicle. This generally occurs when average traffic delays are experienced at the intersection.
- LOS D describes operations with delays in the range of 25 to 35 seconds per vehicle. At LOS D, the influence of congestion becomes more noticeable, and longer traffic delays are experienced.
- LOS E describes operations with delays in the range of 35 to 50 seconds per vehicle. At LOS E, there is obvious congestion, and very long traffic delays are experienced at the intersection.
- LOS F describes operations with delays greater than 50 seconds per vehicle. At LOS F, there is heavy congestion, and excessive traffic delays are experienced at the intersection.

Table 2: Unsignalized Intersection LOS Criteria

Level of Service	Average Delay per Vehicle (Seconds)
A	less than 10.1
B	10.1 to 15.0
C	15.1 to 25.0
D	25.1 to 35.0
E	35.1 to 50.0
F	greater than 50.0

Source: HCM 2000

For signalized and unsignalized intersections, LOS A, B, and C reflect clearly acceptable conditions; LOS D reflects the existence of delays within a generally tolerable range in dense urban environments; and LOS E and F are considered unacceptable.

d. *Intersection Impact Criteria*

Generally, traffic impacts may result from either construction of a project or its subsequent operation. This section addresses the traffic impact analysis for the operational condition of the Proposed Project in its opening year of 2027. The identification of significant adverse traffic impacts at analyzed intersections is based on the following criteria presented in the *CEQR Technical Manual*.

- If a lane group in the future with the Proposed Project condition is within LOS A, B, C, or D (average control delay less than or equal to 55.0 seconds/vehicle for signalized intersections and delay less than or equal to 35.0 seconds/vehicle for unsignalized intersections), the impact is not considered significant.
- For a lane group that would operate at LOS E in the future with the Proposed Project condition, a projected increase in delay of 5.0 or more seconds compared to the No-Build condition is considered a significant impact.
- For a lane group that would operate at LOS F in the Future With the Proposed Project condition, a projected increase in delay of 4.0 or more seconds compared to the No-Build condition is considered a significant impact.

4. Affected Environment

The affected environment assessed and described in this section encompasses traffic operations as indicated by intersection operations and level of service and parking related issues as related to the current parking supply and demand in the study area.

a. *Traffic*

Nine intersections in the vicinity of the JBD were analyzed for 2021 daily peak operating conditions using *HCM 2000* procedures. Traffic volumes, pedestrian crosswalk volumes, signal timing, intersection geometry (i.e., lane utilization, lane widths, parking regulations, etc.), and other pertinent information regarding each intersection were used in this analysis. The resulting output, consisting of v/c, individual movement and approach delays (seconds/vehicle), individual lane group and approach levels of service are presented in Table 3: 2021 Existing Traffic Operations for the weekday AM and PM peak hours. The analyses showed that the majority of intersection approaches in the study areas operate at acceptable levels of service with overall operations at LOS D or better.

Following is a summary of intersections and movements that operate at unacceptable LOS E or F conditions.

Intersections:

- 165th Street and Tuskegee Airmen Way (LOS E in AM)

Movements:

- Eastbound Liberty Avenue left-turn movement at 168th Street operates at LOS E during the AM peak hour. This poor LOS is the result of a relatively high left-turn volume (127 vehicles in the AM peak hour) that must wait for gaps in the westbound traffic stream (756 vph) before turning left as there is no protected left-turn signal at this intersection approach.

- Northbound 168th Street left-through lane at Liberty Avenue operates at LOS E during the PM peak hour, with 190 left-turn and 175 through vehicles in a shared northbound lane to accommodate the bus-only lane on 168th Street.
- Southbound Merrick Boulevard through movement at 107th Avenue operates at LOS E during the PM peak hour, with over 800 southbound vehicles in a single travel lane.
- Eastbound Tuskegee Airmen Way left-turn movement at 165th Street operates at LOS F during the AM peak hour. This poor LOS condition may be attributed to the high left-turn volume (290 vehicles in the AM peak hour) that must wait at the eastbound stop-controlled approach until the uncontrolled north northbound approach clears of conflicting traffic.

Table 3: 2021 Existing Traffic Operations

INTERSECTION & APPROACH		Mvt.	AM Peak Hour			PM Peak Hour		
			V/C	Control Delay	LOS	V/C	Control Delay	LOS
Signalized								
165th Street and Archer Avenue								
Archer Avenue	EB	L	0.12	15.2	B	0.09	14.6	B
		TR	0.47	19.7	B	0.61	22.6	C
	WB	LTR	0.51	9.4	A	0.46	7.9	A
165th Street	NB	LTR	0.75	24.4	C	0.42	18.7	B
	SB	LTR	0.19	16.4	B	0.22	16.9	B
Overall Intersection		-		**17.0**	**B**		**15.6**	**B**
165th Street and Liberty Avenue								
Liberty Avenue	EB	L	0.33	14.7	B	0.19	16.0	B
		TR	0.53	12.0	B	0.66	16.0	B
	WB	L	0.33	20.4	C	0.59	34.1	C
		TR	0.54	19.5	B	0.45	18.1	B
165th Street	NB	LT	0.79	38.0	D	0.26	21.0	C
		R	0.50	25.6	C	0.36	22.7	C
	SB	LTR	0.37	24.7	C	0.38	28.3	C
Overall Intersection		-		**21.1**	**C**		**19.4**	**B**
168th Street and Archer Avenue/93rd Avenue								
Archer Avenue/93rd Avenue	EB	LT	0.27	16.2	B	0.34	4.7	A
	WB	TR	0.13	12.2	B	0.13	12.2	B
168th Street	NB	L	0.24	19.5	B	0.23	19.4	B
		TR	0.51	22.6	C	0.31	19.9	B
	SB	L	0.13	18.7	B	0.09	17.9	B
		R	0.45	22.9	C	0.44	22.7	C
Overall Intersection		-		**19.6**	**B**		**14.6**	**B**
168th Street and Liberty Avenue								
Liberty Avenue	EB	L	0.96	59.9	E	0.68	17.5	B
		T	0.47	1.9	A	0.58	2.4	A
	WB	TR	0.70	23.1	C	0.64	21.8	C
168th Street	NB	LT	0.67	27.2	C	1.00	67.8	E
		R	0.19	20.8	C	0.23	21.2	C
Overall Intersection		-		**20.4**	**C**		**24.0**	**C**
Merrick Boulevard and 107th Avenue								
107th Avenue	EB	LR	0.09	22.4	C	0.20	24.1	C
Merrick Boulevard	NB	L	0.42	21.4	C	0.40	30.2	C
		T	0.92	38.3	D	0.69	22.2	C
	SB	T	0.85	31.6	C	1.03	62.6	E
		R	0.06	11.8	B	0.05	11.7	B
Overall Intersection		-		**33.5**	**C**		**44.7**	**D**

Table 3: 2021 Existing Traffic Operations (cont'd)

INTERSECTION & APPROACH		Mvt.	AM Peak Hour			PM Peak Hour		
			V/C	Control Delay	LOS	V/C	Control Delay	LOS
Merrick Boulevard and Archer Avenue								
Archer Avenue	EB	T	0.39	12.4	B	0.50	14.6	B
		R	0.21	10.9	B	0.27	11.9	B
	WB	L	0.49	15.8	B	0.48	26.8	C
		T	0.29	11.0	B	0.28	19.0	B
Merrick Boulevard	SB	LT	0.76	29.5	C	0.80	31.9	C
		R	0.13	15.3	B	0.15	15.5	B
Overall Intersection		-		**18.1**	**B**		**22.1**	**C**
Merrick Boulevard and Liberty Avenue								
Liberty Avenue	EB	T	0.76	32.0	C	0.82	34.8	C
		R	0.37	25.2	C	0.50	27.7	C
	WB	L	0.64	25.2	C	0.73	30.5	C
		T	0.65	9.4	A	0.58	7.0	A
Merrick Boulevard	SB	LT	0.92	45.9	D	0.97	53.8	D
		R	0.26	17.5	B	0.17	16.3	B
Overall Intersection		-		**25.4**	**C**		**28.9**	**C**
Guy R Brewer Boulevard and Liberty Avenue								
Liberty Avenue	EB	L	0.69	50.1	D	0.29	19.9	B
		TR	0.58	20.5	C	0.72	23.6	C
	WB	L	0.25	11.7	B	0.34	15.7	B
		TR	0.77	15.8	B	0.60	12.8	B
Guy R Brewer Boulevard	NB	LTR	0.75	34.5	C	0.61	29.4	C
	SB	L	0.08	19.1	B	0.18	20.5	C
		TR	0.40	23.1	C	0.61	27.8	C
Overall Intersection		-		**21.6**	**C**		**21.0**	**C**
Unsignalized								
165th Street and Tuskegee Airmen Way								
Tuskegee Airmen Way	EB	L	1.05	102.2	F	0.48	17.4	B
	WB	TR	0.38	20.5	C	0.24	13.5	B
165th Street	NB	LT	0.05	1.9	A	0.03	2.7	A
	SB	R	0.11	0.0	A	0.12	0.0	A
Overall Intersection		-		**37.1**	**E**		**9.4**	**A**

- "Mvt." refers to the specific intersection approach lane(s) and how the lane(s) operate and/or specific pavement striping. TR is a combined through- right turn lane(s), R or L refers to exclusive right- or left-turn movement lane(s), and LTR is a mixed lane(s) that allows for all movement types.
- V/C is the volume-to-capacity ratio for the Mvt. listed in the first column. Values above 1.0 indicate an excess of demand over capacity.
- Level of service (LOS) for signalized intersections is based upon average control delay per vehicle (sec/veh) for each lane group listed in the Mvt. Column as noted in the 2000 HCM - TRB.
- The delay calculations for signalized intersections represent the average control delay experienced by all vehicles that arrive in the analysis period, including delays incurred beyond the analysis period when the lane group is saturated.
- LOS for unsignalized intersections is based upon total average delay per vehicle (sec/veh) for each lane group listed in the Mvt. column as noted in the 2000 HCM -TRB.

Source: STV Incorporated, 2022.

b. *Parking*

On-street parking inventories and utilization surveys were conducted for the 2019 EIS during weekday midday hours within a ¼-mile (a typical "walkable" radius) of the existing JBD. The on-street inventory included a compilation of all posted curbside regulations within the area surveyed. The curbside regulations within the parking study area are provided in Appendix A: Traffic and Transportation of the 2019.

Generally, on-street parking is permitted within the study area. Many blocks have alternate-side parking regulations in effect once a week for street cleaning purposes; most prohibited time periods are in the late evening and early morning times (between midnight and 6 AM). Some blocks do not have any parking regulations, such as 165th Street. Within the parking study area, there are approximately 1,443 legal on-street vehicle parking spaces during the weekday midday period (10 AM to 4 PM). No substantial changes to on-street parking demand or capacity were assumed to have occurred between 2018 and 2021; therefore, the 2018 parking inventory data was grown to 2021 volumes using a background growth rate of approximately one and a half percent[2] resulting in a utilization rate of 99 percent and a demand of approximately 1,423 (see **Table 4: 2018 Existing On-Street Parking Supply and Demand**).

Table 4: 2021 Existing On-street Parking Supply and Demand

Parking Parameter	w/o Regs
Parking-Space Supply	1,443
Demand (Occupancy Rate)	1,423 (99%)
Spaces Available (Rate)	20 1%

Source: STV Incorporated, 2022.

c. *Safety*

According to the *CEQR Technical Manual*, a high-crash location is one where five or more pedestrian/bicycle injury crashes occurred in any consecutive twelve-month period. A review of the crash data obtained from NYCDOT for the most recent three-year period of 2017 through 2019 indicated that none of the study intersections were high-crash locations (see **Table 5: 2017-2019 Crash Summary**, **Table 6: 2017-2019 Detailed Crash Summary by Year** and **Figure 4: Reevaluation – Three Year Crash Total (2017-2019) By Location**). Archer Avenue from Van Wyck Expressway to 168th Street has been identified in the Vision Zero Queens Pedestrian Safety Action Plan as a Priority Corridor.

The Liberty Avenue intersection at Guy Brewer Boulevard had the highest number of pedestrian-related crashes from 2017 through 2019. The majority of the pedestrian crashes involved motorists failing to yield to pedestrians when turning at the intersections. Currently, MTA NYCT buses also turn at these intersections and the volume of buses turning movements would likely increase with the Proposed Project.

[2] The three percent background growth rate assumes an annual background growth of 0.50 percent for years 1 to 5 (2021 to 2026) and an annual growth of 0.25 percent for year 6 (2027) as per the *CEQR Technical Manual*.

NYCDOT has recently implemented leading pedestrian intervals, which allow pedestrians a seven-second head start (walk signal) crossing the intersections before the parallel traffic stream receives the green signal. This allows pedestrians to establish their presence in the crosswalk, thereby improving their visibility to motorists and reducing their exposure to turning vehicle traffic.

Table 5: 2017-2019 Crash Summary

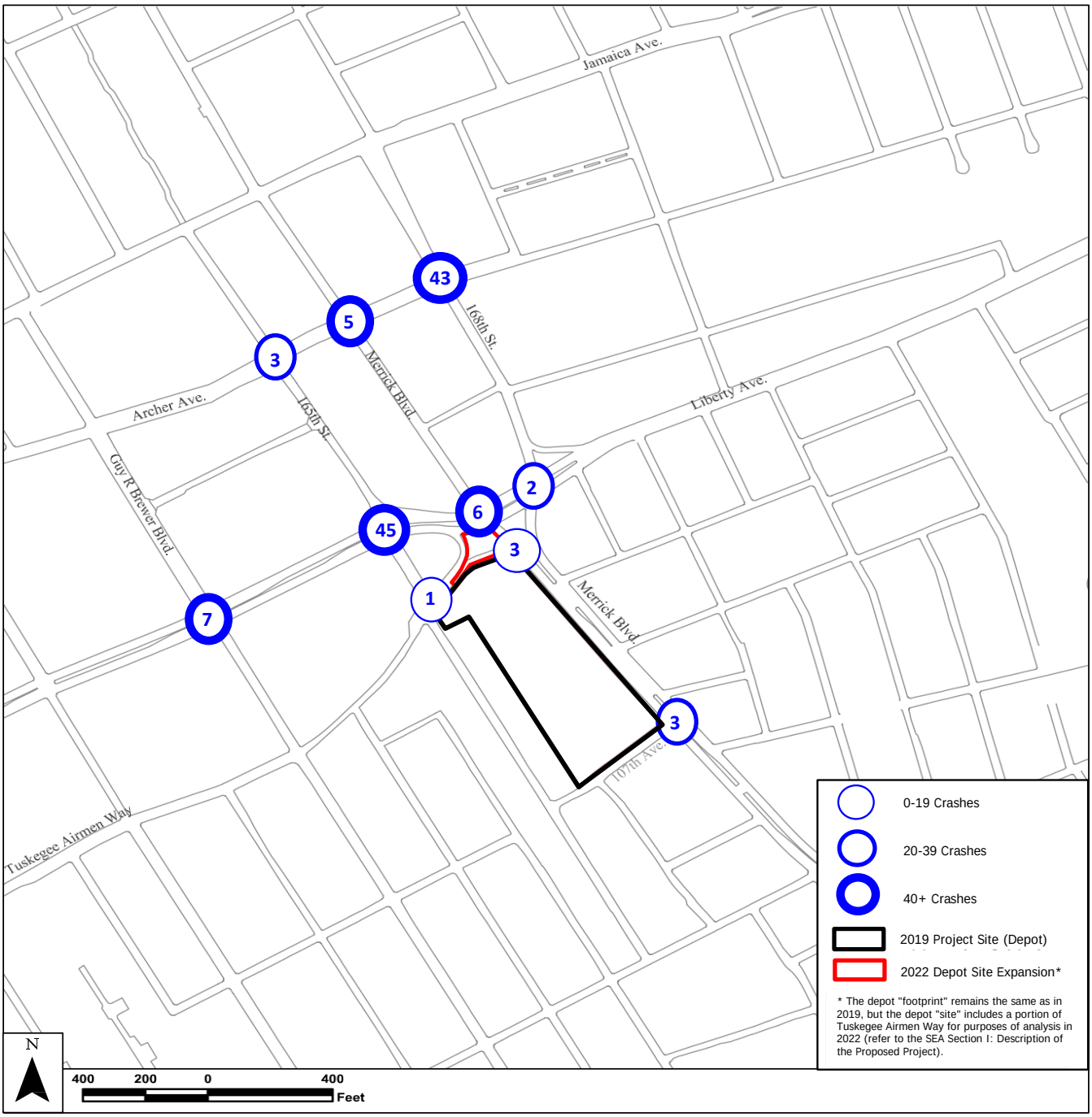
Location		Crashes, 2017-2019				Injuries	Fatalities
		Total	Motor Vehicle	Pedestrian	Bicycle		
Merrick Boulevard	107th Avenue	34	33	0	1	10	0
Merrick Boulevard	Liberty Avenue	65	62	0	3	17	0
Liberty Avenue	165th Street	45	44	1	0	11	0
Liberty Avenue	168th Street	23	23	0	0	2	0
Archer Avenue	165th Street	35	32	3	0	6	0
Archer Avenue	168th Street	43	35	6	2	11	0
Archer Avenue	Merrick Boulevard	58	52	6	0	12	0
Tuskegee Airmen Way	165th Street	13	12	1	0	2	0
Merrick Boulevard	Tuskegee Airmen Way	3	3	0	0	1	0
Liberty Avenue	Guy Brewer Boulevard	74	66	8	0	20	0

Source: STV Incorporated, 2022.

Table 6: 2017-2019 Detailed Crash Summary by Year

Location		Crashes												Injuries			Fatalities		
		Total			Motor Vehicle			Pedestrian			Bicycle								
		2017	2018	2019	2017	2018	2019	2017	2018	2019	2017	2018	2019	2017	2018	2019	2017	2018	2019
Merrick Boulevard	107th Avenue	9	16	9	9	15	9	0	0	0	0	1	0	4	4	2	0	0	0
Merrick Boulevard	Liberty Avenue	21	25	19	21	24	17	0	0	0	0	1	2	7	6	4	0	0	0
Liberty Avenue	165th Street	11	17	17	10	17	17	1	0	0	0	0	0	3	5	3	0	0	0
Liberty Avenue	168th Street	6	10	7	6	10	7	0	0	0	0	0	0	0	0	2	0	0	0
Archer Avenue	165th Street	14	11	10	12	10	10	2	1	0	0	0	0	2	2	2	0	0	0
Archer Avenue	168th Street	13	14	16	13	10	12	0	3	3	0	1	1	1	5	5	0	0	0
Archer Avenue	Merrick Boulevard	16	23	19	16	21	15	0	2	4	0	0	0	3	3	6	0	0	0
Tuskegee Airmen Way	165th Street	3	3	7	3	2	7	0	1	0	0	0	0	1	1	0	0	0	0
Merrick Boulevard	Tuskegee Airmen Way	2	1	0	2	1	0	0	0	0	0	0	0	1	0	0	0	0	0
Liberty Avenue	Guy Brewer Boulevard	28	21	25	26	18	22	2	3	3	0	0	0	9	4	7	0	0	0

Source: STV Incorporated, 2022.



Source: NYCDOT, 2021; STV Incorporated, 2022.

Figure 4

THREE YEAR CRASH TOTAL (2017-2019) BY LOCATION

5. Environmental Impact

a. *Introduction*

The assessment of traffic impacts was performed for the No-Build condition and the future with the Proposed Project for the 2027 Build Year, the opening year of the Proposed Project. The detailed traffic and parking analysis was performed to evaluate the effect of:

- increased number bus trips to/from the Depot;
- increased number of employees; and
- modified bus routing to/from the reconstructed Depot due to a reconfiguration of site driveways and on-site circulation/operations.

b. *No-Build Alternative*

i. Traffic

The analysis of the traffic conditions for the No-Build condition serves as the baseline against which impacts of operating the Proposed Project are compared. The No-Build analysis includes the traffic volume increases expected due to an overall growth in background traffic through and within the study area, and major real-estate developments and roadway system changes scheduled to be occupied or implemented by the future 2027 Build Year. A background growth rate of approximately three percent[3] was assumed for this area of Queens.

Aside from background growth, real-estate developments within the study area anticipated to be constructed and occupied prior to the 2027 Build Year have the potential to generate trips. Several No-Build projects (projects that would happen with or without the reconstruction and expansion of the JBD) were identified in the Depot site Study Area and their anticipated vehicle trip generation/assignments were developed and incorporated into the No-Build traffic volume network, including:

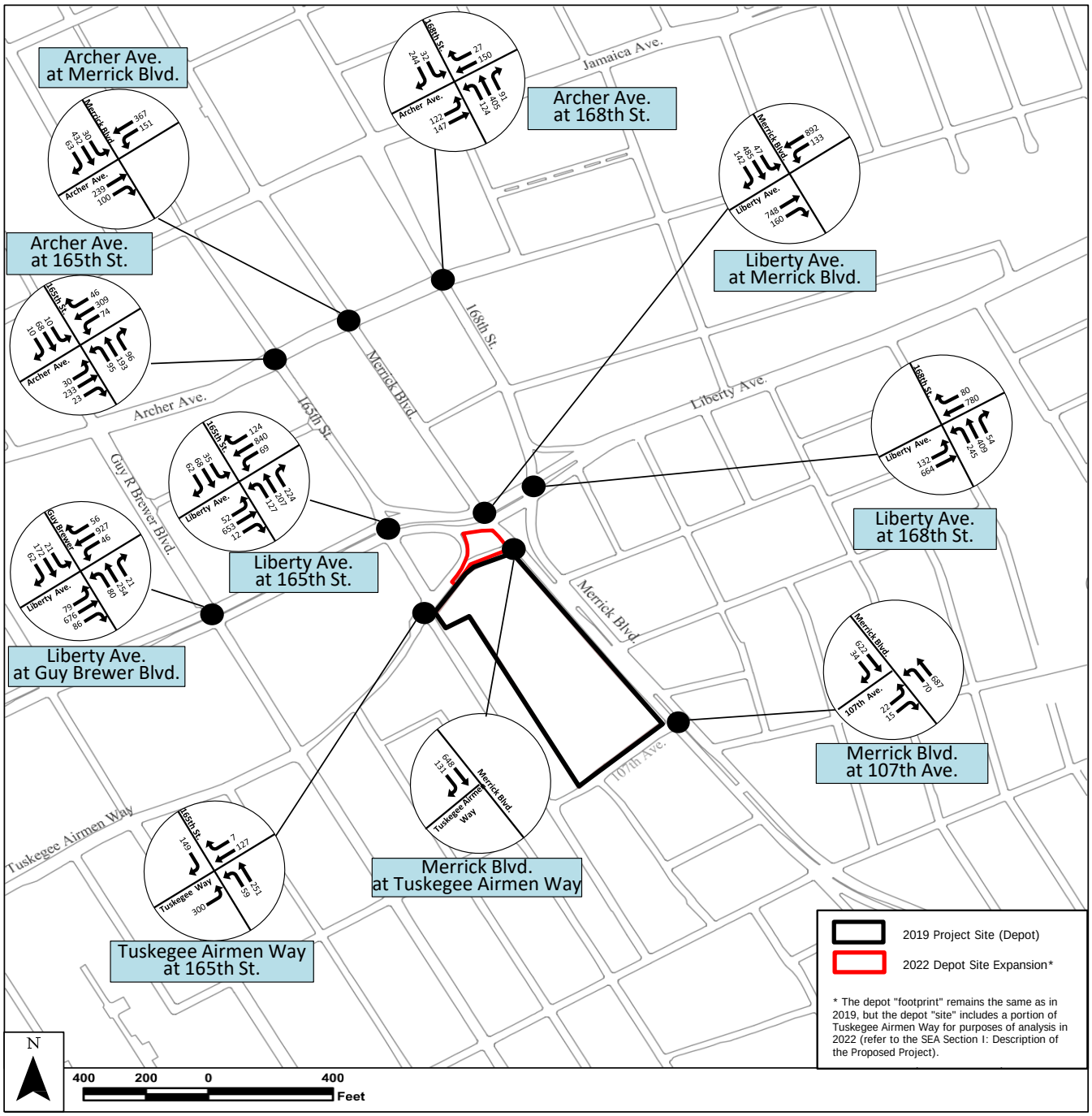
- 90-02 168th Street: 614-unit residential and 24,000 square foot commercial building
- 92-32 Union Hall Street: 110-room hotel
- 160-05 Archer Avenue: mixed-use retail and 315-unit residential building
- 163-05 Archer Avenue: 605-unit residential building

Traffic volumes for the 2027 analysis year No-Build condition were developed by applying the background traffic growth rate of approximately three percent to the existing roadway volume networks and overlaying the trip generation from the No-Build developments. The resulting 2027 No-Build study area traffic volume network is presented on Figure 5: Reevaluation – No-Build Condition Traffic Volume - AM Peak Hour and Figure 6: Reevaluation – No-Build Condition Traffic Volume - PM Peak Hour, which indicate an increase in traffic volumes of approximately 20 to 50 vph per direction on the major arterial corridors of Merrick Boulevard and Liberty Avenue during the peak hours. Traffic volume increments along Archer Avenue and 165th Street are lower, with less than 30 vph during the peak hours. No changes to the street network in the study area are anticipated by 2027.

[3] The three percent background growth rate assumes an annual background growth of 0.50 percent for years 1 to 5 (2021 to 2026) and an annual growth of 0.25 percent for year 6 (2027) as per the *CEQR Technical Manual*.

Presented in Table 7: 2027 No-Build Traffic Operations are v/c ratios, individual movement and approach delays, and individual lane group and approach levels of service for year 2027 No-Build weekday AM and PM peak hours. With the relatively minor increase in traffic projected on the study area roadways between 2021 and 2027, No-Build levels of service are generally similar to existing conditions with slight increases in delay. Specific intersection movements that would deteriorate in a LOS E or F condition between 2021 and 2027 include:

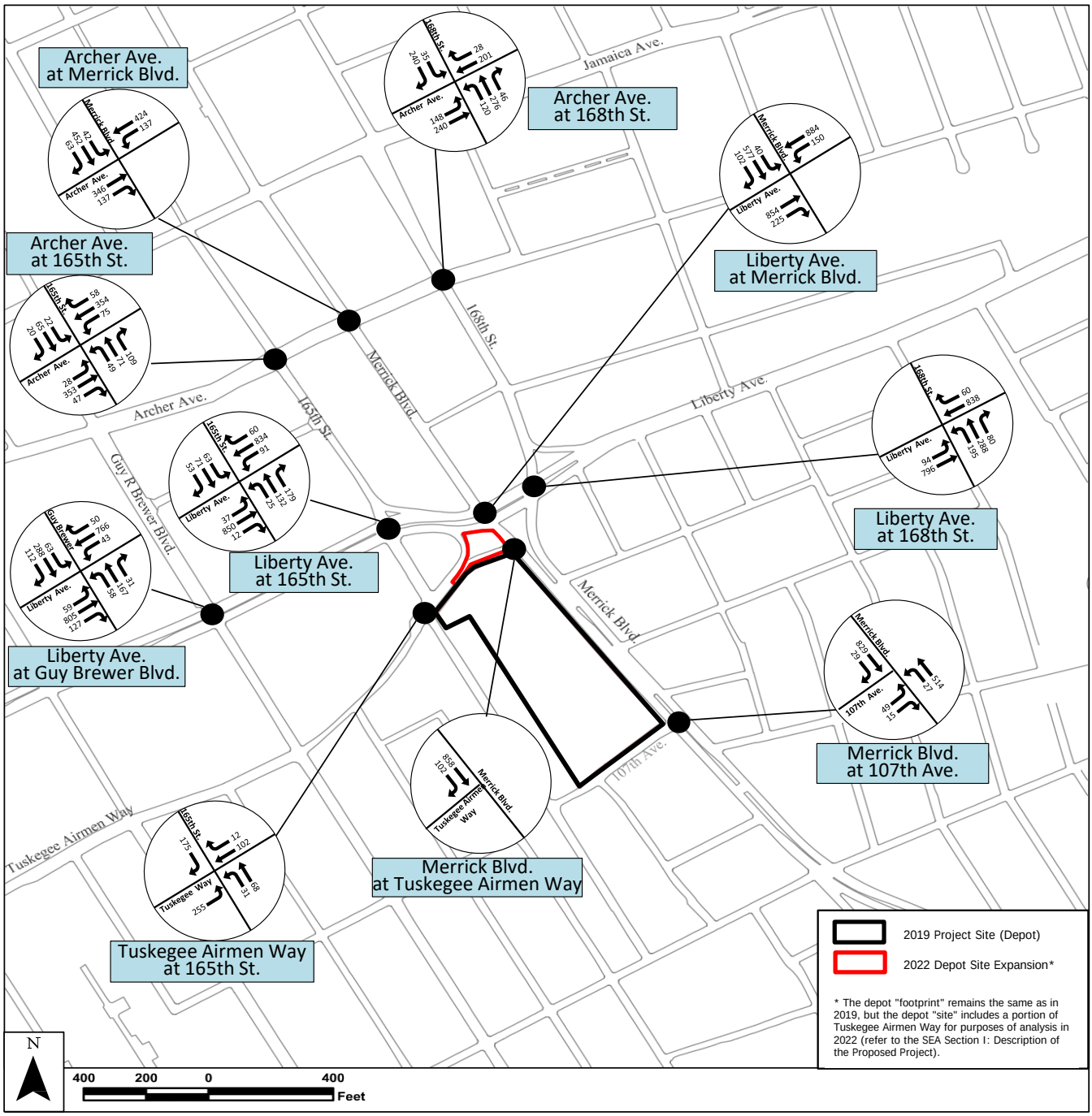
- Eastbound Liberty Avenue left-turn movement at 168th Street would deteriorate from LOS E to LOS F conditions during the AM peak hour.
- Northbound 168th Street left-through movement at Liberty Avenue would deteriorate within LOS E conditions during the PM peak hour.
- Southbound Merrick Boulevard through movement at 107th Avenue would deteriorate within LOS E conditions during the PM peak hour.
- Southbound Merrick Boulevard at Liberty Avenue would deteriorate to unacceptable LOS E conditions during the PM peak hour.
- Eastbound Liberty Avenue left-turn movement at Guy R. Brewer Boulevard would deteriorate to unacceptable LOS E conditions during the AM peak hour.
- Eastbound Tuskegee Airmen Way left-turn movement at 165th Street would deteriorate within LOS F conditions during the AM peak hour.



Source: STV Incorporated, 2022.

Figure 5

NO BUILD CONDITION TRAFFIC VOLUME
AM PEAK HOUR



Source: STV Incorporated, 2022.

Figure 6

NO BUILD CONDITION TRAFFIC VOLUME
PM PEAK HOUR

Table 7: 2027 No-Build Traffic Operations

INTERSECTION & APPROACH		Mvt.	AM Peak Hour			PM Peak Hour		
			V/C	Control Delay	LOS	V/C	Control Delay	LOS
Signalized								
165th Street and Archer Avenue								
Archer Avenue	EB	L	0.15	15.7	B	0.12	15.0	B
		TR	0.54	21.3	C	0.67	24.7	C
	WB	LTR	0.56	10.2	B	0.53	8.8	A
165th Street	NB	LTR	0.78	25.2	C	0.46	19.3	B
	SB	LTR	0.19	16.5	B	0.23	17.0	B
Overall Intersection		-		**17.9**	**B**		**16.7**	**B**
165th Street and Liberty Avenue								
Liberty Avenue	EB	L	0.35	15.6	B	0.21	16.7	B
		TR	0.55	12.3	B	0.68	16.7	B
	WB	L	0.35	21.2	C	0.64	38.3	D
		TR	0.56	19.7	B	0.47	18.3	B
165th Street	NB	LT	0.83	40.8	D	0.29	21.4	C
		R	0.52	25.9	C	0.37	22.9	C
	SB	LTR	0.40	24.9	C	0.39	29.2	C
Overall Intersection		-		**21.7**	**C**		**20.0**	**B**
168th Street and Archer Avenue/93rd Avenue								
Archer Avenue/93rd Avenue	EB	LT	0.31	16.5	B	0.38	5.0	A
	WB	TR	0.14	12.3	B	0.15	12.4	B
168th Street	NB	L	0.24	19.5	B	0.24	19.5	B
		TR	0.53	22.9	C	0.33	20.1	C
	SB	L	0.14	19.0	B	0.10	18.1	B
		R	0.48	23.6	C	0.47	23.3	C
Overall Intersection		-		**19.8**	**B**		**14.7**	**B**
168th Street and Liberty Avenue								
Liberty Avenue	EB	L	1.06	86.3	F	0.75	23.7	C
		T	0.48	1.8	A	0.60	2.4	A
	WB	TR	0.72	23.8	C	0.67	22.3	C
168th Street	NB	LT	0.69	27.8	C	1.03	77.4	E
		R	0.19	20.9	C	0.24	21.3	C
Overall Intersection		-		**22.2**	**C**		**26.5**	**C**
Merrick Boulevard and 107th Avenue								
107th Avenue	EB	LR	0.09	22.4	C	0.20	24.1	C
Merrick Boulevard	NB	L	0.47	24.5	C	0.45	35.1	D
		T	0.95	43.4	D	0.72	23.2	C
	SB	T	0.89	35.3	D	1.07	74.8	E
		R	0.07	11.9	B	0.05	11.7	B
Overall Intersection		-		**37.6**	**D**		**52.0**	**D**

Table 7: 2027 No-Build Traffic Operations (cont'd)

INTERSECTION & APPROACH		Mvt.	AM Peak Hour			PM Peak Hour		
			V/C	Control Delay	LOS	V/C	Control Delay	LOS
Merrick Boulevard and Archer Avenue								
Archer Avenue	EB	T	0.44	13.6	B	0.55	14.2	B
		R	0.24	12.1	B	0.29	11.3	B
	WB	L	0.53	17.7	B	0.53	28.2	C
		T	0.31	11.4	B	0.31	18.7	B
Merrick Boulevard	SB	LT	0.78	30.8	C	0.82	33.5	C
		R	0.13	15.3	B	0.15	15.6	B
Overall Intersection		-		**18.9**	**B**		**22.3**	**C**
Merrick Boulevard and Liberty Avenue								
Liberty Avenue	EB	T	0.79	33.0	C	0.85	36.5	D
		R	0.39	25.4	C	0.51	28.1	C
	WB	L	0.68	27.2	C	0.79	35.0	C
		T	0.67	9.4	A	0.60	7.0	A
Merrick Boulevard	SB	LT	0.95	50.2	D	1.00	60.2	E
		R	0.27	17.6	B	0.18	16.4	B
Overall Intersection		-		**26.7**	**C**		**31.0**	**C**
Guy R Brewer Boulevard and Liberty Avenue								
Liberty Avenue	EB	L	0.80	68.8	E	0.38	22.9	C
		TR	0.60	20.8	C	0.74	24.1	C
	WB	L	0.27	12.4	B	0.37	18.0	B
		TR	0.80	16.8	B	0.63	13.4	B
Guy R Brewer Boulevard	NB	LTR	0.85	43.4	D	0.78	39.6	D
	SB	L	0.10	19.5	B	0.22	21.2	C
		TR	0.47	24.4	C	0.69	30.4	C
Overall Intersection		-		**24.2**	**C**		**23.3**	**C**
Unsignalized								
165th Street and Tuskegee Airmen Way								
Tuskegee Airmen Way	EB	L	1.14	133.7	F	0.52	18.8	B
	WB	TR	0.41	21.5	C	0.25	13.8	B
165th Street	NB	LT	0.05	1.9	A	0.03	2.6	A
	SB	R	0.11	0.0	A	0.12	0.0	A
Overall Intersection		-		**47.8**	**E**		**10.0**	**A**

Source: STV Incorporated, 2022.

ii. Parking

Midday weekday parking demand in the study area was increased based on *CEQR Technical Manual* guidelines by one-half percent per year for the first five years and one-quarter percent for the sixth year, resulting in an approximate increase of three percent. The on-street parking demand is projected to rise to approximately 1,463 spaces or 101 percent of supply, resulting in a shortfall of approximately 20 parking spaces in the future 2027 No-Build conditions (see Table 8: 2027 No-Build On-Street Parking Supply and Demand).

Table 8: 2027 No-Build On-Street Parking Supply and Demand

Parking Parameter	Without Regulations in Effect
Parking-Space Supply	1,443
Demand (Occupancy Rate)	1,463 (101%)
Spaces Available (Rate)	-20 -1%

Source: STV Incorporated, 2022.

c. *Future with the Proposed Project (Build Year 2027)*

i. Traffic

The Proposed Project is anticipated to be complete in year 2027, and so this year has been chosen as the Build Year for which traffic analyses were performed. The incremental changes to the future 2027 traffic network was developed by incorporating three separate traffic components:

- Increased number of bus trips to/from the expansion of the reconstructed Depot,
- Increased number of employee trips to/from the reconstructed Depot, and
- Modification of existing bus movements into and out of the Depot due to the relocation of driveways and on-site bus circulation.

Although any potential de-mapping of Tuskegee Airmen Way, if it were to occur, would be a future separate action, the Depot design as currently contemplated would require reconfiguring the Tuskegee Airmen Way paved roadbed to support Depot operations. This change in roadbed configuration would include the removal of a parking area and some street trees and, therefore, would represent a minor change to the street pattern directly north of the Depot site. The Build analysis for the Proposed Project assumes traffic diversions resulting from the use of this portion of Tuskegee Airmen Way. Additionally, NYCDOT has implemented changes to the street configuration of Merrick Boulevard, Archer Avenue, and 168th Street to accommodate new bus-only lanes.

Bus parking capacity and Depot employment would increase between existing conditions and the 2027 Build Year. The area needed to park one standard sized bus at MTA NYCT depots is defined in units of standard bus equivalents ("SBEs"); an SBE represents the space needed to park a standard 40-foot-long, single-unit bus. MTA NYCT also operates longer buses, such as express buses, which are 45 feet long, and articulated buses,

which are 60 feet long. Because these buses are longer, they would require a larger parking space; an express bus is 1.15 SBEs and an articulated bus is 1.5 SBEs for parking space calculations.

The Depot currently has storage capacity for 200 standard buses (157 SBEs within the original JBD property and 43 SBEs within the new acquired properties along Merrick Boulevard) and does not service/maintain the longer articulated or express bus types. However, the Proposed Project would be designed to accommodate express and articulated buses. **Table 9: Bus Fleet Breakdown by Bus Type** provides a summary of the existing JBD bus fleet composition and compares it to the future estimated bus fleet projections for the Proposed Project. Note that the actual number of physical buses for the Proposed Project is lower than the SBE total as most of the buses are the larger articulated and express bus type that require more space for parking than a single SBE.

Table 9: Bus Fleet Breakdown by Bus Type

Bus Type	Existing Bus Depot		Proposed Project	
	No. of Buses	*SBEs*	*No. of Buses*	*SBEs*
Standards	200	200	74	74
Standards – AEB	0	0	22	22
Articulated	0	0	124	186
Express	0	0	20	23
Total	200	200	240	305

Notes:
1. Standards and AEB buses quantify as 1 SBE
2. Articulated buses quantify as 1.5 SBEs
3. Express buses quantify as 1.15 SBEs
4. An AEB is an all-electric bus

Source: STV Incorporated, 2022.

Bus movements in and out of the Depot vary over the course of the day (see **Table 10: Existing Jamaica Bus Depot Bus Entry/Exit Movements**). Based on 2021 bus Depot data, 176 buses pull out of the Depot between 3 AM and 7:30 AM to serve the morning commuting period. Many of these buses return to the Depot between 8:30 AM and 11 AM. Between 12:30 PM and 3 PM, another surge of approximately 122 buses depart the facility, many of them serving the bus passenger demand during the school dismissal period. Beginning at about 6:30 PM, buses begin returning to the Depot at the end of their runs to be fueled, washed, and then parked overnight. Buses typically need to be on their routes and serving the public during the standard 7-9 AM and 4-6 PM commuting periods; consequently, the peak periods for buses entering and exiting the Depot are typically before and after the commuter peak hours.

Table 10: 2021 Existing Jamaica Bus Depot Bus Entry/Exit Movements

Time	Existing Bus Movement	
	In	Out
12 - 1 AM	19	8
1 - 2 AM	10	0
2 - 3 AM	6	0
3 - 4 AM	1	8
4 - 5 AM	7	29
5 - 6 AM	3	49
6 - 7 AM	2	77
7 - 8 AM	4	13
8 - 9 AM	40	6
9 - 10 AM	58	22
10 - 11 AM	35	25
11 AM - 12 PM	15	18
12 - 1 PM	21	27
1 - 2 PM	19	37
2 - 3 PM	12	63
3 - 4 PM	25	12
4 - 5 PM	39	40
5 - 6 PM	28	34
6 - 7 PM	29	16
7 - 8 PM	38	18
8 - 9 PM	46	12
9 - 10 PM	33	13
10 - 11 PM	27	8
11 PM - 12 AM	22	5

Source: STV Incorporated, 2022.

Bus movements in and out of the Depot are assumed to be similar to existing patterns. The only difference is that the Proposed Project would accommodate additional buses and the number of bus trips entering/exiting would increase proportionately. Specifically, the number of trips would increase by 20 percent for the Proposed Project.

The incremental hourly increase in bus trips to/from the facility was combined with hourly traffic volumes processed on the adjacent roadway network to identify the peak hours for the traffic analysis. As presented in Table 11: Existing Adjacent Roadway Traffic Volumes and Incremental Bus Depot Trips, the AM and PM peak hours for the roadway network were selected for the traffic analysis as the cumulative volume of new bus trips and existing traffic would peak during these periods.

Table 11: Existing Adjacent Roadway Traffic Volumes and Incremental Bus Depot Trips

Time	Existing Traffic Volume (Vehicles)		Incremental Bus Trips	Total (Vehicles)
	Merrick Blvd.	Liberty Ave.		
12 - 1 AM	270	261	4	536
1 - 2 AM	176	198	2	377
2 - 3 AM	113	139	1	254
3 - 4 AM	101	137	1	239
4 - 5 AM	212	249	6	467
5 - 6 AM	444	544	9	997
6 - 7 AM	985	1,172	15	2,172
7 - 8 AM	**1,345**	**1,733**	**4**	**3,082**
8 - 9 AM	1,359	1,616	8	2,983
9 - 10 AM	1,161	1,224	15	2,399
10 - 11 AM	1,045	1,025	10	2,079
11 AM - 12 PM	1,052	1,041	5	2,098
12 - 1 PM	1,126	1,037	7	2,171
1 - 2 PM	1,177	1,186	10	2,373
2 - 3 PM	1,316	1,323	15	2,655
3 - 4 PM	1,327	1,582	6	2,915
4 - 5 PM	1,357	1,619	13	2,989
5 - 6 PM	**1,386**	**1,618**	**8**	**3,012**
6 - 7 PM	1,257	1,367	7	2,631
7 - 8 PM	1,063	1,076	13	2,152
8 - 9 PM	869	765	13	1,647
9 - 10 PM	664	549	10	1,223
10 - 11 PM	505	453	7	966
11 PM - 12 AM	399	346	4	749

Source: STV Incorporated, 2022.

