Chapter 20:  Construction

A. INTRODUCTION

This chapter summarizes the construction plan for the proposed Victoria Theater Redevelopment Project and assesses the potential for construction-period impacts. The CEQR Technical Manual provides guidance on when it is appropriate to include a detailed assessment of construction 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). Where the duration of construction is expected to be short-term, any impacts resulting from construction generally do not require detailed assessment. As described below, the period of construction for the proposed project is expected to be approximately 22 months. This chapter describes the anticipated construction schedule for the proposed project, as well as the expected construction methods and activities. Finally, the analysis presents an assessment of potential construction impacts and, where appropriate, describes methods that may be employed to minimize construction-period impacts.

PRINCIPAL CONCLUSIONS

As described below, this assessment concludes that the proposed project would not result in significant adverse impacts during construction. The overall construction duration of the proposed project would be short-term (less than two years) and would include construction of a single building. As described above, according to the CEQR Technical Manual, where the duration of construction is expected to be short-term, any impacts resulting from construction generally do not require detailed assessment. The analysis presented below concludes that construction of the proposed project would not result in significant adverse impacts on transportation, noise, air quality, hazardous materials, or other relevant technical areas. Therefore, no significant adverse impacts are expected to occur as a result of construction.

B. DESCRIPTION OF CONSTRUCTION ACTIVITIES

The following section presents the anticipated schedule for constructing the proposed project, and describes the methods and means of construction expected to be employed. This section also establishes the framework used for the assessment of potential impacts from construction. The construction timeline—determined by the timing of the various major construction stages associated with constructing a building such as demolition, excavation and foundation, core and shell construction, preservation and restoration of existing structures, and interior finishing—is described. The types of equipment that may be used are discussed, and the number of workers and truck deliveries estimated. General construction practices are also discussed, including those associated with deliveries and access, hours of work, and sidewalk and lane closures.
CONSTRUCTION PHASING AND SCHEDULE

As described in Chapter 1, “Project Description,” the Victoria Theater comprises two buildings. The proposed project would retain, restore, and reuse the South Building as part of the proposed project and redevelop the site of the North Building with residential, hotel, commercial, and cultural uses in a new building. It is anticipated that construction of the proposed project would require a total of approximately 22 months to complete, with some of the construction tasks overlapping. Based on current plans, construction would begin in early 2013 and be completed in late 2014. A breakdown of the anticipated construction program is shown below in Table 20-1.

<table>
<thead>
<tr>
<th>Construction Activity</th>
<th>Start Month</th>
<th>Finish Month</th>
<th>Approximate Duration (Months)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material Salvage, Abatement and Demolition - North and South Buildings</td>
<td>Month 1</td>
<td>Month 2</td>
<td>2</td>
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<tr>
<td>Excavation and Foundation – North Building</td>
<td>Month 3</td>
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<tr>
<td>Core and Shell Construction – North Building</td>
<td>Month 5</td>
<td>Month 16</td>
<td>12</td>
</tr>
<tr>
<td>Restoration Efforts – South Building</td>
<td>Month 5</td>
<td>Month 16</td>
<td>12</td>
</tr>
<tr>
<td>Interior Construction and Fit-out – North Building</td>
<td>Month 11</td>
<td>Month 22</td>
<td>12</td>
</tr>
</tbody>
</table>

*Source: Aufgang + Subotovsky Architecture and Planning*

CONSTRUCTION METHODS AND ACTIVITIES

Overall, the construction of the North Build is expected to employ standard construction methods. The first task is construction startup, which involves the siting of work trailers, installation of temporary power and communication lines, and the erection of site perimeter fencing. Then, any potential hazardous materials (such as asbestos) are abated, and part of the existing structure is then demolished with some of the materials recycled and the debris taken to a licensed disposal facility. Excavation and removal of the soils is next, followed by construction of the foundations. When the below-grade construction is completed, construction of the core and shell of the new building begins. The core is the central part of the building and is the main part of the structural system. It contains the elevators and the mechanical systems for heating, ventilation, and air conditioning (HVAC). The shell is the outside of the building. As the core and floor decks of the building are being erected, installation of the mechanical and electrical internal networks would start. As the building progresses upward, the exterior cladding is placed, and the interior fit out begins. The retention and reuse of the South Building would include the restoration of the façade and key exterior elements such as the blade sign and marquee, renovation and/or construction of interior spaces, and integration with the new construction on the north part of the project site. In addition, limited excavation activities may be required for column support.

