## A. INTRODUCTION

Construction impacts, although temporary, can include disruptive and noticeable effects of a project. Determination of their significance and need for mitigation is generally based on the duration and magnitude of the impacts. Construction impacts are usually important when construction activity could affect traffic conditions, archaeological resources, the integrity of historic resources, community noise patterns, and air quality conditions.

The Proposed Action would facilitate the construction of a new mixed-use building, which is expected to occur over an 18-24 month period. The first section of this chapter describes the general schedule and type of construction activity, and the second section provides an assessment of the Proposed Action's potential impacts associated with these construction related activities. As detailed below, the Proposed Action is not expected to result in any significant adverse construction impacts.

## B. CONSTRUCTION SCHEDULE AND ACTIVITIES

The Proposed Action is intended to facilitate construction of the Proposed Development. As with all construction projects in the city, construction activities would normally take place Monday through Friday, although the delivery/ installation of certain critical equipment could occur on weekend days (with special permission from NYCDOB). Construction staging would most likely occur on the Proposed Development Site itself and may occasionally extend within portions of the sidewalks, and curb and travel lanes of public streets adjacent to the sites (mainly West 155$^{th}$ Street and St. Nicholas Avenue). Any sidewalk or street closures require the approval of the New York City Department of Transportation's Office of Construction Management and Coordination (NYCDOT-OCMC), the entity that insures 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. In addition, there would be requirements for street crossing and entrance barriers, protective scaffolding, and strict compliance with all applicable construction safety measures.

Assuming the Proposed Action is approved, construction of the Proposed Development would commence shortly after ULURP review and is expected to be completed by late 2012. Construction work would comprise four general stages: demolition; below-grade construction; shell and core construction; and interior construction. In the first phase of construction, abatement of any hazardous materials on the site would occur. This is expected to consist of the removal of asbestos-containing materials commonly found in the building materials of older structures as well as any underground storage tanks. As part of this effort, any potential on-site presence of hazardous materials would be identified through a NYCDEP-approved testing program and, if

necessary, remediation measures would then be implemented to ensure that there are no impacts to construction workers or the general public as a result of this construction activity.

Following is a general outline of the anticipated scheduling for construction of the Proposed Development, which is expected to be completed within approximately 18 to 24 months.

- Months 1-6: Demolition of existing building, site clearance, excavation, and foundation. The first 6 months of construction would entail demolition of the existing 2-story garage on the site and site clearance; digging, pile-driving, pile capping, and excavation for the foundation; dewatering (to the extent required), and reinforcing and pouring of the foundation. Typical equipment used for these activities would include excavators, backhoes, tractors, pile-drivers, hammers, and cranes. Trucks would arrive at the site with pre-mixed concrete and other building materials, and would remove any excavated material and construction debris.

- Months 7-10: Erection of the superstructure and underground parking foundation (for accessory garage). Once the foundations have been completed, the construction of the building's steel framework, parking ramp, and decking would take place. This process involves the installation of beams, columns and decking, and would require the use of cranes, derricks, hoists, and welding equipment.

- Months 11-24: Façade and roof construction, mechanical installation, interior and finishing work. This would include the assembly of exterior walls and cladding; installation of heating, ventilation and air conditioning (HVAC) equipment and ductwork; installation and checking of elevator, utility, and life safety systems; and work on interior walls and finishes. During these activities, hoists and cranes would continue to be used, and trucks would remain in use for material supply and construction waste removal.

## C. POTENTIAL IMPACTS DURING CONSTRUCTION

### Historic Resources – Architectural

As discussed in more detail in Chapter 5, "Historic Resources," new construction taking place on the Proposed Development Site would entail demolition of an existing structure and the construction of a new building adjacent to a historic structure, namely, the building on Block 2069/Lot 14, which falls within both the NYCLPC-designated Hamilton Heights/Sugar Hill Northeast Historic District and S/NR-listed Sugar Hill Historic District (refer to Figure 5-1 in Chapter 5, "Historic Resources"). Therefore, the Proposed Action has the potential to cause damage to historic architectural resources from ground-borne construction vibrations.