The Proposed Project is estimated to employ additional bus operators, up to three additional administrative staff, two additional maintainers, and one additional "shifter" (i.e., an employee who drives the buses through the fueling/washing lanes and parks the buses on-site for overnight storage). The estimated number of additional daily bus operators would be 96 for the Proposed Project. The bus operators were assumed to arrive to work within the hour before their scheduled bus pull out time from the Depot and assumed to depart for home within the hour of their bus pull in time to the Depot. The administrative staff were assumed to arrive to work during the AM peak traffic analysis hour and depart during the PM peak traffic analysis hour. The additional maintainers and shifter are needed at the Depot when the buses are returning for the day; therefore, these employees were assumed to arrive to the Depot during the mid-afternoon hours and then depart later in the evening/night. For traffic analysis purposes, all of the employee commuting trips were conservatively assumed to be made by private auto. Overall, the total incremental number of vehicle trips (autos and buses) to and from the reconstructed Depot would be 8 trips in the AM peak hour and 13 trips during the PM peak hour.

According to the *CEQR Technical Manual*, if a proposed project results in fewer than 50 peak hour vehicle trip-ends (such as this Proposed Project), further detailed traffic analyses would typically not be necessary as the potential for significant traffic impacts are unlikely. However, given that existing bus movements would also

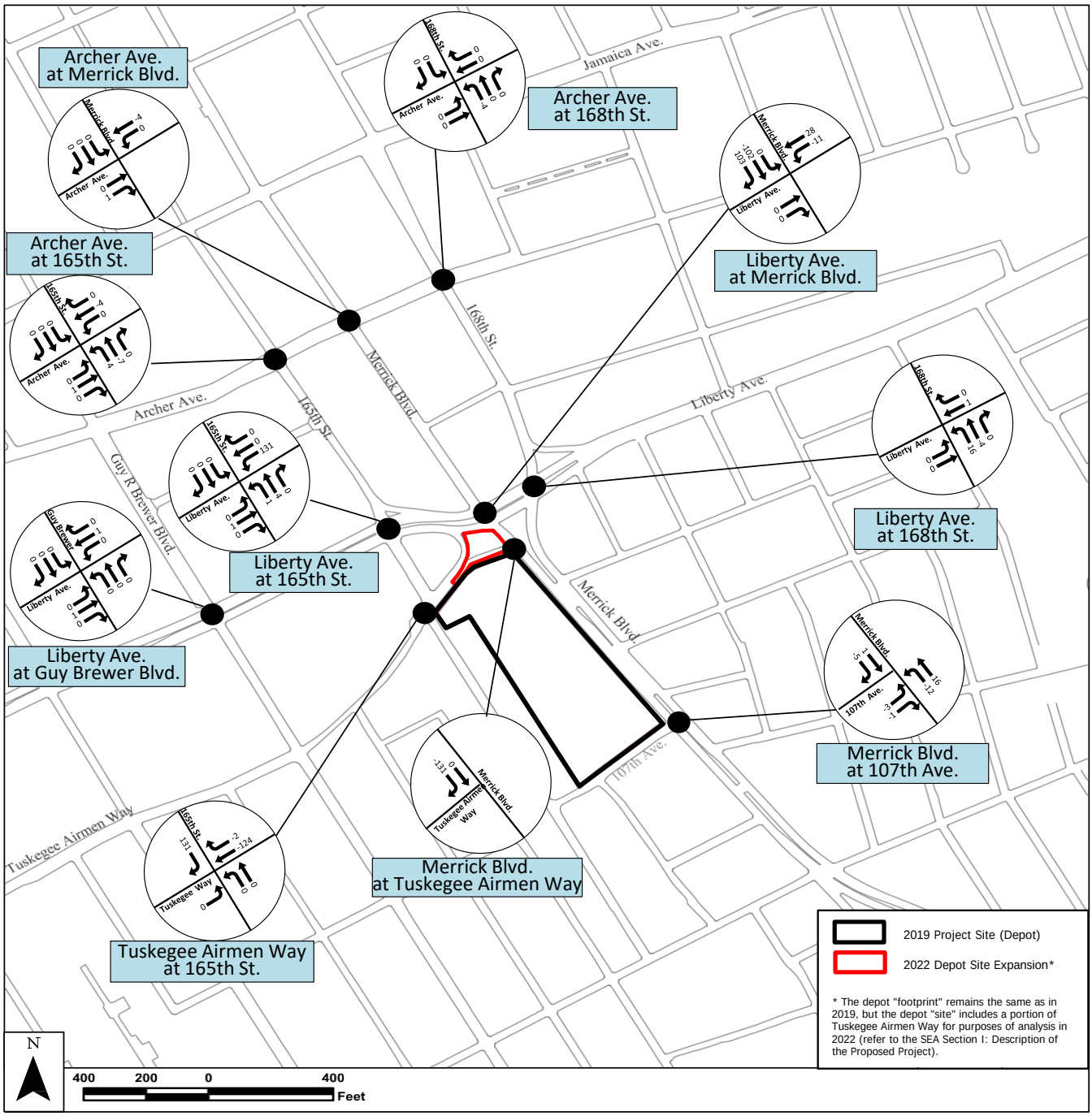
be rerouted as part of the Proposed Project, a detailed traffic analysis was performed. The bus routing is unchanged as described in Section 4.5.5.3 of the 2019 EIS.

Figure 7: Reevaluation – Build Condition Increment Traffic Volume AM Peak Hour and Figure 8: Reevaluation – Build Condition Increment Traffic Volume PM Peak Hour show the incremental change in vehicle trips due to:

- Increased number of bus and employee trips to/from the expansion of the reconstructed Depot,
- Rerouting of existing bus movements into and out of the Depot, and
- Rerouting of vehicles resulting from the Tuskegee Airmen Way.

Figure 9: Reevaluation – Build Condition Traffic Volume AM Peak Hour and Figure 10: Reevaluation – Build Condition Traffic Volume PM Peak Hour indicate the total future with the Proposed Project volumes during the AM and PM peak hours, respectively.

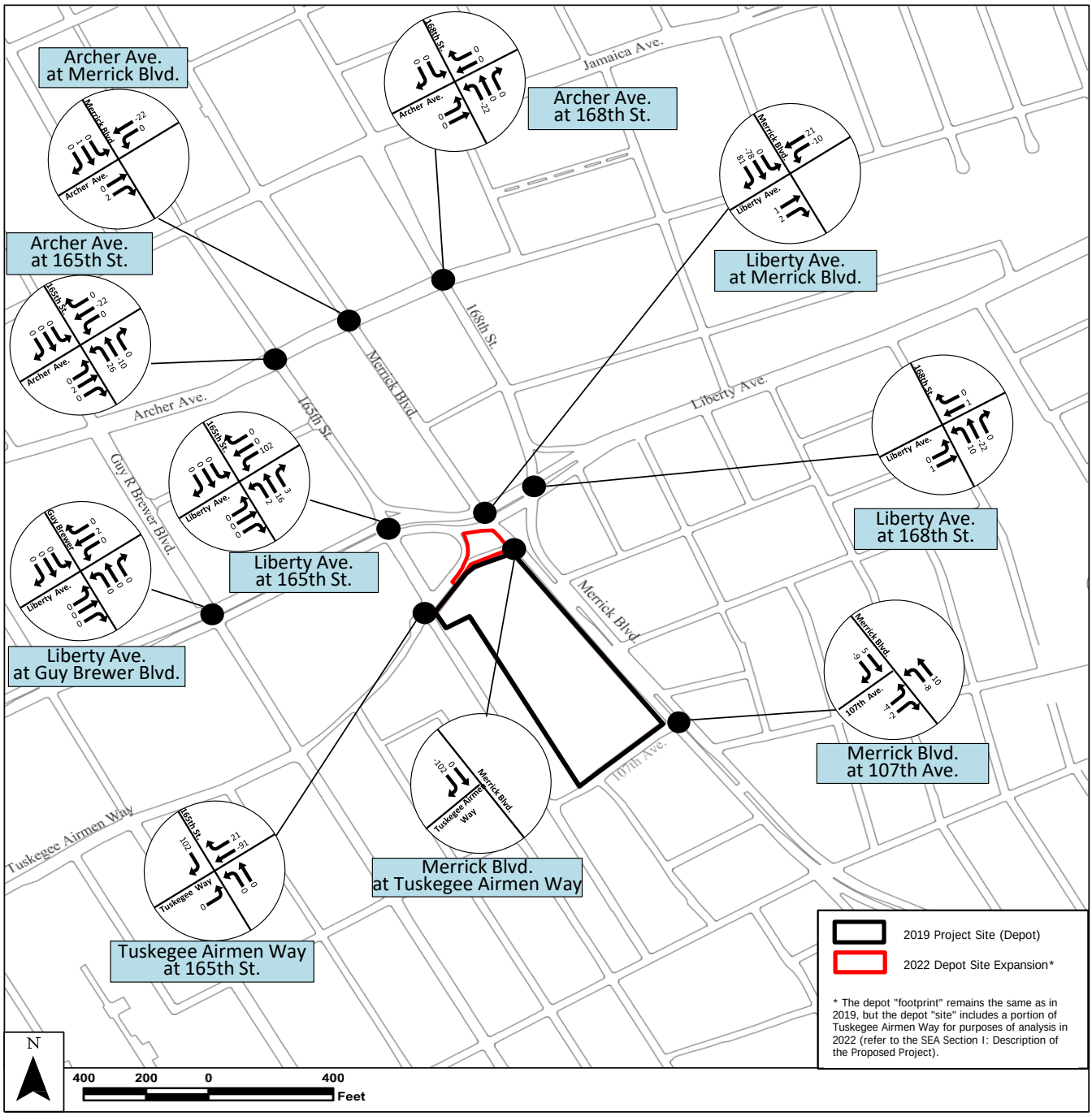
Presented in Table 12: 2027 Future With the Proposed Project Traffic Operations are v/c ratios, individual movement and approach delays, and levels of service for year 2027 future with the Proposed Project weekday AM and PM peak hours. With the relatively minor increase in traffic generated by the Proposed Project, the future with the Proposed Project levels of service are generally similar to No-Build conditions with slight increases in delay. The level-of-service analysis indicated that a significant traffic impact would be expected at one intersection, Liberty Avenue and 165th Street. The westbound Liberty Avenue left-turn delay would deteriorate to LOS F conditions during the AM and PM peak hours, as a result of the traffic diverted from the Tuskegee Airman Way closure.



Source: STV Incorporated, 2022.

Figure 7

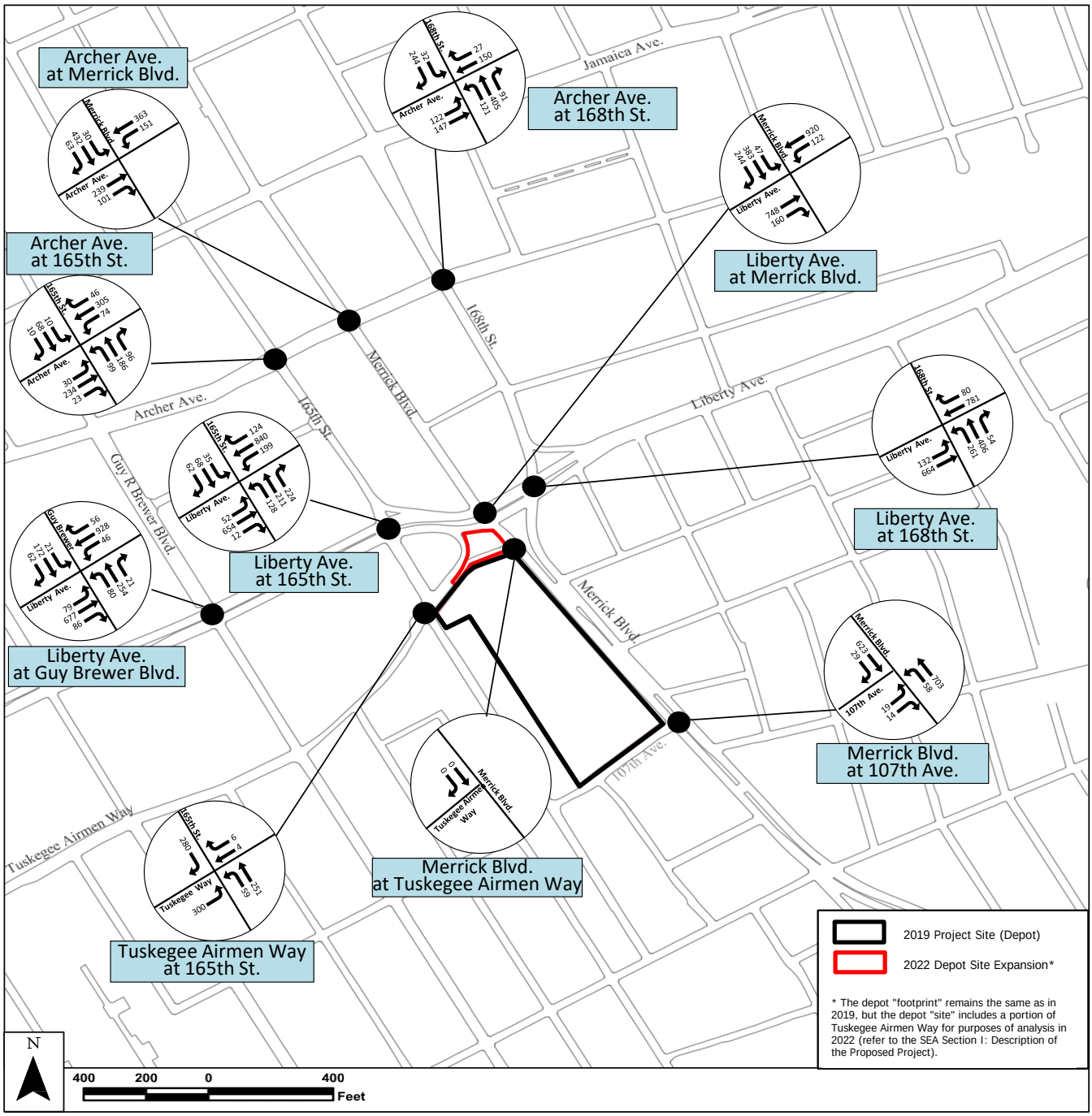
BUILD CONDITION INCREMENT TRAFFIC VOLUME
AM PEAK HOUR



Source: STV Incorporated, 2022.

Figure 8

BUILD CONDITION INCREMENT TRAFFIC VOLUME
PM PEAK HOUR



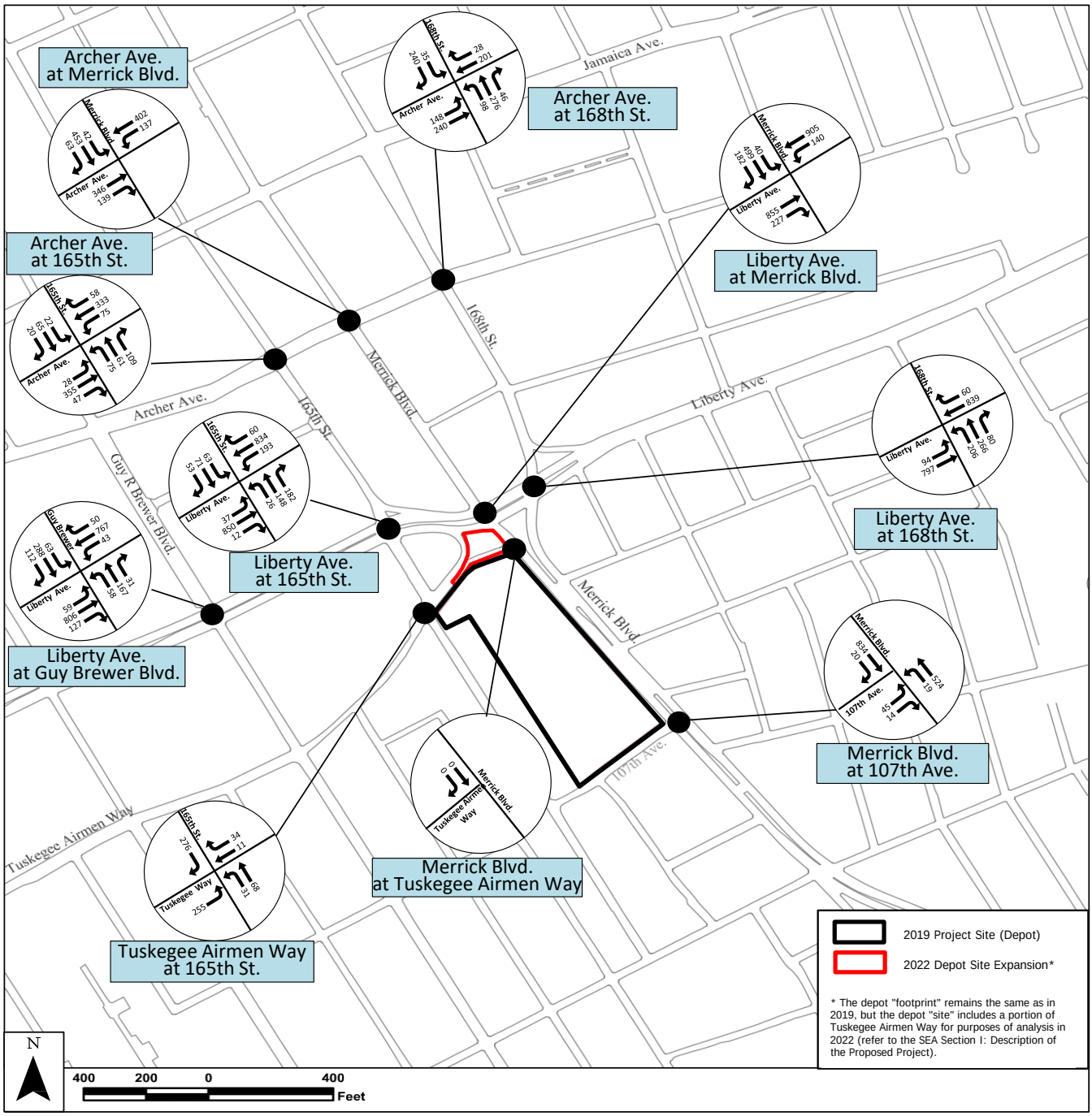
Source: STV Incorporated, 2022.

Figure 9

BUILD CONDITION TRAFFIC VOLUME
AM PEAK HOUR

Reconstruction and Expansion of Jamaica Bus Depot

REEVALUATION



Source: STV Incorporated, 2022.

Figure 10

BUILD CONDITION TRAFFIC VOLUME
PM PEAK HOUR

Table 12: 2027 Future with the Proposed Project Traffic Operations

INTERSECTION & APPROACH		Mvt.	AM Peak Hour			PM Peak Hour		
			V/C	Control Delay	LOS	V/C	Control Delay	LOS
Signalized								
165th Street and Archer Avenue								
Archer Avenue	EB	L	0.15	15.7	B	0.11	14.9	B
		TR	0.54	21.3	C	0.67	24.9	C
	WB	LTR	0.56	10.2	B	0.51	8.7	A
165th Street	NB	LTR	0.78	25.0	C	0.52	20.6	C
	SB	LTR	0.19	16.5	B	0.23	17.0	B
Overall Intersection		-		**17.8**	**B**		**17.2**	**B**
165th Street and Liberty Avenue								
Liberty Avenue	EB	L	0.35	15.5	B	0.21	16.7	B
		TR	0.55	12.3	B	0.68	16.7	B
	WB	L	1.02	93.4	F	1.34	218.2	F
		TR	0.56	19.7	B	0.47	18.3	B
165th Street	NB	LT	0.84	41.7	D	0.32	21.9	C
		R	0.52	25.9	C	0.38	23.0	C
	SB	LTR	0.40	25.1	C	0.40	29.2	C
Overall Intersection		-		**27.1**	**C**		**33.9**	**C**
168th Street and Archer Avenue/93rd Avenue								
Archer Avenue/93rd Avenue	EB	LT	0.31	16.5	B	0.38	5.0	A
	WB	TR	0.14	12.3	B	0.15	12.4	B
168th Street	NB	L	0.24	19.5	B	0.19	19.0	B
		TR	0.53	22.9	C	0.33	20.1	C
	SB	L	0.14	19.0	B	0.10	18.1	B
		R	0.48	23.6	C	0.47	23.3	C
Overall Intersection		-		**19.8**	**B**		**14.6**	**B**
168th Street and Liberty Avenue								
Liberty Avenue	EB	L	1.07	89.4	F	0.76	24.6	C
		T	0.48	1.9	A	0.60	2.4	A
	WB	TR	0.72	23.8	C	0.67	22.4	C
168th Street	NB	LT	0.70	28.3	C	1.01	71.4	E
		R	0.19	20.9	C	0.24	21.3	C
Overall Intersection		-		**22.6**	**C**		**25.1**	**C**
Merrick Boulevard and 107th Avenue								
107th Avenue	EB	LR	0.08	22.3	C	0.18	23.8	C
Merrick Boulevard	NB	L	0.40	21.4	C	0.31	25.2	C
		T	0.97	47.8	D	0.73	23.7	C
	SB	T	0.89	35.4	D	1.08	76.9	E
		R	0.06	11.8	B	0.04	11.6	B
Overall Intersection		-		**40.0**	**D**		**53.5**	**D**

Table 12: 2027 Future with the Proposed Project Traffic Operations (cont'd)

INTERSECTION & APPROACH		Mvt.	AM Peak Hour			PM Peak Hour		
			V/C	Control Delay	LOS	V/C	Control Delay	LOS
Merrick Boulevard and Archer Avenue								
Archer Avenue	EB	T	0.44	13.6	B	0.55	14.0	B
		R	0.24	12.1	B	0.30	11.1	B
	WB	L	0.53	17.7	B	0.53	27.9	C
		T	0.31	11.4	B	0.30	18.2	B
Merrick Boulevard	SB	LT	0.78	30.8	C	0.83	33.6	C
		R	0.13	15.3	B	0.15	15.6	B
Overall Intersection		-		**18.9**	**B**		**22.2**	**C**
Merrick Boulevard and Liberty Avenue								
Liberty Avenue	EB	T	0.79	33.0	C	0.85	36.6	D
		R	0.39	25.4	C	0.52	28.2	C
	WB	L	0.63	24.8	C	0.74	31.2	C
		T	0.69	10.0	A	0.61	7.3	A
Merrick Boulevard	SB	LT	0.76	30.6	C	0.87	38.3	D
		R	0.47	21.0	C	0.32	18.3	B
Overall Intersection		-		**22.6**	**C**		**25.7**	**C**
Guy R Brewer Boulevard and Liberty Avenue								
Liberty Avenue	EB	L	0.80	68.8	E	0.38	23.0	C
		TR	0.60	20.9	C	0.74	24.2	C
	WB	L	0.27	12.3	B	0.37	18.2	B
		TR	0.80	16.8	B	0.63	13.4	B
Guy R Brewer Boulevard	NB	LTR	0.85	43.4	D	0.78	39.6	D
	SB	L	0.10	19.5	B	0.22	21.2	C
		TR	0.47	24.4	C	0.69	30.4	C
Overall Intersection		-		**24.2**	**C**		**23.3**	**C**
Unsignalized								
165th Street and Tuskegee Airmen Way								
Tuskegee Airmen Way	EB	L	0.73	30.7	C	0.43	14.8	B
	WB	TR	0.02	13.0	B	0.07	10.2	B
165th Street	NB	LT	0.06	2.1	A	0.03	2.7	A
	SB	R	0.20	0.0	A	0.19	0.0	A
Overall Intersection		-		**10.8**	**B**		**6.4**	**A**

Source: STV Incorporated, 2022.

ii. Parking

The Depot is active and in operation 24 hours a day. During the peak daytime shift, an estimated 34 additional employees would report to the Depot – nearly all of these employees would be bus operators. For parking analysis purposes, of these estimated 34 additional employees, 21 employees were assumed to arrive at the

Depot by private auto and park,[4] thereby increasing the on-street parking demand by 21 vehicles. Additionally, the use of Tuskegee Airman Way and adjacent NYCDOT traffic island would remove up to thirty available parking spaces (curbside parking spaces and those parked on the existing traffic island) from the parking-space supply in the 2027 future with the Proposed Project. This would increase the shortfall in available on-street parking to three percent (49 spaces) on a typical weekday (see Table 13: 2027 Future With the Proposed Project On-Street Parking Supply and Demand). This shortfall is not considered a significant impact for the Proposed Project due to the availability and proximity of transit in the area. Additionally, MTA NYCT encourages their employees to use public transit to commute to work by providing a MetroCard as part of their employee compensation package. Alternative travel modes are available for JBD employees including four local MTA NYCT bus routes that operate along Merrick Boulevard and two local MTA NYCT bus routes along Liberty Avenue, which could encourage non-auto travel to and from the Depot and further reduce the parking demand.

MTA NYCT policy does not provide employee parking facilities. However, recognizing the on-street parking space utilization concern in the area surrounding the Depot, MTA NYCT will work to provide on-site parking to the extent that it does not interfere with usual and customary operations at the Depot. MTA NYCT employees at the Depot would be able to park their personal vehicles in the parking spaces when the buses are out in service.

Table 13: 2027 Future with the Proposed Project On-Street Parking Supply and Demand

Parking Parameter	w/o Regs
Parking-Space Supply	1,413
Demand (Occupancy Rate)	1,484 (105%)
Spaces Available (Rate)	-71 -5%

Source: STV Incorporated, 2022.

6. Summary of Adverse Impacts and Mitigation Measures

A significant traffic impact was identified at the intersection of Liberty Avenue and 165th Street during the AM and PM peak hours. This impact could be mitigated through signal timing adjustments, a standard traffic mitigation practice. The proposed signal timing changes and resulting intersection operations are listed in Table 14: Mitigated 2027 Future With the Proposed Project Traffic Operations.

Existing traffic and operational conditions at the intersection of Tuskegee Airmen Way at 165th Street meet traffic control signal needs studies as per the CEQR Traffic Signal Warrant Analysis (Warrant 3: Peak Hour Traffic Volumes). Installing a traffic signal would improve existing intersection operations to an acceptable LOS C conditions or better for all approaches. This intersection does not experience a significant traffic impact

[4] The 60 percent employee private auto mode choice was estimated based on U.S. Census reverse journey to work data for workers within Queens Census Tract 254, the Census Tract for the JBD.

due to the Proposed Project; however, given the increase of buses projected to turn through this intersection during the future 2027 Build Year, installation of a traffic signal at this intersection is recommended. This intersection has an offset configuration (i.e., the north and southbound approach do not align) and, therefore, installing a traffic signal would help to improve safety and reduce conflicts between turning buses and through traffic on 165th Street.

Table 14: Mitigated 2027 Future with the Proposed Project Traffic Operations

INTERSECTION & APPROACH		Mvt.	No-Build			Build			Mitigated Build			Improvement Measures
			V/C	Control Delay	LOS	V/C	Control Delay	LOS	V/C	Control Delay	LOS	
AM Peak												
165th Street and Liberty Avenue												
Liberty Avenue	EB	L	0.35	15.6	B	0.35	15.5	B	0.40	40.1	D	- Add a 13-second westbound protected left-turn phase, shifting 12 seconds of green time from the eastbound through phase and one second of green time from the NB/SB phase.
		TR	0.55	12.3	B	0.55	12.3	B	0.79	40.2	D	
	WB	L	0.35	21.2	C	1.02	93.4	F	0.87	51.1	D	
		TR	0.56	19.7	B	0.56	19.7	B	0.54	18.9	B	
165th Street	NB	LT	0.83	40.8	D	0.84	41.7	D	0.87	51.6	D	
		R	0.52	25.9	C	0.52	25.9	C	0.53	33.3	C	
	SB	LTR	0.40	24.9	C	0.40	25.1	C	0.43	19.9	B	
Overall Intersection		-		**21.7**	**C**		**27.1**	**C**		**33.1**	**C**	
165th Street and Tuskegee Airmen Way												
Tuskegee Airmen Way	EB	L	1.14	133.7	F	0.73	30.7	C	0.59	23.1	C	- Install a traffic signal
	WB	TR	0.41	21.5	C	0.02	13.0	B	0.01	14.0	B	
165th Street	NB	LT	0.05	1.9	A	0.06	2.1	A	0.51	20.4	C	
	SB	R	0.11	0.0	A	0.20	0.0	A	0.57	22.9	C	
Overall Intersection		-		**47.8**	**E**		**10.8**	**B**		**22.0**	**C**	
PM Peak												
165th Street and Liberty Avenue												
Liberty Avenue	EB	L	0.21	16.7	B	0.21	16.7	B	0.23	33.0	C	- Add a 15-second westbound protected left-turn phase, shifting 10 seconds of green time from the eastbound through phase and five seconds of green time from the NB/SB phase.
		TR	0.68	16.7	B	0.68	16.7	B	0.91	44.3	D	
	WB	L	0.64	38.3	D	1.34	218.2	F	0.82	44.6	D	
		TR	0.47	18.3	B	0.47	18.3	B	0.41	14.8	B	
165th Street	NB	LT	0.29	21.4	C	0.32	21.9	C	0.38	20.8	C	
		R	0.37	22.9	C	0.38	23.0	C	0.45	22.5	C	
	SB	LTR	0.39	29.2	C	0.40	29.2	C	0.47	34.6	C	
Overall Intersection		-		**20.0**	**B**		**33.9**	**C**		**29.9**	**C**	
165th Street and Tuskegee Airmen Way												
Tuskegee Airmen Way	EB	L	0.52	18.8	B	0.43	14.8	B	0.47	20.3	C	- Install a traffic signal
	WB	TR	0.25	13.8	B	0.07	10.2	B	0.07	14.5	B	
165th Street	NB	LT	0.03	2.6	A	0.03	2.7	A	0.16	15.4	B	
	SB	R	0.12	0.0	A	0.19	0.0	A	0.52	14.3	B	
Overall Intersection		-		**10.0**	**A**		**6.4**	**A**		**16.6**	**B**	

Source: STV Incorporated, 2022.

E. TRANSIT AND PEDESTRIANS

According to the thresholds specified in the *CEQR Technical Manual*, detailed transit analyses are required if a proposed action is projected to result in an increase of 200 or more passengers at a single subway station or on a single subway line or if a proposed action would result in 50 or more bus passengers being assigned to a single bus route (in one direction) during the AM and PM peak hours. Quantitative pedestrian analyses are required if a proposed project results in more than 200 new pedestrian trips.

The number of daily employees at the Depot is projected to increase by up to 102 new employees. Given that the net increase in employees from current staff levels is less than 200 employees, of which only a portion are expected to travel during the AM and PM peak hours, transit and pedestrian related activities generated by the Proposed Project would not exceed the *CEQR Technical Manual* thresholds; therefore, a detailed analysis of transit and pedestrian conditions was not warranted. Additionally, the use of Tuskegee Airmen Way and adjacent NYCDOT traffic island will eliminate the south sidewalk of Tuskegee Airmen Way west of Merrick Boulevard. Pedestrian counts collected as part of the data collection effort in 2021 indicate that in peak hours, less than 20 people per hour use this sidewalk. The volume of rerouted pedestrian trips who would be diverted to Liberty Avenue would be less than the *CEQR Technical Manual* threshold of 200 pedestrian trips and would not require a quantitative pedestrian analysis. The Proposed Project would not result in any significant adverse transit or pedestrian impacts.

Section 4.6 of the 2019 EIS describes the transit and pedestrian characteristics within the study area as related to the operation of the Proposed Project, including the existing subway and bus lines in the area that serve the Depot and the existing pedestrian conditions. These services remain unchanged and no further transit or pedestrian analysis is required as part of the SEA.

II. Construction

A. INTRODUCTION

This section analyzes the potential effects of construction activities at the Depot site and the preparation and temporary construction-period use of the proposed Temporary Bus Parking Site, including specific construction-period bus movements between the Depot and the proposed Temporary Bus Parking Site.

The duration and intensity of construction activities were considered in evaluating the potential for adverse environmental impacts. As stated in the *CEQR Technical Manual*, determination of the significance of construction impacts and need for mitigation is generally based on the duration and intensity of the impacts.

According to the *CEQR Technical Manual*, construction duration is often broken down into short-term (less than two years) and long-term (two or more years). When the duration of construction is expected to be short-term, any impacts resulting from such short-term construction generally do not require detailed assessment. However, the intensity of construction activities may indicate that a project's construction activities, even if short-term, warrant detailed analysis in a specific technical area. For example, further analysis may be warranted if a project's construction period would be short, but construction activities that otherwise would take place over a longer period have been compressed into this shorter timeframe, and therefore increasing the intensity. As described below, construction of the Proposed Project would be expected to last approximately four years and requires a detailed assessment.

To focus the detailed assessment, a preliminary assessment of potential construction impacts was prepared in accordance with the guidelines of the *CEQR Technical Manual* in order to determine which resource categories may be impacted by construction. The preliminary assessment considers:

- construction stages and activities (including number and types of equipment and the anticipated duration of each stage or activity);
- the number of daily construction vehicles and deliveries for each stage and activity; and
- the number of daily construction workers for each stage and activity.

The findings of the preliminary assessment identified the need to undertake more detailed construction impact assessments for transportation.

To conduct detailed assessments, this section describes the conceptual construction schedule and the types of activities likely to occur during construction. The types of construction equipment are also discussed, along with the expected number of workers and truck deliveries. Finally, the potential impacts from construction activities are assessed and the methods that may be employed to avoid significant adverse construction-related impacts are presented.

The existing Depot would remain operational (i.e., capable of servicing buses) throughout the construction period. Although it may be possible to store some buses at the Depot during less intensive periods of construction, there remains the need to store approximately 170 buses at the proposed Temporary Bus Parking Site throughout the duration of construction. Thus, a critical component of the Proposed Actions is the need to rely on the proposed Temporary Bus Parking Site throughout the construction period, which would require moving buses between the Depot and the proposed Temporary Bus Parking Site. Therefore, the related effects of travel and temporary construction-period use of the proposed Temporary Bus Parking Site are also analyzed. MTA NYCT has identified an approximately 3.5-acre parcel of property to the north of the Depot site (i.e., the proposed Temporary Bus Parking Site) and has secured its use for future temporary bus parking during construction.

B. CONCEPTUAL CONSTRUCTION SCHEDULE AND ACTIVITIES

This section presents a description of the construction process for the purposes of quantifying activities that may result in environmental effects. This section is not intended to describe the precise construction methods that may ultimately be used, nor is it intended to dictate or confine the construction process. Actual construction methods and materials may vary, depending in part on how the contractors choose to implement their work to be most cost effective, within the requirements set forth in bid, contract, and construction documents. Construction specifications will require that contractors comply with applicable environmental regulations and obtain necessary permits for the duration of construction. Construction would follow applicable Federal, State, and local laws for building and safety, as well as the City noise ordinances.

1. Construction Methods and Activities

Construction activities for the Proposed Project, consisting of preparation and temporary construction-period use of the proposed Temporary Bus Parking Site, demolition of the existing buildings along Merrick Boulevard, construction of the new Depot, and demolition of the existing JBD, would begin in 2023 and would have a total duration of approximately 49 months.

The Proposed Project has been conceptually developed and the construction staging planned, so that the existing Depot would remain operational throughout the construction period. As previously described, although it may be possible to store some buses at the Depot during less intensive periods of construction, there remains the need for MTA NYCT to store approximately 170 buses at the proposed Temporary Bus Parking Site throughout the duration of construction.

The following section provides a description of the typical construction activities that would take place at the Depot, including the type of construction equipment that would be used and the methods for material delivery and disposal.

2. Typical Construction Activities

Construction of the Proposed Project would occur over a number of years with construction activities and intensities varying, depending upon the phase and stage of construction underway at a given time. Construction of the new Depot would consist of two primary phases. Phase I and Phase II construction of the new Depot, as described in the 2019 EIS, would remain unchanged. The additional preparation activities required to convert the proposed Temporary Bus Parking Site to a temporary paved bus parking area would begin before Phase I and Phase II construction of the new Depot.

Preparation activities for the proposed Temporary Bus Parking Site would include the development of an asphalt paved surface parking lot, installation of stormwater and catch basin system, and the installation of security systems, lighting, guardrails, fencing, and a dispatcher booth. The work will require the removal of up to four feet of soil across the entire proposed Temporary Bus Parking Site and the erection of a new retaining wall. The parking lot will be striped for parking, and instructional signage will be erected.

3. Estimate of Construction Workers and Construction-Period Trucks

Worker and truck projections were based on representative construction projects and experience from the construction of the Mother Clara Hale Bus Depot, located in Upper Manhattan. The resultant estimate of the number of trucks and workers per quarter are summarized in **Table 15: Estimated Total Number of Construction Workers and Construction Trucks On-Site Per Day**. As indicated in the table, the number of construction trucks would peak in the first and second quarters of 2025, with an estimated 280 workers and 68 trucks per day. These represent peak days of work; many days during the construction period would have fewer construction workers and trucks on-site.

Table 15: Estimated Total Number of Construction Workers and Construction Trucks On-Site per Day

Year	2023				2024				2025			
Quarter	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th
Construction Workers	8	16	16	34	22	46	60	80	280	280	260	160
Construction Trucks	2	4	4	6	10	30	22	32	68	68	40	8
Year	2026				2027							
Quarter	1st	2nd	3rd	4th	1st	2nd	3rd	4th				
Construction Workers	160	80	36	36	20	--	--	--				
Construction Trucks	8	30	45	45	10	--	--	--				

Source: STV Incorporated, 2022.

4. Construction Work Hours

Construction activities for buildings in the City generally take place Monday through Friday, with exceptions that are discussed separately below. In accordance with City laws and regulations, construction work would generally begin at 7 AM on weekdays, with workers arriving to prepare work areas between 6 AM and 7 AM. Construction work activities would typically finish around 3:30 PM, but on some occasions, the workday could be extended depending upon the need to complete some specific tasks beyond normal work hours (e.g. finishing a concrete pour for a floor deck, completing the bolting of a steel frame erected that day). The extended workday would generally last until about 6 PM and would not include all construction workers on-site, but just those involved in the specific tasks requiring additional work time.

Occasionally, Saturday or overtime hours may be required to complete some time-sensitive tasks. Weekend work requires a permit from the New York City Department of Buildings ("NYCDOB") and, in certain instances, approval of a noise mitigation plan from the New York City Department of Environmental Protection ("NYCDEP") under the City's Noise Code. The New York City Noise Control Code, as amended in December 2005 and effective July 1, 2007, limits construction (absent special circumstances as described below) to weekdays between the hours of 7 AM and 6 PM and sets noise limits for certain specific pieces of construction equipment. Construction activities occurring after hours (weekdays between 6 PM and 7 AM or on weekends) may be permitted only to accommodate: (i) emergency conditions; (ii) public safety; (iii) construction projects by or on behalf of City agencies; (iv) construction activities with minimal noise impacts; and (v) undue hardship resulting from unique site characteristics, unforeseen conditions, scheduling conflicts, and/or financial considerations. In such cases, the number of workers and pieces of equipment in operation would be limited to those needed to complete the particular authorized task. Therefore, the level of activity for any weekend

work would be less than that of a normal workday. The typical weekend workday would be on Saturday from 7 AM with worker arrivals and site preparation to 5 PM for site cleanup.

5. Construction Staging Areas, Sidewalk and Lane Closures

Construction staging areas, also referred to as "laydown areas," are sites that would be used for the storage of materials and equipment and other construction-related activities. Work zones are those areas where the construction is occurring. Staging areas would typically be fenced and lit for security and would adhere to New York City Building Codes.

It is anticipated that construction staging would most likely occur on the Depot site proper and may, in some cases, extend within the curbside parking lane and sidewalks adjacent to the Depot site. As is typical with construction projects in New York City, the sidewalks immediately adjacent to the Depot site may be closed at times to accommodate heavy loading areas or specific construction activities. During these times, pedestrians would either use a temporary walkway in a sectioned-off portion of the street or be diverted to walk on the opposite side of the street. The MTA NYCT contractor would be required to demonstrate how they intend to reduce disruptions due to vehicle deliveries and staging and the closures of adjacent sidewalks and public streets, which would be formally reviewed and approved by NYCDOT. In addition, detailed Maintenance and Protection of Traffic ("MPT") plans for any temporary sidewalk and lane closures would be submitted for approval to the NYCDOT Office of Construction Mitigation and Coordination ("OCMC"), the entity that ensures critical arteries are not interrupted, especially in peak travel periods. Builders would be required to plan and carry out noise and dust control measures during construction.

Appropriate protective measures for ensuring pedestrian safety surrounding the Depot site would be implemented under MPT plans. Construction activities would also be subject to compliance with the New York City Noise Code and by the United States Environmental Protection Agency ("USEPA") noise emission standards for construction equipment. In addition, there would be requirements for street crossing and entrance barriers, protective scaffolding, and compliance with applicable construction safety measures.

C. CONSTRUCTION TRANSPORTATION PERIOD IMPACTS

1. Introduction

Average daily construction worker and truck activities were projected for the full duration of construction activities, including preparation and temporary construction-period use of the proposed Temporary Bus Parking Site and construction of the Depot, all of which is expected to last for 49 months. These projections were further refined to account for: worker modal splits and vehicle occupancy; arrival and departure distribution; and the passenger car equivalent ("PCE") factor for truck traffic.

a. *Daily Workforce and Truck Deliveries*

For a conservative reasonable worst-case, the peak level of construction activity – combination of worker and truck trips – was used as the basis for estimating peak hour construction traffic volumes (see Table 15: Estimated Total Number of Construction Workers and Construction Trucks On-Site Per Day). In terms of truck activity, a maximum of 68 truck deliveries per day are expected to and from the Depot during the peak of construction activities during Phase I. At this time, the steel erection and installation of metal decks for Building A would be nearing completion, concrete floor slabs would be poured in sections of Building A where

steel erection is finished, and mechanical equipment placement would begin in the areas of Building A where floor slab construction is complete. During the same period, approximately 280 daily construction workers would also be employed at the Depot. Note that these represent peak days of work; many days during the construction period would have fewer construction workers and trucks on-site. Trucks making deliveries to the Depot were assigned using NYCDOT-designated local truck routes in the area, which include Merrick Boulevard, 168th Street, and Liberty Avenue.

b. *Construction Worker Modal Splits*

Travel demand characteristics for project construction workers were estimated based on the U.S. Census Bureau American Association of Highway and Transportation Officials ("AASHTO") Census Transportation Planning Products ("CTPP") reverse journey-to-work 5-year (2006-2010) data for Census Tract 254, where the JBD is located. Based on this information, approximately 65 percent of the construction workers would commute via automobile, with an average auto-occupancy of 1.07.

c. *Peak-Hour Construction Worker Vehicle and Truck Trips*

The preparation for this construction schedule assumed that all Depot site activities would occur during the typical construction shift of 7:00 AM to 3:30 PM. While construction truck trips would be distributed throughout the day (with a higher concentration of trips during the early morning), and trucks would remain in the area for shorter durations, construction worker travel would typically occur during the hours before and after the work shift. For estimating the peak construction-generated traffic volumes, each worker vehicle was assumed to arrive in the morning and depart in the afternoon, while each truck delivery was assumed to result in two truck trips during the same hour. Furthermore, in accordance with *CEQR Technical Manual* guidance, it was assumed that each truck represents two PCEs. Hence, a truck delivery to the site would result in an equivalent of four vehicle trips (two entering and two exiting) during the same hour.