CONSTRUCTION STARTUP TASKS

The following tasks are considered to be typical “startup” work to prepare a site for construction. The tasks could include, but are not limited to, those described below (the means and methods and order of completion of these tasks could change as necessary). Startup work generally involves the installation of public safety measures, such as fencing, sidewalk sheds, and Jersey...
barriers. The site is fenced off, typically with solid fencing to minimize interference between the persons passing by the site and the construction work. Separate gates for workers and for trucks are installed, and sidewalk shed and Jersey barriers are erected. Trailers for the construction engineers and managers are brought to the site. These trailers could be placed within the fence line (which may be difficult given site constraints) or in the curb lane. Also, portable toilets, dumpsters for trash, and water and fuel tankers are brought to the site and installed. Temporary utilities are connected to the construction trailers. During the startup period, permanent utility connections may be made, especially if the contractor has obtained early electric power for construction use, but utility connections may be made almost any time during the construction sequence. Maintenance and Protection of Traffic (MPT) Plans would be developed for any curb lane and sidewalk closures. Approval of these plans and implementation of all temporary sidewalk and curb lane closures during construction would be coordinated with New York City Department of Transportation’s (NYCDOT) Office of Construction Mitigation and Coordination (OCMC). Construction startup tasks are normally completed within a few weeks. Approximately 20 workers would be on-site at any given time during construction startup tasks, with deliveries estimated to require approximately one to two trucks per day.

**MATERIAL SALVAGE, ABATEMENT AND DEMOLITION**

As described in Chapter 7, “Historic and Cultural Resources,” certain material would be removed from the North Building for possible salvage and reuse. This may include the possible salvage and reuse of the north canvas mural from the balcony level of the auditorium, water fountain mosaics, and other architectural elements in the North Building if feasible. Other economically recyclable materials would also be removed prior to abatement.

The proposed project would involve demolition of the existing North Building and retention of the South Building. As discussed in Chapter 10, “Hazardous Materials,” the proposed project would include appropriate health and safety and investigative/remedial measures—including, as necessary, abatement of asbestos, lead-based paint, and polychlorinated biphenyls (PCBs) in existing buildings—that would precede or govern demolition and/or renovation activities.

Prior to demolition and renovation, a New York City-certified asbestos investigator would inspect the existing buildings on the project site for asbestos-containing materials (ACMs) that would be disturbed by the proposed demolition and renovation activities. The ACMs would be removed by a New York State Department of Labor (NYSDOL)-licensed asbestos abatement contractor prior to building demolition or renovation. Asbestos abatement is strictly regulated by the New York City Department of Environmental Protection (NYCDEP), NYSDOL, United States Environmental Protection Agency (EPA), and the United States Occupational Safety and Health Administration (OSHA) to protect the health and safety of construction workers and nearby residents and workers. Depending on the extent and type of ACMs, these agencies would be notified of the asbestos removal project and may inspect the abatement site to ensure that work is being performed in accordance with applicable regulations.

Any demolition and renovation activities with the potential to disturb lead-based paint would be performed in accordance with the applicable Occupational Safety and Health Administration regulation (OSHA 29 CFR 1926.62—Lead Exposure in Construction). In addition, suspected PCB-containing equipment (such as transformers and other electrical equipment including fluorescent light ballasts) that would be disturbed by building renovation or demolition would be evaluated prior to disturbance. Unless labeling or test data indicate that the suspected PCB-containing equipment does not contain PCBs, it would be assumed to contain PCBs and
removed and disposed of at properly licensed facilities in accordance with all applicable regulatory requirements.

After abatement, demolition work would begin on the North Building. Demolition would occur in accordance with NYCDOB guidelines/requirements. The North Building would be deconstructed using large equipment such as excavators and bulldozers. Typical demolition requires fencing around the building to prevent accidental dispersal of building materials into areas accessible to the general public. The demolition debris would be sorted prior to being disposed at landfills to maximize recycling opportunities. This phase of construction is expected to last two months. 25 workers per day are expected to be on site, and typically five truckloads of debris would be removed per day.