The City has two procedures for avoidance of damage to historic structures from adjacent construction. All buildings are provided some protection from accidental damage through New York City Department of Buildings (NYCDOB) controls that govern the protection of any adjacent properties from construction activities, under Building Code Section 27-166 (C26-112.4. For all construction work, Building Code section 27-166 (C26-112.4) serves to protect buildings by requiring that all lots, buildings, and service facilities adjacent to foundation and earthwork areas

be protected and supported in accordance with the requirements of Building Construction Subchapter 7 and Building Code Subchapters 11 and 19.

The second protective measure applies only to designated NYC Landmarks and S/NR-listed historic buildings located within 90 linear feet of the proposed construction site. For these structures, the DOB's Technical Policy and Procedure Notice (TPPN) #10/88 applies. TPPN 10/88 supplements the standard building protections afforded by the Building Code C26-112.4 by requiring, among other things, a monitoring program to reduce the likelihood of construction damage to adjacent NYCLPC-designated or S/NR-listed resources (within 90 feet) and to detect at an early stage the beginnings of damage so that construction procedures can be changed. By following these measures, which are required for any designated historic resources within 90 feet of the Proposed Development Site, the proposed demolition/construction work would not cause any significant adverse construction-related impacts.

Therefore, historic structures within 90 feet of the Proposed Development Site would be protected, by ensuring that adjacent construction of the Proposed Development adheres to all applicable NYCDOB construction guidelines and regulations.

## Hazardous Materials

As described in Chapter 8, "Hazardous Materials," due to the potential presence of hazardous materials at the Proposed Development Site, which is owned by the applicant, a restrictive declaration would be prepared and executed which requires, prior to construction, the preparation of a hazardous materials sampling protocol including a health and safety plan, which would be submitted to the NYCDEP for approval. The restrictive declaration would establish an agreement to test and identify any potential hazardous material impacts pursuant to the approved sampling protocol and, if any such impact is found, submit a hazardous material remediation plan including a health and safety plan to NYCDEP for approval prior to construction activities. If necessary, remediation measures would be undertaken pursuant to a NYCDEP-approved remediation plan. With the measures in place described in Chapter 8, "Hazardous Materials," and Chapter 12, "Mitigation," there would be no significant adverse impacts with respect to hazardous materials during the construction process.

In addition, demolition of interiors, portions of buildings or entire buildings are regulated by the NYC Building Department requiring abatement of asbestos prior to any intrusive construction activities including demolition. The Occupational Safety and Health Administration (OSHA) regulates construction activities to prevent excessive exposure of workers to contaminants in the building materials including lead in paint. New York State Solid Waste regulations control where demolition debris and contaminated materials associated with construction are handled and disposed. Adherence to these existing regulations would prevent impacts from development activities at the Proposed Development Site.

## Other Technical Areas

Construction of the Proposed Development would result in temporary disruption to the surrounding area, including some noise, and traffic associated with the delivery of materials, construction machinery, and arrival of workers on the site. As discussed below, given the relatively

small size of the project, it would not result in a significant amount of construction related traffic or mobile source emissions from construction vehicles, and construction of the Proposed Development would be subject to compliance with the New York City Noise Code.

## *Traffic and Parking*

Construction of the Proposed Development facilitated by the Proposed Action would generate trips resulting from arriving and departing construction workers, movement of materials and equipment, and removal of construction waste. Construction would probably occur between 7 AM and 4 PM. Construction workers would typically arrive before the typical AM peak commuter period and depart before the PM peak hour, and would therefore not represent a substantial increment during the area's peak travel periods. Truck movements would typically be spread throughout the day on weekdays, and would generally occur between the hours of 7:00 AM and 4:30 PM. Wherever possible, the scheduling of deliveries and other construction activities would take place during off-peak travel hours.