The estimated daily vehicle trips were distributed to various hours of the day based on projected work shift allocations and conventional arrival/departure patterns for construction workers and trucks (see Table 16: 2025 (Q1 and Q2) Peak Incremental Construction Vehicle Trip Projections (in PCEs)). For construction workers, it was assumed that the majority (80 percent) of the arrival and departure trips would take place during the hour before and after the work shift. For construction trucks, deliveries would occur throughout the time period while the construction site is active. However, to avoid traffic congestion, construction truck deliveries usually peak during the hour before the regular day shift (25 percent of shift total), overlapping with construction worker arrival traffic. Based on these assumptions, the peak hour construction traffic was estimated for Phase I of construction during quarters one and two of 2025 when the combination of worker and truck trips is expected to result in maximum traffic activity.

Table 16: 2025 (Q1 and Q2) Peak Incremental Construction Vehicle Trip Projections (in PCES)

Hour	Auto Trips					Truck Trips (PCEs)					Total Vehicle Trips (PCEs)		
	In		Out		Total	In		Out		Total	In	Out	Total
	%	#	%	#		%	#	%	#				
6-7 AM	80%	138	0%	0	138	25%	34	25%	34	68	172	34	206
7-8 AM	20%	35	0%	0	35	10%	14	10%	14	28	49	14	63
8-9 AM	0%	0	0%	0	0	10%	14	10%	14	28	14	14	28
9-10 AM	0%	0	0%	0	0	10%	14	10%	14	28	14	14	28
10-11 AM	0%	0	0%	0	0	10%	14	10%	14	28	14	14	28
11-12 PM	0%	0	0%	0	0	10%	13	10%	13	26	13	13	26
12-1 PM	0%	0	0%	0	0	10%	13	10%	13	26	13	13	26
1-2 PM	0%	0	0%	0	0	5%	7	5%	7	14	7	7	14
2-3 PM	0%	0	5%	9	9	5%	7	5%	7	14	7	16	23
3-4 PM	0%	0	80%	138	138	2.5%	3	2.5%	3	6	3	142	145
4-5 PM	0%	0	15%	26	26	2.5%	3	2.5%	3	6	3	29	32

Source: STV Incorporated, 2022.

d. *Street Lane and Sidewalk Closures*

Temporary curb lane and sidewalk closures are anticipated adjacent to the Depot site, similar to other construction projects in New York City, and these would be expected to have dedicated gates, driveways, and/or ramps for access by trucks making deliveries. Truck movements would be spread throughout the day and would generally occur between 6 AM and 5 PM, depending on the stage of construction. As noted above, no rerouting of traffic is anticipated during construction activities and all moving lanes on streets are expected to be available to traffic at all times. Flaggers are also expected to be present during construction to manage the access and movement of trucks. As also noted above, detailed MPT plans for the Depot site would be submitted for approval by NYCDOT OCMC.

2. Construction No-Build Alternative

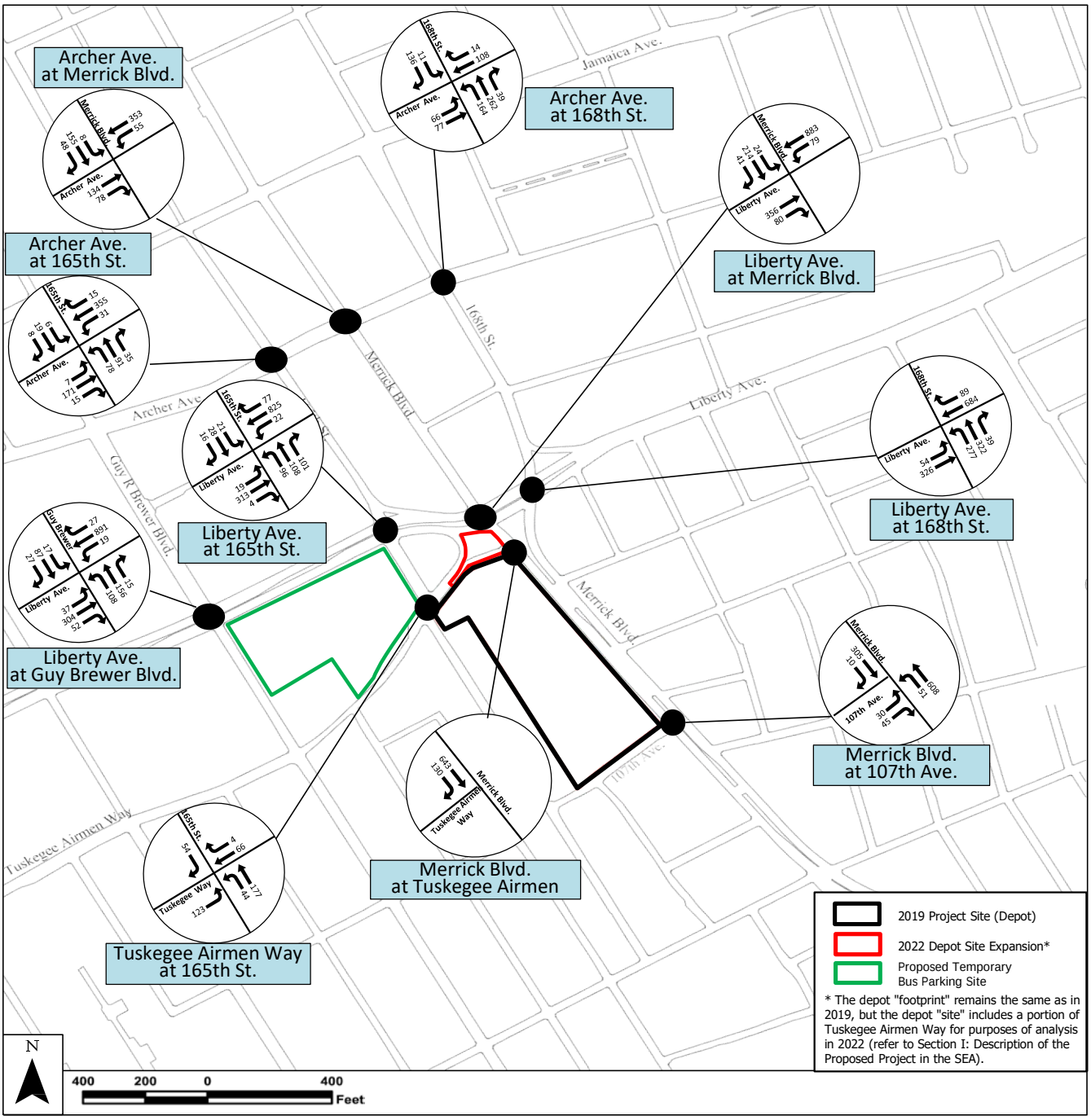
The analysis of the traffic conditions for the No-Build condition of the construction peak hours serves as the baseline against which impacts of construction of the Proposed Project are compared.

a. *Traffic*

Traffic volumes for the 6-7 AM and 3-4 PM construction peak hours were developed following the methodology described in Section I.D.3: Methodology from manual turning movement counts collected at the study area intersections on Tuesday, November 9, 2021. The counts were collected in 15-minute intervals and classified into three vehicle types: passenger cars, buses, and heavy-duty trucks.

Baseline traffic volumes during peak construction activities in the first and second quarters of 2025 were established by applying a background growth rate. The resulting 2025 No-Build study area traffic volume networks for the construction peak hours are presented on Figure 11: Construction-Period – Construction No-Build Condition Traffic Volume - AM Peak Hour and Figure 12: Construction-Period – Construction No-Build Condition Traffic Volume - PM Peak Hour. No changes to the street network in the study area are anticipated by 2025.

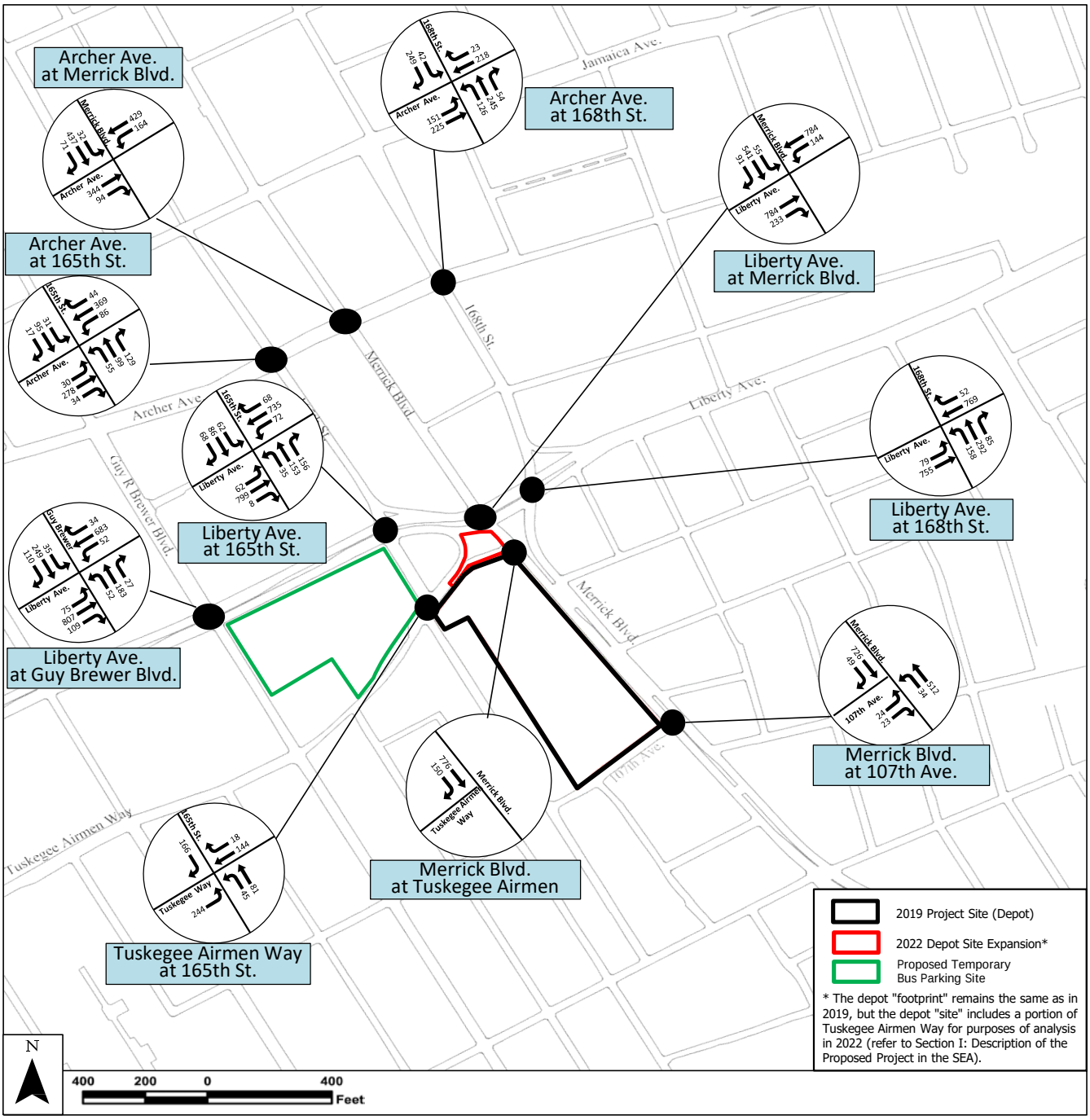
Presented in Table 17: 2025 No-Build Construction Traffic Operations are v/c ratios, individual movement and approach delays, and individual lane group and approach levels of service for year 2025 No-Build construction AM and PM peak hours. The result of the analysis indicated that all movements and intersections would continue to operate at an acceptable LOS in the 2025 No-Build construction period, except for the Merrick Boulevard southbound shared left through-lane at Liberty Avenue, which operates at LOS E during the PM peak construction hour.



Source: STV Incorporated, 2022.

Figure 11

CONSTRUCTION NO BUILD CONDITION TRAFFIC VOLUME
AM PEAK HOUR



Source: STV Incorporated, 2022.

Figure 12

CONSTRUCTION NO BUILD CONDITION TRAFFIC VOLUME
PM PEAK HOUR

Table 17: 2025 No-Build Construction Traffic Operations

INTERSECTION & APPROACH		Mvt.	AM Peak Hour			PM Peak Hour		
			V/C	Control Delay	LOS	V/C	Control Delay	LOS
Signalized								
165th Street and Archer Avenue								
Archer Avenue	EB	L	0.03	13.8	B	0.16	15.9	B
		TR	0.42	18.9	B	0.61	23.0	C
	WB	LTR	0.47	7.4	A	0.62	12.0	B
165th Street	NB	LTR	0.47	19.7	B	0.57	22.1	C
	SB	LTR	0.07	15.2	B	0.29	17.9	B
Overall Intersection		-		**13.3**	**B**		**17.8**	**B**
165th Street and Liberty Avenue								
Liberty Avenue	EB	L	0.15	10.7	B	0.31	16.7	B
		TR	0.30	9.7	A	0.64	15.5	B
	WB	L	0.07	14.8	B	0.45	25.9	C
		TR	0.58	20.1	C	0.43	17.8	B
165th Street	NB	LT	0.48	25.0	C	0.40	23.2	C
		R	0.23	20.7	C	0.36	22.6	C
	SB	LTR	0.15	16.0	B	0.47	30.0	C
Overall Intersection		-		**18.4**	**B**		**19.4**	**B**
168th Street and Archer Avenue/93rd Avenue								
Archer Avenue/93rd Avenue	EB	LT	0.17	13.4	B	0.41	4.4	A
	WB	TR	0.10	12.0	B	0.18	12.6	B
168th Street	NB	L	0.33	20.9	C	0.27	20.1	C
		TR	0.33	20.1	C	0.33	20.2	C
	SB	L	0.04	17.2	B	0.13	18.4	B
		R	0.29	20.2	C	0.51	24.4	C
Overall Intersection		-		**18.0**	**B**		**15.0**	**B**
168th Street and Liberty Avenue								
Liberty Avenue	EB	L	0.46	15.3	B	0.58	13.0	B
		T	0.29	2.8	A	0.57	2.6	A
	WB	TR	0.68	22.8	C	0.66	22.2	C
168th Street	NB	LT	0.67	27.6	C	0.49	23.6	C
		R	0.15	20.2	C	0.26	21.6	C
Overall Intersection		-		**20.3**	**C**		**15.3**	**B**
Merrick Boulevard and 107th Avenue								
107th Avenue	EB	LR	0.30	26.3	C	0.14	23.0	C
Merrick Boulevard	NB	L	0.17	13.3	B	0.42	28.3	C
		T	0.87	33.3	C	0.72	23.4	C
	SB	T	0.53	18.2	B	0.99	51.2	D
		R	0.02	11.5	B	0.09	12.1	B
Overall Intersection		-		**26.9**	**C**		**37.8**	**D**

Table 17: 2025 No-Build Construction Traffic Operations (cont'd)

INTERSECTION & APPROACH		Mvt.	AM Peak Hour			PM Peak Hour		
			V/C	Control Delay	LOS	V/C	Control Delay	LOS
Merrick Boulevard and Archer Avenue								
Archer Avenue	EB	T	0.29	11.6	B	0.58	17.7	B
		R	0.21	11.1	B	0.22	12.5	B
	WB	L	0.16	10.1	B	0.72	39.1	D
		T	0.31	10.3	B	0.35	18.6	B
Merrick Boulevard	SB	LT	0.36	18.4	B	0.77	29.7	C
		R	0.12	15.2	B	0.16	15.7	B
Overall Intersection		-		**12.5**	**B**		**23.3**	**C**
Merrick Boulevard and Liberty Avenue								
Liberty Avenue	EB	T	0.40	24.2	C	0.80	33.5	C
		R	0.20	22.5	C	0.55	29.1	C
	WB	L	0.25	9.6	A	0.72	29.6	C
		T	0.70	11.4	B	0.56	7.5	A
Merrick Boulevard	SB	LT	0.54	22.8	C	1.05	74.7	E
		R	0.10	15.5	B	0.18	16.3	B
Overall Intersection		-		**16.3**	**B**		**34.3**	**C**
Guy R Brewer Boulevard and Liberty Avenue								
Liberty Avenue	EB	L	0.43	29.6	C	0.39	22.6	C
		TR	0.33	16.9	B	0.70	23.3	C
	WB	L	0.07	10.3	B	0.38	16.8	B
		TR	0.79	18.9	B	0.56	11.7	B
Guy R Brewer Boulevard	NB	LTR	0.66	30.4	C	0.71	34.7	C
	SB	L	0.07	19.0	B	0.14	20.0	B
		TR	0.25	20.9	C	0.76	34.0	C
Overall Intersection		-		**20.7**	**C**		**22.7**	**C**
Unsignalized								
165th Street and Tuskegee Airmen Way								
Tuskegee Airmen Way	EB	L	0.29	14.8	B	0.43	14.8	B
	WB	TR	0.16	13.0	B	0.07	10.2	B
165th Street	NB	LT	0.04	1.7	A	0.03	2.7	A
	SB	R	0.03	0.0	A	0.19	0.0	A
Overall Intersection		-		**6.7**	**A**		**14.2**	**B**

Source: STV Incorporated, 2022.

b. *Parking*

As discussed in **Section I.D.4: Affected Environment** above, there is a surplus of approximately 20 on-street parking spaces of the available 1,443 spaces in the weekday midday period in existing conditions within a ¼-mile radius of the Depot site. Parking demand in the study area was increased based on *CEQR Technical Manual* guidelines by one-half percent per year for four years, resulting in an approximate increase of two percent. The on-street parking demand is projected to rise to approximately 1,452 spaces or 101 percent of supply, resulting in a shortfall of approximately nine parking spaces in the future 2025 Construction No-Build conditions (see **Table 18: 2025 Construction No-Build On-Street Parking Supply and Demand**).

Table 18: 2025 Construction No-Build On-Street Parking Supply and Demand

Parking Parameter	Without Regulations in Effect
Parking-Space Supply	1,443
Demand (Occupancy Rate)	1,452 (101%)
Spaces Available (Rate)	-9 -1%

Source: STV Incorporated, 2022.

3. Construction Analysis (2025)

As noted previously, the existing Depot would remain operational throughout the construction period. Although it may be possible to store some buses at the Depot during less intensive periods of construction, there remains the need to store approximately 170 buses at the proposed Temporary Bus Parking Site throughout the duration of construction. A critical component during the construction period is the movement of buses between the Depot and the proposed Temporary Bus Parking Site. The bus routing during Phase I of construction is as follows:

AM Period

In the morning hours, when buses are dispatched, buses will exit the proposed Temporary Bus Parking Site to Liberty Avenue headed eastbound. Buses destined to south and east will proceed east to Merrick Boulevard and then turn right at the Merrick Boulevard intersection to head south. Morning buses destined to downtown Jamaica will turn left from Liberty Avenue at 165th Street and head north to Archer Avenue.

Afternoon Period

A number of buses will return to the proposed Temporary Bus Parking Site for midday layovers. These buses would enter the proposed Temporary Bus Parking Site via 165th Street.

PM Period

In the evening, buses would enter the Depot for fueling and washing in the same manner as existing operations (via westbound 107th Avenue); however, the buses would then exit the Depot via the north side of the existing Depot to Tuskegee Airman Way and enter the proposed Temporary Bus Parking Site from 165th Street. MTA NYCT Bus Operations confirmed these proposed routings are acceptable.

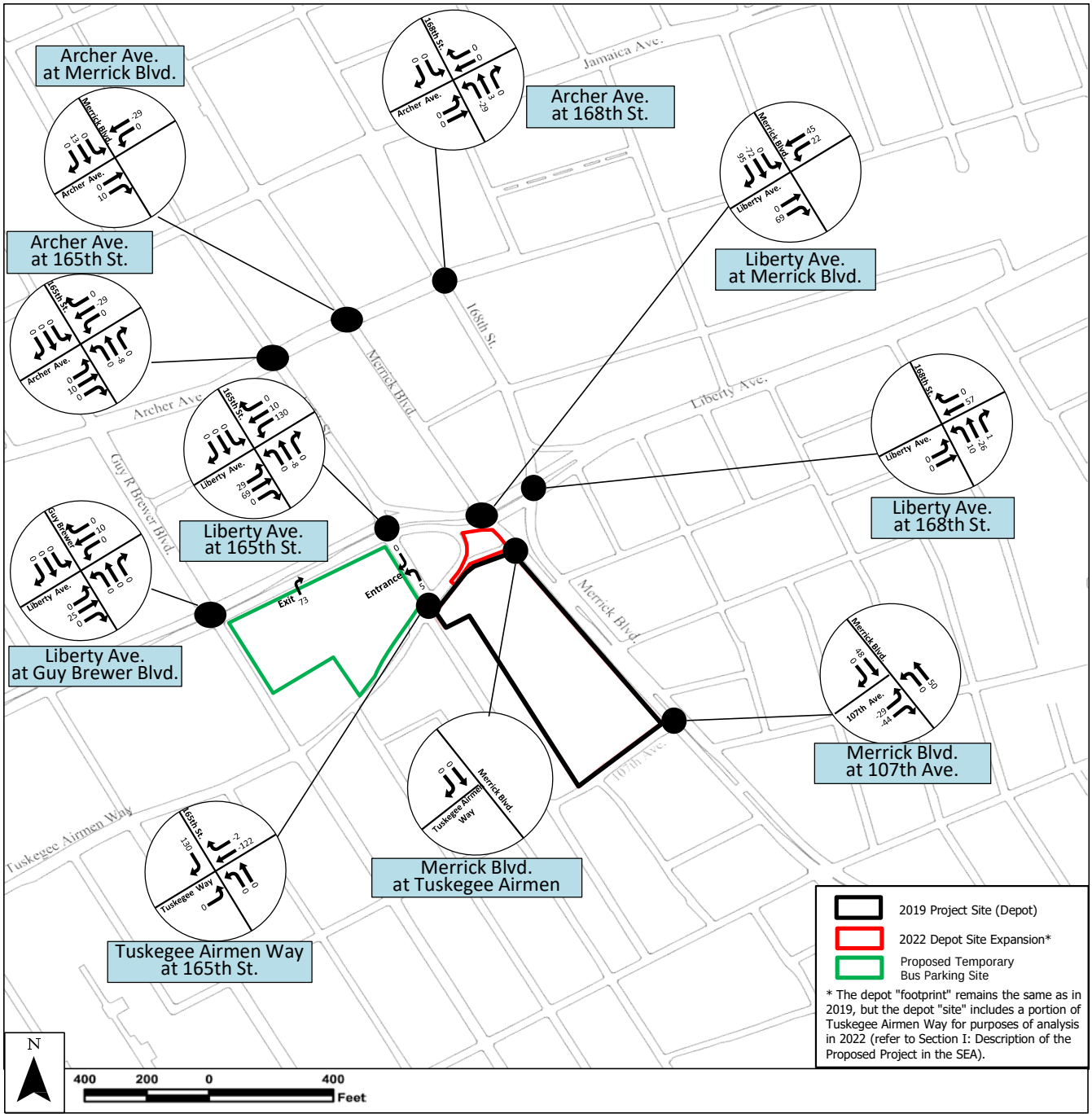
a. *Traffic*

Vehicles generated by construction activities were assigned to the street network to determine the increment of construction-related trips. Figure 13: Construction-Period – Construction Increment Traffic Volume AM Peak Hour and Figure 14: Construction-Period – Construction Increment Traffic Volume PM Peak Hour show the incremental changes to the 2025 construction traffic network by incorporating three separate traffic components:

- Construction worker trips to/from the Depot
- Construction truck trips to/from the Depot
- Routing of buses between the Depot and the proposed Temporary Bus Parking Site

As described in Section I.D.5.c.i: Traffic, although any potential de-mapping of Tuskegee Airmen Way, if it were to occur, would be a future separate action, the Depot design as currently contemplated would require reconfiguring the Tuskegee Airmen Way paved roadbed to support Depot operations. This change in roadbed configuration would include the removal of a parking area and some street trees and, therefore, would represent a minor change to the street pattern directly north of the Depot site. The construction analysis for the Proposed Project assumes traffic diversions resulting from the use of this portion of Tuskegee Airmen Way. Additionally, NYCDOT has implemented changes to the street configuration of Merrick Boulevard, Archer Avenue, and 168th Street to accommodate new bus-only lanes. Figure 15: Construction-Period – Construction Condition Traffic Volume AM Peak Hour and Figure 16: Construction-Period – Construction Condition Traffic Volume PM Peak Hour indicate the total construction AM and PM peak hours volumes, respectively.

Presented in Table 19: 2025 Construction Traffic Operations are v/c ratios, individual movement and approach delays, and levels of service for year 2025 during the construction weekday AM and PM peak hours. The 2025 construction levels of service are generally similar to No-Build conditions with slight increases in delay. The level-of-service analysis indicated that a significant traffic impact would be expected at two intersections. The westbound Liberty Avenue left-turn delay would deteriorate to LOS F conditions during the PM peak hours, as a result of the traffic diverted from the Tuskegee Airman Way closure. The southbound through movement on Merrick Boulevard at 107th Street would deteriorate to LOS E conditions during the PM peak hour with the increase of construction trips.

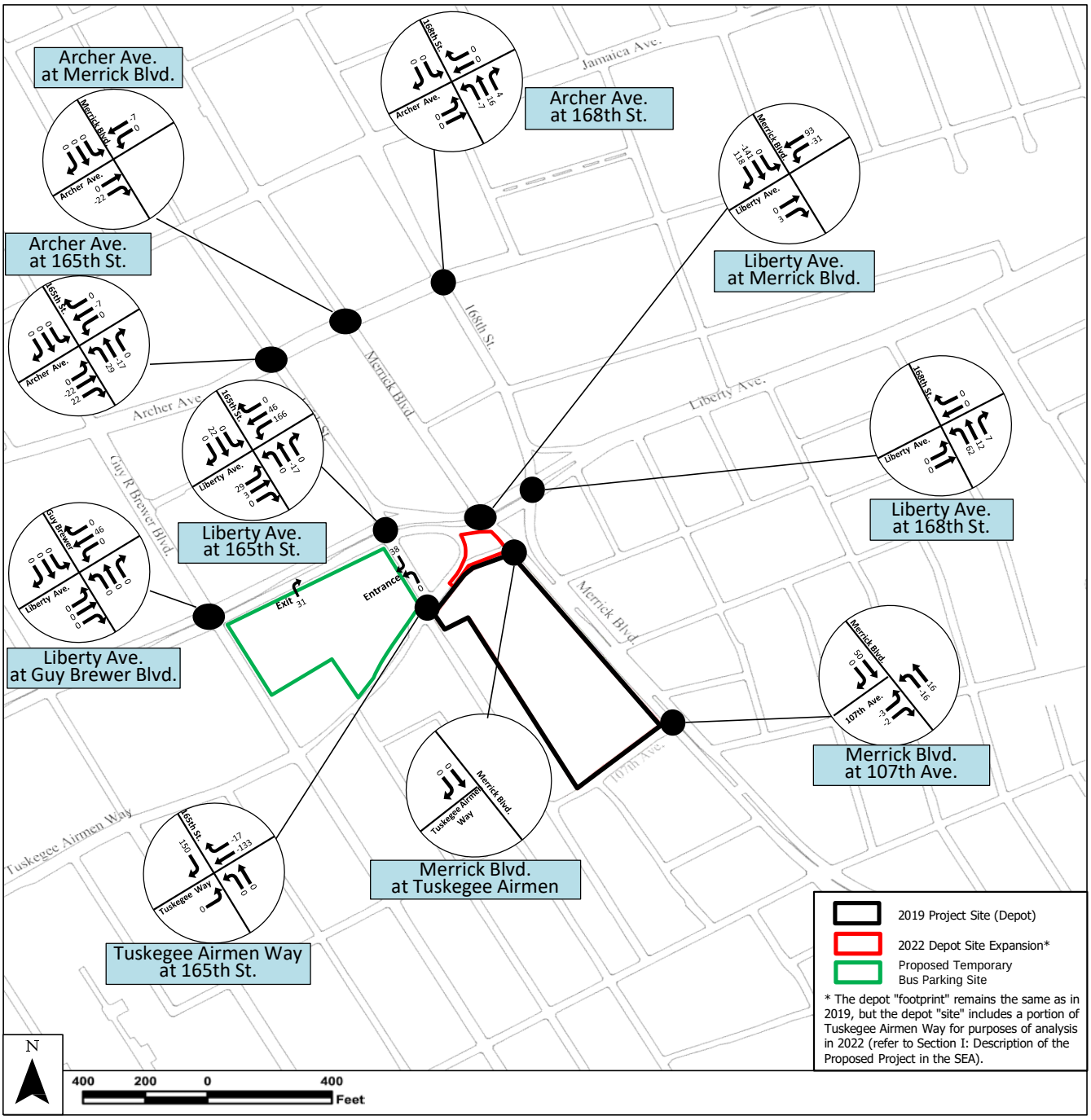


Source: STV Incorporated, 2022.

Figure 13

CONSTRUCTION INCREMENT TRAFFIC VOLUME
AM PEAK HOUR

CONSTRUCTION-PERIOD

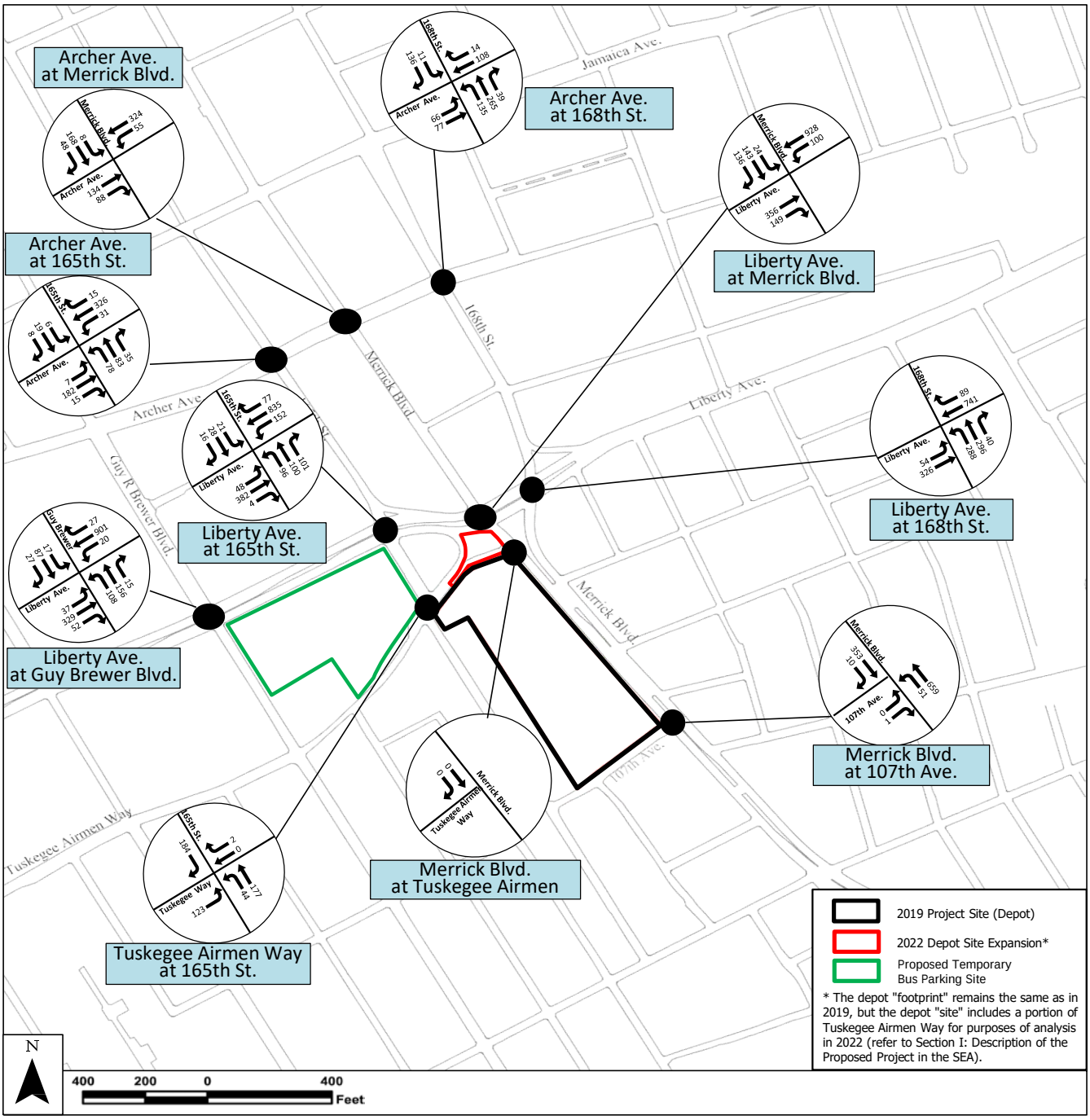


Source: STV Incorporated, 2022.

Figure 14

CONSTRUCTION INCREMENT TRAFFIC VOLUME
PM PEAK HOUR

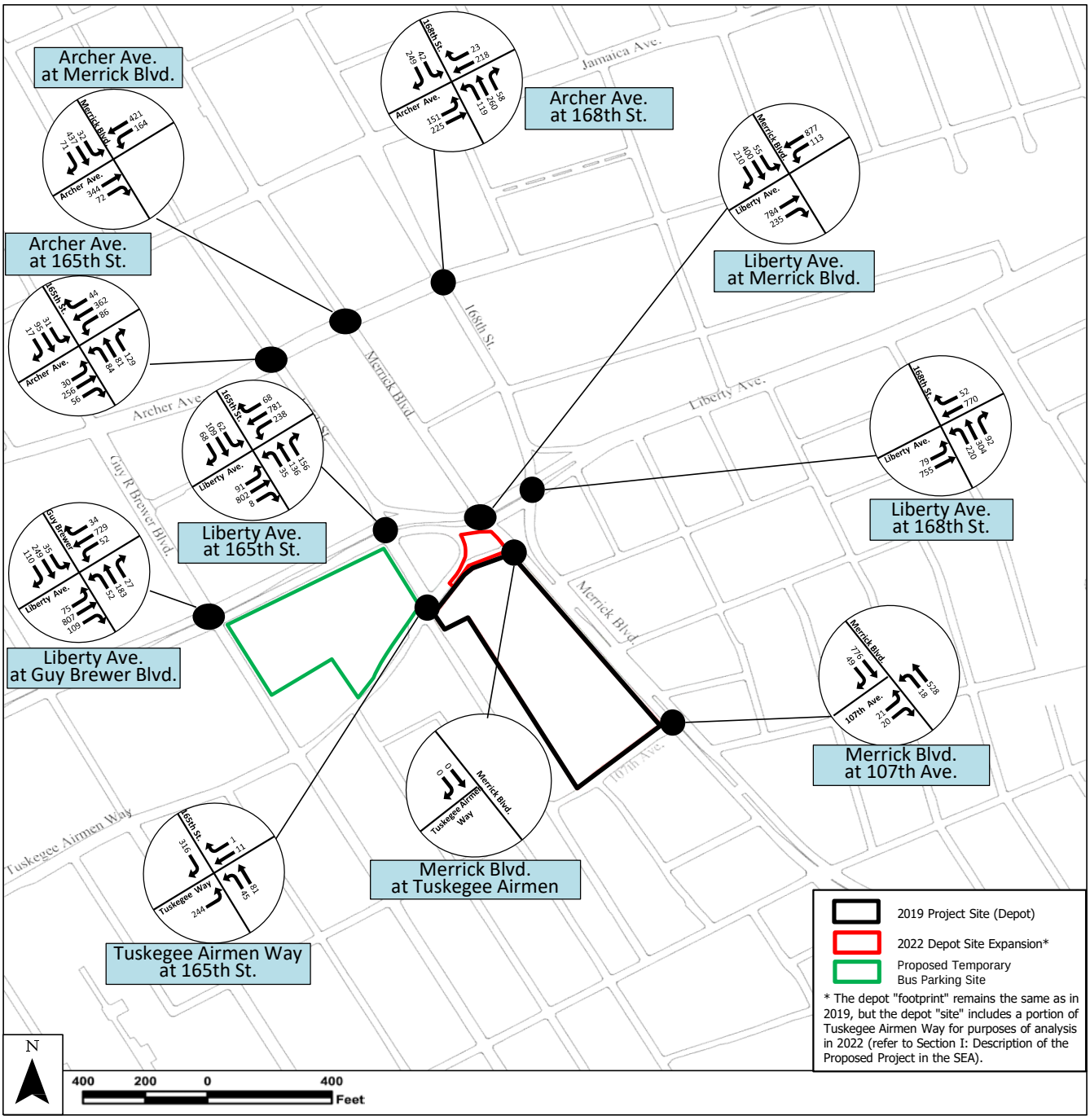
CONSTRUCTION-PERIOD



Source: STV Incorporated, 2022.

Figure 15

CONSTRUCTION TRAFFIC VOLUME
AM PEAK HOUR



Source: STV Incorporated, 2022.

Figure 16

CONSTRUCTION TRAFFIC VOLUME
PM PEAK HOUR

Table 19: 2025 Construction Traffic Operations

INTERSECTION & APPROACH		Mvt.	AM Peak Hour			PM Peak Hour		
			V/C	Control Delay	LOS	V/C	Control Delay	LOS
Signalized								
165th Street and Archer Avenue								
Archer Avenue	EB	L	0.03	13.8	B	0.16	15.8	B
		TR	0.44	19.4	B	0.63	23.5	C
	WB	LTR	0.43	7.5	A	0.62	11.7	B
165th Street	NB	LTR	0.46	22.4	C	0.63	25.1	C
	SB	LTR	0.07	15.1	B	0.29	17.9	B
Overall Intersection		-		**14.4**	**B**		**18.6**	**B**
165th Street and Liberty Avenue								
Liberty Avenue	EB	L	0.40	18.3	B	0.49	20.4	C
		TR	0.36	11.0	B	0.64	15.7	B
	WB	L	0.56	25.6	C	1.49	276.6	F
		TR	0.59	20.2	C	0.45	18.1	B
165th Street	NB	LT	0.46	24.7	C	0.37	22.7	C
		R	0.23	20.7	C	0.36	22.6	C
	SB	LTR	0.15	16.1	B	0.50	29.5	C
Overall Intersection		-		**19.0**	**B**		**42.3**	**D**
168th Street and Archer Avenue/93rd Avenue								
Archer Avenue/93rd Avenue	EB	LT	0.17	13.0	B	0.41	4.4	A
	WB	TR	0.10	12.0	B	0.18	12.6	B
168th Street	NB	L	0.27	20.0	B	0.26	19.8	B
		TR	0.33	20.2	C	0.35	20.4	C
	SB	L	0.04	17.2	B	0.13	18.5	B
		R	0.29	20.2	C	0.51	24.4	C
Overall Intersection		-		**17.7**	**B**		**15.1**	**B**
168th Street and Liberty Avenue								
Liberty Avenue	EB	L	0.53	21.8	C	0.58	13.5	B
		T	0.29	2.9	A	0.57	2.8	A
	WB	TR	0.73	24.3	C	0.66	22.3	C
168th Street	NB	LT	0.66	27.2	C	0.57	25.1	C
		R	0.15	20.2	C	0.28	22.0	C
Overall Intersection		-		**21.0**	**C**		**16.1**	**B**
Merrick Boulevard and 107th Avenue								
107th Avenue	EB	LR	0.00	21.4	C	0.12	22.8	C
Merrick Boulevard	NB	L	0.19	13.8	B	0.29	24.2	C
		T	0.95	43.4	D	0.74	24.4	C
	SB	T	0.62	20.3	C	1.06	69.9	E
		R	0.02	11.5	B	0.09	12.1	B
Overall Intersection		-		**33.6**	**C**		**48.9**	**D**

Table 19: 2025 Construction Traffic Operations (cont'd)

INTERSECTION & APPROACH		Mvt.	AM Peak Hour			PM Peak Hour		
			V/C	Control Delay	LOS	V/C	Control Delay	LOS
Merrick Boulevard and Archer Avenue								
Archer Avenue	EB	T	0.29	11.5	B	0.58	18.1	B
		R	0.24	11.3	B	0.17	12.3	B
	WB	L	0.16	10.8	B	0.72	39.0	D
		T	0.29	10.8	B	0.34	18.4	B
Merrick Boulevard	SB	LT	0.39	18.9	B	0.77	29.7	C
		R	0.12	15.2	B	0.16	15.7	B
Overall Intersection		-		**13.0**	**B**		**23.4**	**C**
Merrick Boulevard and Liberty Avenue								
Liberty Avenue	EB	T	0.40	24.2	C	0.80	33.5	C
		R	0.38	25.4	C	0.55	29.2	C
	WB	L	0.31	9.9	A	0.56	23.3	C
		T	0.73	11.6	B	0.62	9.1	A
Merrick Boulevard	SB	LT	0.38	19.4	B	0.80	32.6	C
		R	0.33	18.6	B	0.41	19.7	B
Overall Intersection		-		**16.3**	**B**		**23.6**	**C**
Guy R Brewer Boulevard and Liberty Avenue								
Liberty Avenue	EB	L	0.44	30.7	C	0.43	24.4	C
		TR	0.35	17.2	B	0.70	23.3	C
	WB	L	0.07	10.5	B	0.38	16.6	B
		TR	0.80	19.4	B	0.59	12.0	B
Guy R Brewer Boulevard	NB	LTR	0.66	30.4	C	0.71	34.7	C
	SB	L	0.07	19.0	B	0.14	20.0	B
		TR	0.25	20.9	C	0.76	34.0	C
Overall Intersection		-		**20.9**	**C**		**22.7**	**C**
Unsignalized								
165th Street and Tuskegee Airmen Way								
Tuskegee Airmen Way	EB	L	0.24	12.6	B	0.43	14.8	B
	WB	TR	0.00	9.4	A	0.07	10.2	B
165th Street	NB	LT	0.04	1.8	A	0.03	2.7	A
	SB	R	0.12	0.0	A	0.19	0.0	A
Overall Intersection		-		**3.9**	**A**		**14.2**	**B**

Source: STV Incorporated, 2022.

b. *Parking*

The 2025 (Q2) peak analysis period for construction travel demand would result in approximately 280 workers on-site daily, approximately 66 percent of whom would be expected to travel to the Depot by private auto. Based on an average vehicle occupancy of 1.07 persons per vehicle, the maximum daily parking demand from Depot construction workers would total approximately 173 spaces (see **Table 20: 2025 Construction Worker Parking Accumulation**). As there are relatively few off-street public parking facilities in proximity to the Depot, the majority of workers are expected to park on-street.

Table 20: 2025 Construction Worker Parking Accumulation

Hour	2025 (Q1 and Q2)		
	In	Out	Total Accumulation
6-7 AM	138	0	138
7-8 AM	35	0	173
8-9 AM	0	0	173
9-10 AM	0	0	173
10-11 AM	0	0	173
11 AM-12 PM	0	0	173
12-1 PM	0	0	173
1-2 PM	0	0	173
2-3 PM	0	9	164
3-4 PM	0	138	26
4-5 PM	0	26	0

Source: STV Incorporated, 2022.