EXCAVATION AND FOUNDATION

Soil excavation and foundation construction for the North Building would take approximately four months to complete. Excavators would be used for the task of digging foundations. The soil would be loaded onto dump trucks for transport to a licensed disposal facility or for reuse on another construction site. Foundation work could include pile driving and pouring concrete footings and foundation. The excavation/foundation task would involve the use of excavators, cranes, pile drivers, concrete pumps, concrete trucks, generators, and hand tools. Approximately 75 workers would be on-site at any given time during this phase of construction, with deliveries estimated to require approximately 10 trucks per day.

Below-Grade Materials

All excavated soil would be handled and disposed of in accordance with applicable regulatory requirements and measures to control dust during excavation would be implemented to protect both the workers and the community. Should contaminated soil and/or petroleum tanks be encountered, applicable regulatory requirements (e.g., those relating to spill reporting and tank registration) would be followed to address removal of the tanks and any associated soil or groundwater contamination (see “Hazardous Materials,” below).

Dewatering

The excavated area could be subject to accumulating groundwater. In addition to groundwater, rain and snow could collect in the excavated area, and that water would have to be removed. If necessary, the water would be pretreated prior to discharge. The decanted water would then be discharged into the New York City sewer system. Discharge in the sewer system is governed by NYCDEP regulations.

NYCDEP has a formal procedure for issuing a Letter of Approval to discharge into the New York City sewer system. The authorization is issued by the NYCDEP Borough office if the discharge is less than 10,000 gallons per day; an additional approval by the Division of Connections & Permitting is needed if the discharge is more than 10,000 gallons per day. All chemical and physical testing of the water has to be done by a laboratory that is certified by the New York State Department of Health (NYSDOH). The design of the pretreatment system has to be signed by a New York State Professional Engineer or Registered Architect. For water discharged into New York City sewers, NYCDEP regulations specify the following maximum concentration of pollutants.

- Petroleum hydrocarbons 50 parts per million (ppm)
- Cadmium 2 ppm
• Hexavalent chromium  5 ppm
• Copper  5 ppm
• Amenable cyanide  0.2 ppm
• Lead  2 ppm
• Mercury  0.05 ppm
• Nickel  3 ppm
• Zinc  5 ppm
• pH between 5 to 12
• Temperature less than 150 degrees Fahrenheit (F)
• Flash Point greater than 140 degrees F
• Benzene  134 parts per billion (ppb)
• Ethylbenzene  380 ppb
• Methyl-Tert-Butyl-Ether (MTBE)  50 ppb
• Naphthalene  47 ppb
• Tetrachloroethylene (perc)  20 ppb
• Toluene  74 ppb
• Xylenes  74 ppb
• PCB  1 ppb
• Total Suspended Solids  350 ppm

Any groundwater discharged in the New York City system would meet these limits. NYCDEP can also impose project-specific limits, depending on the location of the project and contamination that has been found in nearby areas.

CORE AND SHELL CONSTRUCTION

The core and shell construction of the new building would last approximately 12 months. Construction of the interior structure, or core, of the proposed building would include elevator shafts; vertical risers for mechanical, electrical, and plumbing systems; electrical and mechanical equipment rooms; core stairs; and restroom areas. This phase of work would also include construction of the building’s framework (installation of beams and columns), and floor decks. The shell is the outside of the building. Exterior construction would involve the installation of the façade (exterior walls, windows, and cladding) and the roof. The core and shell activities would require the use of cranes, delivery trucks, concrete pumps, concrete trowels, welding equipment, and a variety of handheld tools. Temporary construction elevators (hoists) would also be constructed for the delivery of materials and vertical movement of workers during this stage where necessary. Each day, about 125 workers and about 15 truck deliveries would be required for the core and shell construction of the building.

RESTORATION OF THE SOUTH BUILDING

The South Building would be retained, with the front entrance doors, vertical blade sign, horizontal marquee, lobby, foyer, and marble staircase restored. In addition, certain historic features would be salvaged and some interior walls and ceilings would be demolished for the development of new spaces in the building. Exterior restoration work would also be undertaken. This work would include the cleaning, repair, and restoration of the South Building’s facades and roof, where needed, repair and replacement of some of the building’s windows. The
restoration efforts would take about 12 months to complete and employ approximately 70 workers. About 10 truck deliveries per day would be expected during this task.

**INTERIOR CONSTRUCTION AND FITOUTS**

This stage would include the construction of interior partitions, installation of lighting fixtures, interior finishes (flooring, painting, etc.), and mechanical and electrical work, such as the installation of elevators, for the North Building. Mechanical and other interior work would overlap with the North Building core and shell construction and South Building restoration efforts. This activity would employ the greatest number of construction workers: with about 150 workers per day. In addition, approximately 10 truck deliveries would be expected per day. Equipment used during interior construction would include hoists, delivery trucks, and a variety of small hand-held tools. This stage of construction is typically the quietest, since the exterior building walls are already in place.

