3.19 CONSTRUCTION IMPACTS

INTRODUCTION

Construction impacts, although temporary, can have a disruptive and noticeable effect on the adjacent community and passing pedestrians. This chapter assesses the potential impacts of the construction of buildings expected to result from the proposed action.

As discussed below, construction-related activities resulting from the proposed action are not expected to have any significant adverse impacts on all impact categories except historic resources. As noted in Chapter 3.6, "Historic Resources," inadvertent construction- related damage could potentially occur to one eligible resource. This significant adverse impact would be considered unmitigated because development activity on development sites nearby or adjacent to this eligible resource would occur as-of-right under the proposed action.

METHODOLOGY

This EIS provides an assessment of the existing and future conditions with and without the proposed action. The following is a discussion of the potential effects associated with construction-related activities, including traffic, air quality, noise, archaeological resources, historic resources, natural resources, and hazardous materials.

FUTURE CONDITION WITH THE PROPOSED ACTION

The proposed action would result in the construction of new residential buildings and commercial buildings, as well as the conversion of some existing buildings that are primarily vacant or occupied with industrial and commercial uses to residential use. As described in other chapters of this EIS, the anticipated developments are expected to be medium to high density with building heights up to 400 feet tall along the Harlem River waterfront, and between 70 to 125 feet tall east of Exterior Street. In addition, the proposed action also includes the creation of a new approximately 2.26-acre park adjacent to the waterfront, plus a waterfront walkway.

Construction on the 31 projected development sites is assumed to be completed in the ten years following the adoption of the proposed action. New construction is projected on 20 of these sites; nine sites are expected to have an existing building converted but not expanded; and two sites are expected to have existing buildings converted and expanded. In addition, there are 48 potential development sites considered less likely to be developed over the ten-year analysis period, but which are considered potential sites for future development.

The sections below discuss the potential impacts resulting from the construction of the projected development sites as described in the Reasonable Worst Case Development Scenario (RWCDS) presented in Chapter 2.0, "Project Description."

3.19.1 CONSTRUCTION SCHEDULE AND ACTIVITIES

The RWCDS presented in Chapter 2.0, "Project Description," does not describe which of the sites would be developed first or assume a particular sequence of development. However, it is assumed that construction of all projected development sites would likely be completed by 2018. While market considerations will determine the demand for new residential and commercial development, it is reasonable to assume that a number of projected development sites may be under construction at the same time. However, given the wide geographic distribution of the projected development sites, this is not expected to result in a clustering of construction activities at any given location at any one time within the proposed action area.

Construction activities would normally take place Monday through Friday, although the delivery/installation of certain critical equipment could occur on weekend days. Construction staging would most likely occur on the projected and potential development sites themselves and may, in some cases, extend within portions of sidewalks, and curb and travel lanes of public streets adjacent to the construction sites. 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 during 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.

Following is a general outline of typical scheduling for the projected development sites. It should be noted, however, that the duration and extent of new construction activities would vary based on which site is being developed.

- *Months 1-4:* Site clearance, excavation, and foundation. The first four months of construction would entail 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 5-10:* Erection of the superstructure and underground parking foundation, where applicable. Once the foundations have been completed, the construction of the building's steel framework, parking lots, ramps 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.

3.19.2 POTENTIAL IMPACTS DURING CONSTRUCTION

Historic Resources

Archeological Resources

As described in Chapter 3.6, "Historic Resources," the NYC Landmarks Preservation Commission (LPC) reviewed the proposed action area to determine the potential archaeological sensitivity of the area. This was done to determine if the projected and potential developments could affect archaeological resources, as construction activities could result in excavation or other in-ground disturbance. LPC determined that the development sites are not archaeologically sensitive and therefore the proposed action would have no construction-related significant adverse impact on archaeological resources.

Architectural Resources

One designated resource is located within 90 feet of projected or potential development sites: Public School 31 at 425 Grand Concourse (Historic Resource #2, NYCL and NR listed) which is located across the street from, and within 90 feet of, projected development site 7 and potential development site 42. (See chapter 3.6, "Historic Resources" for more information.) As this resource is within 90 feet of a projected or potential development site, it could be adversely affected by construction activities at the development sites. The City has procedures for avoidance of damage to structures from adjacent construction with added protection for designated historic resources, which would be afforded to Public School 31.

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. In addition, the New York City Department of Buildings' *Technical Policy and Procedure Notice (PPN) #10/88*, supplements these procedures by requiring a monitoring program to reduce the likelihood of construction damage to adjacent NYCLPC-designated or S/NR-listed historic structures (within 90 feet). This monitoring program will detect at an early stage the beginnings of damage so that construction procedures can be changed. With these measures, significant, adverse construction-related impacts are not expected to Public School 31 (#2, NYCL and NR-listed).