Construction workers traveling to the Depot would increase the on-street parking demand by 173 vehicles. Additionally, the use of Tuskegee Airman Way and adjacent NYCDOT traffic island would remove up to 30 available parking spaces (curbside parking spaces and those parked on the existing traffic island) from the parking-space supply in 2025. This results in a parking shortfall of 212 spaces in the future 2025 Construction No-Build conditions (see **Table 21: 2025 Construction On-Street Parking Supply and Demand**). This shortfall is not considered a significant impact due to the availability and proximity of public transit in the area. As such, construction activities during the 2025 (Q1 and Q2) peak construction traffic period would not result in a significant adverse parking impact.

Table 21: 2025 Construction On-Street Parking Supply and Demand

Parking Parameter	Without Regulations in Effect
Parking-Space Supply	1,413
Demand (Occupancy Rate)	1,625 (115%)
Spaces Available (Rate)	-212 -15%

Source: STV Incorporated, 2022.

4. Summary of Adverse Impacts and Mitigation Measures

Significant traffic impacts were identified at the intersections of Liberty Avenue and 165th Street and Merrick Boulevard and 107th Street during the PM peak hours. These impacts could be mitigated through signal timing adjustments, a standard traffic mitigation practice. The proposed signal timing changes and resulting intersection operations are listed in Table 22: Mitigated 2025 Construction Traffic Operations.

As discussed in Section I.D.6: Summary of Adverse Impacts and Mitigation Measures, existing traffic and operational conditions at the intersection of Tuskegee Airmen Way and 165th Street meet traffic control signal needs studies as per the CEQR Traffic Signal Warrant Analysis (Warrant 3: Peak Hour Traffic Volumes). Installing a traffic signal would improve existing intersection operations to an acceptable LOS C condition or better for all approaches. This intersection does not experience a significant traffic impact; however, given the increase of buses projected to turn through this intersection, installation of a traffic signal at this intersection is recommended. This intersection has an offset configuration given that the north and southbound approach do not align. Installing a traffic signal would help to improve safety and reduce conflicts between turning buses and through traffic on 165th Street.

Table 22: Mitigated 2025 Construction Traffic Operations

INTERSECTION & APPROACH		Mvt.	No-Build			Build			Mitigated Build			Improvement Measures
			V/C	Control Delay	LOS	V/C	Control Delay	LOS	V/C	Control Delay	LOS	
AM Peak												
165th Street and Tuskegee Airmen Way												
Tuskegee Airmen Way	EB	L	0.29	14.8	B	0.24	12.6	B	0.25	16.6	B	- Install a traffic signal
	WB	TR	0.16	13.0	B	0.00	9.4	A	0.00	13.9	B	
165th Street	NB	LT	0.04	1.7	A	0.04	1.8	A	0.36	17.9	B	
	SB	R	0.03	0.0	A	0.12	0.0	A	0.32	13.3	B	
Overall Intersection		-		**6.7**	**A**		**3.9**	**A**		**16.1**	**B**	
PM Peak												
165th Street and Liberty Avenue												
Liberty Avenue	EB	L	0.31	16.7	B	0.49	20.4	C	0.57	44.2	D	- Add a 17-second westbound protected left-turn phase, shifting 11 seconds of green time from the eastbound through phase and six seconds of green time from the NB/SB phase.
		TR	0.64	15.5	B	0.64	15.7	B	0.89	45.1	D	
	WB	L	0.45	25.9	C	1.49	276.6	F	0.88	49.2	D	
		TR	0.43	17.8	B	0.45	18.1	B	0.39	14.0	B	
165th Street	NB	LT	0.40	23.2	C	0.37	22.7	C	0.45	46.8	D	
		R	0.36	22.6	C	0.36	22.6	C	0.44	46.6	D	
	SB	LTR	0.47	30.0	C	0.50	29.5	C	0.63	41.4	D	
Overall Intersection		-		**19.4**	**B**		**42.3**	**D**		**35.4**	**D**	
Merrick Boulevard and 107th Avenue												
107th Avenue	EB	LR	0.14	23.0	C	0.12	22.8	C	0.13	25.1	C	- Shift three seconds of green time from the eastbound phase to the NB/SB phase.
Merrick Boulevard	NB	L	0.42	28.3	C	0.29	24.2	C	0.21	16.3	B	
		T	0.72	23.4	C	0.74	24.4	C	0.70	20.5	C	
	SB	TR	0.99	51.2	D	1.06	69.9	E	0.99	49.1	D	
0.00		-		**12.1**	**B**		**12.1**	**B**		**10.6**	**B**	
165th Street and Tuskegee Airmen Way												
Tuskegee Airmen Way	EB	L	0.43	14.8	B	0.43	14.8	B	0.50	20.9	C	- Install a traffic signal
	WB	TR	0.07	10.2	B	0.07	10.2	B	0.02	14.1	B	
165th Street	NB	LT	0.03	2.7	A	0.03	2.7	A	0.21	15.9	B	
	SB	R	0.19	0.0	A	0.19	0.0	A	0.69	31.5	C	
Overall Intersection		-		**14.2**	**B**		**14.2**	**B**		**24.7**	**C**	

Source: STV Incorporated, 2022.

D. TRANSIT AND PEDESTRIANS

According to the thresholds specified in the *CEQR Technical Manual*, detailed transit analyses are required if a proposed action is projected to result in an increase of 200 or more passengers at a single subway station or on a single subway line or if a proposed action would result in 50 or more bus passengers being assigned to a single bus route (in one direction) during the AM and PM peak hours. Quantitative pedestrian analyses are required if a proposed project results in more than 200 new pedestrian trips.

a. *Transit*

It is estimated that approximately 280 construction workers would travel to and from the Depot each day during the 2025 peak analysis period for construction travel demand (refer to Table 16: 2025 Peak Incremental Construction Vehicle Trip Projections (in PCES)). The modal split data indicates that approximately 22 percent of these construction workers are expected to travel to and from the Depot by public transit (subway or bus) because the JBD is located in an area that is well served by public transportation, with a total of three subway lines and ten bus routes.

As noted previously, it is estimated that approximately 80 percent of all construction workers would arrive and depart in the peak hour before and after each shift. Therefore, construction worker travel demand is expected to generate a total of approximately 50 transit trips in both the 6-7 AM and 3-4 PM construction peak hours. As per the criteria established in the *CEQR Technical Manual*, quantitative transit analyses are warranted if a proposed project results in more than 200 new peak hour transit trips. Based on the increase of 50 new transit trips during construction, transit related trips would not exceed the *CEQR Technical Manual* criteria. Therefore, a detailed analysis of transit conditions is not warranted, and construction of the Proposed Project would not result in any significant adverse transit impacts.

There is a Merrick Boulevard bus stop adjacent to the Depot site that serves the Q4, Q5, Q84, Q85, and N4 bus routes. This bus stop may need to be relocated during construction. MTA NYCT would coordinate any bus stop relocations with the contractor and NYCDOT OCMC.

b. *Pedestrians*

As discussed above, during the 2025 peak analysis period for construction travel demand, it is estimated that there would be approximately 280 construction workers on-site daily. Approximately ten percent of these workers would be expected to walk to the Depot, in addition to the 22 percent who would be expected to travel to the Depot by transit, walking to and from area subway stations and bus stops. These travel mode choice estimates were based on U.S. Census data for the study area.

Construction worker travel demand on area sidewalks and crosswalks is expected to total approximately 72 trips in both the 6-7 AM and 3-4 PM construction peak hours, when 80 percent of construction workers are expected to arrive and depart. As per the criteria established in the *CEQR Technical Manual*, quantitative pedestrian analyses are warranted if a proposed project results in more than 200 new peak hour pedestrian trips. Based on the increase of 72 new walk trips during construction, a detailed analysis of pedestrian conditions is not warranted, and construction of the Proposed Project would not result in any significant adverse pedestrian impacts. Adequate protection or temporary sidewalks and appropriate signage would be provided in accordance with NYCDOT requirements at locations where temporary sidewalk closures are required during construction activities.

Attachment E: Air Quality

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I. Depot Operations

A. INTRODUCTION

Operation of the Proposed Project has the potential to affect localized air quality conditions, which could result in potential effects to public health and the environment. Therefore, analyses were conducted in 2019 Environmental Impact Statement ("EIS") in accordance with the New York City Environmental Quality Review ("*CEQR") Technical Manual*, as well as other relevant guidance and protocols provided by the New York State Department of Environmental Conservation ("NYSDEC"), New York City Department of Environmental Protection ("NYCDEP"), and the United States Environmental Protection Agency ("USEPA"). In addition, the air quality characteristics of the Proposed Project are identified and discussed within the context of the Clean Air Act ("CAA") requirements and other applicable State and local air quality standards. Potential effects related to construction-period air quality are discussed in Section II: Construction.

This section examines the potential for direct and indirect air quality impacts from the Proposed Project. Direct impacts stem from emissions generated by stationary sources at the Depot site, such as emissions from fossil fuels burned on-site for heating, ventilation, and air conditioning ("HVAC") systems. Indirect impacts can include emissions from mobile vehicle trips generated by a project or other changes to traffic conditions from a project.

The Proposed Project would include fossil fuel-fired HVAC systems to provide heating and cooling. Therefore, this section assesses the impacts of these systems to the surrounding community and the environment. The Proposed Project would increase traffic in the vicinity of the Depot site resulting from the increase in future bus ridership demand. To meet the future ridership demand, Metropolitan Transportation Authority ("MTA") New York City Transit ("NYCT") will require more buses, higher capacity buses, and additional employees to service and operate them than currently served by the existing Depot. Therefore, screening analyses for carbon monoxide ("CO") and particulate matter ("PM") were conducted to assess the impacts from mobile sources.

The Depot site is surrounded by both residential and commercial/industrial land uses. Residential homes dominate the western portion of the Depot site study area along 165th Street, whereas commercial and retail business dominate the land use east and north of the Depot site along Merrick Boulevard and Tuskegee Airmen Way, respectively. A high-rise senior citizen housing complex is located south of the Depot site study area.

B. SUMMARY AND CONCLUSION

The air quality analysis for the Proposed Project indicates that the maximum predicted pollutant concentrations and concentration increments from stationary and mobile sources would not result in any significant adverse air quality impacts.

The stationary source screening analysis determined that there would be no potential significant adverse air quality impacts from the emissions of pollutants from both the HVAC systems and bus parking activities associated with the Proposed Project.

Increases in mobile and stationary source resulting from the Proposed Project would not exceed the USEPA's National Ambient Air Quality Standards ("NAAQS") or the CEQR *de minimis* impact criteria.

- For mobile sources, the *CEQR Technical Manual* traffic screening threshold for CO would not be surpassed at any of the studied intersections; however, two intersections associated with the Proposed Project would exceed the *CEQR Technical Manual* screening criteria for fine respirable particulate matter ("$PM_{2.5}$") for increased heavy-duty diesel vehicle ("HDDV") equivalents. As a result, a detailed intersection analysis of $PM_{2.5}$ was conducted for the intersection with the greatest potential to exceed the CEQR *de minimis* impact criteria. The results of the detailed intersection analysis conducted for $PM_{2.5}$ indicate that there would be no exceedance of the CEQR *de minimis* impact criteria.
- For stationary sources, a detailed assessment of on-site emissions of nitrogen dioxide ("NO_2"), sulfur dioxide ("SO_2"), and $PM_{2.5}$ was conducted in the 2019 EIS for bus parking and maintenance activities, as well as the Proposed Project's heat and hot water systems. The results of the analyses indicate that the Proposed Project would not have a significant adverse air quality impact at any of the nearby residences (sensitive receptors). Concentrations of NO_2 and SO_2 would not exceed the USEPA's NAAQS criteria and $PM_{2.5}$ concentrations would not exceed the CEQR *de minimis* impact criteria.

Operational phasing of the Proposed Project would be the same as that was proposed in the 2019 EIS. Therefore, the methodology and assessment results presented in the 2019 EIS, as shown below, are determined to be still valid.

The projected emission pollutant burdens calculated in the 2019 EIS would result in annual emissions that would categorize the Proposed Project as a minor source and, as a result, the Proposed Project would be eligible to obtain a State facility permit.

C. REGULATORY FRAMEWORK

1. National Ambient Air Quality Standards

Ambient air quality is affected by air pollutants produced by both motor vehicles and stationary sources. Emissions from motor vehicles are referred to as mobile source emissions, while emissions from fixed facilities are referred to as stationary source emissions. As required by the CAA, primary and secondary NAAQS have been established for six major air pollutants: CO; NO_2; ozone; respirable PM (i.e., $PM_{2.5}$ and respirable particulate matter ("PM_{10}")); SO_2; and lead. The primary standards represent levels that are requisite to protect public health, allowing an adequate margin of safety. The secondary standards are intended to protect the nation's welfare, and account for air pollutant effects on soil, water, visibility, materials, vegetation, and other aspects of the environment. The primary and secondary standards are the same for NO_2, ozone, lead, and PM, and there is no secondary standard for CO. The NAAQS are presented in Table 1: National Ambient Air Quality Standards. The NAAQS for CO, NO_2, and SO_2 have also been adopted as the ambient air quality standards for New York State, but are defined on a running 12-month basis rather than for calendar years only.

Federal ambient air quality standards do not exist for noncriteria pollutants; however, as mentioned above, New York State has issued standards for three noncriteria compounds. NYSDEC has also developed a

guidance document DAR-1 (February 2021), which contains a compilation of annual and short term (1-hour) guideline concentrations for numerous other noncriteria compounds. The NYSDEC thresholds represent ambient levels that are considered safe for public exposure.

Table 1: National Ambient Air Quality Standards

Pollutant	Primary		Secondary	
	ppm	µg/m³	ppm	µg/m³
Carbon Monoxide ("CO")				
8-Hour Average	9 (1)	10,000	None	
1-Hour Average	35 (1)	40,000		
Lead				
Rolling 3-Month Average	NA	0.15	NA	0.15
Nitrogen Dioxide ("NO_2")				
1-Hour Average (2)	0.100	188	None	
Annual Average	0.053	100	0.053	100
Ozone ("O_3")				
8-Hour Average (3)	0.070	140	0.070	140
Respirable Particulate Matter ("PM_{10}")				
24-Hour Average (4)	NA	150	NA	150
Fine Respirable Particulate Matter ("$PM_{2.5}$")				
Annual Mean (5)	NA	12	NA	15
24-Hour Average (6)	NA	35	NA	35

Table 1: National Ambient Air Quality Standards (cont'd)

Pollutant	Primary		Secondary	
	ppm	µg/m³	ppm	µg/m³
Sulfur Dioxide ("SO_2")				
1-Hour Average [7]	0.075	196	NA	NA
Maximum 3-Hour Average [1]	NA	NA	0.50	1,300

Notes:
ppm—parts per million (unit of measure for gases only)
µg/m³—micrograms per cubic meter (unit of measure for gases and particles, including lead)
NA—not applicable
All annual periods refer to calendar year.
Standards are defined in ppm. Approximately equivalent concentrations in µg/m³ are presented.
[1] Not to be exceeded more than once a year.
[2] 3-year average of the annual 98th percentile daily maximum 1-hr average concentration.
[3] 3-year average of the annual fourth-highest daily maximum 8-hr average concentration.
[4] Not to be exceeded more than once a year on average over three years.
[5] 3-year average of annual mean.
[6] Not to be exceeded by the annual 98th percentile when averaged over 3 years.
[7] 3-year average of the annual 99th percentile daily maximum 1-hr average concentration.

Source: 40 CFR Part 50: National Primary and Secondary Ambient Air Quality Standards.

2. Relevant Air Pollutants for Analysis

a. *Carbon Monoxide*

Carbon monoxide is a colorless and odorless gas produced primarily by the incomplete combustion of gasoline and other fossil fuels. In urban areas, approximately 80 to 90 percent of CO emissions are from motor vehicles. Since CO is a reactive gas that does not persist in the atmosphere, CO concentrations can vary greatly over relatively short distances; elevated concentrations are usually limited to locations near crowded intersections, heavily traveled and congested roadways, parking lots, and garages. Consequently, CO concentrations must be predicted on a local, or microscale, basis.

The Proposed Project would increase bus and automobile traffic volumes on streets near the Depot and may result in local increases in CO levels. Therefore, a mobile source assessment was conducted at critical intersections in the Depot site study area to evaluate CO concentrations in the No-Build and future with the Proposed Project conditions to determine the potential for significant adverse impacts.

b. *Lead*

Airborne lead emissions are currently associated principally with industrial sources. Lead in gasoline has been banned under the CAA and would not be emitted from any other component of the Proposed Project. Therefore, an analysis of this pollutant is not warranted.

c. *Nitrogen Oxides, VOCs, and Ozone*

Nitrogen oxides ("NO_x") are of concern because of their role, together with volatile organic compounds ("VOCs"), as precursors in the formation of ozone. Ozone is formed through a series of reactions that take place in the atmosphere in the presence of sunlight. Because the reactions are slow, and occur as the pollutants travel downwind, elevated ozone levels are often found many miles from sources of the precursor pollutants. Therefore, the effects of NO_x and VOC emissions from added stationary or mobile sources are generally examined on a regional basis.

Although New York City is designated as a non-attainment area for ozone, the relatively small scale of this project does not warrant a regional assessment of this pollutant. However, because the Proposed Project's heating and hot water systems would utilize natural gas-fired combustion equipment, a more localized assessment of this pollutant is warranted.

d. *Respirable Particulate Matter — PM_{10} and $PM_{2.5}$*

PM is a broad class of air pollutants that includes discrete particles of a wide range of sizes and chemical compositions, as either liquid droplets (aerosols) or solids suspended in the atmosphere. The constituents of PM are numerous and varied, and they are emitted from a wide variety of sources (both natural and anthropogenic). Natural sources include the condensed and reacted forms of naturally occurring VOCs; salt particles resulting from the evaporation of sea spray; wind-borne pollen, fungi, molds, algae, yeasts, rusts, bacteria, and material from live and decaying plant and animal life; particles eroded from beaches, soil, and rock; and particles emitted from volcanic and geothermal eruptions and from forest fires. Naturally occurring PM is generally greater than 2.5 micrometers in diameter. Major anthropogenic sources of PM include the combustion of fossil fuels (e.g., vehicular exhaust, power generation, boilers, engines, and home heating); chemical and manufacturing processes; all types of construction; agricultural activities; as well as wood-burning stoves and fireplaces. PM also acts as a substrate for the adsorption of other pollutants, which are often toxic, as well as some likely carcinogenic compounds.

As described below, PM is regulated in two size categories: particles with an aerodynamic diameter of less than or equal to 2.5 micrometers, or $PM_{2.5;}$ and particles with an aerodynamic diameter of less than or equal to 10 micrometers, or PM_{10}, which includes the smaller $PM_{2.5}$. $PM_{2.5}$ is extremely persistent in the atmosphere and has the ability to reach the lower regions of the respiratory tract, delivering with it other compounds that adsorb to the surfaces of the particles. $PM_{2.5}$ is mainly derived from combustion material that has volatilized and then condensed to form primary PM (often soon after the release from an exhaust pipe or stack) or from precursor gases reacting in the atmosphere to form secondary PM.

Given that the Proposed Project would increase the number of buses and automobiles traveling near the Depot, a PM emissions assessment was performed for both mobile sources (buses and vehicles) and stationary sources (heat and hot water systems) following the *CEQR Technical Manual* and USEPA guidance.

e. *Sulfur Dioxide*

SO_2 emissions are primarily associated with the combustion of sulfur-containing fuels such as oil and coal. Due to Federal restrictions on the sulfur content in diesel fuel for on-road vehicles, no significant quantities are emitted from vehicular sources. Therefore, an analysis of this pollutant from mobile sources is not warranted for the Proposed Project.

As stated above, the heating and hot water systems would be "gas-fired." The sulfur content of natural gas is negligible; however, a stationary source analysis was conducted to ensure a conservative analysis.

D. NAAQS ATTAINMENT STATUS AND STATE IMPLEMENTATION PLAN ("SIP")

The CAA, as amended in 1990, defines non-attainment areas ("NAA") as geographic regions that have been designated as not meeting one or more of the NAAQS. When an area is designated as non-attainment by USEPA, the state is required to develop and implement a State Implementation Plan ("SIP"), which delineates how a state plans to achieve air quality that meets the NAAQS under the deadlines established by the CAA, followed by a plan for maintaining attainment status once the area is in attainment.

In 2002, USEPA re-designated New York City as in attainment for CO. Under the resulting maintenance plans, New York State is committed to implementing site-specific control measures throughout the City to reduce CO levels, should unanticipated localized growth result in elevated CO levels during the maintenance period. The second CO maintenance plan for the region was approved by USEPA on May 30, 2014.

The five New York City counties and Nassau, Suffolk, Rockland, Westchester, and Orange Counties had been designated as a $PM_{2.5}$ NAA (New York Portion of the New York–Northern New Jersey–Long Island, NY–NJ–CT NAA) since 2004 under the CAA due to exceedance of the 1997 annual average standard, and were also non-attainment with the 2006 24-hour $PM_{2.5}$ NAAQS since November 2009. The area was re-designated as in attainment for that standard effective April 18, 2014 and is now under a maintenance plan. USEPA lowered the annual average primary standard to 12 $\mu g/m^3$ effective March 2013. USEPA designated the area as in attainment for the 12 $\mu g/m^3$ NAAQS effective April 15, 2015.

Effective June 15, 2004, USEPA designated Nassau, Rockland, Suffolk, Westchester, and the five New York City counties (NY portion of the New York–Northern New Jersey–Long Island, NY-NJ-CT, NAA) as a moderate non-attainment area for the 1997 8-hour average ozone standard. In March 2008, USEPA strengthened the 8-hour ozone standards, but certain requirements remain in areas that were either non-attainment or maintenance areas for the 1997 ozone standard ('anti-backsliding'). USEPA designated the same NAA as a marginal NAA for the 2008 ozone NAAQS, effective July 20, 2012. On April 11, 2016, as requested by New York State, USEPA reclassified the area as a "moderate" NAA. On July 19, 2017 NYSDEC announced that the New York Metro Area ("NYMA") is not projected to meet the July 20, 2018 attainment deadline and NYSDEC therefore requested that USEPA reclassify the NYMA to "serious" non-attainment. USEPA reclassified the NYMA from "moderate" to "serious" NAA, effective September 23, 2019, which imposes a new attainment deadline of July 20, 2021 (based on 2018-2020 monitored data). On April 30, 2018, USEPA designated the same area as a moderate NAA for the revised 2015 ozone standard. SIP revisions have been submitted to USEPA, pending to final approval.

New York City is currently in attainment of the annual-average NO_2 standard. USEPA has designated the entire State of New York as "unclassifiable/attainment" of the 1-hour NO_2 standard effective February 29, 2012. Given that additional monitoring is required for the 1-hour standard, areas will be reclassified once three years of monitoring data are available.

USEPA has established a 1-hour SO_2 standard, replacing the former 24-hour and annual standards, effective August 23, 2010. In December 2017, USEPA designated the entire State of New York as in attainment for this standard, with the exception of Monroe County, which was designated "unclassifiable."

a. *Federal Conformity*

Federal conformity regulations promulgated under the CAA require projects in NAA that receive Federal funding to conform to the applicable SIP. An area's Metropolitan Planning Organization ("MPO"), together with the State, is responsible for demonstrating conformity with respect to the SIP on metropolitan long-range transportation plans and Transportation Improvement Programs ("TIP"). The Proposed Project is not receiving Federal funding and is not required to meet the Federal conformity requirements.

2. Impact Criteria

The New York State Environmental Quality Review Act ("SEQRA") regulations and *CEQR Technical Manual* state that the significance of a predicted consequence of a project (i.e., whether it is material, substantial, large or important) should be assessed in connection with its setting (e.g., urban or rural), its probability of occurrence, its duration, its irreversibility, its geographic scope, its magnitude, and the number of people affected.[1] In terms of the magnitude of air quality impacts, any action predicted to increase the concentration of a criteria air pollutant to a level that would exceed the concentrations defined by the NAAQS (see Table 1: National Ambient Air Quality Standards) would be deemed to have a potential significant adverse impact.

In addition, to maintain concentrations lower than the NAAQS in attainment areas, or to ensure that concentrations would not be significantly increased in NAA, threshold levels have been defined for certain pollutants; any action predicted to increase the concentrations of these pollutants above the thresholds would be deemed to have a potential significant adverse impact, even in cases where violations of the NAAQS are not predicted.

a. *CO De Minimis Criteria*

New York City has developed *de minimis* criteria to assess the significance of the increase in CO concentrations that would result from the impact of proposed projects or actions on mobile sources, as set forth in the *CEQR Technical Manual*. These criteria set the minimum change in CO concentration that defines a significant environmental impact. Significant increases of CO concentrations in New York City are defined as:

- An increase of 0.5 parts per million ("ppm") or more in the maximum eight-hour average CO concentration at a location where the predicted No-Action eight-hour concentration is equal to or between 8.0 and 9.0 ppm; or
- An increase of more than half the difference between baseline (i.e., No-Action) concentrations and the eight-hour standard, when No-Action concentrations are below 8.0 ppm.

[1] New York City. *CEQR Technical Manual*; and SEQR Regulations. 6 NYCRR § 617.7

b. *$PM_{2.5}$ De Minimis Criteria*

New York City uses *de minimis* criteria to determine the potential for significant adverse $PM_{2.5}$ impacts under CEQR as follows:

- Predicted increase of more than half the difference between the background concentration and the 24-hour standard;
- Annual average $PM_{2.5}$ concentration increments which are predicted to be greater than 0.1 $\mu g/m^3$ at ground level on a neighborhood scale (i.e., the annual increase in concentration representing the average over an area of approximately one square kilometer, centered on the location where the maximum ground-level impact is predicted for stationary sources; or at a distance from a roadway corridor similar to the minimum distance defined for locating neighborhood scale monitoring stations); or
- Annual average $PM_{2.5}$ concentration increments which are predicted to be greater than 0.3 $\mu g/m^3$ at a discrete receptor location (i.e., elevated or ground level).

3. Monitored Ambient Air Quality Levels

NYSDEC maintains an air quality monitoring network and produces annual air quality reports that include monitoring data for CO, NO_x, PM_{10}, $PM_{2.5}$, and SO_2. To develop background levels, the latest available pollutant concentrations from monitoring sites located closest to the Depot were used.

$PM_{2.5}$ impacts are assessed on an incremental basis and compared with the $PM_{2.5}$ *de minimis* criteria, without considering the annual background. Table 2: Background Pollutant Concentrations summarizes the background concentrations for each of the pollutants.

Table 2: Background Pollutant Concentrations

Pollutant	Averaging Period	Location	Concentration
CO	1-Hour[1]	Queens College, Queens	2.1 ppm
	8-Hour[2]	Queens College, Queens	1.8 ppm
SO_2	1-Hour[3]	Queens College, Queens	15.1 µg/m³
NO_2	1-Hour[4]	Queens College, Queens	99.9 µg/m³
	Annual[5]	Queens College, Queens	29.7 µg/m³
$PM_{2.5}$	24-Hour[6]	Queens College, Queens	17.7 µg/m³
	Annual[7]	Queens College, Queens	7.0 µg/m³
PM_{10}	24-Hour[8]	Queens College, Queens	28.0 µg/m³

Notes:

[1] 1-hour CO background concentration is based on the highest 2nd max value from the latest three years of available monitoring data from NYSDEC.

[2] 8-hour CO background concentration is based on the highest value from the latest available monitoring data from NYSDEC.

[3] 1-hour SO_2 background concentration is based on the maximum 99th percentile concentration averaged over three years of data from NYSDEC.

[4] 1-hour NO_2 background concentration is based on three-year average of the 98th percentile of daily maximum 1-hour concentrations from available monitoring data from NYSDEC.

[5] Annual NO_2 background concentration is based on the maximum annual average from the latest five years of available monitoring data from NYSDEC.

[6] The 24-hour $PM_{2.5}$ background concentration is based on maximum 98th percentile concentration averaged over three years of data from NYSDEC.

[7] Annual $PM_{2.5}$ is based on three-year average from the latest three years of available monitoring data from NYSDEC.

[8] 24-hour PM_{10} is based on the highest 2nd max value from the latest three years of available monitoring data from NYSDEC.

Source: NYSDEC, https://www.dec.ny.gov/docs/air_pdf/2020airqualreport.pdf

E. AIR QUALITY METHODOLOGY

1. Mobile Sources

The Proposed Project has the potential for significant mobile source air quality impacts from increases in and/or redistribution of traffic. As outlined in the *CEQR Technical Manual*, in this area of Queens, actions that would result in the generation of 170 or more peak-hour vehicle trips at an intersection may result in potentially significant air quality impacts and require a detailed air quality analysis for CO.

Also, NYCDEP, in conjunction with NYSDEC, has promulgated guidance for the screening and assessment of $PM_{2.5,}$ which is outlined in the *CEQR Technical Manual*. The mobile source screening portion of the guidelines requires that if a proposed project would generate fewer HDDVs per hour (or its equivalent in vehicular emissions) than listed below, a detailed $PM_{2.5}$ analysis is not required:

- 12 HDDV: for paved roads with < 5,000 vehicles per day
- 19 HDDV: for collector type roads
- 23 HDDV: for principal and minor arterials
- 23 HDDV: or expressways and limited access roads

All mobile source analyses were performed for the 2027 build year.

a. *Vehicle Emissions*

CO and PM emission factors are estimated using the USEPA Motor Vehicle Emissions Simulator ("MOVES") released in 2010 and updated in 2014 (the latest version is MOVES 2014b). Emissions are supplied for average projected free flow speeds provided by the traffic analysis. Applicable and up-to-date environmental and vehicular traffic data for MOVES are supplied by NYSDEC to accurately model project conditions. Additional link-based data files requirements for MOVES are compiled by obtaining volume, speed, and traffic distribution data from the traffic analysis.

Appropriate credits are used to accurately reflect the inspection and maintenance program.[2] County-specific hourly temperature and relative humidity data obtained from NYSDEC are used.

Emissions of fugitive dust are estimated using USEPA's latest Air Pollutant Emission Factor ("AP-42") equation for paved roads. Emissions from fugitive dust are dependent upon vehicle weight and the surface silt loading in accordance with the latest NYCDEP guidelines regarding roadway silt loading factors and average fleet vehicle weight. Fugitive road dust is not included in the neighborhood scale $PM_{2.5}$ microscale analyses, because NYCDEP considers it to have an insignificant contribution on that scale.

b. *Traffic Data*

Traffic data for the air quality analysis are derived from vehicle counts and other information developed as part of the traffic analysis. Peak traffic periods considered in the air quality analysis are the same peak periods selected for the traffic analysis and consist of the weekday AM and PM peak hours. These are the periods when the maximum changes in pollutant concentrations are expected based on overall traffic volumes and anticipated changes in traffic patterns due to the Proposed Project.

The *2000 Highway Capacity Manual* and Highway Capacity Software is used to develop the traffic data necessary for the air quality analysis. The vehicle classification is determined through field data collection. Existing vehicle speeds are obtained from field measurements for the area and adjusted to estimate future free flow speeds. Where speed data is unavailable, the lowest speed from the nearest intersections or different direction of same intersection is applied to be conservative.

c. *Dispersion Model*

The CO and PM concentrations due to vehicular emissions adjacent to the analysis sites were predicted using the American Meteorological Society/Environmental Protection Agency Regulated Model ("AERMOD") the latest Version 21112. AERMOD is a state-of-the-art dispersion model, applicable to rural and urban areas, flat and complex terrain, surface and elevated releases, and multiple sources (including point, area, and volume sources). AERMOD is a steady-state plume model that incorporates current concepts about flow and dispersion in complex terrain, including updated treatments of the boundary layer theory, understanding of turbulence and dispersion, and includes handling of terrain interactions. AERMOD has been a recommended model for transportation air quality analyses for several years and

[2] The inspection and maintenance programs require inspections of automobiles and light trucks to determine if pollutant emissions from each vehicle exhaust system are lower than emission standards. Vehicles failing the emissions test must undergo maintenance and pass a repeat test to be registered in New York State.

USEPA mandated its use for transportation conformity purposes after a three-year transition period. Following USEPA guidelines, the analysis was performed using an area source representation of emission sources in order to simulate traffic-related air pollutant dispersion. Hourly traffic volumes and associated emission factors were used to estimate hourly emission rates from each modeled roadway segment and predict traffic-related air pollutant concentrations at receptor locations.

d. *Meteorology*

In general, the transport and concentration of pollutants from vehicular sources are influenced by three principal meteorological factors: wind direction; wind speed; and atmospheric stability. Wind direction influences the direction in which pollutants are dispersed, and atmospheric stability accounts for the effects of vertical mixing in the atmosphere. These factors influence the concentration at a prediction location (receptor).

The AERMOD model includes the modeling of hourly concentrations based on hourly traffic data and five years of monitored hourly meteorological data. The data consists of surface data collected at LaGuardia Airport and upper air data collected at Brookhaven, New York for the period 2016–2020. The meteorological data provide hour-by-hour wind speeds and directions, stability states, and temperature inversion elevation over the five-year period. These data are processed using the USEPA AERMET program to develop data in a format which can be readily processed by the AERMOD model. The land uses around the site where meteorological surface data were available were classified using categories defined in digital United States Geological Survey ("USGS") maps.

e. *Analysis Year*

The microscale analyses were performed for the No-Build condition and the 2027 build year, the year by which the Proposed Project would be operational. The analysis was performed for both the No-Build Alternative and the future with the Proposed Project.

f. *Background Concentrations*

To represent the total impact of the Proposed Project in the analysis, it is necessary to consider representative background levels for each of the analyzed pollutants. The background level is the component of the total concentration not accounted for through the microscale modeling analysis. Applicable background concentrations are added to the modeling results to obtain the total pollutant concentrations at each receptor site for the analysis year. CO, $PM_{2.5}$, PM_{10}, NO_2, and SO_2 background values were obtained from NYSDEC. These values are added to the modeling results, as appropriate, to obtain the total pollutant concentrations at each receptor site for the future analysis year. The background values used in the air quality analyses are provided in Table 2: Background Pollutant Concentrations.

g. *Analysis Sites*

To determine locations at which microscale modeling analysis would be required to estimate CO and $PM_{2.5}$ concentration levels at the most heavily congested intersections in the study area, screening procedures described in the *CEQR Technical Manual* are utilized in order to select the worst-case analysis sites. These procedures include a determination as to whether future traffic volumes from the studied traffic intersections would exceed the CEQR CO screening threshold of 170 vehicles during peak traffic hours.

For $PM_{2.5}$, in concert with its interim guidelines, NYCDEP has developed a screening threshold procedure according to roadway type which examines the minimum allowable project-induced heavy-duty diesel ("HDD") truck trips per hour that would not result in significant emissions of $PM_{2.5}$.

- 12 or more HDDV for paved roads with average daily traffic fewer than 5,000 vehicles;
- 19 or more HDDV for collector roads;
- 23 or more HDDV for principal and minor arterials; or
- 23 or more HDDV for expressways and limited access roads.

Traffic periods considered in the air quality analysis consist of the weekday, AM, and PM peak hours. Future conditions for the study year 2027, with and without the Proposed Project, are considered in the selection process. The screening process concluded that none of the traffic intersections in the study area would exceed the CEQR screening thresholds for CO. For $PM_{2.5}$, the screening process indicated that two intersections in the study area would exceed the CEQR incremental screening criteria. Therefore, a detailed analysis was performed at the intersection at 165th Street and Liberty Avenue, which presented as the worst-case scenario for impacts.

2. Stationary Sources

A stationary source analysis was conducted in the 2019 EIS to evaluate potential air quality impacts related to the operation of the Proposed Project. Operation, equipment types, and fuel usage of the Proposed Project will be the same as what were proposed in the 2019 EIS. Therefore, the methodology and assessment results presented in the 2019 EIS, as shown below, are still valid. The latest air monitoring background concentration was incorporated to assess air quality impacts based on the 2019 EIS modelling results since the build year has changed for the Proposed Project.

The stationary sources of emissions from the Proposed Project include: boilers; hot water heater; gas-fired rooftop heat recovery ventilation air units ("HRUs"); emergency generators; and tail pipe exhaust system, related to the storage and maintenance of buses.

The hot water boilers would provide for building heating and a separate water heater would provide hot water for domestic use. The boilers and water heater would be gas-fired. The facility would have two boilers, but only one would be operational at any given time. Ventilation for the maintenance and storage areas of the Depot would be provided by up to 19 roof-mounted gas-fired HVAC/HRUs. These HVAC/HRU systems would be designed to be more energy efficient than traditional ventilation systems by recovering heat from the air being exhausted from the building to pre-heat intake air, thereby reducing overall natural gas consumption. Three gas-fired rooftop HVAC/HRU units would provide heating and cooling of administrative and support areas within the Depot.

Two diesel-fueled 2-megawatt ("MW") generators would be provided to supply the Depot with emergency backup power in the event of any temporary Con Edison power outage.

a. *Emissions Estimates*

Emission rates for the Proposed Project's fossil fuel-fired equipment were calculated based on emission factors obtained from the USEPA's Compilation of Air Pollutant Emission Factors, AP-42, Fifth Edition, Volume I: Stationary Point and Area Sources. PM emissions include both the filterable and condensable fractions. Short-term and annual emission rates were estimated based on conservative estimates of

equipment size and utilization data provided by MTA NYCT and on other relevant information from other MTA NYCT bus depot facilities.

The Proposed Project would also be required to meet the applicable NYSDEC regulatory requirements for sources of air emissions. As shown in **Table 3: Estimated Annual Emissions for the Proposed Project**, the Proposed Project would result in annual emissions that would categorize it as a minor source and, as a result, would be eligible to obtain a State facility permit.

Table 3: Estimated Annual Emissions for the Proposed Project

Pollutants	Estimated Facility Emissions (Tons/year)		Major Source Threshold (Tons/Year)[1]
	2019 EIS	2022 SEA	
NOx	6.8	**6.8**	25
CO	6.2	**6.2**	100
PM_{10}	0.5	**0.5**	100
$PM_{2.5}$	0.5	**0.5**	100
SO_2	0.1	**0.1**	100
VOCs	1.2	**1.2**	25

Note:
[1] https://www.dec.ny.gov/permits/6244.html

Source: STV Incorporated, 2022.

Additional key assumptions for pollutant emissions determinations include:

- Emergency generators would run/operate during emergencies and periodic testing; therefore, emissions would be insignificant and were not included as part of the impact assessment.
- Only Low NO_x Boilers would be used for the facility.
- Only one boiler would be utilized during peak one-hour periods.
- Unless otherwise specified, all rooftop emissions sources assume 100 percent load conditions.
- For boilers, short-term emission rate for 24-hour averaging period is based on one boiler operating for three hours in the morning and three hours in the evening at 100 percent load, and one boiler operating at 50 percent load for the rest of the day (18 hours).
- For HRUs, short-term emission rate for 24-hour averaging period is based on the operation of the heat recovery units for three hours in the morning and three hours in the evening at 100 percent load and operating at two-thirds of the maximum load for the rest of the day (18 hours).
- All future diesel buses associated with the Proposed Project are assumed to be at least Tier 4 compliant. As a result, USEPA MOVES emission factors were adjusted to reflect emissions reduction technology such as diesel particulate filters.

b. *Dispersion Analysis*

A detailed dispersion modeling analysis using the USEPA AERMOD model was conducted for the Proposed Project. AERMOD is a versatile model capable of predicting pollutant concentrations from continuous point, area, and volume sources. AERMOD uses enhanced plume and wake dispersion algorithms that are capable of estimating pollutant concentrations in a building's cavity and wake regions.

The AERMOD model calculates pollutant concentrations from one or more points (e.g., exhaust stacks) based on hourly meteorological data, and has the capability to calculate pollutant concentrations at locations where the plume from the exhaust stack is affected by the aerodynamic wakes and eddies (downwash) produced by nearby structures. The analyses of potential impacts from exhaust stacks were made assuming stack tip downwash, urban dispersion and surface roughness length, and elimination of calms. AERMOD was run with and without building downwash (the downwash option accounts for the effects on plume dispersion created by the structure the stack is located on, and other nearby structures). This ensures that the highest estimates of pollutant concentrations when assessing the impact of elevated sources on elevated receptor locations are produced.

The refined dispersion modeling analysis was performed for 1-hour SO_2 and NO_2, 24-hour $PM_{2.5}$, annual $PM_{2.5}$, and NO_2.

One-hour average NO_2 concentration increments associated with the Proposed Project were estimated using AERMOD model's Ozone Limiting Method ("OLM") module to analyze chemical transformation within the model. The OLM module incorporates hourly background ozone concentrations to estimate NO_x transformation within the source plume. Ozone concentrations were taken from the NYSDEC Queens College monitoring station that is the nearest ozone monitoring station and has five years of hourly data available.

c. *Meteorological Data*

Based on its proximity to the Depot, the five-year period (2013 to 2017) of available representative hourly meteorological data from LaGuardia Airport in the 2019 EIS was used in the analysis along with upper air data from Brookhaven, located in Long Island, New York. Meteorological data represents a key input into the AERMOD model that helps determine local pollutant transport.

d. *Receptor Locations*

A comprehensive receptor network (i.e., locations with continuous public access or residential land use) was developed for the modeling analyses. The receptor network included numerous discrete receptors to simulate impacts on elevated receptors (e.g., windows, balconies, air intakes) from the Proposed Project. Receptors were placed at multiple locations for buildings in the immediate vicinity of the Depot site. Locations included ground level and upper floors up to the maximum building heights, representative of intake vents or operable windows.

F. AIR QUALITY IMPACT ASSESSMENT

1. The Future Without the Proposed Project

Under the No-Build Alternative (also referred to as "the future without the Proposed Project"), it is assumed that the Depot will continue to operate without any improvements. For mobile sources, no analysis was conducted since impacts associated with $PM_{2.5}$ are assessed by their incremental effect on existing conditions. For stationary sources, the No-Build Alternative will include the same bus maintenance facilities as described in the 2019 EIS. No new major stationary emission sources are currently proposed within the Depot site study area.

2. The Future With the Proposed Project

a. *Mobile Sources*

Based on the estimated incremental traffic projected for the Proposed Project, a detailed $PM_{2.5}$ analysis was conducted in accordance with guidance of the *CEQR Technical Manual*. Maximum impacts from vehicular emissions were calculated at the intersection of Liberty Avenue and 165th Street. This intersection represents the worst-case scenario for intersections affected by the Proposed Project. Concentrations were predicted for the 24-hour and annual time periods, which were then used for comparison with the CEQR criteria. The predicted results presented below in **Table 4: Highest Predicted Pollutant Concentrations ($PM_{2.5}$ – Mobile Sources)** represent the highest incremental concentrations for both AM and PM peak traffic periods.