**GENERAL CONSTRUCTION PRACTICES**

Certain activities would be on-going throughout the project construction. The applicant would have a field representative to serve as the contact point for the community and local leaders. The representative would be available to meet and work with the community to resolve concerns or problems that arise during the construction process. New York City maintains a 24-hour-a-day telephone hotline (311) so that concerns can be registered with the city.

**GOVERNMENTAL COORDINATION AND OVERSIGHT**

The following describes governmental construction oversight agencies and typical construction practices in New York City. In certain instances, specific practices may vary from those described below. All deliveries, material removals, and hoist uses would be tightly scheduled to maintain an orderly work area and to keep the construction on schedule and within budget.

The governmental oversight of construction in New York City is extensive and involves a number of city, state, and federal agencies. Table 20-2 shows the main agencies involved in construction oversight and the agencies’ areas of responsibilities. The primary responsibilities lie with New York City agencies. The New York City Department of Buildings (DOB) has the primary responsibility for ensuring that the construction meets the requirements of the Building Code and that the building is structurally, electrically, and mechanically safe. In addition, DOB enforces safety regulations to protect both the workers and the public. The areas of responsibility include installation and operation of the equipment, such as cranes and lifts, sidewalk shed, and safety netting and scaffolding. In addition, DOB approves the Construction Protection Plan (CPP) used when the construction is in proximity to historic structures. NYCDEP enforces the Noise Code and regulates water disposal into the sewer system. FDNY has primary oversight for compliance with the Fire Code and for the installation of tanks containing flammable materials. NYCDOT reviews and approves any traffic lane and sidewalk closures. DEC regulates the disposal of hazardous materials, and construction, operation, and removal of bulk petroleum and chemical storage tanks. DOL licenses asbestos workers. On the federal level, the EPA has wide ranging authority over environmental matters, including air emissions, noise, and hazardous materials. Much of the responsibility is delegated to the state level. The Occupational Safety and Health Administration (OSHA) sets standards for work site safety and the construction equipment.
Table 20-2

Construction Oversight in New York City

<table>
<thead>
<tr>
<th>Agency</th>
<th>Areas of Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>New York City</strong></td>
<td></td>
</tr>
<tr>
<td>Department of Buildings</td>
<td>Primary oversight for Building Code and site safety</td>
</tr>
<tr>
<td>Department of Environmental Protection</td>
<td>Noise, dewatering</td>
</tr>
<tr>
<td>Fire Department</td>
<td>Compliance with Fire Code, tank operation</td>
</tr>
<tr>
<td>Department of Transportation</td>
<td>Lane and sidewalk closures</td>
</tr>
<tr>
<td><strong>New York State</strong></td>
<td></td>
</tr>
<tr>
<td>Department of Labor</td>
<td>Asbestos workers</td>
</tr>
<tr>
<td>Department of Environmental Conservation</td>
<td>Hazardous materials, tanks</td>
</tr>
<tr>
<td><strong>United States</strong></td>
<td></td>
</tr>
<tr>
<td>Environmental Protection Agency</td>
<td>Air emissions, noise, hazardous materials</td>
</tr>
<tr>
<td>Occupational Safety and Health Admin</td>
<td>Worker safety</td>
</tr>
</tbody>
</table>

DELIVERIES AND ACCESS

Because of site constraints, the presence of large equipment, and the type of work, access to the construction site would be tightly controlled. The work areas would be fenced off, and limited access points for workers and trucks would be provided. Security guards and flaggers would be posted, and all persons and trucks would have to pass through security points. Workers or trucks without a need to be on the site would not be allowed entry. After work hours, the gates would be closed and locked. Security guards would patrol the construction sites after work hours and over the weekends to prevent unauthorized access.

Material deliveries to the site would be controlled and scheduled to the degree feasible. To aid in adhering to the delivery schedules, as is normal for building construction in New York City, flaggers may be employed at access points. The flaggers could be supplied by the subcontractor on-site at that time or by the construction manager. The flaggers would control trucks entering and exiting the site so that they would not interfere with one another or with on-street traffic streams.