Construction activities may result in short-term disruption of both traffic and pedestrian movements at the Proposed Development Site. This would occur primarily due to the temporary loss of curbside lanes from the staging of equipment and the movement of materials to and from the site. Additionally, construction would at times result in temporary closings of sidewalks adjacent to the site. These conditions would be temporary and not result in significant adverse impacts on traffic and transportation conditions. NYCDOT-OCMC issues permits for any street/sidewalk closures after evaluation of traffic and pedestrian conditions.

Construction workers would use both public transportation and private automobile. Parking is typically done off-site for the larger development sites, and at curbside in the vicinity of the smaller ones. These curbside spaces are typically available as area residents use their autos to travel to work and elsewhere, and are vacated by construction workers in the afternoon before resident demand increases after the typical workday.

## *Air Quality*

Possible impacts on local air quality during construction of the Proposed Development include: fugitive dust (particulate) emissions from land clearing operations; and mobile source emissions, including hydrocarbons, nitrogen oxide, and carbon monoxide.

Fugitive dust emissions could occur from land clearing, excavation, hauling, dumping, spreading, grading, compaction, wind erosion, and traffic over unpaved areas. Actual quantities of emissions depend on the extent and nature of the land clearing operations, the type of equipment employed, the physical characteristics of the underlying soil, the speed at which construction vehicles are operated, and the type of fugitive dust control methods employed. Much of the fugitive dust generated by construction activities consists of relatively large-size particles, which are expected to settle within a short distance from the construction site and to not significantly impact nearby buildings or people. All appropriate fugitive dust control measures – including watering of exposed areas and dust covers for trucks – would be employed during construction of the Proposed Development.

Mobile source emissions may result from the operation of construction equipment, trucks delivering materials and removing debris, workers' private vehicles, or occasional disruptions in

traffic near the construction site. Localized increases in mobile source emissions would be minimized by following standard traffic maintenance requirements, such as: construction requiring temporary street closings would be performed during off-peak hours wherever possible; the existing number of traffic lanes would be maintained to the maximum extent possible; and idling of delivery trucks or other equipment would not be permitted during unloading or other inactive times.

### *Noise*

Impacts on noise levels during construction of the Proposed Development would include noise and vibration from the operation of construction equipment. The severity of impacts from these noise sources would depend on the noise characteristics of the equipment and activities involved, the construction schedule, and the distance to potentially sensitive noise receptors. Noise and vibration levels at a given location are dependent on the kind and number of pieces of construction equipment being operated, as well as the distance from the construction site. Noise caused by construction activities would vary widely, depending on the phase of construction – demolition, land clearing and excavation, foundation and capping, erection of structural steel, construction of exterior walls, etc. – and the specific task being undertaken. Increased noise levels caused by construction activities can be expected to be most significant during the early phases of construction before the building is enclosed. Increases in noise levels caused by delivery trucks and other construction vehicles would not be significant. Small increases in noise levels are expected to be found near a few defined truck routes and the streets in the immediate vicinity of the Proposed Development Site.

Construction noise is regulated by the New York City Noise Control Code and by EPA noise emission standards for construction equipment. These local and federal requirements mandate that certain classifications of construction equipment and motor vehicles meet specified noise emissions standards; that, except under exceptional circumstances, construction activities be limited to weekdays between the hours of 7 AM and 6 PM; and that construction material be handled and transported in such a manner as not to create unnecessary noise. These regulations would be carefully followed. In addition, appropriate low-noise emission level equipment and operational procedures would be used. Compliance with noise control measures would be ensured by directives to the construction contractor.

## D. CONCLUSION

The Proposed Action would facilitate the construction of a new mixed-use building, which is expected to occur over an 18-24 month period. As discussed above, given the relatively small size of the project and the short construction period, the Proposed Action would not result in a significant amount of construction related impacts. Construction-related activities resulting from the Proposed Action are not expected to have any significant adverse impacts on historic resources, hazardous materials, traffic, air quality, or noise conditions. Moreover, the construction process in New York City is highly regulated to ensure that construction period impacts are eliminated or minimized. The construction process requires consultation and coordination with a number of City and/or State agencies, including NYCDOT, NYC Department of Buildings (DOB), NYCDEP, and NYSDEC (where applicable), among others.