Table 4: Highest Predicted Pollutant Concentrations ($PM_{2.5}$ – Mobile sources)

Pollutant	Time Averaging Period	Intersection	Maximum Concentration Increment ($\mu g/m^3$)	*De Minimis* Criteria ($\mu g/m^3$)
$PM_{2.5}$	24-Hour [1]	Liberty Avenue & 165th Street	0.19	8.7
	Annual		0.01	0.10

Note:
[1] $PM_{2.5}$ de minimis criteria – 24-hour average, not to exceed more than half the difference between the background concentration 17.7 $\mu g/m^3$ and the 24-hour NAAQS of 35 $\mu g/m^3$

Source: STV Incorporated, 2022.

The values shown are the highest predicted concentrations for any of the time periods analyzed. The results indicate that the Proposed Project would be well below the CEQR *de minimis* criteria. Therefore, the Proposed Project would not result in significant adverse $PM_{2.5}$ impacts at the studied intersection locations.

b. *Stationary Sources*

For the Proposed Project, a stationary source analysis was conducted to evaluate potential air quality impacts resulting from on-site activities, heating, and hot water systems. The analysis focused on the critical pollutants: NO_2, SO_2, and $PM_{2.5}$. As shown in **Table 5: Highest Predicted Pollutant Concentrations (NO_2/SO_2 – Stationary Sources)**, the total NO_2 and SO_2 concentrations that would result from combining project-generated stack emissions with background levels would be below the NAAQS. Since air monitoring background levels are lower in recent years, the total NO_2 and SO_2 concentrations would be further below the NAAQS.

Table 5: Highest Predicted Pollutant Concentrations (NO_2/SO_2 – Stationary Sources)

Pollutant	Time Averaging Period	Maximum Modeled Build Concentration (ug/m^3)[2]	Background Concentration (2015-2017) (ug/m^3)	Total Concentration with 2015-2017 Background Concentration (ug/m^3)	Background Concentration (2018-2020) (ug/m^3)	Total Concentration with 2015-2017 Background Concentration (ug/m^3)	NAAQS (ug/m^3)
NO_2	1-Hour [1]	185.83	111.3	185.83	99.9	185.83	188
	Annual	15.54	32.9	48.4	29.7	45.3	100
SO_2	1-Hour	0.69	18.6	19.29	15.1	15.8	197

Notes:
[1] Seasonal-hourly background concentration was added to the modeled one-hour NO_2 concentrations to predict the maximum total concentration.
[2] For this SEA, 2015-2017 background concentrations are presented in ug/m^3 to be consistent with 2018-2020 background concentrations.

Source: STV Incorporated, 2022.

Likewise, for $PM_{2.5}$ the results shown in **Table 6: Highest Predicted Pollutant Concentrations ($PM_{2.5}$ – Stationary Sources)** indicate that the maximum discrete and annual $PM_{2.5}$ concentration increments would be below the updated NYCDEP interim guidance criteria. Given that air monitoring background levels have been lower in recent years, the total $PM_{2.5}$ concentration increments would be further below the updated NYCDEP interim guidance criteria than they were in the 2019 EIS.

Table 6: Highest Predicted Pollutant Concentrations ($PM_{2.5}$ – Stationary Sources)

Pollutant	Time Averaging Period	Maximum Concentration Increment ($\mu g/m^3$)	*De Minimis* (based on 2015-2017 Background Concentration) Criteria ($\mu g/m^3$)	*De Minimis* (based on 2018-2020 Background Concentration) Criteria ($\mu g/m^3$)
$PM_{2.5}$	24-Hour [1]	1.34	8.0	8.7
	Annual [2]	0.27	0.3	0.3

Notes:
[1] The 24-hour $PM_{2.5}$ impacts are assessed on an incremental basis without considering the background. The 24-hour $PM_{2.5}$ background concentration is used to develop the de minimis criteria.
[2] Annual $PM_{2.5}$ impacts are assessed on an incremental basis and compared with the $PM_{2.5}$ de minimis criteria of 0.3 $\mu g/m^3$, without considering the annual background. Therefore, the annual $PM_{2.5}$ background is not presented in the table.

Source: STV Incorporated, 2022.

The analyses in this section represent worst-case scenario conditions both for mobile and stationary sources. It is anticipated that potential future detailed design and/or operational refinements, not assessed in this analysis, could further reduce future estimated emissions. These design and/or operation refinements could include:

- using 30 to 60 buses operating within the Proposed Project that would be electric powered;

- the increased size and efficiency of the facility could facilitate better servicing and maintenance of buses.

II. Construction

This updated construction activity assessment for the Proposed Project considers both the preparation and temporary construction-period use of the Proposed Temporary Bus Parking Site and the construction of the Depot, specifically because of the change in build year since the 2019 EIS, and also because the construction-period air quality assessment considers the worst-case condition for the entirety of the construction period.

A. INTRODUCTION

As is typical with construction projects in New York City, construction activities related to the Proposed Project would require use of both non-road construction equipment and on-road vehicles. Non-road construction equipment includes equipment operating on-site such as excavators and compressors. On-road vehicles include construction delivery trucks, dump trucks, concrete trucks, and construction worker vehicles arriving at and departing from the construction site as well as operating on-site. Emissions from non-road construction equipment and on-road vehicles have the potential to affect air quality. In addition, emissions from dust-generating construction activities (i.e., truck loading and unloading operations) also have the potential to affect air quality. A quantitative analysis of the overall combined impact of both non-road and on-road sources of construction-related air emissions, including dust emissions, was performed to determine the potential for significant adverse impacts from these sources of air emissions generated during construction activities related to the Proposed Project. Section I: Depot Operation contains a review of these air pollutants; applicable regulations, standards, and benchmarks; and general methodology for the air quality analyses. Additional details relevant only to the construction air quality analysis methodology are presented in this section.

B. SUMMARY CONCLUSIONS

An emissions reduction program would be implemented for construction activities related to the Proposed Project to minimize the effects of construction activities on the surrounding community. Measures would include dust suppression measures, use of ultra-low sulfur diesel ("ULSD") fuel, idling restrictions, diesel equipment reduction, the utilization of newer equipment, and best available tailpipe reduction technologies. With the implementation of these emission reduction measures, the dispersion modeling analysis of construction-related air emissions for both non-road and on-road sources determined that $PM_{2.5}$ and PM_{10}, annual-average NO_2, and CO concentrations would be below their corresponding NAAQS, respectively. Additionally, an analysis of the proposed Temporary Bus Parking Site determined that the maximum predicted CO and PM concentrations generated at the site would not exceed standards. Therefore, construction activities related to Proposed Project would not result in significant adverse air quality impacts due to construction sources.

C. DEPOT

1. Emission Reduction Measures

Construction activity in general, and large-scale construction in particular, has the potential to adversely affect air quality as a result of diesel emissions. Measures would be taken to reduce pollutant emissions during construction in accordance with all applicable laws, regulations, and building codes. In addition, contractors would be required under contract specifications to implement an emissions reduction program to minimize the air quality effects from construction activities related to the Proposed Project, consisting of the following components:

A. *Dust Control.* To minimize dust emissions from construction activities, a dust control plan including a robust watering program would be required. For example, all trucks hauling loose material would be equipped with tight-fitting tailgates and their loads securely covered prior to leaving the construction site; and water sprays would be used for all demolition, excavation, and transfer of soils so that materials would be dampened as necessary to avoid the suspension of dust into the air. Stockpiled soils or debris would be watered, stabilized with a chemical suppressing agent, or covered. All measures required by NYCDEP's *Construction Dust Rules* regulating construction-related dust emissions would be implemented.
B. *Idling Restriction.* In addition to adhering to the local law restricting unnecessary idling on roadways, on-site vehicle except concrete truck idle time would be restricted to three minutes for all equipment and vehicles that are not using their engines to operate a loading, unloading, or processing device or are otherwise required for the proper operation of the engine.
C. *Clean Fuel*. ULSD fuel would be used exclusively for all diesel engines on the construction site.
D. *Diesel Equipment Reduction*. In accordance with the New York City Noise Control Code, electrically powered equipment would be preferred over diesel-powered and gasoline-powered versions of that equipment to the extent practicable. Equipment that would use grid power in lieu of diesel engines includes, but may not be limited to, hoists and small equipment (such as welders).
E. *Utilization of Newer Equipment.* USEPA's Tier 1 through 4 standards for non-road diesel engines regulate the emission of criteria pollutants from new engines, including PM, CO, NO_x, and hydrocarbons.

Overall, this emissions reduction program is expected to substantially reduce diesel emissions. The analysis accounted for the emissions reduction measures listed above that would be implemented during construction.

2. Methodology and Assessment

To determine which construction period would constitute the worst-case period for the pollutants of concern (PM, CO, NO_2), construction-related emissions were calculated for each calendar year throughout the duration of construction on a rolling annual and peak day basis for $PM_{2.5}$. $PM_{2.5}$ is selected for determining the worst-case periods for all pollutants analyzed, because the ratio of predicted $PM_{2.5}$ incremental concentrations to impact criteria is anticipated to be higher than for other pollutants. Therefore, initial estimates of $PM_{2.5}$ emissions throughout the construction years were used for determining the worst-case periods for analysis of all pollutants. Generally, emission patterns of PM_{10} and NO_2 would follow $PM_{2.5}$ emissions since they are related to diesel engines by horsepower. CO emissions

may have a somewhat different pattern but would also be anticipated to be highest during periods when the most activity would occur.

Based on the resulting multi-year profiles of annual average and peak day average emissions of $PM_{2.5}$, and the proximity of the construction activities to residences, other sensitive uses, and publicly-accessible open spaces, worst-case short-term and annual periods for construction were identified for dispersion modeling of annual and short-term (i.e., 24-hour, 8-hour, and 1-hour) averaging periods. April 2024 and the 12-month period from April 2024 to March 2025 were identified as worst-case, short-term, and annual periods, respectively, since the highest project-wide emissions were predicted in these periods. During these times, construction activities are projected to occur during Phase I of construction of the new Depot along Merrick Boulevard under the construction schedule. In addition, these peak periods include construction activities that would take place in close proximity to surrounding neighborhood that contain both sensitive residential and commercial land uses.

Dispersion of the relevant air pollutants from the construction site during these periods were analyzed. Broader conclusions regarding potential concentrations during non-peak periods are discussed qualitatively, based on the reasonable worst-case analysis period results.

a. *Engine Emissions*

The sizes, types, and number of units of construction equipment were estimated based on the construction activity schedule developed by the Construction Manager. Emission rates for NO_X, CO, PM_{10}, and $PM_{2.5}$ from truck engines were developed using the USEPA MOVES2014b emission model. Emission factors for NO_x, CO, PM_{10}, and $PM_{2.5}$ from on-site construction engines were developed using the NONROAD emission module included in the MOVES2014b emission model.

b. *Dust Emissions*

In addition to engine emissions, dust emissions from construction activities (e.g., excavation and transferring of excavated materials into dump trucks) were calculated based on USEPA procedures delineated in AP-42 Table 13.2.3-1. Since construction is required to follow the New York City Air Pollution Control Code regarding construction-related dust emissions, a 50 percent reduction in particulate emissions from fugitive dust was conservatively assumed in the calculation (dust control methods such as wet suppression would often provide at least a 50 percent reduction in particulate emissions).

c. *Dispersion Modeling*

Potential impacts from construction sources related to the Proposed Project were evaluated using a refined dispersion model, the USEPA/AMS AERMOD dispersion model. AERMOD is a state-of-the-art dispersion model, applicable to rural and urban areas, flat and complex terrain, surface and elevated releases, and multiple sources (including point, area, and volume sources). AERMOD is a steady-state plume model that incorporates current concepts about flow and dispersion in complex terrain and includes updated treatments of the boundary layer theory, understanding of turbulence and dispersion, and handling of terrain interactions.

d. *Source Simulation*

For short-term model scenarios (predicting concentration averages for periods of 24 hours or less), all emission sources were simulated as area sources. For periods of eight hours or less (less than the length of a shift), it was assumed that all engines would be active simultaneously.

e. *Meteorological Data*

The meteorological data set consists of five consecutive years of latest available meteorological data to be provided by NYSDEC: surface data collected at the nearest representative National Weather Service Station (LaGuardia Airport) from 2016 to 2020 and concurrent upper air data collected at Brookhaven, New York. The meteorological data provide hour-by-hour wind speeds and directions, stability states, and temperature inversion elevation over the five-year period. These data were processed using the USEPA AERMET program to develop data in a format which can be readily processed by the AERMOD model.

f. *Background Concentrations*

To estimate the maximum expected total pollutant concentrations, the calculated impacts from the emission sources must be added to a background value that accounts for existing pollutant concentrations from other sources. The background levels are based on concentrations monitored at the nearest NYSDEC ambient air monitoring stations (see Table 2: Background Pollutant Concentrations).

g. *Receptor Locations*

Receptors were placed at publicly-accessible locations that include residential and other sensitive uses at both ground-level and elevated locations (e.g., residential windows), adjacent sidewalk locations, publicly-accessible open spaces, and schools on adjacent blocks.

h. *On-Road Sources*

Since emissions from on-site construction equipment and on-road construction-related vehicles may contribute to concentration increments concurrently, on-road emissions adjacent to the construction site were included with the on-site dispersion analysis (in addition to on-site truck and non-road engine activity) to address all local project-related emissions cumulatively.

i. *On-Road Vehicle Emissions*

Vehicular engine emission factors were computed using the USEPA mobile source emissions model, MOVES2014b.[3] This emissions model is capable of calculating engine emission factors for various vehicle types, based on the fuel type (gasoline, diesel, or natural gas), meteorological conditions, vehicle speeds, vehicle age, roadway type and grade, number of starts per day, engine soak time, and various other factors that influence emissions, such as inspection maintenance programs. The inputs and use of MOVES incorporate the most current guidance available from NYSDEC.

[3] USEPA, Motor Vehicle Emission Simulator ("MOVES"), User Guide for MOVES2014a, November 2015.

j. *On-Road Dust Emissions*

$PM_{2.5}$ emission rates were determined with fugitive road dust to account for their impacts. Road dust emission factors were calculated according to the latest procedure delineated by USEPA.[4] An average weight of 20 tons and 2.6 tons were assumed for construction trucks and worker vehicles in the analyses, respectively.

3. Results

Maximum predicted concentrations during the representative worst-case construction periods for construction activities related to the Proposed Project are presented in **Table 7: Maximum Pollutant Concentrations from Construction**. To estimate the maximum total pollutant NO_2, CO, $PM_{2.5}$ and PM_{10} concentrations, the modeled concentrations from construction activities related to the Proposed Project were added to a background value that accounts for existing pollutant concentrations from other nearby sources. As shown in **Table 7: Maximum Pollutant Concentrations from Construction**, the maximum predicted total concentrations of NO_2, CO, $PM_{2.5}$ and PM_{10} are below the applicable NAAQS for both short-term and annual averaging periods. Emissions from the other less intensive construction periods would be less than the emissions during the modeled worst-case periods; therefore, the resulting concentrations from these non-peak periods are expected to be less than the concentrations presented in **Table 7: Maximum Pollutant Concentrations from Construction**.

Table 7: Maximum Pollutant Concentrations from Construction

Pollutant	Averaging Period	Units	Maximum Modeled Impact	Background Concentration (1)	Total Concentration	Criterion
NO_2	Annual	$\mu g/m^3$	11.2	29.7	41.0	100 (2)
CO	1-hour	ppm	0.4	2.1	2.5	35 (2)
	8-hour	ppm	0.06	1.8	1.86	9 (2)
PM_{10}	24-hour	$\mu g/m^3$	4.5	28.0	32.5	150 (2)
$PM_{2.5}$	24-hour	$\mu g/m^3$	3.4	17.7	21.1	35 (2)
	Annual	$\mu g/m^3$	0.5	7.0	7.5	12 (2)

Notes:
[1] The background levels are based on the most representative concentrations monitored at NYSDEC ambient air monitoring stations (see **Table 2: Background Pollutant Concentrations**).
[2] NAAQS.

Source: STV Incorporated, 2022.

[4] USEPA, Compilations of Air Pollutant Emission Factors AP-42, Fifth Edition, Volume I: Stationary Point and Area Sources, Ch. 13.2.1, NC, http://www.epa.gov/ttn/chief/ap42, January 2011.

D. PROPOSED TEMPORARY BUS PARKING SITE

1. Introduction

To allow the existing Depot to remain operational, the proposed Temporary Bus Parking site would be prepared and used temporarily during the construction-period. Emissions from vehicles using the Temporary Bus Parking Site would have the potential to affect pollutant concentrations in the immediate vicinity of ambient Air Quality, which are in close proximity to the proposed Temporary Bus Parking Site. The pollutants of concern are CO and PM.

2. Methodology and Assessment

For the proposed Temporary Bus Parking Site, vehicle emissions and emission dispersion were analyzed using the methodology defined in the *CEQR Technical Manual*. Maximum CO and PM concentrations were determined for the time periods when overall on-site parking activity would be the greatest, considering the hours when the greatest number of vehicles would exit the proposed Temporary Bus Parking Site. The number of vehicles entering and exiting the proposed Temporary Bus Parking Site were derived from the trip generation analysis described in Attachment D: Transportation.

Emissions from vehicles entering, parking, and exiting the proposed Temporary Bus Parking Site were determined using the USEPA MOVES mobile source emission model. For all arriving and departing vehicles, an average speed of five miles per hour was conservatively assumed for travel within the proposed Temporary Bus Parking Site. In addition, all departing vehicles were assumed to idle for 60 seconds before proceeding to the exit.

A persistence factor of 0.70 was used to convert the maximum 1 hour average CO concentrations to 8–hour averages, per *CEQR Technical Manual* guidance, and factors of 0.6 and 0.1 to convert maximum 1-hour PM_{10} and $PM_{2.5}$ concentrations to 24 hour, and $PM_{2.5}$ annual averages, respectively, per USEPA guidance, accounting for meteorological variability over the longer averaging periods.

Background and on-street concentrations were added to the modeling results to obtain the total ambient levels. The on-street pollutant concentrations were determined using the methodology in the Air Quality Appendix of the *CEQR Technical Manual*, utilizing traffic volumes from a traffic analysis conducted in the study area.

3. Results

Based on the methodology described above, the maximum predicted CO and PM concentrations from the proposed Temporary Bus Parking Site, were estimated for the receptors near-side sidewalk on the same side of the street as the proposed Temporary Bus Parking Site, and a far-side sidewalk on the opposite side of the street from the proposed Temporary Bus Parking Site.

The maximum predicted 1-hour average CO concentration is 3.0 ppm with a background level of 2.1 ppm. The maximum predicted 8-hour average CO concentration is 2.7 ppm with a background level of 1.8 ppm. The maximum predicted concentrations are below the 1-hour and 8-hour standards of 35 ppm and 9 ppm, respectively.

The maximum predicted 24-hour average $PM_{2.5}$ concentration is 26.2 µg/m^3 with a background level of 17.7 µg/m^3. The maximum predicted annual average $PM_{2.5}$ concentration is 8.4 µg/m^3 with a background level of 7.0 µg/m^3. The maximum predicted concentrations are below the 24-hour and annual standards of 35 µg/m^3 and 12 µg/m^3, respectively.

The maximum predicted 24-hour average PM_{10} concentration is 45.3 µg/m^3 with a background level of 28.0 µg/m^3. The maximum predicted concentration is below the 24-hour standards of 150 µg/m^3.

III. Conclusion

The dispersion modeling analysis of construction-related air emissions for both non-road and on-road sources for the Depot site and temporary construction-period use of the Proposed Temporary Bus Parking Site determined that $PM_{2.5}$ and PM_{10}, annual-average NO_2, and CO concentrations would be below their corresponding NAAQS, respectively. Additionally, an analysis of the proposed Temporary Bus Parking Site determined that the maximum predicted CO and PM concentrations generated by the bus parking and idling at the site would not exceed standards. Therefore, construction activities related to the Proposed Project would not result in significant adverse air quality impacts due to construction sources.

Attachment F: Noise and Vibration

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I. Introduction

This attachment addresses changes to the project design and operational assumptions since the 2019 Environmental Impact Statement ("EIS") and incorporates updated noise monitoring data utilized to determine potential impacts at sensitive neighborhood receptor locations. It also include an updated construction activity assessment for the Proposed Project, which considers both the preparation and temporary construction period use of the Proposed Temporary Bus Parking Site and the construction of the Depot, specifically because of the change in build year since the 2019 EIS, and also because the construction-period noise assessment considers the worst-case condition for the entirety of the construction period.

II. Depot Operations

This section summarizes the potential for noise and vibration impacts from the operation of the Proposed Project. Project noise and vibration impacts are evaluated using the impact criteria defined in the Federal Transit Administration ("FTA") guidance manual, *Transit Noise and Vibration Impact Assessment (September 2018)*, as well as elements of the New York City Environmental Quality Review ("*CEQR") Technical Manual*. For a discussion of construction-period noise and vibration effects, see Section III: Construction.

A. SUMMARY AND CONCLUSIONS

The Proposed Project would not result in any significant adverse noise or vibration impacts from either stationary or mobile sources to surrounding land uses.

The Proposed Project would generate both stationary and mobile source noise. Stationary source noise would be generated by rooftop mechanical equipment, as well as by bus parking activities within the Depot building. Mobile source noise would be generated off-site by buses and passenger vehicles driving to and from the proposed Depot. In addition to roadway noise, on-site bus noise from the existing Depot may affect some nearby residences along 107th Avenue and 165th Street. Operations at the proposed Depot would not result in any significant noise impacts to sensitive noise receptors such as residences or community facilities in the vicinity of the Depot. Noise generated at the proposed Depot would not exceed the FTA noise criteria at adjacent sensitive noise receptors. In addition, the increase in the number of buses maintained at the Depot would not result in any exceedance of the *CEQR Technical Manual* noise criteria at nearby sites along the local traffic network.

Because buses are rubber-tired vehicles, there would be no significant vibration effects to any nearby vibration-sensitive receptors such as residences or community facilities.

The design for the Depot includes security/sound barrier walls at a minimum height of 20 feet, which is similar to the height of the existing wall that borders the properties along 165th Street. The height of the security/sound barrier wall along 165th Street would be increased to 31 feet so that the noise exposure levels for the Jamaica Bus Depot ("JBD") would not exceed the FTA's threshold criteria level. Given that the

design for the Depot includes these security/sound barrier walls and rooftop parapet walls, which would control noise levels, no further mitigation would be warranted.

B. REGULATORY FRAMEWORK

1. FTA Noise Impact Criteria

The FTA guidance manual presents procedures for predicting and assessing noise and vibration impacts of proposed mass transit projects. Procedures for assessing noise and vibration impacts are provided for different stages of project development, from early planning through preliminary engineering and final design. Both for noise and vibration, there are three levels of analysis described. The framework acts as a screening process, reserving detailed analysis for projects with the greatest potential for impacts while allowing a simpler process for projects with little or no effects. This guidance manual contains noise and vibration impact criteria that are used to assess the magnitude of predicted impacts. A range of mitigation measures are described for dealing with adverse noise and vibration impacts. The FTA Manual contains established methods to assess potential noise effects. These criteria group noise sensitive land uses into three categories:

Category 1 – Buildings or parks where quiet is an essential element of their intended purpose. This category includes National Historic landmarks with significant outdoor usage, as well as recording studios and concert halls.

Category 2 – Residences and buildings where people normally sleep. This includes residences, hospitals, and hotels where nighttime sensitivity is assumed to be of utmost importance.

Category 3 – Institutional land uses with primarily daytime and evening use. This category includes schools, libraries, theaters, and churches where it is important to avoid interference with such activities as speech, meditation, and concentration on reading material.

Stationary source noise impacts resulting from a proposed action are determined by comparing the existing and future project-related outdoor noise levels.

As the level of existing ambient noise increases, the allowable level of transit noise also increases, but the total amount by which a community's noise can increase without an impact is reduced. This accounts for the unexpected fact that a project noise level lower than the existing noise level can still result in an impact. This fact is also demonstrated below in Table 1: Noise Levels Defining Impact for Transit Projects. Noise level increases, defined by the FTA Manual as "moderate impacts" or "severe impacts," occur when the existing levels are surpassed by more than the allowable increase by project-related noise.

Table 1: Noise Levels Defining Impact for Transit Projects

Existing Noise Exposure* $L_{eq}(h)$ or L_{dn} (dBA)	Project Noise Impact Exposure,* $L_{eq}(h)$ or L_{dn} (dBA)					
	Category 1 or 2 Sites			Category 3 Sites		
	No Impact	Moderate Impact	Severe Impact	No Impact	Moderate Impact	Severe Impact
<43	< Ambient+10	Ambient + 10 to 15	>Ambient+15	<Ambient+15	Ambient + 15 to 20	>Ambient+20
43	<52	52-58	>58	<57	57-63	>63
44	<52	52-58	>58	<57	57-63	>63
45	<52	52-58	>58	<57	57-63	>63
46	<53	53-59	>59	<58	58-64	>64
47	<53	53-59	>59	<58	58-64	>64
48	<53	53-59	>59	<58	58-64	>64
49	<54	54-59	>59	<59	59-64	>64
50	<54	54-59	>59	<59	59-64	>64
51	<54	54-60	>60	<59	59-65	>65
52	<55	55-60	>60	<60	60-65	>65
53	<55	55-60	>60	<60	60-65	>65
54	<55	55-61	>61	<60	60-66	>66
55	<56	56-61	>61	<61	61-66	>66
56	<56	56-62	>62	<61	61-67	>67
57	<57	57-62	>62	<62	62-67	>67
58	<57	57-62	>62	<62	62-67	>67
59	<58	58-63	>63	<63	63-68	>68
60	<58	58-63	>63	<63	63-68	>68
61	<59	59-64	>64	<64	64-69	>69
62	<59	59-64	>64	<64	64-69	>69
63	<60	60-65	>65	<65	65-70	>70
64	<61	61-65	>65	<66	66-70	>70
65	<61	61-66	>66	<66	66-71	>71
66	<62	62-67	>67	<67	67-72	>72
67	<63	63-67	>67	<68	68-72	>72
68	<63	63-68	>68	<68	68-73	>73
69	<64	64-69	>69	<69	69-74	>74
70	<65	65-69	>69	<70	70-74	>74
71	<66	66-70	>70	<71	71-75	>75
72	<66	66-71	>71	<71	71-76	>76
73	<66	66-71	>71	<71	71-76	>76
74	<66	66-72	>72	<71	71-77	>77
75	<66	66-73	>73	<71	71-78	>78
76	<66	66-74	>74	<71	71-79	>79
77	<66	66-74	>74	<71	71-79	>79
>77	<66	66-75	>75	<71	71-80	>80

* L_{dn} is used for land use where nighttime sensitivity is a factor; L_{eq} during the hour of maximum transit noise exposure is used for land use involving only daytime activities.

Source: FTA, Transit Noise and Vibration Impact Assessment, September 2018.

2. NYC CEQR Noise Impact Criteria

The New York City noise standards and criteria are described below as a guideline to assess noise levels associated with the operation of on-street mobile sources related to the Depot.

The *CEQR Technical Manual* has established standards for noise exposure at sensitive receptors resulting from the implementation of a project. During daytime hours (between 7 AM and 10 PM), nuisance levels for noise are generally considered to be more than 45 dBA indoors and 70 to 75 dBA outdoors. Indoor activities are subject to task interference above this level, and 70 to 75 dBA is the level at which speech interference occurs outdoors. Typical noise attenuation techniques used in the past (including typical single glazed windows) provide a minimum of approximately 20 dBA of noise attenuation from outdoor to indoor areas. As a result, CEQR noise standards are based on a daytime threshold noise level of 65 dBA, which should not be significantly exceeded. The impact thresholds are described below:

- A significant impact would occur if the daytime period noise level significantly exceeds 65 dBA.
- An increase of five dBA or greater over the No-Build noise level would be an impact if the No- Build noise level is 60 dBA or less.
- If the No-Build noise level is 62 dBA or more, a three dBA increase or greater would be considered significant.
- A significant impact would occur during the nighttime period (defined by CEQR standards as being between 10 PM and 7 AM) if there is a change in noise levels of three dBA or more.

Many areas of NYC, including portions of the Proposed Project study area, experience ambient noise levels that are currently greater than 65 dBA. In these cases, a significant increase would occur if the No-Build noise level is increased by three dBA $L_{eq}(1)$ or greater.

3. CEQR Noise Exposure Standards

New York City Department of Environmental Protection ("NYCDEP") has established four categories of acceptability based on receptor type and land use for vehicular traffic, rail, and aircraft-related noise sources. The categories include "generally acceptable," "marginally acceptable," marginally unacceptable," and "clearly unacceptable." Listed in Table 2: Noise Exposure Standards for Use in City Environmental Impact Review are attenuation values and external noise exposure standards as they relate to traffic, aircraft, and rail noise.

Table 2: Noise Exposure Standards for Use in City Environmental Impact Review

Receptor Type	Time Period	Acceptable General External Exposure	Airport Exposure[3]	Marginally Acceptable General External Exposure	Airport Exposure[3]	Marginally Unacceptable General External Exposure	Airport Exposure[3]	Clearly Unacceptable General External Exposure	Airport Exposure[3]
1. outdoor area requiring serenity and quiet[2]		L_{10} < 55dBA	L_{dn} < 60 dBA		60 < L_{dn} < 65 dBA		(I) 65 < L_{dn} < 75 dBA		L_{dn} > 75 dBA
2. hospital, nursing home		L_{10} < 55dBA		55 < L_{10} < 65dBA		65 < L_{10} < 80dBA		L_{10} > 80dBA	
3. residence, residential hotel/ motel	7AM - 10PM	L_{10} < 65dBA		65 < L_{10} < 70dBA		70 < L_{10} < 80dBA		L_{10} > 80dBA	
	10PM - 7AM	L_{10} < 55dBA		55 < L_{10} < 70dBA		70 < L_{10} < 80dBA		L_{10} > 80dBA	
4. school, museum, library, court, house of worship, transient hotel or motel, public meeting room, auditorium, out-patient health facility		Same as Residential Day (7AM - 10PM)		Same as Residential Day (7AM - 10PM)		Same as Residential Day (7AM - 10 PM)		Same as Residential Day (7AM - 10 PM)	
5. commercial or office		Same as Residential Day (7AM - 10PM)		Same as Residential Day (7AM - 10PM)		Same as Residential Day (7AM - 10PM)		Same as Residential Day (7 AM - 10 PM)	
6. industrial, public areas only[4]	Note 4	Note 4		Note 4		Note 4		Note 4	

Notes: In addition, any new activity shall not increase the ambient noise level by three dBA or more:

1. Measurements and projections of noise exposures are to be made at appropriate heights above site boundaries as given by ANSI Standards; all values are for the worst hour in the time period.
2. Tracts of land where serenity and quiet are extraordinarily important and serve an important public need and where the preservation of these qualities is essential of the area to serve its intended purpose. Such areas could include amphitheaters, particular parks or portions of parks or open spaces dedicated or recognized by appropriate local officials for activities requiring special qualities of serenity and quiet. Examples are grounds for ambulatory hospital patients and patients and residents of sanitariums and old-age homes.
3. One may use FAA-approved land contours supplied by the Port Authority of New York and New Jersey, or the noise contours may be computed from the federally-approved INM Computer Model using flight data supplied by the Port Authority.
4. External Noise Exposure standards for industrial areas of sounds produced by industrial operations other than operating motor vehicles or other transportation facilities are spelled out in the New York City Zoning Resolution, Sections 42-20 and 42-21. The referenced standards apply to M1, M2, and M3 manufacturing districts and to adjoining residence districts (performance standards are octave band standards).

Source: New York City Department of Environmental Protection (adopted by DEP for use in CEQR-1983)

4. NYC Noise Code

According to the NYC Noise Code, no person shall cause or permit a sound source operating with any commercial or business enterprise to exceed these designated decibel levels within the assigned octave bands as shown in Table 3: New York City Noise Control Code. These criteria, as they relate to the Proposed Project, would apply to noise from the project's rooftop heating, ventilation and air conditioning ("HVAC") and Heat Recovery Unit ("HRU") systems or other outdoor machinery.

Table 3: New York City Noise Control Code

Octave Band Frequency (Hz)	Maximum Sound Pressure Levels (dB) (as measured within a receiving property as specified below)	
	Residential Receiving Property for Mixed-Use Buildings and Residential Buildings (as measured within any room of the residential portion of the building with windows open, if possible)	Commercial Receiving Property (as measured within any room containing offices within the building with windows open, if possible)
31.5	70	74
63	61	64
125	53	56
250	46	50
500	40	45
1,000	36	41
2,000	34	39
4,000	33	38
8,000	32	37

Source: Section 24-232 of the Administrative Code of the City of NY, as amended 12-05.

C. OPERATIONAL NOISE ASSESSMENT METHODOLOGY

Noise in a community can come from man-made sources such as automobiles, trucks, buses, aircraft, and construction equipment as well as from industrial, commercial, transportation, and manufacturing facilities. The Proposed Project would generate both stationary and mobile source noise. Stationary source noise would be generated by rooftop mechanical equipment, as well as by bus parking activities taking place within the Depot building, including bus parking. Mobile source noise would be generated off-site by buses and passenger vehicles driving to and from the proposed Depot.

Noise levels, which are measured in units called decibels ("dB"), relate the magnitude of the sound pressure to a standard reference value. Although the noise values of certain activities can approach 135dB, sounds typically encountered in the environment are within the 40 to 120dB range.

Noise of any kind contains sound energy that occurs at several different frequencies. The frequency range of this sound energy depends on the nature of the individual noise activity or source. The way humans interpret noise is important because the human ear does not register the sound levels of all noise frequencies equally; humans automatically reduce the impression of high- and low-pitched sounds. Over the normal range of hearing, humans are most sensitive to sounds produced with frequencies in the range

of 200 hertz to 10,000 hertz. To quantitatively replicate this response of the human ear to noise, the noise levels at different frequencies must be adjusted using a process referred to as A-weighting. Under this process, the resulting noise level commonly expressed as an A-weighted decibel ("dBA") will automatically compensate for the non-flat frequency response of human hearing.

Noise levels from environmental and man-made activities also vary widely over time. Distinctive noise descriptors are used so that that these variations can be represented within a proper context. For example, the equivalent noise level, represented by the L_{eq} descriptor, characterizes a time-varying noise level produced over a random period of time, as a single number represented over a specified period of time. This represents the equivalent steady noise level, which, over a given period, contains the same energy as the time-varying noise during the same period.

A common time period used in environmental noise studies is one hour, represented as L_{eq} ("h"). This descriptor is used to express the results of noise monitoring, predictions, and impact assessments at sensitive receptors where sleep is not an issue. At sensitive receptors where sleep is essential, such as residences and hospitals, the descriptor most often used in noise analyses is the day-night average sound level or L_{dn}. The L_{dn} is defined as the cumulative noise exposure from all events occurring over a 24-hour period, but with a 10dB penalty imposed on noise occurring between 10 PM to 7 AM. This added penalty takes into consideration the fact that people tend to be more sensitive to noises during these late night and early morning hours. Both the L_{dn} and the L_{eq} descriptor are used here, as it would be most relevant in describing the study area's noise environment.

Because changes in the decibel scale are represented logarithmically, increases or decreases in the decibel levels of a noise source are often misunderstood. The following general relationships are helpful in understanding the decibel scale with respect to noise:

- An increase of one dBA cannot be perceived by the human ear.
- A 3 dBA increase represents a doubling of sound energy and is normally the smallest change in sound level perceptible to the human ear.
- A 10 dBA increase in noise level corresponds to a tenfold increase in noise energy; however, a listener would only judge a 10 dBA increase as being twice as loud.
- A 20 dBA increase would result in a dramatic change in how a listener would perceive the sound.

1. Stationary Sources

Noise associated with the reconstruction and expansion of the JBD was determined using FTA's recommended quantitative assessment methodology. The noise evaluation involved the following steps:

- Representative noise-sensitive receptors (i.e., residences, churches) that could be potentially affected by the reconstruction and expansion of the JBD are identified utilizing FTA screening procedures.
- Existing noise levels were determined through measurement. For purposes of assessing potential noise impacts, 24-hour noise measurements are typically conducted for residential receptors and peak period short-term measurements are collected for institutional land uses.
- Determine noise FTA impact threshold levels based on existing noise levels.

For selected representative receptors, the FTA Manual noise assessment procedures were used to predict future noise levels from operations at the Depot. The principal assessment inputs include on-site bus activity, source-to-receiver distances, and site geometry.

To determine potential noise impacts, project-related noise resulting from the reconstruction and expansion of the JBD was compared to the FTA Manual impact threshold level. Impact occurs only if the project-related total noise exposure exceeds the FTA Manual impact threshold criteria level.

2. Mobile Sources

A screening analysis (per CEQR guidelines) for noise impacts was conducted for the AM, PM, and late PM traffic periods to determine whether a significant noise impact would occur (requiring the implementation of a more rigorous noise analysis). According to CEQR guidelines, to cause a significant noise impact, the project would have to induce traffic that would at least double the existing Passenger Car Equivalents ("PCEs") near any sensitive receptor. PCEs are used to account for the different types of motor vehicles (i.e., cars, trucks etc.) and their varying levels of sound. According to the *CEQR Technical Manual*, the relationships used for calculating PCEs are as follows: one automobile is equivalent to one PCE; one medium truck is equivalent to 13 PCEs; one bus is equivalent to 18 PCEs; and one heavy truck is equivalent to 47 PCEs. In other words, the noise level produced by a medium truck would be the same as that from 13 cars and the noise level from a heavy truck would be equivalent to that of 47 cars. If the PCEs more than doubled along studied traffic routes from the existing to the Build scenario, then the site was selected for further analysis. This doubling of PCEs is the minimum increase in traffic volume that would result in a three-dB increase in the corresponding noise level.

To determine future noise levels in the future without the Proposed Project, noise from existing conditions and expected traffic generated by No-Build projects were combined. To determine noise levels in the future with the Proposed Project, noise from existing conditions, No-Build traffic, and the JBD itself were combined. This procedure is simply expressed, with a logarithmic equation which utilizes existing noise levels and existing PCEs along with future PCEs. The equation is described below:

F NL = 10Log (F PCE/E PCE) + E NL, where:

- F NL = Future Noise Level
- F PCE = Future PCEs
- E PCE = Existing PCEs
- E NL = Existing Noise Level

Locations are modeled for the weekday AM, PM, and late PM time periods.

D. EXISTING CONDITIONS

The neighborhood surrounding the Depot site consists mainly of low density residential and some small commercial land uses. However, the seven-storied Allen Cathedral Senior Residence also exists directly across from the Depot site on 107th Avenue. There are no surface rail lines in the immediate vicinity of this project. As a result, the major sources of existing community noise come primarily from automobile traffic, which includes buses accessing the existing Depot. The highest existing traffic volumes exist along Merrick Boulevard and Liberty Avenue, but roadway noise is also audible along Tuskegee Airman Way. In addition

to roadway noise, on-site bus noise from the existing Depot does affect some nearby residents along 107th Avenue and 165th Street.

1. Ambient Noise Measurements

To determine the influence of existing traffic noise, noise measurements were conducted at four locations representative of existing sensitive locations. Locations were situated along roadways where the greatest project generated increases in traffic volumes are likely to occur. These measurements were performed at three short-term locations previously monitored in the 2019. However, one additional location along Tuskegee Airman Way was also monitored to ensure that anticipated changes in traffic patterns would were considered as part of the updated noise analysis. Locations were monitored for the three weekday time periods corresponding to the peak periods of bus traffic entering and leaving the Depot and when the majority of future project-generated traffic would be passing noise sensitive locations. Short-term monitoring was conducted for the 7-8 AM, 5-6 PM and 10-11 PM peak time periods during January and February 2022. The duration of all measurements was 20 minutes to ensure that representative measurements were obtained. During measurements, simultaneous traffic counts were also taken. The noise descriptors recorded during field measurements included L_{eq} (i.e. defined as the average sound pressure level during a period of time) and L_{10} (i.e., defined as the noise level exceeded for 10 percent of the time of the measurement duration). Table 4: 2022 Short-Term Noise Monitoring Levels lists the results of the short-term noise monitoring program.

Table 4: 2022 Short-Term Noise Monitoring Levels

Mobile Source Analysis Site	Period	L_{eq}	L_{10}	L_{50}	L_{90}
S1	AM	65.2	68.4	63.7	60.5
	PM	64.2	67.1	62.6	59.6
	Late PM	64.0	66.3	59.2	54.2
S2	AM	64.1	65.7	61.5	55.2
	PM	61.0	62.6	58.3	54.6
	Late PM	62.4	63.7	57.3	54.1
S3	AM	68.4	72.4	65.1	58.2
	PM	66.6	69.9	64.9	58.1
	Late PM	62.8	67.4	58.3	54.7
S4	AM	66.2	70.0	59.8	55.7
	PM	67.0	69.5	61.5	55.2
	Late PM	62.5	65.8	53.2	51.6

Source: CSA Group, 2022

In addition to the short-term noise measurements, measurements were also taken at three locations to determine the 24-Hour L_{dn} within the study area. These measurements take into account existing noise, not only during the peak-hour periods, but also during off-peak periods. The measured noise levels are representative of noise conditions nearby the three residential clusters bordering the Depot site. These include residences on the southern, western, and eastern site boundaries along 107th Avenue (Allen Cathedral Senior Residence), 165th Street (single-family homes) and Merrick Boulevard (single-family

homes), respectively. Full 24-hour measurements were taken on January 30, 2022 for the locations along 107th Avenue and 165th Streets. Partial measurements were taken in January and February 2022 for the location along Merrick Boulevard in order to determine the L_{dn} value. Based on these measurements, the resulting L_{dn} values are shown below in Table 5: 2022 24-Hour Noise Monitoring Levels

Table 5: 2022 24-Hour Noise Monitoring Levels

Location	L_{dn} Value
107th Avenue (Between 165th Street and Merrick Boulevard)	69.1
165th Street (Between Tuskegee Airman Way and 107th Avenue)	71.7
Merrick Boulevard (106th Ave)	66.0

Source: CSA Group, 2022

All noise measurements were taken with a Larson & Davis Model 831 Type I sound level meter. A windscreen was placed over the microphone for all measurements. The meter was properly calibrated for all measurements using a Larson & Davis Model Cal200 calibrator. There were no significant variances between the beginning and ending calibration measurements. All measurements taken during the monitoring program were conducted during acceptable wind and weather conditions.

E. IMPACTS AND MITIGATION

1. The Future Without the Proposed Project

With respect to the Depot, no significant changes in operation would be expected. As a result, nearby noise sensitive receptors, such as residences along 165th Street and at the Allen Cathedral Senior Center, are expected to experience similar levels of noise as they currently do under existing conditions. For mobile sources, the No-Build condition, as noted in the traffic analysis, would not result in a sufficient number of new vehicular trips to double the passenger car equivalents through any intersection and the *CEQR Technical Manual* threshold for detailed analysis would not be met. As shown in Table 6: 2027 Future No-Build Levels (dBA), the difference in noise levels between the No-Build and existing conditions would be less than 0.2 dBA at all analysis sites. As a result, the No-Build condition is not expected to result in any substantial change to noise conditions beyond the existing conditions.