HOURS OF WORK

Construction activities for the buildings would generally take place Monday through Friday. In accordance with city laws and regulations, construction work would generally begin at 7:00 AM on weekdays, with some workers arriving to prepare work areas between 6:00 AM and 7:00 AM. Normally, work would end at 3:30 PM, but it can be expected that to meet the construction schedule or as needed for specific tasks that must be completed at one time, the workday could be extended as late as 6:00 PM without requiring authorization from DOB. The work could include such tasks as completing the drilling of piles, finishing a concrete pour for a floor deck, or completing the bolting of a steel frame erected that day. The extended workday would not include all construction workers on-site, but just those involved in the specific task requiring additional work time. Limited extended workdays may occur on weekdays over the course of construction.

At limited times over the course of construction weekend work may be required to make up for weather delays or other unforeseen circumstances. In such cases, appropriate work permits from DOB would be obtained. The numbers 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 a normal workday. The typical weekend...
workday would begin with worker arrival and site preparation at 7:00 AM, and ending with site cleanup at 5:00 PM.

Some tasks may have to be continuous, and the work could extend to more than a typical 8-hour day. For example, in certain situations, concrete must be poured continuously to form one structure without joints. This type of concrete pour is usually associated with foundations and structural slabs at grade, which would require a minimum of 12 hours or more to complete.

SIDEWALK AND LANE CLOSURES

During the course of construction, traffic lanes and sidewalks may be closed or protected for varying periods of time. A street lane on West 126th Street and some sidewalks may be intermittently or continuously closed to allow for certain construction activities. This work would be coordinated with and approved by NYCDOT. No rerouting of traffic is anticipated and moving lanes of traffic are expected to be available at all times. It is anticipated that the sidewalks on West 126th Street immediately adjacent to the project site may also be closed to accommodate heavy loading areas for at least several months of the construction period. Pedestrians would be expected to be rerouted to a sectioned-off and protected portion of the street or to the other side of the street, if required—NYCDOT would be consulted to determine the appropriate protective measures for ensuring pedestrian safety surrounding the development site.

C. THE FUTURE WITHOUT THE PROPOSED PROJECT

In the future without the proposed project, no new construction would take place on the project site except for measures that may have to be undertaken to help support the deteriorated building. It is expected that the project site would remain substantially vacant and that the North and South Buildings would continue to deteriorate.

D. PROBABLE IMPACTS OF THE PROPOSED PROJECT

Similar to many large development projects in New York City, construction can be disruptive to the surrounding area for limited periods of time throughout the construction period. The following analyses describe potential construction impacts on transportation, air quality, and noise and vibration, as well as other areas including historic and cultural resources, hazardous materials, socioeconomic conditions, community facilities, and land use and neighborhood character.

TRANSPORTATION

As described in the CEQR Technical Manual, construction activities may affect several elements of the transportation system, including traffic, transit, pedestrians, and parking. A transportation analysis of construction activities is predicated upon the duration, intensity, complexity and/or location of construction activity.

Certain construction activities may require temporarily impeding the streets adjacent to the site, and/or the temporary closing, narrowing, or otherwise impeding of the adjacent sidewalks. Construction-related closures are anticipated to be the type of routine closure typically addressed by a permit and pedestrian access plan required by NYCDOT’s OCMC at the time of closure(s). The overall construction duration of the proposed project would be short-term (less than two years).
Throughout the construction process, construction workers would travel to and from the site by personal vehicle, bus, and subway. Given that the typical construction peak hours would occur outside of the commuting peak hours, and that the project site is well served by mass transit, including the A, B, C, D, 2, and 3 subway lines and the M2, M3, M7, M10, M60, M100, M101, M102, and BX15 bus routes, it is anticipated that usage of transportation facilities by construction workers would not have a noticeable effect on levels of service. As described in Chapter 14, “Transportation,” the public parking facilities within ¼-mile of the project site have a combined capacity of 953 parking spaces and parking utilization is fairly low—ranging from 37 to 74 percent. Overall, the construction worker trips are not expected to result in significant adverse impacts on the area’s traffic operations, parking supply and utilization, bus loading, or subway station conditions. For construction trucks, deliveries would occur throughout the day when the construction site is active but would typically peak during the hour before the normal work day outside of the commuting peak hours. These construction trucks would use NYCDOT-designated truck routes, including West 125th Street and Adam Clayton Powell Jr. Boulevard. Therefore, the proposed project’s construction activities are not expected to result in significant adverse transportation impacts.