Table 6: 2027 Future No-Build Levels (dBA)

Mobile Source Analysis Site	Period	Existing L_{eq}	No-Build L_{eq}	Difference
S1	AM	65.2	65.4	0.2
	PM	64.2	64.4	0.2
	Late PM	64.0	64.2	0.2
S2	AM	64.1	64.2	0.1
	PM	61.0	61.2	0.2
	Late PM	62.4	62.5	0.1
S3	AM	68.4	68.6	0.2
	PM	66.6	66.8	0.2
	Late PM	62.8	63.0	0.2
S4	AM	66.2	66.3	0.1
	PM	67.0	67.2	0.2
	Late PM	62.5	62.7	0.2

Source: CSA Group, 2022

2. The Future With the Proposed Project

a. *Stationary Source Analysis*

For the assessment of noise resulting from the Proposed Project as shown in **Table 7: Stationary Source Analysis,** the results of the assessment indicate that the nearby noise sensitive receptors (residential and institutional land uses) would not experience any significant impacts generated from maintenance activities at the Depot.

Table 7: Stationary Source Analysis

Analysis Site #	Location	Land Use	Ambient Total Noise Level (L_{dn})	FTA Impact Threshold Levels (dBA)		Total Project Noise Exposure (L_{dn} or L_{eq})	Noise Impacts?
				Moderate	Severe		
LT1	165th Street Between 107th Avenue and Tuskegee Airman Way (1st Floor)	Residential	72	66-71	>71	59	No
	165th Street Between 107th Avenue and Tuskegee Airman Way (2nd Floor)	Residential	72	66-71	>71	59	No
	165th Street Between 107th Avenue and Tuskegee Airman Way (3rd Floor)	Residential	72	66-71	>71	63	No
LT2	Allen Cathedral Senior Building (1st Floor)	Residential	69	64-69	>69	48	No
	Allen Cathedral Senior Building (Elevated)	Residential	69	64-69	>69	59	No
C1	Rose of Sharon Baptist Church	Church	65	61-66	>66	56	No
LT3	Merrick Boulevard (1st Floor)	Church	66	62-67	>67	48	No
	Merrick Boulevard (2nd Floor)	Residential	66	62-67	>67	48	No

Source: CSA Group, 2022

b. *Mobile Source Analysis*

In the Build condition, no detailed mobile source analysis would be required as the incremental number of new vehicle trips would not exceed the *CEQR Technical Manual* screening threshold. As shown in **Table 8: 2027 Future Build Levels (dBA)**, the difference in noise levels between the Build and No- Build conditions would be less than 0.1 dBA at all analysis sites. As a result, the reconstruction and expansion of the JBD is not expected to result in any substantial change to noise conditions over the No-Build condition.

Table 8: 2027 Future Build Levels (dBA)

Site	Period	No-Build L_{eq}	Build L_{eq}	Difference
S1	AM	65.4	65.4	0.0
	PM	64.4	64.3	0.0
	Late PM	64.2	64.2	0.0
S2	AM	64.2	64.3	0.1
	PM	61.2	61.2	0.0
	Late PM	62.5	62.6	0.0
S3	AM	68.6	68.6	0.0
	PM	66.8	66.8	0.0
	Late PM	63.0	63.0	0.0
S4	AM	66.3	66.4	0.1
	PM	67.2	67.2	0.1
	Late PM	62.7	62.7	0.0

Source: CSA Group, 2022

c. ***Rooftop HVAC Equipment***

Only conceptual designs of the building's rooftop HVAC and HRU systems are available at this time. However, those systems would meet all applicable NYC Noise Code regulations and requirements with respect to noise impact to nearby/adjacent sensitive receptors (residences). Based on typical manufacturing data, the proposed rooftop HVAC and HRU systems would result in project-generated noise level increments of less than 3 dBA. Noise level increments of this magnitude are generally considered imperceptible and would not be significant according to CEQR impact criteria.

F. VIBRATION

Depot operations would not produce any perceptible vibration levels. The rubber tires and suspension systems on buses and passenger vehicles provide vibration isolation. With proper roadway maintenance to prevent large potholes, bumps, etc. in the roadways surrounding the Depot site and the internal bus paths within the proposed Depot, perceptible vibration levels are not expected from the buses and passenger vehicles that would operate outside of the proposed Depot. In addition, the proposed Depot facility would be designed to avoid discontinuities on the floor, or operational conditions that would result in generating perceptible vibration levels.

III. Construction

This updated construction activity assessment for the Proposed Project will consider both the preparation and temporary construction-period use of the Proposed Temporary Bus Parking Site and the construction of the Depot, specifically because of the change in build year since the 2019 EIS, and also because the construction-period noise assessment considers the worst-case condition for the entirety of the construction period. This section currently only includes the assessment of the proposed Temporary Bus

Parking Site. The assessment for the Depot will be included in the Final Supplemental Environmental Assessment ("SEA").

A. PROPOSED TEMPORARY BUS PARKING SITE

1. Introduction

Potential effects from noise and vibration on the surrounding community due to the preparation and temporary construction-period use of the proposed Temporary Bus Parking Site were evaluated based on FTA transit noise and vibration guidelines. The analysis considers: noise emissions generated by construction equipment during site preparation; the amount of time the equipment would be in use; and the distance between the equipment and potential receptors. Receptors include noise-sensitive buildings such as residences and school buildings that are located adjacent to the proposed Temporary Bus Parking Site. In addition, once the proposed Temporary Bus Parking Site is prepared and construction of the Depot is ongoing, Metropolitan Transportation Authority ("MTA") New York City Transit ("NYCT") would store approximately 170 buses at the proposed Temporary Bus Parking Site. As a result, the temporary use of the proposed Temporary Bus Parking Site during Depot construction is also assessed to determine if on-site (stationary) and off-site (mobile) noise resulting from its use would impact nearby residents.

Because the primary concern with construction vibration as defined by FTA is building damage, it is generally assessed in terms of peak particle velocity ("PPV"). Equipment used in construction, such as jackhammers, backhoes, and excavators do not generate significant area-wide vibration, and the impact of such equipment is typically more localized.

2. Summary and Conclusions

a. *Noise*

Noise levels at the proposed Temporary Bus Parking Site were assessed at representative locations chosen based on: their ability to represent numerous noise-sensitive sites in the area (such as residences); their proximity to the proposed Temporary Bus Parking Site; and the potential for increases in future noise levels. Mobile source noise impacts from bus diversions to and from the proposed Temporary Bus Parking Site were assessed at one representative worst-case location at 168-11 106th Avenue (near Merrick Boulevard) (see Figure 1: Construction-Period – Noise Monitoring and Assessment Locations).

Projected noise levels for construction equipment related to the preparation of the proposed Temporary Bus Parking Site would not exceed the FTA noise thresholds at any noise-sensitive locations adjacent to the proposed Temporary Bus Parking Site. While at times, noise levels may be elevated, these noise increases would be minimized by strict adherence to the revised 2005 NYC Noise Code and prevention measures that would be identified in the construction contracts. In addition, predicted worst-case noise levels for preparation of the proposed Temporary Bus Parking Site would last for less than one year and the sources of noise would migrate throughout the site; therefore, the effects of noise related to site preparation on the sensitive receptors would change depending on the location of particular noise sources. Note also that noise-generating activities would be intermittent and of short-term durations.

MTA NYCT construction contract specifications would require the contractor to meet the requirements set forth in the NYCDEP Noise Control Code (e.g., Construction Noise Mitigation Plans). Based on these requirements, the contractor must implement and adhere to the noise mitigation plan measures as required.

b. *Vibration*

Results of the vibration study indicate that projected vibration levels for construction equipment used during site preparation near sensitive receptors adjacent to the proposed Temporary Bus Parking Site would not exceed the FTA damage criteria of 0.20 ips for the wood-framed residential buildings facing the southern edge of the site. MTA NYCT would use vibration control measures to minimize, to the extent possible, the vibration levels for all properties near proposed Temporary Bus Parking Site.

The FTA vibration annoyance level would be exceeded at vibration-sensitive building locations closer than 140 feet from the proposed Temporary Bus Parking Site construction area. However, while these impacts could occur, they would be short-term since most activities related to site preparation would be intermittent, and the sources of vibration would migrate throughout the larger construction area. All efforts would be made by the contractor to schedule these types of activities during the least intrusive times. In addition, the contractor would inform the occupants of adjacent buildings in advance before proceeding with work associated with equipment such as rollers.

3. Noise

a. *Acoustic Fundamentals*

General noise acoustic fundamentals are described in Section II.C: Operational Noise Assessment Methodology.

b. *Guidelines and Criteria*

i. FTA Noise Impact Criteria – Construction

FTA construction guidelines state that a noise assessment may be qualitative or quantitative depending on the scale and scope of a construction project. Qualitative assessments are usually conducted for projects that last for a short period of time or employ equipment that would not create a significant amount of noise. For projects that are lengthier and employ noisier equipment, such as the Proposed Project, a quantitative analysis may be more appropriate. For the preparation of the proposed Temporary Bus Parking Site, a detailed quantitative assessment methodology using the 8-hour L_{eq} was utilized.

The detailed FTA noise assessment uses a set of threshold 8-hour L_{eq} levels for various construction activities. The noise criteria and the descriptors used to evaluate project construction noise, depend on the type of land use and the construction operating schedules in the vicinity of the proposed Temporary Bus Parking Site.

Table 9: FTA Criteria for Detailed Construction Noise Analysis presents the FTA construction noise criteria for the detailed assessments. Using FTA guidelines, an airborne noise impact would occur if noise levels during construction exceed these FTA-recommended values.

Table 9: FTA Criteria for Detailed Construction Noise Analysis

Land Use	1-hour L_{eq} (dBA)	
	Day	Night
Residential	80	70
Commercial	85	85
Industrial	90	90

Source: FTA, Transit Noise and Vibration Assessment, September 2018

While NYCT is not bound by the FTA criteria threshold, it is utilized in this report for the purposes of identifying potentially elevated noise conditions so that appropriate noise reduction measures, if required, can be applied.

ii. FTA Noise Impact Criteria - Operations

With respect to transit related bus parking facilities, the FTA guidance manual presents procedures for predicting and assessing noise and vibration impacts of proposed mass transit projects. Procedures for assessing noise and vibration impacts are provided for different stages of project development, from early planning through preliminary engineering and final design. Both for noise and vibration, there are three levels of analysis described. The framework acts as a screening process, reserving detailed analysis for projects with the greatest potential for impacts while allowing a simpler process for projects with little or no effects. This guidance manual contains noise and vibration impact criteria that are used to assess the magnitude of predicted impacts. Additional details regarding transit facility impact criteria and potential mitigation are described in Section II.B: Regulatory Framework.

c. *Existing Conditions*

Outdoor A-weighted sound levels were used to measure and assess the noise effects at sensitive noise receptor locations because dBA correlates well with the human perception of noise. In this report, noise receptors are defined as locations where human activity could be affected by excessive noise levels. Sensitive noise receptors are typically related to residential land uses. The noise descriptors selected for this analysis were the 1-hour equivalent continuous noise level L_{eq} ("1h") and the 24-hour noise level L_{dn} in dBA.

Measurements were taken at three locations to determine the maximum 1-hour L_{eq} within the study area. Shown on Figure 1: Noise Monitoring & Assessment Locations, the measured noise levels are representative of noise conditions at sensitive receptors bordering the proposed Temporary Bus Parking Site construction limits. These include residences on the southern boundary at 104-09 165th Street (single-family homes and Allen Cathedral Senior Residence) - R1, 164-28 Tuskegee Airman Way (single-family homes) – R2, and Liberty Avenue (CUNY York College Building) – R3, respectively. Measurements were taken in January and February of 2022. Based on these measurements, the resulting maximum daytime L_{eq}, values were: 59.8 dB for the representative properties along 107th Avenue (R1); 66.2 dB for the representative properties along Tuskegee Airman Way (R2); and 69.6 dB for the CUNY York College building along Liberty Avenue (R3). For the sensitive receptor most likely to be affected by the proposed Temporary Bus Parking Site diversions, one additional measurement was conducted at a representative residential location (single-family home) at 168-11 106th Avenue (corner of Merrick Boulevard). Based on this measurement, the resulting 24-hour L_{dn}, value was 66.0 dBA.

Noise measurements were taken with a Larson & Davis Model LxT and 831 Type I sound-level meters. A windscreen was placed over the microphones for all measurements. The meter was properly calibrated for all measurements using a Larson & Davis Model Cal200 calibrator. There were no significant variances between the beginning and ending calibration measurements. All measurements were taken during acceptable weather conditions (i.e., clear day with no precipitation) and low wind speeds.

d. *Methodology*

Using FTA's recommended quantitative assessment methodology, noise and vibration associated with the proposed Temporary Bus Parking Site preparation and temporary construction-period use were analyzed. Three receptors, representative of the typical neighborhood land use and located closest to the proposed Temporary Bus Parking Site construction zone, were chosen for the assessment of potential construction noise impacts. An additional receptor was also examined to determine worst-case impacts from the proposed Temporary Bus Parking Site bus diversions.

i. Mobile Noise Sources

Noise from mobile source off-site construction vehicles is not included in the project construction noise assessment. The preparation of the proposed Temporary Bus Parking Site would not result in street closures and traffic diversions that would generate a significant number of vehicles during any hours. As a result, there would be no doubling of traffic volumes or traffic PCEs for roadways within the studied traffic network, and any increase in noise levels from off-site mobile source construction vehicles would not be perceptible.

ii. Stationary Noise Sources

Stationary noise sources consist of off-road construction equipment that would be employed during construction as well as on-road vehicles operating on-site. Identification of stationary construction equipment to be used during the construction period is the product of a multi-step process that analyzes the foreseeable construction process based on the proposed design and available project information. Construction activities were derived from the construction schedule provided by NYCT that incorporated inputs such as construction: phasing; duration; activity; equipment type; number of pieces of equipment; and hours worked per day. With the identification of these equipment, typical noise emissions levels from construction equipment, such as excavators, backhoes, rollers, and graders, were used as a basis to evaluate potential noise impacts at sensitive receptor locations in the study area.

Another essential input used to calculate construction noise levels at each noise sensitive receptor is the acoustical usage factor ("AUF"). This is the percentage of time that a particular piece of equipment is expected to be operated at full throttle setting while on-site during construction. Since the construction equipment is not expected to be in operation at full power continuously, an AUF was assigned to each piece of equipment based on equipment usage cycles recommended by the equipment manufacturer. The equipment reference noise levels and AUF, which are shown in Table 10: Noise Emission Levels for Construction Equipment, are based on data contained in the FTA Transit Noise and Vibration Impact Assessment (September 2018) guidelines and the FHWA's Roadway Construction Noise Model ("RCNM") data, and include the equipment expected to be utilized during construction. The "Peak Quantity" is the number of equipment pieces to be used during peak construction period, such as peak 8-hour period. The "Usage Factor" is the percentage of time the equipment is expected to be in operation.

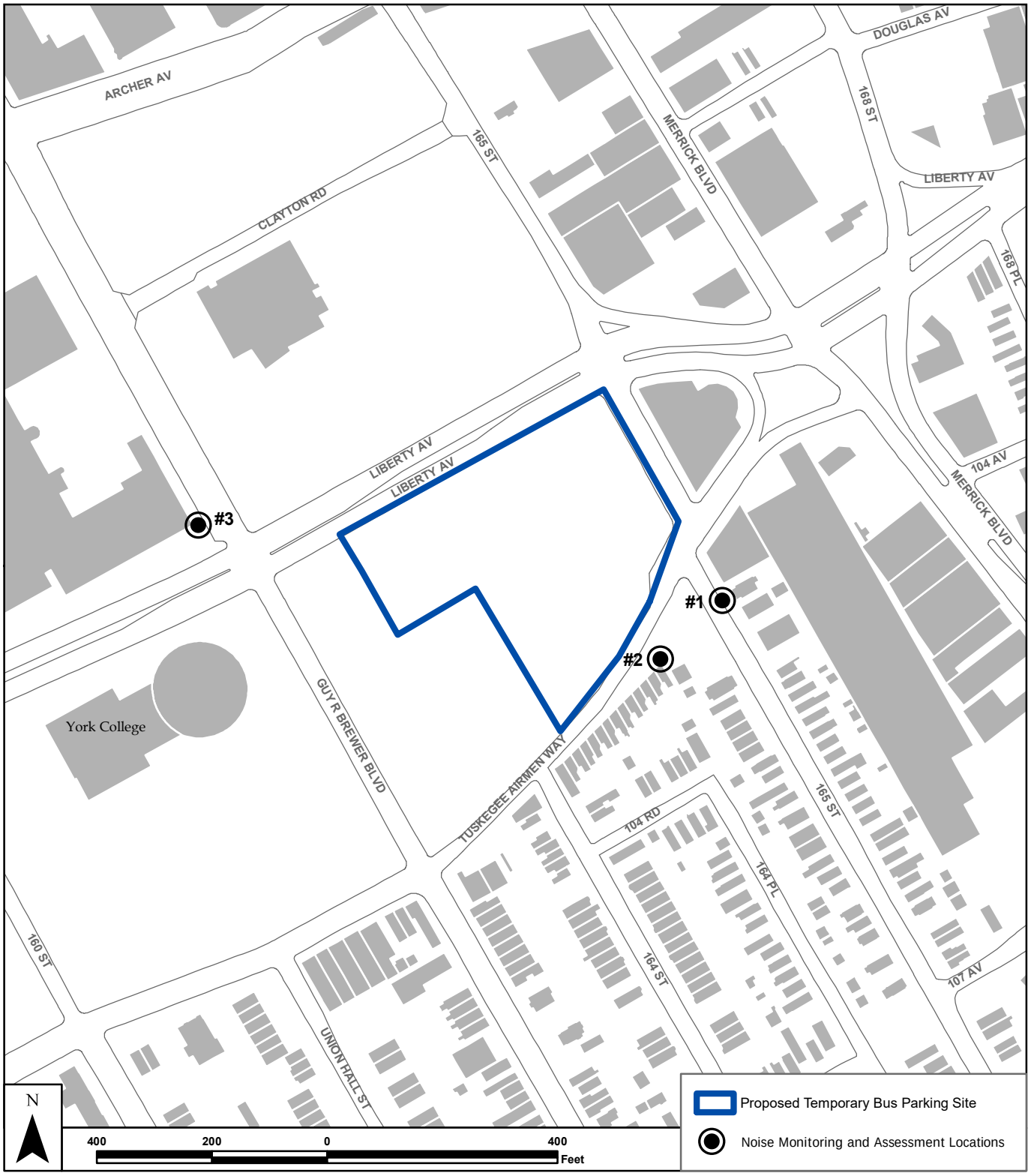
Table 10: Noise Emission Levels for Construction Equipment

Equipment Description	Usage Factor (%)	L_{max} @ 50 feet
Back Hoe	40%	80
Dump Truck	40%	84
Excavator	40%	85
Dozer /Grader	40%	85
Concrete Pump Truck	20%	82
Concreter Truck	40%	85
Asphalt Spreader [1]	50%	85
Roller	20%	85
Man Lift	20%	85
Paint Truck [2]	40%	55

Notes:
1. Assumed to be similar to a RCNM grader.
2. Assumed to be similar to RCNM pickup truck

Source: FTA, September 2018; FHWA RCNM, 2006

The quantification of these noise levels was completed using noise prediction equations contained in Section 7.1 of the FTA Transit Noise and Vibration Impact Assessment (September 2018). The modeling procedure involves determining the noise level at representative neighborhood receptors for each individual piece of equipment. The use of decibel addition is then employed to account for the combination of construction equipment pieces being used. The model equation inputs account for construction equipment noise emissions and AUFs as well as the distance between the equipment and the receiver being analyzed. Per FTA guidance, and for the purposes of analysis, all equipment was assumed to be operating in the center of the construction zone.



Source: New York City DoITT, Building Footprints, 2019; STV Incorporated, 2022.

Figure 1

NOISE MONITORING AND ASSESSMENT LOCATIONS

Reconstruction and Expansion of Jamaica Bus Depot

e. ***Impact Results***

For construction-related mobile sources, the construction of the Proposed Project would not result in street closures and traffic diversions that would double volumes or PCE's within the traffic network. The construction generation trips would not result in a doubling of traffic PCE's at any location. Therefore, noise impacts resulting from mobile source traffic are not expected. Mobile source impacts from bus diversions were also examined for the proposed Temporary Bus Parking Site. The mobile source bus diversion results for the proposed Temporary Bus Parking Site operations are presented in Table 11: Mobile Source Assessment for Bus Diversions.

Table 11: Mobile Source Assessment for Bus Diversions

Analysis Location	Land Use	Ambient Total Noise Level (L_{dn})	FTA Impact Threshold Levels (dBA)		Total Project Noise Exposure (L_{dn} or L_{eq})	Noise Impacts?
			Moderate	Severe		
168-11 106th Avenue (Along Merrick Boulevard)	Residential	66	62-67	>67	45	No

Source: CSA Group, 2022

For stationary sources, noise calculations were conducted for the proposed Temporary Bus Parking Site. The maximum 8-hour L_{eq} noise level from project construction was predicted for each of the three representative noise receptors surrounding the proposed Temporary Bus Parking Site construction zone. Results for construction are presented in Table 12: Maximum Construction Noise at Receptor Locations.

Table 12: Maximum Construction Noise at Receptor Locations

Noise Receptor Number	Description	Distance from Construction Zone	FTA Criteria Threshold 8-Hr L_{eq} (dBA)	Predicted Peak 8-Hr L_{eq} (dBA)	Estimated Construction Starting Year
R1	104-09 165th Street (Residential)	284	80	62	2023
R2	164-28 Tuskegee Airman Way (Residential)	338	80	60	2023
R3	York College - 94-20 Guy R Brewer Blvd (Institutional)	609	85	55	2023

Source: CSA Group, 2022

The noise prediction results indicate that construction activities related to environmental remediation (disposal of contaminated soil) and asphalt paving, would create the greatest noise. Noisy equipment such

as excavators and asphalt spreaders would be used to facilitate the soil removal and lay down new asphalt for the parking areas, respectively. However, during these worst-case periods, the FTA criteria threshold would not be exceeded at any of the representative noise receptor locations. In addition, the predicted worst-case noise levels would last for less than two months and because the sources of noise would migrate throughout the construction areas, the effects of construction noise on the sensitive receptors would change depending on the location of particular noise sources. As a result, it is expected that additional construction tasks would produce less noise.

f. *Mitigation*

MTA NYCT would consider and, where practicable, implement noise control measures to minimize the potential noise impacts. MTA NYCT is committed, as explained below, to developing and implementing an extensive mitigation program to reduce and alleviate the project's noise impacts during construction.

i. Construction Specifications to Reduce Noise Emissions

Contractors will be obligated to comply with all of the requirements and regulations of the New York City Noise Control Code. Devices and activities which are subject to the provisions of the New York City Noise Control Code would be required to be operated, conducted, constructed, or manufactured without causing a violation of the code. All work would be required to be conducted in compliance with the regulations set forth below controlling maximum noise levels from construction work. At the construction site, special precautions and noise abatement measures would be required to be taken by the contractor to reduce public exposure to noise.

Other measures and strategies to reduce noise levels would be considered by MTA NYCT to meet the NYC Noise Code requirements. MTA NYCT would determine which measures are most effective and practicable.

These measures and strategies may include:

- Use of OSHA-compliant, quieter, manually adjustable backup alarms set to their low level
- Use of shields and/or impervious fences to inhibit transmission of noise
- Use of noise enclosures or noise insulation fabric on compressors, generators, and other equipment
- Use of effective intake and exhaust mufflers on internal combustion engines and compressors
- Lining or covering hoppers, storage bins, and chutes with sound-absorbing material
- Avoiding the use of pneumatic or gasoline driven saws
- Employing alternative construction methods, using special low noise emission level equipment, and selecting and specifying quieter demolition methods
- Routing construction equipment and other vehicles carrying spoil, concrete, or other materials over streets and routes that will cause the least disturbance to residents in the vicinity of the activity
- Designing considerations and project layout approaches, including measures such as construction of temporary sound barrier walls, placing construction equipment farther from noise sensitive receptors, constructing walled enclosures/sheds around especially noisy activities such as pavement breaking, and sequencing operations to combine especially noisy equipment
- Developing and implementing a noise monitoring program in order to quantify noise levels at nearby sensitive receptors during construction
- Use of the quietest model of jackhammer available such as the Copco model TEX P90s

- Implementing a community liaison and complaint hot line

g. *Conclusions*

Projected noise levels for construction equipment related to the proposed Temporary Bus Parking Site would not exceed the FTA noise thresholds at any noise sensitive locations (such as residences) adjacent to proposed construction limits. Noise levels related to construction would not be elevated above ambient noise levels. However, any noise increases would be minimized by strict adherence to the revised 2005 NYC Noise Code and mitigation measures identified in the construction contracts. In addition, predicted worst-case noise levels would last for only a few months and, because the sources of noise would migrate throughout the construction areas, the effects of construction noise on the sensitive receptors would change depending on the location of particular noise sources. Note also that noise-generating activities would be intermittent and of short-term durations.

Noise levels from off-site mobile source construction vehicles would not be perceptible. Noise from potential bus traffic diversions caused by the temporary construction-period use of the proposed Temporary Bus Parking Site would not result in any exceedances of the FTA noise impact criteria.

The MTA NYCT construction contract specification would require the Contractor to meet the requirements set forth in the NYCDEP Noise Control Code (e.g., Construction Noise Mitigation Plans). Based on these requirements, the contractor must implement and adhere to the noise mitigation plan measures as required.

4. Vibration

a. *Vibration Level Characteristics*

Construction activities have the potential for producing high levels of vibration that may be perceptible or disruptive close to a project site. In some cases, architectural and structural damage could occur if construction activities are not properly managed. However, ground vibrations from most types of construction activities rarely reach the levels that can damage structures.

When evaluating human response, ground-borne vibration is usually expressed in terms of decibels. To avoid confusion with sound decibels, the abbreviation VdB is used for vibration decibels. To evaluate potential vibration occurrences, vibration is typically expressed in terms of inches per second ("ips").

Although the perceptibility threshold for ground-borne vibration is approximately 65 VdB, human response to vibration is not usually substantial unless the vibration exceeds 70 VdB. Background vibration is usually well below the threshold of human perception, and it is of concern only when the vibration affects very sensitive manufacturing or research equipment. Electron microscopes, high-resolution lithography equipment, and laser and optical equipment are typically sensitive to vibration. Fragile buildings and/or historic buildings may be especially sensitive to vibration. Within the vicinity of the proposed Temporary Bus Parking Site, there are residential receptors, particularly along 165th Street and Tuskegee Airman Way, which could be potentially affected by vibration intense activities that would require the contractor to use vibration control measures. However, there are no historic buildings or districts in close proximity to the proposed Temporary Bus Parking Site construction limits (i.e., within 90 feet, as defined by the New York City Department of Buildings ("NYCDOB")). Vibration levels for typical human and structural responses and sources are shown in Table 13: Typical Sources of Ground Borne-Vibration. The threshold criteria are based

on research experience with human sensitivity and community responses to ground-borne vibration and noise.

Table 13: Typical Sources of Ground Borne-Vibration

Human / Structural Response	VdB	Inch per Second (ips)	Typical Sources (at 50 feet)
Threshold, minor cosmetic damage for fragile buildings	100	0.1	Blasting from construction projects
			Bulldozers and other heavy tracked construction equipment
Difficulty with vibration sensitive tasks, such as reading a video screen	90	0.03	Commuter rail, upper range
Residential annoyance, infrequent events	80	0.01	Rapid transit rail, upper range
			Commuter rail, typical range
Residential annoyance, frequent events	70	0.003	Bus or truck over bump
			Rapid transit rail, typical range
Limit for vibration-sensitive equipment	60	0.001	Bus or truck, typical
Approximate threshold for human perception of vibration	50	0.0003	Typical background vibration

Source: Transit Noise and Vibration Impact Assessment, FTA, September 2018

b. *Guidelines and Criteria*

Potential impacts related to construction vibration would be of limited duration. Therefore, the primary concern regarding construction vibration would be related to potential damage to buildings. Damage criteria are based on the peak particle velocity levels for different types of construction equipment. For structural damage, the FTA identifies criteria for several categories of buildings that could be affected. In the areas adjacent to the Proposed Project, wood framed residential structures exist. For these buildings, the FTA criteria consider that damage would occur at a vibration level of 0.20 ips (94 VdB). Exceptions to this would be York College along Liberty Avenue and a storage facility along 165th Street, directly across the street from the proposed Temporary Bus Parking Site. These buildings are considered reinforced concrete structure where FTA criteria consider that damage would occur at a vibration level of 0.50 ips (102 VdB).

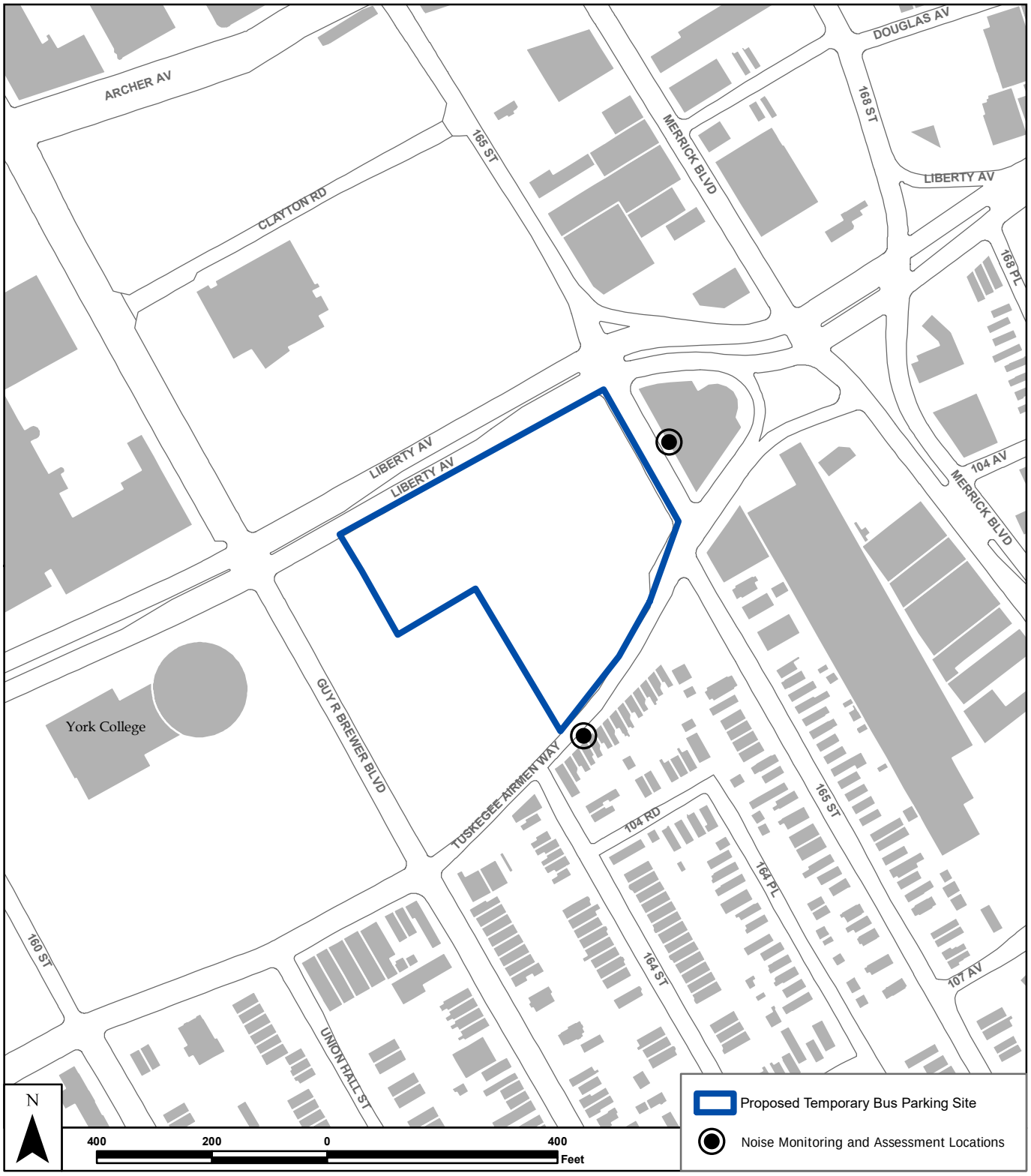
FTA guidance also provides human annoyance criteria limits for construction-related vibration. The FTA annoyance criteria would be 72 VdB for residential land uses. This criterion is associated with events that are likely to occur frequently (such as use of jackhammers) over the course of one day.

c. *Methodology*

A quantitative assessment of vibration impacts was based on FTA guidelines and the review of project construction plans and schedules. Potential worst-case impacts related to building damage were assessed for one worst case off-site residential receptor at 164-12 Tuskegee Airman Way, and the closest reinforced concrete structure located at 165-08 Liberty Avenue. The receptor on Tuskegee Airman Way would be representative of the northern facades of other buildings along Tuskegee Airman Way. The construction information used in assessing vibration included construction activities, equipment types, and vibration

emission levels. The proposed Temporary Bus Parking Site would not use any impact equipment; consequently, a review of the anticipated construction equipment and activities shows that rollers represent the worst vibration-causing construction activity at the construction limits.

The residential building at 164-12 Tuskegee Airman Way would be located approximately 90 feet south of the closest edge of the proposed Temporary Bus Parking Site construction zone. The commercial building at 164-12 Tuskegee Airman Way would be located approximately 73 feet east of the closest edge of the proposed Temporary Bus Parking Site construction zone. The vibration assessments utilized the roller equipment's reference peak particle velocity levels which were then adjusted for distance and compared to the FTA damage criteria. The FTA guidance was also used for the vibration-related human annoyance determination. The studied vibration receptor locations are shown as location below on Figure 2: Vibration Assessment Locations.



Source: New York City DoITT, Building Footprints, 2019; STV Incorporated, 2022.

Figure 2

VIBRATION ASSESSMENT LOCATIONS

Reconstruction and Expansion of Jamaica Bus Depot

d. *Impact Results*

The results of the vibration assessment demonstrate that the predicted vibration level at 164-12 Tuskegee Airman Way would be 0.031 ips. The predicted vibration level at 165-08 Liberty Avenue would be 0.042 ips. None of the predicted results would not result in damage at the two properties. The location at 164-12 Tuskegee Airman Way would be representative of multiple residential buildings that exist along Tuskegee Airman Way between 164th Street and 165th Street.

i. Vibration Annoyance

For the representative residential property at 164-12 Tuskegee Airman Way, the FTA vibration annoyance criteria of 72 VdB would be surpassed at properties within approximately 140 feet of the construction zone. This would include all of the residential buildings located along Tuskegee Airman Way between 164th Street and 165th Street. However, most of these potential impacts would occur during tasks associated with asphalt paving. The duration of this event would represent a small segment of the total construction period. In addition, activity associated with rollers would be intermittent and given the size of the construction site, activities would also migrate throughout the construction areas, such that the effects of construction vibration on the sensitive receptors would change depending on the location. The contractor would make all efforts to schedule these types of activities during times when it would be the least intrusive. In addition, the contractors would inform the occupants of adjacent buildings in advance before proceeding with work associated with rollers or other vibration intensive activities.

e. *Mitigation*

Giving consideration to the potential for both building damage and temporary annoyance to residents, MTA NYCT would require the contractor to use vibration control measures to minimize, as much as possible, the vibration levels in all neighborhoods near the construction site. Types of mitigation measures specific to the site of each type of construction activity, may include, but would not be limited to, the following:

- Informing people living and working in the vicinity about construction method, possible effects, quality control measures, precautions to be used; and the channels of communication available to them
- A vibration mitigation plan would be prepared once more details regarding construction operations are known. This plan would be initiated at the start of construction and would include a preconstruction survey and post-construction survey in sensitive areas.
- Developing and implementing a vibration-monitoring program during highly disruptive construction activities that would be immediately adjacent to affected properties.
- Routing of truck traffic and heavy equipment to avoid impacts to the more sensitive residential receptors.
- To the extent possible, earth moving equipment would be operated far from vibration-sensitive receptors.
- Where practicable, utilize smaller sized bulldozers or backhoes.
- Use of deep saw-cuts to minimize the transmission of vibrations from pavement breaking operations to foundations of nearby structures.
- Use of concrete cutters on pavement surfaces instead of pavement breakers, where practical.
- Minimization of the duration of vibration activities.

f. *Conclusions*

Based on the results of the vibration assessment, projected vibration levels for construction equipment near sensitive receptors adjacent to the construction zones would not exceed the FTA damage criteria of 0.20 ips for the wood framed residential buildings facing the southern edge of the construction zone and 0.50 ips for the closest concrete building. MTA NYCT would use vibration control measures to minimize, as much as possible, the vibration levels for all properties near the construction site. The specific vibration control measures to be implemented will be determined during the post-EIS design phase and coordinated between the design-build contractor and MTA NYCT.

The FTA vibration annoyance level would be exceeded at vibration sensitive building locations closer than 140 feet from the proposed Temporary Bus Parking Site construction zones. However, while these impacts could occur, they would be short-term since most construction activities would be intermittent, and the sources of vibration would migrate throughout the larger construction zone.

B. DEPOT

For the Depot, a detailed construction noise analysis was conducted in the 2019 EIS. Given that the Depot building would remain the same as analyzed in the 2019 EIS, the type and number of construction equipment expected to be used in each construction phase would be similar. Therefore, the results in the 2019 EIS would be expected to remain valid. This section will be included in the Final SEA.

Attachment G: SEQR Environmental Assessment Form

Full Environmental Assessment Form
Part 1 - Project and Setting

Instructions for Completing Part 1

Part 1 is to be completed by the applicant or project sponsor. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification.

Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information; indicate whether missing information does not exist, or is not reasonably available to the sponsor; and, when possible, generally describe work or studies which would be necessary to update or fully develop that information.

Applicants/sponsors must complete all items in Sections A & B. In Sections C, D & E, most items contain an initial question that must be answered either "Yes" or "No". If the answer to the initial question is "Yes", complete the sub-questions that follow. If the answer to the initial question is "No", proceed to the next question. Section F allows the project sponsor to identify and attach any additional information. Section G requires the name and signature of the applicant or project sponsor to verify that the information contained in Part 1is accurate and complete.

A. Project and Applicant/Sponsor Information.

Name of Action or Project: Reconstruction and Expansion of Jamaica Bus Depot (Supplemental Environmental Assessment, "SEA"[1])		
Project Location (describe, and attach a general location map): Queens Block 10160, Lot No. 1 and a portion of Queens Block 10159, Lot No. 3[2](see SEA report - Figure 2)		
Brief Description of Proposed Action (include purpose or need): This EAF serves as a supplement to the Environmental Impact Statement ("EIS") prepared for the original Reconstruction and Expansion of Jamaica Bus Depot ("JBD") in 2019 and, as such, reports on new information and assumptions provided since the publication of the 2019 EIS. Given the structural and operational limitations of the existing JBD to meet the existing and future demands of servicing and storing 300 buses, the Metropolitan Transportation Authority ("MTA") New York City Transit ("NYCT") proposed in its 2019 EIS to update antiquated technology and facilities at the existing JBD and to increase bus service and storage capacity to meet the growing demand for bus service. The purpose and need as described in the 2019 EIS remains unchanged. The 2019 EIS stated a supplement would be prepared once a locale for temporary bus parking was identified. NYCT has identified an approximately 3.5-acre parcel of property to the north of the Depot Site at a site owned by the Dormitory Authority of the State of New York ("DASNY") and managed by the City University of New York ("CUNY") York College ("Temporary Bus Parking Site"). In addition, the following new information warrants supplemental environmental review: (1) This EAF reassesses the analysis year for operations, as well as the construction years with the greatest potential for traffic, air, and noise impacts; the respective environmental analyses are adjusted accordingly; (2) Refinement of depot entry and exit points through consultation with the New York City Department of Transportation ("NYCDOT"); and (3) Minor street reconfiguration to the east of the JBD by NYCDOT. Additionally, as a separate action not subject to this SEQRA review, a portion of Tuskegee Airmen Way and adjacent NYCDOT traffic island, directly north of and adjacent to the Depot Site, would be made available for depot operations use to accommodate NYCDOT mandates. Otherwise, the 2019 EIS remains valid; therefore, this EAF focuses specifically on the Temporary Bus Parking Site (refer to the 2019 EIS for information about the Reconstructed and Expanded JBD). Details are provided within the attached SEA report.		
Name of Applicant/Sponsor: Metropolitan Transportation Authority (MTA) - New York City Transit (NYCT)	Telephone: See below E-Mail: See below	
Address: 2 Broadway		
City/PO: New York	State: NY	Zip Code: 10004
Project Contact (if not same as sponsor; give name and title/role): Mary Kong	Telephone: 646-252-4935 E-Mail: Mary.Kong@mtacd.org	
Address: 2 Broadway		
City/PO: New York, New York	State: NY	Zip Code: 10004
Property Owner (if not same as sponsor): Dormitory Authority of the State of New York (DASNY)[2]	Telephone: (518) 257-3000 E-Mail:	
Address: 515 Broadway		
City/PO: Albany	State: NY	Zip Code: 12207

1. Where applicable, references are made on this form to the attached SEA report.
2. Project location and ownership information provided is for the Temporary Bus Parking Site, which was not previously analyzed in the 2019 EIS. For information about the location and site ownership of the Depot Site, please refer to the 2019 EIS.

B. Government Approvals

B. Government Approvals, Funding, or Sponsorship. ("Funding" includes grants, loans, tax relief, and any other forms of financial assistance.)

Government Entity	If Yes: Identify Agency and Approval(s) Required	Application Date (Actual or projected)
a. City Counsel, Town Board, or Village Board of Trustees ☐Yes☐No		
b. City, Town or Village Planning Board or Commission ☐Yes☐No		
c. City, Town or Village Zoning Board of Appeals ☐Yes☐No		
d. Other local agencies ☑Yes☐No	NYCDOT, NYCDEP - Stormwater/Sewers	Proposed for 2022
e. County agencies ☐Yes☐No		
f. Regional agencies ☐Yes☐No		
g. State agencies ☑Yes☐No	MTA Board Approval, NYSDOT	Proposed for 2022
h. Federal agencies ☐Yes☐No		

i. Coastal Resources.
i. Is the project site within a Coastal Area, or the waterfront area of a Designated Inland Waterway? ☐Yes☑No

ii. Is the project site located in a community with an approved Local Waterfront Revitalization Program? ☑Yes☐No

iii. Is the project site within a Coastal Erosion Hazard Area? ☐Yes☑No

C. Planning and Zoning

C.1. Planning and zoning actions.

Will administrative or legislative adoption, or amendment of a plan, local law, ordinance, rule or regulation be the only approval(s) which must be granted to enable the proposed action to proceed? ☐Yes☑No

- **If Yes,** complete sections C, F and G.
- **If No,** proceed to question C.2 and complete all remaining sections and questions in Part 1

C.2. Adopted land use plans.

a. Do any municipally- adopted (city, town, village or county) comprehensive land use plan(s) include the site where the proposed action would be located? ☐Yes☑No

If Yes, does the comprehensive plan include specific recommendations for the site where the proposed action would be located? ☐Yes☐No

b. Is the site of the proposed action within any local or regional special planning district (for example: Greenway; Brownfield Opportunity Area (BOA); designated State or Federal heritage area; watershed management plan; or other?) ☑Yes☐No

If Yes, identify the plan(s):

Jamaica Bay Watershed Protection Plan (developed pursuant to Local Law 71 of 2005)

c. Is the proposed action located wholly or partially within an area listed in an adopted municipal open space plan, or an adopted municipal farmland protection plan? ☐Yes☑No

If Yes, identify the plan(s):

C.3. Zoning

a. Is the site of the proposed action located in a municipality with an adopted zoning law or ordinance. ☑ Yes ☐ No
If Yes, what is the zoning classification(s) including any applicable overlay district?
The Temporary Bus Parking Site is in New York City Zoning District R6[3]

b. Is the use permitted or allowed by a special or conditional use permit? N/A - MTA is not subject to city zoning ☐ Yes ☐ No

c. Is a zoning change requested as part of the proposed action? ☐ Yes ☑ No
If Yes,
i. What is the proposed new zoning for the site? _____

C.4. Existing community services.

a. In what school district is the project site located? New York City School District No. 28

b. What police or other public protection forces serve the project site?
New York City Police Department (Precinct 103)

c. Which fire protection and emergency medical services serve the project site?
New York City Fire Department (Engine 275)

d. What parks serve the project site?
Detective Keith L. Williams Park and the Latimer Playground

D. Project Details

D.1. Proposed and Potential Development

a. What is the general nature of the proposed action (e.g., residential, industrial, commercial, recreational; if mixed, include all components)? Transportation - MTA Bus Depot Reconstruction / Expansion

b. a. Total acreage of the site of the proposed action? 3.5[4] acres
b. Total acreage to be physically disturbed? 3.5[4] acres
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? 0[4] acres

c. Is the proposed action an expansion of an existing project or use? ☐ Yes ☑ No[4]
i. If Yes, what is the approximate percentage of the proposed expansion and identify the units (e.g., acres, miles, housing units, square feet)? % _____ Units: _____

d. Is the proposed action a subdivision, or does it include a subdivision? ☐ Yes ☑ No
If Yes,
i. Purpose or type of subdivision? (e.g., residential, industrial, commercial; if mixed, specify types)
ii. Is a cluster/conservation layout proposed? ☐ Yes ☐ No
iii. Number of lots proposed? _____
iv. Minimum and maximum proposed lot sizes? Minimum _____ Maximum _____

e. Will the proposed action be constructed in multiple phases? ☐ Yes ☑ No
i. If No, anticipated period of construction: 11[5] months
ii. If Yes:
- Total number of phases anticipated _____
- Anticipated commencement date of phase 1 (including demolition) _____ month _____ year
- Anticipated completion date of final phase _____ month _____ year
- Generally describe connections or relationships among phases, including any contingencies where progress of one phase may determine timing or duration of future phases: _____

3. For zoning information pertaining to the Depot Site, see the 2019 EIS.
4. The Temporary Bus Parking Site does not comprise a permanent expansion of an existing facility, and would only be used temporarily during the JBD construction period. For development information pertaining to the Depot Site, see the 2019 EIS.
5. The construction required to convert the Temporary Bus Parking Site to a temporary paved bus parking area would occur over a duration of 11 months and would precede the 38-month construction of the new depot.

f. Does the project include new residential uses? ☐Yes ☑No
If Yes, show numbers of units proposed.

	One Family	Two Family	Three Family	Multiple Family (four or more)
Initial Phase				
At completion of all phases				

g. Does the proposed action include new non-residential construction (including expansions)? ☑Yes ☐No
If Yes,
i. Total number of structures 0[6]
ii. Dimensions (in feet) of largest proposed structure: 0 height; 0 width; and 0 length
iii. Approximate extent of building space to be heated or cooled: 0 square feet

h. Does the proposed action include construction or other activities that will result in the impoundment of any liquids, such as creation of a water supply, reservoir, pond, lake, waste lagoon or other storage? ☐Yes ☑No
If Yes,
i. Purpose of the impoundment:
ii. If a water impoundment, the principal source of the water: ☐ Ground water ☐ Surface water streams ☐Other specify:
iii. If other than water, identify the type of impounded/contained liquids and their source.
iv. Approximate size of the proposed impoundment. Volume: million gallons; surface area: acres
v. Dimensions of the proposed dam or impounding structure: height; length
vi. Construction method/materials for the proposed dam or impounding structure (e.g., earth fill, rock, wood, concrete):

D.2. Project Operations

a. Does the proposed action include any excavation, mining, or dredging, during construction, operations, or both? ☑Yes ☐No
(Not including general site preparation, grading or installation of utilities or foundations where all excavated materials will remain onsite)
If Yes:
i. What is the purpose of the excavation or dredging? Installation of asphalt-paved temporary bus parking[7]
ii. How much material (including rock, earth, sediments, etc.) is proposed to be removed from the site?
- Volume (specify tons or cubic yards): TBD
- Over what duration of time? Site preparation (up to 11 months) for temporary bus parking[7]

iii. Describe nature and characteristics of materials to be excavated or dredged, and plans to use, manage or dispose of them.
The methods to manage and dispose of the material are being developed in coordination with NYSDEC.

iv. Will there be onsite dewatering or processing of excavated materials? ☑Yes ☐No
If yes, describe. On-site dewatering and/or limited processing of materials may be required as part of remediation developed in coordination with NYSDEC.

v. What is the total area to be dredged or excavated? Temporary Bus Parking Site comprises 3.5[7] acres
vi. What is the maximum area to be worked at any one time? TBD acres
vii. What would be the maximum depth of excavation or dredging? TBD feet
viii. Will the excavation require blasting? ☐Yes ☑No
ix. Summarize site reclamation goals and plan:

Based on the analysis of soil samples collected during the Phase II ESA, material excavated from the Temporary Bus Parking Site is expected to be either hazardous waste for the toxicity characteristic of lead in the vicinity of TP-06 or non-hazardous excavated material. If possible, planned construction/excavation activities would avoid the area of hazardous waste. If subsurface work is required in this area, a supplemental investigation would be conducted to further delineate the horizontal limits of hazardous waste for the toxicity characteristic of lead.[7]

b. Would the proposed action cause or result in alteration of, increase or decrease in size of, or encroachment into any existing wetland, waterbody, shoreline, beach or adjacent area? ☐Yes ☑No
If Yes:
i. Identify the wetland or waterbody which would be affected (by name, water index number, wetland map number or geographic description):

6. No new structure would be required for the Temporary Bus Parking Site. For information pertaining to the Depot Site, see the 2019 EIS.
7. For excavation, mining, and dredging information pertaining to the Depot Site, see the 2019 EIS.

ii. Describe how the proposed action would affect that waterbody or wetland, e.g. excavation, fill, placement of structures, or alteration of channels, banks and shorelines. Indicate extent of activities, alterations and additions in square feet or acres:

_____

_____

_____

_____

iii. Will the proposed action cause or result in disturbance to bottom sediments? ☐Yes ☐No

If Yes, describe: _____

iv. Will the proposed action cause or result in the destruction or removal of aquatic vegetation? ☐Yes ☐No

If Yes:

- acres of aquatic vegetation proposed to be removed: _____
- expected acreage of aquatic vegetation remaining after project completion: _____
- purpose of proposed removal (e.g. beach clearing, invasive species control, boat access): _____

_____

- proposed method of plant removal: _____
- if chemical/herbicide treatment will be used, specify product(s): _____

v. Describe any proposed reclamation/mitigation following disturbance: _____

_____

c. Will the proposed action use, or create a new demand for water? The Temporary Bus Parking Site would not create additional new demand for water (see the 2019 EIS for information pertaining to the Depot Site) ☐Yes ☑No

If Yes:

i. Total anticipated water usage/demand per day: _____ gallons/day

ii. Will the proposed action obtain water from an existing public water supply? ☐Yes ☐No

If Yes:

- Name of district or service area: _____
- Does the existing public water supply have capacity to serve the proposal? ☐Yes ☐No
- Is the project site in the existing district? ☐Yes ☐No
- Is expansion of the district needed? ☐Yes ☐No
- Do existing lines serve the project site? ☐Yes ☐No

iii. Will line extension within an existing district be necessary to supply the project? ☐Yes ☐No

If Yes:

- Describe extensions or capacity expansions proposed to serve this project: _____

_____

- Source(s) of supply for the district: _____

iv. Is a new water supply district or service area proposed to be formed to serve the project site? ☐Yes ☐No

If, Yes:

- Applicant/sponsor for new district: _____
- Date application submitted or anticipated: _____
- Proposed source(s) of supply for new district: _____

v. If a public water supply will not be used, describe plans to provide water supply for the project: _____

_____

vi. If water supply will be from wells (public or private), what is the maximum pumping capacity: _____ gallons/minute.

d. Will the proposed action generate liquid wastes? The Temporary Bus Parking Site would not generate liquid wastes (see the 2019 EIS for information pertaining to the Depot Site) ☐Yes ☑No

If Yes:

i. Total anticipated liquid waste generation per day: _____ gallons/day

ii. Nature of liquid wastes to be generated (e.g., sanitary wastewater, industrial; if combination, describe all components and approximate volumes or proportions of each): _____

_____

_____

iii. Will the proposed action use any existing public wastewater treatment facilities? ☐Yes ☐No

If Yes:

- Name of wastewater treatment plant to be used: _____
- Name of district: _____
- Does the existing wastewater treatment plant have capacity to serve the project? ☐Yes ☐No
- Is the project site in the existing district? ☐Yes ☐No
- Is expansion of the district needed? ☐Yes ☐No

- Do existing sewer lines serve the project site? ☐Yes ☐No
- Will a line extension within an existing district be necessary to serve the project? ☐Yes ☐No

If Yes:

- Describe extensions or capacity expansions proposed to serve this project: _____

iv. Will a new wastewater (sewage) treatment district be formed to serve the project site? ☐Yes ☐No

If Yes:

- Applicant/sponsor for new district: _____
- Date application submitted or anticipated: _____
- What is the receiving water for the wastewater discharge? _____

v. If public facilities will not be used, describe plans to provide wastewater treatment for the project, including specifying proposed receiving water (name and classification if surface discharge or describe subsurface disposal plans):

vi. Describe any plans or designs to capture, recycle or reuse liquid waste: _____

e. Will the proposed action disturb more than one acre and create stormwater runoff, either from new point sources (i.e. ditches, pipes, swales, curbs, gutters or other concentrated flows of stormwater) or non-point source (i.e. sheet flow) during construction or post construction? ☑Yes ☐No

If Yes:

i. How much impervious surface will the project create in relation to total size of project parcel?

_____ Square feet or 3.5[8] acres (impervious surface)

_____ Square feet or 3.5[8] acres (parcel size)

ii. Describe types of new point sources. Pavement runoff[8]

iii. Where will the stormwater runoff be directed (i.e. on-site stormwater management facility/structures, adjacent properties, groundwater, on-site surface water or off-site surface waters)?

Stormwater runoff (unenclosed paved parking) would be redirected to NYCDEP sewers, consistent with NYCDEP requirements for on-site stormwater management[8]

- If to surface waters, identify receiving water bodies or wetlands: N/A
- Will stormwater runoff flow to adjacent properties? ☐Yes ☑No

iv. Does the proposed plan minimize impervious surfaces, use pervious materials or collect and re-use stormwater? ☐Yes ☑No

f. Does the proposed action include, or will it use on-site, one or more sources of air emissions, including fuel combustion, waste incineration, or other processes or operations? ☑Yes ☐No

If Yes, identify:

i. Mobile sources during project operations (e.g., heavy equipment, fleet or delivery vehicles)

Unenclosed bus parking area

ii. Stationary sources during construction (e.g., power generation, structural heating, batch plant, crushers)

N/A

iii. Stationary sources during operations (e.g., process emissions, large boilers, electric generation)

N/A

g. Will any air emission sources named in D.2.f (above), require a NY State Air Registration, Air Facility Permit, or Federal Clean Air Act Title IV or Title V Permit? ☐Yes ☑No

The Temporary Bus Parking Site would not require a NY State Air Registration, Air Facility Permit, or Federal Clean Air Act Title IV or Title V Permit (see the 2019 EIS for information pertaining to the Depot Site)

If Yes:

i. Is the project site located in an Air quality non-attainment area? (Area routinely or periodically fails to meet ambient air quality standards for all or some parts of the year) ☐Yes ☐No

ii. In addition to emissions as calculated in the application, the project will generate:

- _____Tons/year (short tons) of Carbon Dioxide (CO_2)
- _____Tons/year (short tons) of Nitrous Oxide (N_2O)
- _____Tons/year (short tons) of Perfluorocarbons (PFCs)
- _____Tons/year (short tons) of Sulfur Hexafluoride (SF_6)
- _____Tons/year (short tons) of Carbon Dioxide equivalent of Hydroflourocarbons (HFCs)
- _____Tons/year (short tons) of Hazardous Air Pollutants (HAPs)

8. For stormwater runoff information pertaining to the Depot Site, see the 2019 EIS.

h. Will the proposed action generate or emit methane (including, but not limited to, sewage treatment plants, landfills, composting facilities)? ☐Yes ☑No

If Yes:

i. Estimate methane generation in tons/year (metric): _____

ii. Describe any methane capture, control or elimination measures included in project design (e.g., combustion to generate heat or electricity, flaring): _____

i. Will the proposed action result in the release of air pollutants from open-air operations or processes, such as quarry or landfill operations? ☐Yes ☑No

If Yes: Describe operations and nature of emissions (e.g., diesel exhaust, rock particulates/dust):

j. Will the proposed action result in a substantial increase in traffic above present levels or generate substantial new demand for transportation facilities or services? ☑Yes ☐No

If Yes:

i. When is the peak traffic expected (Check all that apply): ☑ Morning ☑ Evening ☐Weekend
☐ Randomly between hours of _____ to _____.

ii. For commercial activities only, projected number of truck trips/day and type (e.g., semi trailers and dump trucks): N/A

iii. Parking spaces: Existing 0 SBE (standard bus)[9] Proposed 170 SBE[9] Net increase/decrease 170 SBE[9]

iv. Does the proposed action include any shared use parking? ☐Yes ☑No

v. If the proposed action includes any modification of existing roads, creation of new roads or change in existing access, describe: To accommodate NYCDOT mandates, the portion of Tuskegee Airmen Way directly north of and adjacent to the Depot Site would be de-mapped in the future (as a separate action, not subject to this SEQRA review). This portion of Tuskegee Airmen Way and the adjacent NYCDOT traffic island would be paved with markings to facilitate bus circulation into and out of the JBD.[9]

vi. Are public/private transportation service(s) or facilities available within ½ mile of the proposed site? ☑Yes ☐No

vii Will the proposed action include access to public transportation or accommodations for use of hybrid, electric or other alternative fueled vehicles? ☐Yes ☑No

viii. Will the proposed action include plans for pedestrian or bicycle accommodations for connections to existing pedestrian or bicycle routes? ☐Yes ☑No

k. Will the proposed action (for commercial or industrial projects only) generate new or additional demand for energy? ☐Yes ☑No

Neighbor-friendly lighting would be installed at the Temporary Bus Parking Site; however, this increment in energy consumption would be minimal (see the 2019 EIS for information pertaining to the Depot Site)

If Yes:

i. Estimate annual electricity demand during operation of the proposed action: _____

ii. Anticipated sources/suppliers of electricity for the project (e.g., on-site combustion, on-site renewable, via grid/local utility, or other):

iii. Will the proposed action require a new, or an upgrade, to an existing substation? ☐Yes ☐No

l. Hours of operation. Answer all items which apply.

i. During Construction: (Temporary Bus Parking Site preparation)

- Monday - Friday: 7 AM - 6 PM[10]
- Saturday: 7 AM - 6 PM[10]
- Sunday: 7 AM - 6 PM[10]
- Holidays: 7 AM - 6 PM[10]

ii. During Operations: (Depot construction-period use of the Temporary Bus Parking Site)

- Monday - Friday: Continuous Operation[10]
- Saturday: Continuous Operation[10]
- Sunday: Continuous Operation[10]
- Holidays: Continuous Operation[10]

9. For transportation information pertaining to the Depot Site, see the 2019 EIS.
10. Temporary Bus Parking Site preparation activities are expected to be limited to the hours of 7:00 AM - 6:00 PM (per NYC Noise Code). Once complete and available for use, the Temporary Bus Parking Site would be utilized throughout the day and night while the depot is being constructed.

m. Will the proposed action produce noise that will exceed existing ambient noise levels during construction, operation, or both? ☑ Yes ☐ No

If yes:

i. Provide details including sources, time of day and duration:

Predicted worst-case noise levels for construction and temporary construction-period use of the proposed Temporary Bus Parking Site would last for less than one year and the sources of noise would migrate throughout the site.[11]

ii. Will the proposed action remove existing natural barriers that could act as a noise barrier or screen? ☐ Yes ☑ No

Describe: _____

n. Will the proposed action have outdoor lighting? ☑ Yes ☐ No

If yes:

i. Describe source(s), location(s), height of fixture(s), direction/aim, and proximity to nearest occupied structures:

General lighting would be that typically found in parking lots.[12]

ii. Will proposed action remove existing natural barriers that could act as a light barrier or screen? ☐ Yes ☑ No

Describe: _____

o. Does the proposed action have the potential to produce odors for more than one hour per day? ☐ Yes ☑ No

If Yes, describe possible sources, potential frequency and duration of odor emissions, and proximity to nearest occupied structures: _____

p. Will the proposed action include any bulk storage of petroleum (combined capacity of over 1,100 gallons) or chemical products 185 gallons in above ground storage or any amount in underground storage? ☐ Yes ☑ No

The Temporary Bus Parking Site would not include any bulk storage of petroleum or chemical products (see the 2019 EIS for information pertaining to the Depot Site)

If Yes:

i. Product(s) to be stored _____

ii. Volume(s) _____ per unit time _____ (e.g., month, year)

iii. Generally, describe the proposed storage facilities: _____

q. Will the proposed action (commercial, industrial and recreational projects only) use pesticides (i.e., herbicides, insecticides) during construction or operation? ☑ Yes ☐ No

If Yes:

i. Describe proposed treatment(s):

Rodent and pest management

ii. Will the proposed action use Integrated Pest Management Practices? ☐ Yes ☑ No

r. Will the proposed action (commercial or industrial projects only) involve or require the management or disposal of solid waste (excluding hazardous materials)? ☐ Yes ☑ No

No management or disposal of solid waste would be required for the Temporary Bus Parking Site (see the 2019 EIS for information pertaining to the Depot Site)

If Yes:

i. Describe any solid waste(s) to be generated during construction or operation of the facility:

- Construction: _____ tons per _____ (unit of time)
- Operation : _____ tons per _____ (unit of time)

ii. Describe any proposals for on-site minimization, recycling or reuse of materials to avoid disposal as solid waste:

- Construction: _____
- Operation: _____

iii. Proposed disposal methods/facilities for solid waste generated on-site:

- Construction: _____
- Operation: _____

11. For noise information pertaining to the Depot Site, see the 2019 EIS.
12. For lighting information pertaining to the Depot Site, see the 2019 EIS.

s. Does the proposed action include construction or modification of a solid waste management facility? ☐ Yes ☑ No

If Yes:

i. Type of management or handling of waste proposed for the site (e.g., recycling or transfer station, composting, landfill, or other disposal activities): _____

ii. Anticipated rate of disposal/processing:

- _____ Tons/month, if transfer or other non-combustion/thermal treatment, or
- _____ Tons/hour, if combustion or thermal treatment

iii. If landfill, anticipated site life: _____ years

t. Will the proposed action at the site involve the commercial generation, treatment, storage, or disposal of hazardous waste? ☐ Yes ☑ No

If Yes:

i. Name(s) of all hazardous wastes or constituents to be generated, handled or managed at facility: _____

ii. Generally describe processes or activities involving hazardous wastes or constituents: _____

iii. Specify amount to be handled or generated _____ tons/month

iv. Describe any proposals for on-site minimization, recycling or reuse of hazardous constituents: _____

v. Will any hazardous wastes be disposed at an existing offsite hazardous waste facility? ☐ Yes ☐ No

If Yes: provide name and location of facility: _____

If No: describe proposed management of any hazardous wastes which will not be sent to a hazardous waste facility:

E. Site and Setting of Proposed Action

E.1. Land uses on and surrounding the project site

a. Existing land uses.

i. Check all uses that occur on, adjoining and near the project site.

☑ Urban ☑ Industrial ☑ Commercial ☐ Residential (suburban) ☐ Rural (non-farm)
☐ Forest ☐ Agriculture ☐ Aquatic ☑ Other (specify): Public facilities/institutional (CUNY York College campus); Methodist Cemetery; Jamaica Bus Depot; Allen Cathedral Residences; single-family detached residences[13]

ii. If mix of uses, generally describe:

b. Land uses and covertypes on the project site.

Land use or Covertype	Current Acreage	Acreage After Project Completion	Change (Acres +/-)
• Roads, buildings, and other paved or impervious surfaces	0	3.5 [13]	+3.5 [13]
• Forested	0	0	0
• Meadows, grasslands or brushlands (non-agricultural, including abandoned agricultural)	0	0	0
• Agricultural (includes active orchards, field, greenhouse etc.)	0	0	0
• Surface water features (lakes, ponds, streams, rivers, etc.)	0	0	0
• Wetlands (freshwater or tidal)	0	0	0
• Non-vegetated (bare rock, earth or fill)	0	0	0
• Other Describe: Vacant grass-covered lot	3.5 [13]	0	-3.5 [13]

13. For land use information pertaining to the Depot Site, see the 2019 EIS.

c. Is the project site presently used by members of the community for public recreation? ☐Yes☑No
i. If Yes: explain: _____

d. Are there any facilities serving children, the elderly, people with disabilities (e.g., schools, hospitals, licensed day care centers, or group homes) within 1500 feet of the project site? ☑Yes☐No
If Yes,
i. Identify Facilities:
Nee Cee Cares Day Care, Little People's Day Care, Clifford Glover/Starlight Day Care, and New Dawn Elementary

e. Does the project site contain an existing dam? ☐Yes☑No
If Yes:
i. Dimensions of the dam and impoundment:
- Dam height: _____ feet
- Dam length: _____ feet
- Surface area: _____ acres
- Volume impounded: _____ gallons OR acre-feet

ii. Dam's existing hazard classification: _____
iii. Provide date and summarize results of last inspection:

f. Has the project site ever been used as a municipal, commercial or industrial solid waste management facility, or does the project site adjoin property which is now, or was at one time, used as a solid waste management facility? ☐Yes☑No
If Yes:
i. Has the facility been formally closed? ☐Yes☐No
- If yes, cite sources/documentation: _____

ii. Describe the location of the project site relative to the boundaries of the solid waste management facility:

iii. Describe any development constraints due to the prior solid waste activities: _____

g. Have hazardous wastes been generated, treated and/or disposed of at the site, or does the project site adjoin property which is now or was at one time used to commercially treat, store and/or dispose of hazardous waste? ☐Yes☑No
If Yes:
i. Describe waste(s) handled and waste management activities, including approximate time when activities occurred:

h. Potential contamination history. Has there been a reported spill at the proposed project site, or have any remedial actions been conducted at or adjacent to the proposed site? ☑Yes☐No
If Yes:
i. Is any portion of the site listed on the NYSDEC Spills Incidents database or Environmental Site Remediation database? Check all that apply: ☐Yes☑No[14]
☐ Yes – Spills Incidents database — Provide DEC ID number(s): _____
☐ Yes – Environmental Site Remediation database — Provide DEC ID number(s): _____
☐ Neither database

ii. If site has been subject of RCRA corrective activities, describe control measures: _____

iii. Is the project within 2000 feet of any site in the NYSDEC Environmental Site Remediation database? ☑Yes☐No
If yes, provide DEC ID number(s): C241243, C241062, 241227[14]

iv. If yes to (i), (ii) or (iii) above, describe current status of site(s):

DEC ID no. C241243 - Classification "A" (remediation work is underway and not yet complete); DEC ID no. 241227 - Classification "P" (preliminary information indicates that a site may have contamination that makes it eligible for consideration for placement on the Registry of Inactive Hazardous Waste Disposal Sites); DEC ID no. C241062 - Classification "N" (no further action at this time)[14]

14. For contamination history pertaining to the Depot Site, see the 2019 EIS.

v. Is the project site subject to an institutional control limiting property uses? The Temporary Bus Parking Site is not subject to such controls (see the 2019 EIS for information pertaining to the Depot Site) ☐ Yes ☑ No

- If yes, DEC site ID number: _____
- Describe the type of institutional control (e.g., deed restriction or easement): _____
- Describe any use limitations: _____
- Describe any engineering controls: _____
- Will the project affect the institutional or engineering controls in place? The Temporary Bus Parking Site would not affect any such controls (see the 2019 EIS for information pertaining to the Depot Site) ☐ Yes ☑ No
- Explain: _____

E.2. Natural Resources On or Near Project Site

a. What is the average depth to bedrock on the project site? 600 feet

b. Are there bedrock outcroppings on the project site? ☐ Yes ☑ No
If Yes, what proportion of the site is comprised of bedrock outcroppings? _____ %

c. Predominant soil type(s) present on project site:

FGA - Flatbush-Greenbelt complex, 0-3% slopes[15]	48 %
FGB - Flatbush-Greenbelt complex, 3-8%[15]	52 %
	%

d. What is the average depth to the water table on the project site? Average: >6.5[15] feet

e. Drainage status of project site soils:
☑ Well Drained: 100 % of site
☐ Moderately Well Drained: _____ % of site
☐ Poorly Drained _____ % of site

f. Approximate proportion of proposed action site with slopes:
☑ 0-10%: 100 % of site
☐ 10-15%: _____ % of site
☐ 15% or greater: _____ % of site

g. Are there any unique geologic features on the project site? ☐ Yes ☑ No
If Yes, describe: _____

h. Surface water features.
i. Does any portion of the project site contain wetlands or other waterbodies (including streams, rivers, ponds or lakes)? ☐ Yes ☑ No
ii. Do any wetlands or other waterbodies adjoin the project site? ☐ Yes ☑ No
If Yes to either *i* or *ii*, continue. If No, skip to E.2.i.
iii. Are any of the wetlands or waterbodies within or adjoining the project site regulated by any federal, state or local agency? ☐ Yes ☐ No
iv. For each identified regulated wetland and waterbody on the project site, provide the following information:
- Streams: Name _____ Classification _____
- Lakes or Ponds: Name _____ Classification _____
- Wetlands: Name _____ Approximate Size _____
- Wetland No. (if regulated by DEC) _____

v. Are any of the above water bodies listed in the most recent compilation of NYS water quality-impaired waterbodies? ☐ Yes ☐ No
If yes, name of impaired water body/bodies and basis for listing as impaired: _____

i. Is the project site in a designated Floodway? ☐ Yes ☑ No

j. Is the project site in the 100-year Floodplain? ☐ Yes ☑ No

k. Is the project site in the 500-year Floodplain? ☐ Yes ☑ No

l. Is the project site located over, or immediately adjoining, a primary, principal or sole source aquifer? ☑ Yes ☐ No
If Yes:
i. Name of aquifer: Brooklyn-Queens SSA

15. For natural resources information pertaining to the Depot Site, see the 2019 EIS.

m. Identify the predominant wildlife species that occupy or use the project site:
Typical urban species

n. Does the project site contain a designated significant natural community? ☐Yes ☑No
If Yes:
i. Describe the habitat/community (composition, function, and basis for designation):
ii. Source(s) of description or evaluation:
iii. Extent of community/habitat:
- Currently: _____ acres
- Following completion of project as proposed: _____ acres
- Gain or loss (indicate + or -): _____ acres

o. Does project site contain any species of plant or animal that is listed by the federal government or NYS as endangered or threatened, or does it contain any areas identified as habitat for an endangered or threatened species? ☐ Yes ☑No
If Yes:
i. Species and listing (endangered or threatened):

p. Does the project site contain any species of plant or animal that is listed by NYS as rare, or as a species of special concern? ☐Yes ☑No
If Yes:
i. Species and listing:

q. Is the project site or adjoining area currently used for hunting, trapping, fishing or shell fishing? ☐Yes ☑No
If yes, give a brief description of how the proposed action may affect that use:

E.3. Designated Public Resources On or Near Project Site

a. Is the project site, or any portion of it, located in a designated agricultural district certified pursuant to Agriculture and Markets Law, Article 25-AA, Section 303 and 304? ☐Yes ☑No
If Yes, provide county plus district name/number:

b. Are agricultural lands consisting of highly productive soils present? ☐Yes ☑No
i. If Yes: acreage(s) on project site?
ii. Source(s) of soil rating(s):

c. Does the project site contain all or part of, or is it substantially contiguous to, a registered National Natural Landmark? ☐Yes ☑No
If Yes:
i. Nature of the natural landmark: ☐ Biological Community ☐ Geological Feature
ii. Provide brief description of landmark, including values behind designation and approximate size/extent:

d. Is the project site located in or does it adjoin a state listed Critical Environmental Area? ☐Yes ☑No
If Yes:
i. CEA name:
ii. Basis for designation:
iii. Designating agency and date:

e. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district which is listed on the National or State Register of Historic Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places? ☐ Yes ☑ No

If Yes:

i. Nature of historic/archaeological resource: ☐ Archaeological Site ☐ Historic Building or District

ii. Name: _____

iii. Brief description of attributes on which listing is based:

_____

f. Is the project site, or any portion of it, located in or adjacent to an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory? ☑ Yes ☐ No

g. Have additional archaeological or historic site(s) or resources been identified on the project site? ☐ Yes ☑ No

If Yes:

i. Describe possible resource(s): _____

ii. Basis for identification: _____

h. Is the project site within fives miles of any officially designated and publicly accessible federal, state, or local scenic or aesthetic resource? ☐ Yes ☑ No

If Yes:

i. Identify resource: _____

ii. Nature of, or basis for, designation (e.g., established highway overlook, state or local park, state historic trail or scenic byway, etc.): _____

iii. Distance between project and resource: _____ miles.

i. Is the project site located within a designated river corridor under the Wild, Scenic and Recreational Rivers Program 6 NYCRR 666? ☐ Yes ☑ No

If Yes:

i. Identify the name of the river and its designation: _____

ii. Is the activity consistent with development restrictions contained in 6NYCRR Part 666? ☐ Yes ☐ No

F. Additional Information

Attach any additional information which may be needed to clarify your project.

If you have identified any adverse impacts which could be associated with your proposal, please describe those impacts plus any measures which you propose to avoid or minimize them.

G. Verification

I certify that the information provided is true to the best of my knowledge.

Applicant/Sponsor Name Thomas Abdallah, P.E. Date August 22 2022

Signature Thomas Abdallah Digitally signed by Thomas Abdallah 000526 1085097 Date: 2022.08.22 16:34:16 -04'00' Title VP Design Services & Chief Environmental Engineer

PRINT FORM

Agency Use Only [If applicable]

Project :

Date :

Full Environmental Assessment Form
Part 2 - Identification of Potential Project Impacts

Part 2 is to be completed by the lead agency. Part 2 is designed to help the lead agency inventory all potential resources that could be affected by a proposed project or action. We recognize that the lead agency's reviewer(s) will not necessarily be environmental professionals. So, the questions are designed to walk a reviewer through the assessment process by providing a series of questions that can be answered using the information found in Part 1. To further assist the lead agency in completing Part 2, the form identifies the most relevant questions in Part 1 that will provide the information needed to answer the Part 2 question. When Part 2 is completed, the lead agency will have identified the relevant environmental areas that may be impacted by the proposed activity.

If the lead agency is a state agency **and** the action is in any Coastal Area, complete the Coastal Assessment Form before proceeding with this assessment.

Tips for completing Part 2:

- Review all of the information provided in Part 1.
- Review any application, maps, supporting materials and the Full EAF Workbook.
- Answer each of the 18 questions in Part 2.
- If you answer "**Yes**" to a numbered question, please complete all the questions that follow in that section.
- If you answer "**No**" to a numbered question, move on to the next numbered question.
- Check appropriate column to indicate the anticipated size of the impact.
- Proposed projects that would exceed a numeric threshold contained in a question should result in the reviewing agency checking the box "Moderate to large impact may occur."
- The reviewer is not expected to be an expert in environmental analysis.
- If you are not sure or undecided about the size of an impact, it may help to review the sub-questions for the general question and consult the workbook.
- When answering a question consider all components of the proposed activity, that is, the "whole action".
- Consider the possibility for long-term and cumulative impacts as well as direct impacts.
- Answer the question in a reasonable manner considering the scale and context of the project.

1. Impact on Land

Proposed action may involve construction on, or physical alteration of, the land surface of the proposed site. (See Part 1. D.1)

☐ NO ☑ YES

If "Yes", answer questions a - j. If "No", move on to Section 2.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may involve construction on land where depth to water table is less than 3 feet.	E2d	☑	☐
b. The proposed action may involve construction on slopes of 15% or greater.	E2f	☑	☐
c. The proposed action may involve construction on land where bedrock is exposed, or generally within 5 feet of existing ground surface.	E2a	☑	☐
d. The proposed action may involve the excavation and removal of more than 1,000 tons of natural material.	D2a	☑	☐
e. The proposed action may involve construction that continues for more than one year or in multiple phases.	D1e	☑	☐
f. The proposed action may result in increased erosion, whether from physical disturbance or vegetation removal (including from treatment by herbicides).	D2e, D2q	☑	☐
g. The proposed action is, or may be, located within a Coastal Erosion hazard area.	B1i	☑	☐
h. Other impacts: _____ _____		☐	☐

2. Impact on Geological Features

The proposed action may result in the modification or destruction of, or inhibit access to, any unique or unusual land forms on the site (e.g., cliffs, dunes, minerals, fossils, caves). (See Part 1. E.2.g) ☑NO ☐YES

If "Yes", answer questions a - c. If "No", move on to Section 3.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Identify the specific land form(s) attached: _____ _____	E2g	☐	☐
b. The proposed action may affect or is adjacent to a geological feature listed as a registered National Natural Landmark. Specific feature: _____	E3c	☐	☐
c. Other impacts: _____ _____		☐	☐

3. Impacts on Surface Water

The proposed action may affect one or more wetlands or other surface water bodies (e.g., streams, rivers, ponds or lakes). (See Part 1. D.2, E.2.h) ☑NO ☐YES

If "Yes", answer questions a - l. If "No", move on to Section 4.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may create a new water body.	D2b, D1h	☐	☐
b. The proposed action may result in an increase or decrease of over 10% or more than a 10 acre increase or decrease in the surface area of any body of water.	D2b	☐	☐
c. The proposed action may involve dredging more than 100 cubic yards of material from a wetland or water body.	D2a	☐	☐
d. The proposed action may involve construction within or adjoining a freshwater or tidal wetland, or in the bed or banks of any other water body.	E2h	☐	☐
e. The proposed action may create turbidity in a waterbody, either from upland erosion, runoff or by disturbing bottom sediments.	D2a, D2h	☐	☐
f. The proposed action may include construction of one or more intake(s) for withdrawal of water from surface water.	D2c	☐	☐
g. The proposed action may include construction of one or more outfall(s) for discharge of wastewater to surface water(s).	D2d	☐	☐
h. The proposed action may cause soil erosion, or otherwise create a source of stormwater discharge that may lead to siltation or other degradation of receiving water bodies.	D2e	☐	☐
i. The proposed action may affect the water quality of any water bodies within or downstream of the site of the proposed action.	E2h	☐	☐
j. The proposed action may involve the application of pesticides or herbicides in or around any water body.	D2q, E2h	☐	☐
k. The proposed action may require the construction of new, or expansion of existing, wastewater treatment facilities.	D1a, D2d	☐	☐

l. Other impacts: _____ _____		☐	☐

4. Impact on groundwater

The proposed action may result in new or additional use of ground water, or may have the potential to introduce contaminants to ground water or an aquifer. (See Part 1. D.2.a, D.2.c, D.2.d, D.2.p, D.2.q, D.2.t) ☐NO ☑YES

If "Yes", answer questions a - h. If "No", move on to Section 5.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may require new water supply wells, or create additional demand on supplies from existing water supply wells.	D2c	☑	☐
b. Water supply demand from the proposed action may exceed safe and sustainable withdrawal capacity rate of the local supply or aquifer. Cite Source: _____	D2c	☑	☐
c. The proposed action may allow or result in residential uses in areas without water and sewer services.	D1a, D2c	☑	☐
d. The proposed action may include or require wastewater discharged to groundwater.	D2d, E2l	☑	☐
e. The proposed action may result in the construction of water supply wells in locations where groundwater is, or is suspected to be, contaminated.	D2c, E1f, E1g, E1h	☑	☐
f. The proposed action may require the bulk storage of petroleum or chemical products over ground water or an aquifer.	D2p, E2l	☑	☐
g. The proposed action may involve the commercial application of pesticides within 100 feet of potable drinking water or irrigation sources.	E2h, D2q, E2l, D2c	☑	☐
h. Other impacts: _____ _____		☐	☐

5. Impact on Flooding

The proposed action may result in development on lands subject to flooding. (See Part 1. E.2) ☑NO ☐YES

If "Yes", answer questions a - g. If "No", move on to Section 6.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in development in a designated floodway.	E2i	☐	☐
b. The proposed action may result in development within a 100 year floodplain.	E2j	☐	☐
c. The proposed action may result in development within a 500 year floodplain.	E2k	☐	☐
d. The proposed action may result in, or require, modification of existing drainage patterns.	D2b, D2e	☐	☐
e. The proposed action may change flood water flows that contribute to flooding.	D2b, E2i, E2j, E2k	☐	☐
f. If there is a dam located on the site of the proposed action, is the dam in need of repair, or upgrade?	E1e	☐	☐

g. Other impacts: _____		☐	☐

6. Impacts on Air

The proposed action may include a state regulated air emission source. (See Part 1. D.2.f., D.2.h, D.2.g)
If "Yes", answer questions a - f. If "No", move on to Section 7.

☐ NO ☑ YES

Potential air quality effects associated with the Depot Site were analyzed in the 2019 EIS

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. If the proposed action requires federal or state air emission permits, the action may also emit one or more greenhouse gases at or above the following levels:			
i. More than 1000 tons/year of carbon dioxide (CO_2)	D2g	☑	☐
ii. More than 3.5 tons/year of nitrous oxide (N_2O)	D2g	☑	☐
iii. More than 1000 tons/year of carbon equivalent of perfluorocarbons (PFCs)	D2g	☑	☐
iv. More than .045 tons/year of sulfur hexafluoride (SF_6)	D2g	☑	☐
v. More than 1000 tons/year of carbon dioxide equivalent of hydrochloroflourocarbons (HFCs) emissions	D2g	☑	☐
vi. 43 tons/year or more of methane	D2h	☑	☐
b. The proposed action may generate 10 tons/year or more of any one designated hazardous air pollutant, or 25 tons/year or more of any combination of such hazardous air pollutants.	D2g	☑	☐
c. The proposed action may require a state air registration, or may produce an emissions rate of total contaminants that may exceed 5 lbs. per hour, or may include a heat source capable of producing more than 10 million BTU's per hour.	D2f, D2g	☑	☐
d. The proposed action may reach 50% of any of the thresholds in "a" through "c", above.	D2g	☑	☐
e. The proposed action may result in the combustion or thermal treatment of more than 1 ton of refuse per hour.	D2s	☑	☐
f. Other impacts: _____		☐	☐

7. Impact on Plants and Animals

The proposed action may result in a loss of flora or fauna. (See Part 1. E.2. m.-q.)
If "Yes", answer questions a - j. If "No", move on to Section 8.

☑ NO ☐ YES

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may cause reduction in population or loss of individuals of any threatened or endangered species, as listed by New York State or the Federal government, that use the site, or are found on, over, or near the site.	E2o	☐	☐
b. The proposed action may result in a reduction or degradation of any habitat used by any rare, threatened or endangered species, as listed by New York State or the federal government.	E2o	☐	☐
c. The proposed action may cause reduction in population, or loss of individuals, of any species of special concern or conservation need, as listed by New York State or the Federal government, that use the site, or are found on, over, or near the site.	E2p	☐	☐
d. The proposed action may result in a reduction or degradation of any habitat used by any species of special concern and conservation need, as listed by New York State or the Federal government.	E2p	☐	☐

e. The proposed action may diminish the capacity of a registered National Natural Landmark to support the biological community it was established to protect.	E3c	☐	☐
f. The proposed action may result in the removal of, or ground disturbance in, any portion of a designated significant natural community. Source: _____	E2n	☐	☐
g. The proposed action may substantially interfere with nesting/breeding, foraging, or over-wintering habitat for the predominant species that occupy or use the project site.	E2m	☐	☐
h. The proposed action requires the conversion of more than 10 acres of forest, grassland or any other regionally or locally important habitat. Habitat type & information source: _____ _____	E1b	☐	☐
i. Proposed action (commercial, industrial or recreational projects, only) involves use of herbicides or pesticides.	D2q	☐	☐
j. Other impacts: _____ _____		☐	☐

8. Impact on Agricultural Resources

The proposed action may impact agricultural resources. (See Part 1. E.3.a. and b.) ☑NO ☐YES

If "Yes", answer questions a - h. If "No", move on to Section 9.

	Relevant Part I Question(s)	**No, or small impact may occur**	**Moderate to large impact may occur**
a. The proposed action may impact soil classified within soil group 1 through 4 of the NYS Land Classification System.	E2c, E3b	☐	☐
b. The proposed action may sever, cross or otherwise limit access to agricultural land (includes cropland, hayfields, pasture, vineyard, orchard, etc).	E1a, E1b	☐	☐
c. The proposed action may result in the excavation or compaction of the soil profile of active agricultural land.	E3b	☐	☐
d. The proposed action may irreversibly convert agricultural land to non-agricultural uses, either more than 2.5 acres if located in an Agricultural District, or more than 10 acres if not within an Agricultural District.	E1b, E3a	☐	☐
e. The proposed action may disrupt or prevent installation of an agricultural land management system.	E1 a, E1b	☐	☐
f. The proposed action may result, directly or indirectly, in increased development potential or pressure on farmland.	C2c, C3, D2c, D2d	☐	☐
g. The proposed project is not consistent with the adopted municipal Farmland Protection Plan.	C2c	☐	☐
h. Other impacts: _____		☐	☐

9. Impact on Aesthetic Resources
The land use of the proposed action are obviously different from, or are in sharp contrast to, current land use patterns between the proposed project and a scenic or aesthetic resource. (Part 1. E.1.a, E.1.b, E.3.h.)
If "Yes", answer questions a - g. If "No", go to Section 10.

☑ NO ☐ YES

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Proposed action may be visible from any officially designated federal, state, or local scenic or aesthetic resource.	E3h	☐	☐
b. The proposed action may result in the obstruction, elimination or significant screening of one or more officially designated scenic views.	E3h, C2b	☐	☐
c. The proposed action may be visible from publicly accessible vantage points: i. Seasonally (e.g., screened by summer foliage, but visible during other seasons) ii. Year round	E3h	☐ ☐	☐ ☐
d. The situation or activity in which viewers are engaged while viewing the proposed action is: i. Routine travel by residents, including travel to and from work ii. Recreational or tourism based activities	E3h E2q, E1c	☐ ☐	☐ ☐
e. The proposed action may cause a diminishment of the public enjoyment and appreciation of the designated aesthetic resource.	E3h	☐	☐
f. There are similar projects visible within the following distance of the proposed project: 0-1/2 mile ½ -3 mile 3-5 mile 5+ mile	D1a, E1a, D1f, D1g	☐	☐
g. Other impacts: _____		☐	☐

10. Impact on Historic and Archeological Resources
The proposed action may occur in or adjacent to a historic or archaeological resource. (Part 1. E.3.e, f. and g.)
If "Yes", answer questions a - e. If "No", go to Section 11.