AIR QUALITY

Emissions from on-site construction equipment and on-road construction-related vehicles, as well as dust generating activities, have the potential to affect air quality. In general, much of the heavy equipment used in construction has diesel-powered engines and produces relatively high levels of nitrogen oxides (NOx) and particulate matter (PM). Gasoline engines produce relatively high levels of carbon monoxide (CO). Fugitive dust generated by construction activities is composed of particulate matter. As a result, the primary air pollutants of concern for construction activities include nitrogen dioxide (NO2), particulate matter with an aerodynamic diameter of less than or equal to 10 micrometers (PM10), particulate matter with an aerodynamic diameter of less than or equal to 2.5 micrometers (PM2.5), and CO.

Generally, if a transportation analysis is not needed with regard to construction activities, an air quality assessment of construction vehicles is likely not warranted. As demonstrated above under “Transportation,” construction of the proposed project does not require a detailed transportation analysis. The construction would not result in substantial increases in vehicle volumes, lane or roadway closures, or traffic diversions. Therefore, construction of the proposed project would not cause significant changes in air quality related to vehicular traffic, and further mobile-source analysis is not required.

The main component of diesel exhaust that has been identified as having an adverse effect on human health is PM2.5. As described above, the duration of the proposed project’s construction is expected to be short-term (less than two years). However, in order to minimize the project’s potential to have construction-period impacts on air quality, the following measures would be implemented, to the extent feasible:

- **Diesel Equipment Reduction.** Construction of the proposed project would minimize the use of diesel engines and use electric engines, to the extent practicable. This would reduce the need for on-site generators, and require the use of electric engines in lieu of diesel where practicable.
- **Clean Fuel.** To the extent practicable, ultra-low sulfur diesel (ULSD) would be used for diesel engines used at the construction site.
Best Available Tailpipe Reduction Technologies. To the extent feasible, nonroad diesel engines with a power rating of 50 horsepower (hp) or greater and controlled truck fleets (i.e., truck fleets under long-term contract, such as concrete mixing and pumping trucks) would utilize the best available tailpipe (BAT) technology for reducing DPM emissions. Diesel particulate filters (DPFs) have been identified as being the tailpipe technology currently proven to have the highest reduction capability.

Utilization of New Equipment. In addition to the tailpipe control commitments, construction equipment rated Tier 2 or higher would be used for all nonroad diesel engines with a power output of 50 hp or higher, to the extent practicable.

Dust Control. Fugitive dust control plans will be required as part of contract specifications. For example, stabilized truck exit areas would be established for washing off the wheels of all trucks that exit the construction site. All trucks hauling loose material will be equipped with tight fitting tailgates and their loads securely covered prior to leaving the site. In addition to regular cleaning by the City, streets adjacent to the construction site would be cleaned as frequently as needed by the construction contractor. Chutes would be used for material drops during structure rehabilitation. Water sprays will be used for all transfer of spoils to ensure that materials are dampened as necessary to avoid the suspension of dust into the air.

Idle Restriction. In addition to adhering to the local law restricting unnecessary idling on roadways, on-site vehicle idle time will also be restricted to three minutes for all equipment and vehicles that are not using their engines to operate a loading, unloading, or processing device (e.g., concrete mixing trucks) or otherwise required for the proper operation of the engine.

ULSD, DPFs and construction equipment rated Tier 2 or higher are now readily available in New York City. The New York City Air Pollution Control Code regulates construction-related dust emissions. Overall, the reduction measures identified above would substantially reduce DPM emissions. The duration of the proposed project’s construction is expected to be short-term (less than two years) and an emissions control program would be implemented to minimize potential construction-period effects on air quality. Therefore, the construction of the proposed project would not result in any significant adverse impact on air quality.

NOISE

Impacts on community noise levels during construction would include noise from the operation of construction equipment and noise from construction and delivery vehicles traveling to and from the site. Noise and vibration levels at a given location are dependent on the type and quantity of construction equipment being operated, the acoustical utilization factor of the equipment (i.e., the percentage of time a piece of equipment is operating), the distance from the

1 The first federal regulations for new nonroad diesel engines were adopted in 1994, and signed by USEPA into regulation in a 1998 Final Rulemaking. The 1998 regulation introduces Tier 1 emissions standards for all equipment 50 hp and greater and phases in the increasingly stringent Tier 2 and Tier 3 standards for equipment manufactured in 2000 through 2008. In 2004, USEPA introduced Tier 4 emissions standards with a phased-in period of 2008 to 2015. The Tier 1 through 4 standards regulate the USEPA criteria pollutants, including particulate matter (PM), hydrocarbons (HC), oxides of nitrogen (NOx) and carbon monoxide (CO). Prior to 1998, emissions from nonroad diesel engines were unregulated. These engines are typically referred to as Tier 0.
construction site, and any shielding effects (from structures such as buildings, walls, or barriers). Noise levels caused by construction activities would vary widely, depending on the phase of construction (i.e., structure rehabilitation, interior fit-outs, etc.) and the location of the construction activities relative to noise-sensitive receptor locations.

A wide variety of measures can be used to minimize construction noise and reduce potential noise impacts. A noise mitigation plan is required as part of the New York City Noise Control Code, and would include:

- Source controls;
- Path controls; and
- Receptor controls.

In terms of source controls (i.e., reducing noise levels at the source or during most sensitive time periods), the following measures for construction would be implemented as per the New York City Noise Control Code:

- The contractors would use equipment that meets the sound level standards for equipment from the start of construction activities and use a wide range of equipment, including construction trucks, which produce lower noise levels than typical construction equipment.
- As early in the construction period as practicable, diesel-powered equipment would be replaced with electrical-powered equipment, such as electric scissor lifts and electric articulating forklifts (i.e., early electrification).
- All contractors and subcontractors would be required to properly maintain their equipment and have quality mufflers installed.

In terms of path controls (e.g., placement of equipment and implementation of barriers between equipment and sensitive receptors), the following measures for construction would be implemented as per the New York City Noise Control Code:

- Perimeter noise barriers would be constructed that satisfy New York City Noise Control Code requirements.
- To the extent feasible, noisy equipment, such as generators, cranes, trailers, concrete pumps, concrete trucks, and dump trucks, would be located away from and shielded from sensitive receptor locations.

For impact determination purposes, significant adverse noise impacts are based on whether maximum predicted incremental noise levels at sensitive receptor locations off-site would be greater than the impact criteria suggested in the CEQR Technical Manual for two consecutive years or more. The impact criteria are explained in detail in Chapter 17, “Noise.” While increases exceeding the CEQR impact criteria for two years or less may be noisy and intrusive, they are not considered to be significant adverse noise impacts.

On-site construction activities may generate elevated noise levels at the nearby P.S. 154 Harriet Tubman School and its associated schoolyard on West 126th Street (across from the project site) during some parts of the construction period, and may exceed CEQR impact criteria only during the heaviest construction activities (demolition, excavation, and foundation construction). However, the overall construction duration of the proposed project would be short-term (less than two years) and as shown in the conceptual construction schedule in Table 20-1, the heaviest construction activities would only last for approximately six months. Since such
exceedances would not occur for two or more consecutive years, the construction of the proposed project would not result in a significant adverse noise impacts.

OTHER TECHNICAL AREAS

HISTORIC AND CULTURAL RESOURCES

The proposed project would comply with LPC’s Guidelines for Construction Adjacent to a Historic Landmark as well as the guidelines set forth in section 523 of the CEQR Technical Manual and the procedures set forth in DOB’s TPPN #10/88. As part of the proposed project, a CPP would be prepared prior to construction activities and submitted to OPRHP for review and approval. The proposed project would result in construction activities within 90 feet of the South Building and the Apollo Theater and the CPP would include measures to ensure that the South Building and the Apollo Theater are not affected by ground-borne construction vibrations or other potential construction-related activities. None of the other architectural resources in the study area are close enough—within 90 feet—to experience direct, physical impacts from construction of the proposed project.

As described in Chapter 7, “Historic and Cultural Resources,” there is no potential for the proposed project to disturb archaeological remains. Therefore, the proposed project would not result in any significant adverse construction-related impacts on historic and cultural resources.

HAZARDOUS MATERIALS

The proposed project would include partial demolition on the project site, restoration of the remainder, and construction of a multi-story hotel and residential building, which would entail excavation for one below-grade level. As described in Chapter 10, “Hazardous Materials,” the potential for hazardous material concerns was evaluated based on a February 2012 Phase I Environmental Site Assessment (ESA). The Phase I ESA identified potential sources of contamination, including: historical and/or existing petroleum storage tanks on the project site; historical and/or current uses in the surrounding area (including a contractor’s yard and a commercial-manufacturing building west-adjacent to the project site, and a dry cleaner and an undertaker on the north-adjacent block); and hazardous waste generators (including dry cleaners) and petroleum storage facilities.