☐ NO ☑ YES

Potential archaeological effects associated with the Depot Site were analyzed in the 2019 EIS

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may occur wholly or partially within, or substantially contiguous to, any buildings, archaeological site or district which is listed on the National or State Register of Historical Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places.	E3e	☑	☐
b. The proposed action may occur wholly or partially within, or substantially contiguous to, an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory.	E3f	☑	☐
c. The proposed action may occur wholly or partially within, or substantially contiguous to, an archaeological site not included on the NY SHPO inventory. Source: _____	E3g	☑	☐

d. Other impacts: _____ _____		☐	☐
e. If any of the above (a-d) are answered "Moderate to large impact may occur", continue with the following questions to help support conclusions in Part 3:			
i. The proposed action may result in the destruction or alteration of all or part of the site or property.	E3e, E3g, E3f	☐	☐
ii. The proposed action may result in the alteration of the property's setting or integrity.	E3e, E3f, E3g, E1a, E1b	☐	☐
iii. The proposed action may result in the introduction of visual elements which are out of character with the site or property, or may alter its setting.	E3e, E3f, E3g, E3h, C2, C3	☐	☐

11. Impact on Open Space and Recreation

The proposed action may result in a loss of recreational opportunities or a reduction of an open space resource as designated in any adopted municipal open space plan.
(See Part 1. C.2.c, E.1.c., E.2.q.)
If "Yes", answer questions a - e. If "No", go to Section 12.

☑ NO ☐ YES

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in an impairment of natural functions, or "ecosystem services", provided by an undeveloped area, including but not limited to stormwater storage, nutrient cycling, wildlife habitat.	D2e, E1b E2h, E2m, E2o, E2n, E2p	☐	☐
b. The proposed action may result in the loss of a current or future recreational resource.	C2a, E1c, C2c, E2q	☐	☐
c. The proposed action may eliminate open space or recreational resource in an area with few such resources.	C2a, C2c E1c, E2q	☐	☐
d. The proposed action may result in loss of an area now used informally by the community as an open space resource.	C2c, E1c	☐	☐
e. Other impacts: _____ _____		☐	☐

12. Impact on Critical Environmental Areas

The proposed action may be located within or adjacent to a critical environmental area (CEA). (See Part 1. E.3.d)
If "Yes", answer questions a - c. If "No", go to Section 13.

☑ NO ☐ YES

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in a reduction in the quantity of the resource or characteristic which was the basis for designation of the CEA.	E3d	☐	☐
b. The proposed action may result in a reduction in the quality of the resource or characteristic which was the basis for designation of the CEA.	E3d	☐	☐
c. Other impacts: _____ _____		☐	☐

13. Impact on Transportation

The proposed action may result in a change to existing transportation systems. (See Part 1. D.2.j) ☐ NO ☑ YES

If "Yes", answer questions a - f. If "No", go to Section 14.

Potential transportation effects associated with the Depot Site were analyzed in the 2019 EIS

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Projected traffic increase may exceed capacity of existing road network.	D2j	☑	☐
b. The proposed action may result in the construction of paved parking area for 500 or more vehicles.	D2j	☑	☐
c. The proposed action will degrade existing transit access.	D2j	☑	☐
d. The proposed action will degrade existing pedestrian or bicycle accommodations.	D2j	☑	☐
e. The proposed action may alter the present pattern of movement of people or goods.	D2j	☑	☐
f. Other impacts: _____		☐	☐

14. Impact on Energy

The proposed action may cause an increase in the use of any form of energy. (See Part 1. D.2.k) ☑ NO ☐ YES

If "Yes", answer questions a - e. If "No", go to Section 15.

Potential energy effects associated with the Depot Site were analyzed in the 2019 EIS

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action will require a new, or an upgrade to an existing, substation.	D2k	☐	☐
b. The proposed action will require the creation or extension of an energy transmission or supply system to serve more than 50 single or two-family residences or to serve a commercial or industrial use.	D1f, D1q, D2k	☐	☐
c. The proposed action may utilize more than 2,500 MWhrs per year of electricity.	D2k	☐	☐
d. The proposed action may involve heating and/or cooling of more than 100,000 square feet of building area when completed.	D1g	☐	☐
e. Other Impacts: _____			

15. Impact on Noise, Odor, and Light

The proposed action may result in an increase in noise, odors, or outdoor lighting. (See Part 1. D.2.m., n., and o.) ☐ NO ☑ YES

If "Yes", answer questions a - f. If "No", go to Section 16.

Potential noise, odor, and light effects associated with the Depot Site were analyzed in the 2019 EIS

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may produce sound above noise levels established by local regulation.	D2m	☑	☐
b. The proposed action may result in blasting within 1,500 feet of any residence, hospital, school, licensed day care center, or nursing home.	D2m, E1d	☑	☐
c. The proposed action may result in routine odors for more than one hour per day.	D2o	☑	☐

d. The proposed action may result in light shining onto adjoining properties.	D2n	☑	☐
e. The proposed action may result in lighting creating sky-glow brighter than existing area conditions.	D2n, E1a	☑	☐
f. Other impacts: Construction and operation of this facility could potentially result in noise and vibration impacts.		☑	☐

16. Impact on Human Health

The proposed action may have an impact on human health from exposure to new or existing sources of contaminants. (See Part 1.D.2.q., E.1. d. f. g. and h.) ☐ NO ☑ YES

Potential human health impacts associated with the Depot Site were analyzed in the 2019 EIS

If "Yes", answer questions a - m. If "No", go to Section 17.

	Relevant Part I Question(s)	No,or small impact may occur	Moderate to large impact may occur
a. The proposed action is located within 1500 feet of a school, hospital, licensed day care center, group home, nursing home or retirement community.	E1d	☑	☐
b. The site of the proposed action is currently undergoing remediation.	E1g, E1h	☑	☐
c. There is a completed emergency spill remediation, or a completed environmental site remediation on, or adjacent to, the site of the proposed action.	E1g, E1h	☑	☐
d. The site of the action is subject to an institutional control limiting the use of the property (e.g., easement or deed restriction).	E1g, E1h	☑	☐
e. The proposed action may affect institutional control measures that were put in place to ensure that the site remains protective of the environment and human health.	E1g, E1h	☑	☐
f. The proposed action has adequate control measures in place to ensure that future generation, treatment and/or disposal of hazardous wastes will be protective of the environment and human health.	D2t	☑	☐
g. The proposed action involves construction or modification of a solid waste management facility.	D2q, E1f	☑	☐
h. The proposed action may result in the unearthing of solid or hazardous waste.	D2q, E1f	☑	☐
i. The proposed action may result in an increase in the rate of disposal, or processing, of solid waste.	D2r, D2s	☑	☐
j. The proposed action may result in excavation or other disturbance within 2000 feet of a site used for the disposal of solid or hazardous waste.	E1f, E1g E1h	☑	☐
k. The proposed action may result in the migration of explosive gases from a landfill site to adjacent off site structures.	E1f, E1g	☑	☐
l. The proposed action may result in the release of contaminated leachate from the project site.	D2s, E1f, D2r	☑	☐
m. Other impacts: _____		☐	☐

17. Consistency with Community Plans

The proposed action is not consistent with adopted land use plans. (See Part 1. C.1, C.2. and C.3.) ☑ NO ☐ YES

If "Yes", answer questions a - h. If "No", go to Section 18.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action's land use components may be different from, or in sharp contrast to, current surrounding land use pattern(s).	C2, C3, D1a E1a, E1b	☐	☐
b. The proposed action will cause the permanent population of the city, town or village in which the project is located to grow by more than 5%.	C2	☐	☐
c. The proposed action is inconsistent with local land use plans or zoning regulations.	C2, C2, C3	☐	☐
d. The proposed action is inconsistent with any County plans, or other regional land use plans.	C2, C2	☐	☐
e. The proposed action may cause a change in the density of development that is not supported by existing infrastructure or is distant from existing infrastructure.	C3, D1c, D1d, D1f, D1d, E1b	☐	☐
f. The proposed action is located in an area characterized by low density development that will require new or expanded public infrastructure.	C4, D2c, D2d D2j	☐	☐
g. The proposed action may induce secondary development impacts (e.g., residential or commercial development not included in the proposed action)	C2a	☐	☐
h. Other: _____ _____		☐	☐

18. Consistency with Community Character

The proposed project is inconsistent with the existing community character. (See Part 1. C.2, C.3, D.2, E.3) ☑ NO ☐ YES

If "Yes", answer questions a - g. If "No", proceed to Part 3.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may replace or eliminate existing facilities, structures, or areas of historic importance to the community.	E3e, E3f, E3g	☐	☐
b. The proposed action may create a demand for additional community services (e.g. schools, police and fire)	C4	☐	☐
c. The proposed action may displace affordable or low-income housing in an area where there is a shortage of such housing.	C2, C3, D1f D1g, E1a	☐	☐
d. The proposed action may interfere with the use or enjoyment of officially recognized or designated public resources.	C2, E3	☐	☐
e. The proposed action is inconsistent with the predominant architectural scale and character.	C2, C3	☐	☐
f. Proposed action is inconsistent with the character of the existing natural landscape.	C2, C3 E1a, E1b E2g, E2h	☐	☐
g. Other impacts: _____ _____		☐	☐

PRINT FULL FORM

Agency Use Only [If Applicable]

Project:

Date:

Full Environmental Assessment Form
Part 3 - Evaluation of the Magnitude and Importance of Project Impacts and Determination of Significance

Part 3 provides the reasons in support of the determination of significance. The lead agency must complete Part 3 for every question in Part 2 where the impact has been identified as potentially moderate to large or where there is a need to explain why a particular element of the proposed action will not, or may, result in a significant adverse environmental impact.

Based on the analysis in Part 3, the lead agency must decide whether to require an environmental impact statement to further assess the proposed action or whether available information is sufficient for the lead agency to conclude that the proposed action will not have a significant adverse environmental impact. By completing the certification on the next page, the lead agency can complete its determination of significance.

Reasons Supporting This Determination:

To complete this section:

- Identify the impact based on the Part 2 responses and describe its magnitude. Magnitude considers factors such as severity, size or extent of an impact.
- Assess the importance of the impact. Importance relates to the geographic scope, duration, probability of the impact occurring, number of people affected by the impact and any additional environmental consequences if the impact were to occur.
- The assessment should take into consideration any design element or project changes.
- Repeat this process for each Part 2 question where the impact has been identified as potentially moderate to large or where there is a need to explain why a particular element of the proposed action will not, or may, result in a significant adverse environmental impact.
- Provide the reason(s) why the impact may, or will not, result in a significant adverse environmental impact
- For Conditional Negative Declarations identify the specific condition(s) imposed that will modify the proposed action so that no significant adverse environmental impacts will result.
- Attach additional sheets, as needed.

Determination of Significance - Type 1 and Unlisted Actions

SEQR Status: ☐ Type 1 ☑ Unlisted

Identify portions of EAF completed for this Project: ☑ Part 1 ☑ Part 2 ☑ Part 3

Upon review of the information recorded on this EAF, as noted, plus this additional support information
As noted, a Final EIS ("FEIS") was completed for the Proposed Project in 2019. This Supplemental Environmental Assessment focuses on information that has changed since.

and considering both the magnitude and importance of each identified potential impact, it is the conclusion of the
Metropolitan Transportation Authority - New York City Transit as lead agency that:

☑ A. This project will result in no significant adverse impacts on the environment, and, therefore, an environmental impact statement need not be prepared. **Accordingly, this negative declaration is issued.**

☐ B. Although this project could have a significant adverse impact on the environment, that impact will be avoided or substantially mitigated because of the following conditions which will be required by the lead agency:

There will, therefore, be no significant adverse impacts from the project as conditioned, and, therefore, this conditioned negative declaration is issued. A conditioned negative declaration may be used only for UNLISTED actions (see 6 NYCRR 617.7(d)).

☐ C. This Project may result in one or more significant adverse impacts on the environment, and an environmental impact statement must be prepared to further assess the impact(s) and possible mitigation and to explore alternatives to avoid or reduce those impacts. Accordingly, this positive declaration is issued.

Name of Action: Reconstruction and Expansion of Jamaica Bus Depot (Supplemental Environmental Assessment, "SEA")

Name of Lead Agency: Metropolitan Transportation Authority

Name of Responsible Officer in Lead Agency: Thomas Abdallah, P.E.

Title of Responsible Officer: VP Design Services & Chief Environmental Engineer • Delivery Services Office MTA C&D

Signature of Responsible Officer in Lead Agency: Thomas Abdallah Digitally signed by Thomas Abdallah 000526 1085097 Date: 2022.08.22 16:32:51 -04'00' Date: August 22, 2022

Signature of Preparer (if different from Responsible Officer) Date:

For Further Information:

Contact Person: Mary Kong

Address: 2 Broadway, New York, NY 10004

Telephone Number: 646-252-4935

E-mail: Mary.Kong@mtacd.org

For Type 1 Actions and Conditioned Negative Declarations, a copy of this Notice is sent to:

Chief Executive Officer of the political subdivision in which the action will be principally located (e.g., Town / City / Village of)
Other involved agencies (if any)
Applicant (if any)
Environmental Notice Bulletin: http://www.dec.ny.gov/enb/enb.html

PRINT FULL FORM

Full Environmental Assessment Form
Part 1 - Project and Setting

Instructions for Completing Part 1

Part 1 is to be completed by the applicant or project sponsor. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification.

Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information; indicate whether missing information does not exist, or is not reasonably available to the sponsor; and, when possible, generally describe work or studies which would be necessary to update or fully develop that information.

Applicants/sponsors must complete all items in Sections A & B. In Sections C, D & E, most items contain an initial question that must be answered either "Yes" or "No". If the answer to the initial question is "Yes", complete the sub-questions that follow. If the answer to the initial question is "No", proceed to the next question. Section F allows the project sponsor to identify and attach any additional information. Section G requires the name and signature of the applicant or project sponsor to verify that the information contained in Part 1is accurate and complete.

A. Project and Applicant/Sponsor Information.

Name of Action or Project: Reconstruction and Expansion of Jamaica Bus Depot (Supplemental Environmental Assessment, "SEA")		
Project Location (describe, and attach a general location map): Queens Block 10160, Lot No. 1 and a portion of Queens Block 10159, Lot No. 3 (see SEA report - Figure 2)		
Brief Description of Proposed Action (include purpose or need):		
Name of Applicant/Sponsor: Metropolitan Transportation Authority (MTA) - New York City Transit (NYCT)	Telephone: See below E-Mail: See below	
Address: 2 Broadway		
City/PO: New York	State: NY	Zip Code: 10004
Project Contact (if not same as sponsor; give name and title/role): Mary Kong	Telephone: 646-252-4935 E-Mail: Mary.Kong@mtacd.org	
Address: 2 Broadway		
City/PO: New York, New York	State: NY	Zip Code: 10004
Property Owner (if not same as sponsor): Dormitory Authority of the State of New York (DASNY)	Telephone: (518) 257-3000 E-Mail:	
Address: 515 Broadway		
City/PO: Albany	State: NY	Zip Code: 12207

C.3. Zoning

a. Is the site of the proposed action located in a municipality with an adopted zoning law or ordinance. ☑ Yes ☐ No
If Yes, what is the zoning classification(s) including any applicable overlay district?
The Temporary Bus Parking Site is in New York City Zoning District R6

b. Is the use permitted or allowed by a special or conditional use permit? ☐ Yes ☐ No

c. Is a zoning change requested as part of the proposed action? ☐ Yes ☑ No
If Yes,
i. What is the proposed new zoning for the site? _____

C.4. Existing community services.

a. In what school district is the project site located? New York City School District No. 28

b. What police or other public protection forces serve the project site?
New York City Police Department (Precinct 103)

c. Which fire protection and emergency medical services serve the project site?
New York City Fire Department (Engine 275)

d. What parks serve the project site?
Detective Keith L. Williams Park and the Latimer Playground

D. Project Details

D.1. Proposed and Potential Development

a. What is the general nature of the proposed action (e.g., residential, industrial, commercial, recreational; if mixed, include all components)? Transportation - MTA Bus Depot Reconstruction / Expansion

b. a. Total acreage of the site of the proposed action? 3.5 acres
b. Total acreage to be physically disturbed? 3.5 acres
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? 0 acres

c. Is the proposed action an expansion of an existing project or use? ☐ Yes ☑ No
i. If Yes, what is the approximate percentage of the proposed expansion and identify the units (e.g., acres, miles, housing units, square feet)? % _____ Units: _____

d. Is the proposed action a subdivision, or does it include a subdivision? ☐ Yes ☑ No
If Yes,
i. Purpose or type of subdivision? (e.g., residential, industrial, commercial; if mixed, specify types)
ii. Is a cluster/conservation layout proposed? ☐ Yes ☐ No
iii. Number of lots proposed? _____
iv. Minimum and maximum proposed lot sizes? Minimum _____ Maximum _____

e. Will the proposed action be constructed in multiple phases? ☐ Yes ☑ No
i. If No, anticipated period of construction: 11 months
ii. If Yes:
- Total number of phases anticipated _____
- Anticipated commencement date of phase 1 (including demolition) _____ month _____ year
- Anticipated completion date of final phase _____ month _____ year
- Generally describe connections or relationships among phases, including any contingencies where progress of one phase may determine timing or duration of future phases: _____

ii. Describe how the proposed action would affect that waterbody or wetland, e.g. excavation, fill, placement of structures, or alteration of channels, banks and shorelines. Indicate extent of activities, alterations and additions in square feet or acres:

_____

_____

_____

_____

iii. Will the proposed action cause or result in disturbance to bottom sediments? ☐Yes ☐No

If Yes, describe: _____

iv. Will the proposed action cause or result in the destruction or removal of aquatic vegetation? ☐Yes ☐No

If Yes:

- acres of aquatic vegetation proposed to be removed: _____
- expected acreage of aquatic vegetation remaining after project completion: _____
- purpose of proposed removal (e.g. beach clearing, invasive species control, boat access): _____

_____

- proposed method of plant removal: _____
- if chemical/herbicide treatment will be used, specify product(s): _____

v. Describe any proposed reclamation/mitigation following disturbance: _____

_____

c. Will the proposed action use, or create a new demand for water? ☐Yes ☑No

If Yes:

i. Total anticipated water usage/demand per day: _____ gallons/day

ii. Will the proposed action obtain water from an existing public water supply? ☐Yes ☐No

If Yes:

- Name of district or service area: _____
- Does the existing public water supply have capacity to serve the proposal? ☐Yes ☐No
- Is the project site in the existing district? ☐Yes ☐No
- Is expansion of the district needed? ☐Yes ☐No
- Do existing lines serve the project site? ☐Yes ☐No

iii. Will line extension within an existing district be necessary to supply the project? ☐Yes ☐No

If Yes:

- Describe extensions or capacity expansions proposed to serve this project: _____

_____

- Source(s) of supply for the district: _____

iv. Is a new water supply district or service area proposed to be formed to serve the project site? ☐Yes ☐No

If, Yes:

- Applicant/sponsor for new district: _____
- Date application submitted or anticipated: _____
- Proposed source(s) of supply for new district: _____

v. If a public water supply will not be used, describe plans to provide water supply for the project: _____

_____

vi. If water supply will be from wells (public or private), what is the maximum pumping capacity: _____ gallons/minute.

d. Will the proposed action generate liquid wastes? ☐Yes ☑No

If Yes:

i. Total anticipated liquid waste generation per day: _____ gallons/day

ii. Nature of liquid wastes to be generated (e.g., sanitary wastewater, industrial; if combination, describe all components and approximate volumes or proportions of each): _____

_____

_____

iii. Will the proposed action use any existing public wastewater treatment facilities? ☐Yes ☐No

If Yes:

- Name of wastewater treatment plant to be used: _____
- Name of district: _____
- Does the existing wastewater treatment plant have capacity to serve the project? ☐Yes ☐No
- Is the project site in the existing district? ☐Yes ☐No
- Is expansion of the district needed? ☐Yes ☐No

h. Will the proposed action generate or emit methane (including, but not limited to, sewage treatment plants, landfills, composting facilities)? ☐Yes ☑No

If Yes:

i. Estimate methane generation in tons/year (metric): _____

ii. Describe any methane capture, control or elimination measures included in project design (e.g., combustion to generate heat or electricity, flaring): _____

i. Will the proposed action result in the release of air pollutants from open-air operations or processes, such as quarry or landfill operations? ☐Yes ☑No

If Yes: Describe operations and nature of emissions (e.g., diesel exhaust, rock particulates/dust):

j. Will the proposed action result in a substantial increase in traffic above present levels or generate substantial new demand for transportation facilities or services? ☑Yes ☐No

If Yes:

i. When is the peak traffic expected (Check all that apply): ☑ Morning ☑ Evening ☐Weekend ☐ Randomly between hours of _____ to _____.

ii. For commercial activities only, projected number of truck trips/day and type (e.g., semi trailers and dump trucks): N/A

iii. Parking spaces: Existing 0 SBE (standard bus) Proposed 170 SBE Net increase/decrease 170 SBE

iv. Does the proposed action include any shared use parking? ☐Yes ☑No

v. If the proposed action includes any modification of existing roads, creation of new roads or change in existing access, describe:

vi. Are public/private transportation service(s) or facilities available within ½ mile of the proposed site? ☑Yes ☐No

vii Will the proposed action include access to public transportation or accommodations for use of hybrid, electric or other alternative fueled vehicles? ☐Yes ☑No

viii. Will the proposed action include plans for pedestrian or bicycle accommodations for connections to existing pedestrian or bicycle routes? ☐Yes ☑No

k. Will the proposed action (for commercial or industrial projects only) generate new or additional demand for energy? ☐Yes ☑No

If Yes:

i. Estimate annual electricity demand during operation of the proposed action: _____

ii. Anticipated sources/suppliers of electricity for the project (e.g., on-site combustion, on-site renewable, via grid/local utility, or other):

iii. Will the proposed action require a new, or an upgrade, to an existing substation? ☐Yes ☐No

l. Hours of operation. Answer all items which apply.

i. During Construction:

- Monday - Friday: 7 AM - 6 PM
- Saturday: 7 AM - 6 PM
- Sunday: 7 AM - 6 PM
- Holidays: 7 AM - 6 PM

ii. During Operations:

- Monday - Friday: Continuous Operation
- Saturday: Continuous Operation
- Sunday: Continuous Operation
- Holidays: Continuous Operation

s. Does the proposed action include construction or modification of a solid waste management facility? ☐ Yes ☑ No

If Yes:

i. Type of management or handling of waste proposed for the site (e.g., recycling or transfer station, composting, landfill, or other disposal activities): _____

ii. Anticipated rate of disposal/processing:

- _____ Tons/month, if transfer or other non-combustion/thermal treatment, or
- _____ Tons/hour, if combustion or thermal treatment

iii. If landfill, anticipated site life: _____ years

t. Will the proposed action at the site involve the commercial generation, treatment, storage, or disposal of hazardous waste? ☐ Yes ☑ No

If Yes:

i. Name(s) of all hazardous wastes or constituents to be generated, handled or managed at facility: _____

ii. Generally describe processes or activities involving hazardous wastes or constituents: _____

iii. Specify amount to be handled or generated _____ tons/month

iv. Describe any proposals for on-site minimization, recycling or reuse of hazardous constituents: _____

v. Will any hazardous wastes be disposed at an existing offsite hazardous waste facility? ☐ Yes ☐ No

If Yes: provide name and location of facility: _____

If No: describe proposed management of any hazardous wastes which will not be sent to a hazardous waste facility:

E. Site and Setting of Proposed Action

E.1. Land uses on and surrounding the project site

a. Existing land uses.

i. Check all uses that occur on, adjoining and near the project site.

☑ Urban ☑ Industrial ☑ Commercial ☐ Residential (suburban) ☐ Rural (non-farm)
☐ Forest ☐ Agriculture ☐ Aquatic ☑ Other (specify): _____

ii. If mix of uses, generally describe:

b. Land uses and covertypes on the project site.

Land use or Covertype	Current Acreage	Acreage After Project Completion	Change (Acres +/-)
• Roads, buildings, and other paved or impervious surfaces	0	3.5	+3.5
• Forested	0	0	0
• Meadows, grasslands or brushlands (non-agricultural, including abandoned agricultural)	0	0	0
• Agricultural (includes active orchards, field, greenhouse etc.)	0	0	0
• Surface water features (lakes, ponds, streams, rivers, etc.)	0	0	0
• Wetlands (freshwater or tidal)	0	0	0
• Non-vegetated (bare rock, earth or fill)	0	0	0
• Other Describe: Vacant grass-covered lot	3.5	0	-3.5

v. Is the project site subject to an institutional control limiting property uses? ☐ Yes ☑ No

- If yes, DEC site ID number: _____
- Describe the type of institutional control (e.g., deed restriction or easement): _____
- Describe any use limitations: _____
- Describe any engineering controls: _____
- Will the project affect the institutional or engineering controls in place? ☐ Yes ☑ No
- Explain: _____

E.2. Natural Resources On or Near Project Site

a. What is the average depth to bedrock on the project site? 600 feet

b. Are there bedrock outcroppings on the project site? ☐ Yes ☑ No
If Yes, what proportion of the site is comprised of bedrock outcroppings? _____ %

c. Predominant soil type(s) present on project site:
_____ 48 %
_____ 52 %
_____ %

d. What is the average depth to the water table on the project site? Average: >6.5 feet

e. Drainage status of project site soils:
☑ Well Drained: 100 % of site
☐ Moderately Well Drained: _____ % of site
☐ Poorly Drained _____ % of site

f. Approximate proportion of proposed action site with slopes:
☑ 0-10%: 100 % of site
☐ 10-15%: _____ % of site
☐ 15% or greater: _____ % of site

g. Are there any unique geologic features on the project site? ☐ Yes ☑ No
If Yes, describe: _____

h. Surface water features.

i. Does any portion of the project site contain wetlands or other waterbodies (including streams, rivers, ponds or lakes)? ☐ Yes ☑ No

ii. Do any wetlands or other waterbodies adjoin the project site? ☐ Yes ☑ No

If Yes to either *i* or *ii*, continue. If No, skip to E.2.i.

iii. Are any of the wetlands or waterbodies within or adjoining the project site regulated by any federal, state or local agency? ☐ Yes ☐ No

iv. For each identified regulated wetland and waterbody on the project site, provide the following information:

- Streams: Name _____ Classification _____
- Lakes or Ponds: Name _____ Classification _____
- Wetlands: Name _____ Approximate Size _____
- Wetland No. (if regulated by DEC) _____

v. Are any of the above water bodies listed in the most recent compilation of NYS water quality-impaired waterbodies? ☐ Yes ☐ No

If yes, name of impaired water body/bodies and basis for listing as impaired: _____

i. Is the project site in a designated Floodway? ☐ Yes ☑ No

j. Is the project site in the 100-year Floodplain? ☐ Yes ☑ No

k. Is the project site in the 500-year Floodplain? ☐ Yes ☑ No

l. Is the project site located over, or immediately adjoining, a primary, principal or sole source aquifer? ☑ Yes ☐ No
If Yes:

i. Name of aquifer: Brooklyn-Queens SSA

e. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district which is listed on the National or State Register of Historic Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places? ☐ Yes ☑ No

If Yes:

i. Nature of historic/archaeological resource: ☐ Archaeological Site ☐ Historic Building or District

ii. Name: _____

iii. Brief description of attributes on which listing is based:

_____

f. Is the project site, or any portion of it, located in or adjacent to an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory? ☑ Yes ☐ No

g. Have additional archaeological or historic site(s) or resources been identified on the project site? ☐ Yes ☑ No

If Yes:

i. Describe possible resource(s): _____

ii. Basis for identification: _____

h. Is the project site within fives miles of any officially designated and publicly accessible federal, state, or local scenic or aesthetic resource? ☐ Yes ☑ No

If Yes:

i. Identify resource: _____

ii. Nature of, or basis for, designation (e.g., established highway overlook, state or local park, state historic trail or scenic byway, etc.): _____

iii. Distance between project and resource: _____ miles.

i. Is the project site located within a designated river corridor under the Wild, Scenic and Recreational Rivers Program 6 NYCRR 666? ☐ Yes ☑ No

If Yes:

i. Identify the name of the river and its designation: _____

ii. Is the activity consistent with development restrictions contained in 6NYCRR Part 666? ☐ Yes ☐ No

F. Additional Information

Attach any additional information which may be needed to clarify your project.

If you have identified any adverse impacts which could be associated with your proposal, please describe those impacts plus any measures which you propose to avoid or minimize them.

G. Verification

I certify that the information provided is true to the best of my knowledge.

Applicant/Sponsor Name Thomas Abdallah, P.E. Date August 22 2022

Signature Thomas Abdallah Digitally signed by Thomas Abdallah 000526 1085097 Date: 2022.08.22 16:34:16 -04'00' Title VP Design Services & Chief Environmental Engineer

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2. Impact on Geological Features

The proposed action may result in the modification or destruction of, or inhibit access to, any unique or unusual land forms on the site (e.g., cliffs, dunes, minerals, fossils, caves). (See Part 1. E.2.g) ☑ NO ☐ YES

If "Yes", answer questions a - c. If "No", move on to Section 3.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Identify the specific land form(s) attached: _____ _____	E2g	☐	☐
b. The proposed action may affect or is adjacent to a geological feature listed as a registered National Natural Landmark. Specific feature: _____	E3c	☐	☐
c. Other impacts: _____ _____		☐	☐

3. Impacts on Surface Water

The proposed action may affect one or more wetlands or other surface water bodies (e.g., streams, rivers, ponds or lakes). (See Part 1. D.2, E.2.h) ☑ NO ☐ YES

If "Yes", answer questions a - l. If "No", move on to Section 4.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may create a new water body.	D2b, D1h	☐	☐
b. The proposed action may result in an increase or decrease of over 10% or more than a 10 acre increase or decrease in the surface area of any body of water.	D2b	☐	☐
c. The proposed action may involve dredging more than 100 cubic yards of material from a wetland or water body.	D2a	☐	☐
d. The proposed action may involve construction within or adjoining a freshwater or tidal wetland, or in the bed or banks of any other water body.	E2h	☐	☐
e. The proposed action may create turbidity in a waterbody, either from upland erosion, runoff or by disturbing bottom sediments.	D2a, D2h	☐	☐
f. The proposed action may include construction of one or more intake(s) for withdrawal of water from surface water.	D2c	☐	☐
g. The proposed action may include construction of one or more outfall(s) for discharge of wastewater to surface water(s).	D2d	☐	☐
h. The proposed action may cause soil erosion, or otherwise create a source of stormwater discharge that may lead to siltation or other degradation of receiving water bodies.	D2e	☐	☐
i. The proposed action may affect the water quality of any water bodies within or downstream of the site of the proposed action.	E2h	☐	☐
j. The proposed action may involve the application of pesticides or herbicides in or around any water body.	D2q, E2h	☐	☐
k. The proposed action may require the construction of new, or expansion of existing, wastewater treatment facilities.	D1a, D2d	☐	☐

g. Other impacts: _____ _____		☐	☐

6. Impacts on Air

The proposed action may include a state regulated air emission source. (See Part 1. D.2.f., D.2.h, D.2.g) ☐NO ☑YES

If "Yes", answer questions a - f. If "No", move on to Section 7.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. If the proposed action requires federal or state air emission permits, the action may also emit one or more greenhouse gases at or above the following levels:			
i. More than 1000 tons/year of carbon dioxide (CO_2)	D2g	☑	☐
ii. More than 3.5 tons/year of nitrous oxide (N_2O)	D2g	☑	☐
iii. More than 1000 tons/year of carbon equivalent of perfluorocarbons (PFCs)	D2g	☑	☐
iv. More than .045 tons/year of sulfur hexafluoride (SF_6)	D2g	☑	☐
v. More than 1000 tons/year of carbon dioxide equivalent of hydrochloroflourocarbons (HFCs) emissions	D2g	☑	☐
vi. 43 tons/year or more of methane	D2h	☑	☐
b. The proposed action may generate 10 tons/year or more of any one designated hazardous air pollutant, or 25 tons/year or more of any combination of such hazardous air pollutants.	D2g	☑	☐
c. The proposed action may require a state air registration, or may produce an emissions rate of total contaminants that may exceed 5 lbs. per hour, or may include a heat source capable of producing more than 10 million BTU's per hour.	D2f, D2g	☑	☐
d. The proposed action may reach 50% of any of the thresholds in "a" through "c", above.	D2g	☑	☐
e. The proposed action may result in the combustion or thermal treatment of more than 1 ton of refuse per hour.	D2s	☑	☐
f. Other impacts: _____ _____		☐	☐

7. Impact on Plants and Animals

The proposed action may result in a loss of flora or fauna. (See Part 1. E.2. m.-q.) ☑NO ☐YES

If "Yes", answer questions a - j. If "No", move on to Section 8.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may cause reduction in population or loss of individuals of any threatened or endangered species, as listed by New York State or the Federal government, that use the site, or are found on, over, or near the site.	E2o	☐	☐
b. The proposed action may result in a reduction or degradation of any habitat used by any rare, threatened or endangered species, as listed by New York State or the federal government.	E2o	☐	☐
c. The proposed action may cause reduction in population, or loss of individuals, of any species of special concern or conservation need, as listed by New York State or the Federal government, that use the site, or are found on, over, or near the site.	E2p	☐	☐
d. The proposed action may result in a reduction or degradation of any habitat used by any species of special concern and conservation need, as listed by New York State or the Federal government.	E2p	☐	☐

9. Impact on Aesthetic Resources

The land use of the proposed action are obviously different from, or are in sharp contrast to, current land use patterns between the proposed project and a scenic or aesthetic resource. (Part 1. E.1.a, E.1.b, E.3.h.)

☑ NO ☐ YES

If "Yes", answer questions a - g. If "No", go to Section 10.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Proposed action may be visible from any officially designated federal, state, or local scenic or aesthetic resource.	E3h	☐	☐
b. The proposed action may result in the obstruction, elimination or significant screening of one or more officially designated scenic views.	E3h, C2b	☐	☐
c. The proposed action may be visible from publicly accessible vantage points: i. Seasonally (e.g., screened by summer foliage, but visible during other seasons) ii. Year round	E3h	 ☐ ☐	 ☐ ☐
d. The situation or activity in which viewers are engaged while viewing the proposed action is: i. Routine travel by residents, including travel to and from work ii. Recreational or tourism based activities	E3h E2q, E1c	 ☐ ☐	 ☐ ☐
e. The proposed action may cause a diminishment of the public enjoyment and appreciation of the designated aesthetic resource.	E3h	☐	☐
f. There are similar projects visible within the following distance of the proposed project: 0-1/2 mile ½ -3 mile 3-5 mile 5+ mile	D1a, E1a, D1f, D1g	☐	☐
g. Other impacts: _____ _____		☐	☐

10. Impact on Historic and Archeological Resources

The proposed action may occur in or adjacent to a historic or archaeological resource. (Part 1. E.3.e, f. and g.)

☐ NO ☑ YES

If "Yes", answer questions a - e. If "No", go to Section 11.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may occur wholly or partially within, or substantially contiguous to, any buildings, archaeological site or district which is listed on the National or State Register of Historical Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places.	E3e	☑	☐
b. The proposed action may occur wholly or partially within, or substantially contiguous to, an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory.	E3f	☑	☐
c. The proposed action may occur wholly or partially within, or substantially contiguous to, an archaeological site not included on the NY SHPO inventory. Source: _____	E3g	☑	☐

13. Impact on Transportation
The proposed action may result in a change to existing transportation systems. ☐ No [Z] YES
(See Part 1. D.2.j)
If "Yes", answer questions a - f. If "No", go to Section 14.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Projected traffic increase may exceed capacity of existing road network.	D2j	☐	☐
b. The proposed action may result in the construction of paved parking area for 500 or more vehicles.	D2j	☐	☐
c. The proposed action will degrade existing transit access.	D2j	☐	☐
d. The proposed action will degrade existing pedestrian or bicycle accommodations.	D2j	☐	☐
e. The proposed action may alter the present pattern of movement of people or goods.	D2j	☐	☐
f. Other impacts: _____		☐	☐

14. Impact on Energy
The proposed action may cause an increase in the use of any form of energy. [Z] NO ☐ YES
(See Part 1. D.2.k)
If "Yes", answer questions a - e. If "No", go to Section 15.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action will require a new, or an upgrade to an existing, substation.	D2k	☐	☐
b. The proposed action will require the creation or extension of an energy transmission or supply system to serve more than 50 single or two-family residences or to serve a commercial or industrial use.	D1q, D2k	☐	☐
c. The proposed action may utilize more than 2,500 MWhrs per year of electricity.	D2k	☐	☐
d. The proposed action may involve heating and/or cooling of more than 100,000 square feet of building area when completed.	D1g	☐	☐
e. Other Impacts: _____			

15. impact on Noise, Odor, and Light
The proposed action may result in an increase in noise, odors, or outdoor lighting. ☐ No [Z] YES
(See Part I. D.2.m., n., and o.)
If "Yes", answer questions a - f. If "No", go to Section 16.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may produce sound above noise levels established by local regulation.	D2m	☐	☐
b. The proposed action may result in blasting within 1,500 feet of any residence, hospital, school, licensed day care center, or nursing home.	D2m, E1d	☐	☐
c. The proposed action may result in routine odors for more than one hour per day.	D2o	☐	☐

17. Consistency with Community Plans

The proposed action is not consistent with adopted land use plans. ☑ NO ☐ YES

(See Part 1. C.1, C.2. and C.3.)

If "Yes", answer questions a - h. If "No", go to Section 18.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action's land use components may be different from, or in sharp contrast to, current surrounding land use pattern(s).	C2, C3, D1a E1a, E1b	☐	☐
b. The proposed action will cause the permanent population of the city, town or village in which the project is located to grow by more than 5%.	C2	☐	☐
c. The proposed action is inconsistent with local land use plans or zoning regulations.	C2, C2, C3	☐	☐
d. The proposed action is inconsistent with any County plans, or other regional land use plans.	C2, C2	☐	☐
e. The proposed action may cause a change in the density of development that is not supported by existing infrastructure or is distant from existing infrastructure.	C3, D1c, D1d, D1f, D1d, E1b	☐	☐
f. The proposed action is located in an area characterized by low density development that will require new or expanded public infrastructure.	C4, D2c, D2d D2j	☐	☐
g. The proposed action may induce secondary development impacts (e.g., residential or commercial development not included in the proposed action)	C2a	☐	☐
h. Other: _____ _____		☐	☐

18. Consistency with Community Character

The proposed project is inconsistent with the existing community character. ☑ NO ☐ YES

(See Part 1. C.2, C.3, D.2, E.3)

If "Yes", answer questions a - g. If "No", proceed to Part 3.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may replace or eliminate existing facilities, structures, or areas of historic importance to the community.	E3e, E3f, E3g	☐	☐
b. The proposed action may create a demand for additional community services (e.g. schools, police and fire)	C4	☐	☐
c. The proposed action may displace affordable or low-income housing in an area where there is a shortage of such housing.	C2, C3, D1f D1g, E1a	☐	☐
d. The proposed action may interfere with the use or enjoyment of officially recognized or designated public resources.	C2, E3	☐	☐
e. The proposed action is inconsistent with the predominant architectural scale and character.	C2, C3	☐	☐
f. Proposed action is inconsistent with the character of the existing natural landscape.	C2, C3 E1a, E1b E2g, E2h	☐	☐
g. Other impacts: _____ _____		☐	☐

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Upon review of the information recorded on this EAF, as noted, plus this additional support information
As noted, a Final EIS ("FEIS") was completed for the Proposed Project in 2019. This Supplemental Environmental Assessment focuses on information that has changed since.

and considering both the magnitude and importance of each identified potential impact, it is the conclusion of the Metropolitan Transportation Authority - New York City Transit as lead agency that:

☑ A. This project will result in no significant adverse impacts on the environment, and, therefore, an environmental impact statement need not be prepared. **Accordingly, this negative declaration is issued.**

☐ B. Although this project could have a significant adverse impact on the environment, that impact will be avoided or substantially mitigated because of the following conditions which will be required by the lead agency:

There will, therefore, be no significant adverse impacts from the project as conditioned, and, therefore, this conditioned negative declaration is issued. A conditioned negative declaration may be used only for UNLISTED actions (see 6 NYCRR 617.7(d)).

☐ C. This Project may result in one or more significant adverse impacts on the environment, and an environmental impact statement must be prepared to further assess the impact(s) and possible mitigation and to explore alternatives to avoid or reduce those impacts. Accordingly, this positive declaration is issued.

Name of Action: Reconstruction and Expansion of Jamaica Bus Depot (Supplemental Environmental Assessment, "SEA")

Name of Lead Agency: Metropolitan Transportation Authority

Name of Responsible Officer in Lead Agency: Thomas Abdallah, P.E.

Title of Responsible Officer: VP Design Services & Chief Environmental Engineer • Delivery Services Office MTA C&D

Signature of Responsible Officer in Lead Agency: Thomas Abdallah Digitally signed by Thomas Abdallah 000526 1085097 Date: 2022.08.22 16:32:51 -04'00' Date: August 22, 2022

Signature of Preparer (if different from Responsible Officer) Date:

For Further Information:

Contact Person: Mary Kong

Address: 2 Broadway, New York, NY 10004

Telephone Number: 646-252-4935

E-mail: Mary.Kong@mtacd.org

For Type 1 Actions and Conditioned Negative Declarations, a copy of this Notice is sent to:

Chief Executive Officer of the political subdivision in which the action will be principally located (e.g., Town / City / Village of)
Other involved agencies (if any)
Applicant (if any)
Environmental Notice Bulletin: http://www.dec.ny.gov/enb/enb.html

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Attachment H: Response to Comments

A Supplemental Environmental Assessment has been completed by the Metropolitan Transportation Authority (MTA) New York City Transit (NYCT) for the Proposed Reconstruction and Expansion of Jamaica Bus Depot (SEA JBD) located at 165-18 Tuskegee Airmen Way in Jamaica, Queens New York. The SEA JBD has been prepared in accordance with: The State Environmental Quality Review Act (SEQRA), Article 8 of the Environmental Conservation Law (ECL§§ 8-0101 et seq.) and it's implementing regulations, Title 6 NYCRR §617.

In addition to the public review of the Draft Supplemental Environmental Assessment, a 30 day public comment period (February 23, 2022 through March 24, 2022), was included in the review period to afford agencies and the public reasonable time to consider the SEA JBD before MTA Issues a written Findings Statement.

There were no comments received from the Stakeholders (agencies and public) for the Supplemental Environmental Assessment for the Reconstruction and Expansion of Jamaica Bus Depot.