To further evaluate the potential for human or environmental exposure to known or unexpectedly encountered contamination during and following the proposed project, a Subsurface (Phase II) Investigation including the collection of soil and groundwater samples for laboratory analysis would be performed prior to soil disturbance. Based on the results of the Phase II investigation, the developer may be required to prepare a project-specific Remedial Action Plan (RAP) and would be required to prepare a Construction Health and Safety Plan (CHASP) to be implemented during construction of the proposed project. The plans would set out appropriate procedures to be followed to safely address any identified contamination, historical fill materials, etc. and would provide measures to protect both the workers and the community. All excavated soil would be handled and disposed of in accordance with applicable regulatory requirements and measures to control dust during excavation would be implemented to protect both the workers and the community. Should contaminated soil and/or petroleum tanks be encountered, applicable regulatory requirements (e.g., those relating to spill reporting and tank registration) would be followed to address removal of the tanks and any associated soil or groundwater contamination.
Lead-based paint, ACM, and PCB containing electrical equipment and fluorescent lighting fixtures, may be present at the project site. Regulatory requirements pertaining to these hazardous materials would be followed.

With the measures described above, the proposed project would not result in any significant adverse impacts related to hazardous materials.

**SOCIOECONOMIC CONDITIONS**

Construction activities could temporarily affect pedestrian and vehicular access. However, lane and/or sidewalk closures would not obstruct entrances to any existing businesses, and businesses are not expected to be significantly affected by any temporary reductions in the amount of pedestrian foot traffic or vehicular delays that could occur as a result of construction activities. Utility service would be maintained to all businesses, although short term interruptions (i.e., hours) may occur if major new equipment/infrastructure (e.g., a transformer, or a sewer or water line) is put into operation. Overall, construction activities associated with the proposed project would not result in any significant adverse impacts on surrounding businesses.

Construction would create direct benefits resulting from expenditures on labor, materials, and services, and indirect benefits created by expenditures by material suppliers, construction workers, and other employees involved in the direct activity. Construction also would contribute to increased tax revenues for the City and State, including those from personal income taxes. In addition, the developer would use its best efforts to employ Harlem residents in the pre-construction, construction, and post-construction phases of the proposed project.

**COMMUNITY FACILITIES**

The P.S. 154 Harriet Tubman School is located north of the project site along West 127th Street, and its schoolyard is across West 126th Street from the proposed project site. While construction of the proposed project would result in temporary increases in traffic during the construction period, access to and from this facility would not be affected during the construction period. The construction site would be surrounded by construction fencing and barriers that would prevent unauthorized access and shield surrounding uses. As discussed above (see “Noise”), potential increases in noise levels on P.S. 154 as a result of construction-related activities would be expected to be of limited duration. Construction of the proposed project would not block or restrict access to any community facilities in the area. Therefore, construction of the proposed project would not have a significant adverse impact on community facilities.

**LAND USE AND NEIGHBORHOOD CHARACTER**

Construction activities would affect land use on the project site but would not alter surrounding land uses. As is typical with construction projects, during periods of peak construction activity there would be some disruption, predominantly noise, to the nearby area. There would be construction trucks and construction workers coming to the site. There would also be noise, sometimes intrusive, from building construction as well as trucks and other vehicles backing up, loading, and unloading. These disruptions would be temporary in nature and would have limited effects on land uses within the study area, particularly as most construction activities would take place at the project site or within portions of sidewalks, curbs, and travel lanes of public streets immediately adjacent to the project site. Overall, while the construction at the site would be evident to the local community, the limited duration of construction would not result in
significant or long-term adverse impacts on local land use patterns or the character of the surrounding area.

**RODENT CONTROL**

Construction contracts would include provisions for a rodent (mouse and rat) control program. Before the start of construction, the contractor would survey and bait the appropriate areas and provide for proper site sanitation. During the construction the contractor would carry out a maintenance program, as necessary. Signage would be posted, and coordination would be maintained with appropriate public agencies. Only EPA- and NYSDEC-registered rodenticides would be permitted, and the contractor would be required to perform rodent control programs in a manner that avoids hazards to persons, domestic animals, and non-target wildlife.