Inadvertent construction-related damage could potentially occur to one eligible resource in the proposed action study area including the North Side Board of Trade (#1, (NR Potential). This significant adverse impact would be unmitigated because development activity on development sites within 90 feet of this eligible resource would occur as-of-right. With respect to construction-related impacts, the potential resource would be afforded some protection under DOB regulations applicable to all buildings located adjacent to construction sites; however, as the resource is not S/NR-listed or NYCLPC-designated, the resource is not afforded special protections under DOB's *TPPN 10/88.* The resource would be provided a measure of protection from construction as Building Code section 27-166 (C26-112.4), which requires 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. Additional protective measures afforded under DOB's *TPPN 10/88*, which apply to designated historic resources, would not be applicable in this case, unless the eligible resource is designated in the future prior to the initiation of construction. If this resource is not designated, however, it would not be subject to the above construction protection procedures and adjacent or nearby development resulting from the proposed action could potentially result in significant adverse construction-related impacts to this resource.

Natural Resources

As discussed in Chapter 3.9, "Natural Resources," the projected developments would occur on sites that have been previously developed or improved. Accordingly, as the locations affected by action generated construction do not contain any important natural resources, the proposed action is not expected to result in any significant adverse construction impacts related to natural resources.

As discussed in Chapter 3.11, "Waterfront Revitalization," a portion of the proposed action area, located west of Exterior Street, is classified by FEMA as Zone "A", areas of the 100-year flood, and Zone "B", areas of the 500-year flood. However, this area is not classified as floodway. Structures planned for this area would not be considered a significant encroachment and would not result in any increases in flood levels in surrounding areas. Development that may result is unlikely to affect the floodplain characteristics of the substantial Hudson/Harlem/East River system as construction in the floodplain would be dictated by the New York City Building Code. New York City's Local Law 33 of 1988 regulates construction in the 100-year floodplain. Shoreline conditions would be modified by replacement and improvement of existing shoreline structures, and the land at the water's edge and adjacent areas would be elevated to accommodate views to the Harlem River over the Oak Point Rail Link. Structures would be elevated on replacement structures above the floodplain. In all cases, habitable structures must be flood-proofed or raised above the 100-year floodplain. Therefore, the proposed action would not result in construction-related significant adverse impacts to natural resources.

Hazardous Materials

As described in Chapter 3.10, "Hazardous Materials," for all of the projected and potential development sites, (E) designations are recommended as part of the proposed zoning. The (E) designation requires that pre-development activities at each site include a Phase I Environmental Site Investigation (ESI) and, if necessary, a sampling protocol and remediation to the satisfaction of NYCDEP before the issuance of a building permit. Recommendations for (E) designations are based on whether the projected and potential development sites may have been adversely affected by current or historical uses at, adjacent to, or within 400 feet of these sites. By placing (E) designations on sites where there is a known or suspect environmental concern, the potential for an adverse impact to human health and the environment resulting from the proposed action is avoided. The (E) designation provides the City with the mechanism for addressing environmental conditions so that significant adverse impacts do not occur as a result of site development.

In addition to the sites receiving (E) designations, the proposed action would provide for the reuse of a 2.26-acre parcel adjacent to the north of projected development site #2 as a public park. A Phase I ESI was prepared to address potential contamination on the site. The results of this evaluation indicated that contamination may be present and that a sampling program should be undertaken to determine the nature and degree of the contaminations as part of a subsequent Phase II investigation. The City is committed to completion of Phase II Environmental Site Investigations for the park site. The Phase II ESI and testing protocols will be submitted for review and approval to the NYCDEP. Once the approved testing is completed, the City will complete the recommended remediation at the park site prior to the initiation of work. With these provisions in place, no significant adverse impacts are expected.

Demolition of interiors, portions of buildings or entire buildings are regulated by the NYC Buildings Department requiring abatement of asbestos prior to any intrusive construction activities including demolition. 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 any of the projected and potential development sites in the proposed action area.

With the requirements of the (E) designation on development sites and coordination with NYCDEP regarding the establishment of a new public park along the Harlem River waterfront, there would be no construction-related significant adverse impacts from the potential presence of contaminated materials.

Traffic and Parking

The proposed action would result in residential and commercial development and some community facility development on 31 projected development sites in the 10 years following the adoption of the proposed action. These developments would replace existing uses on the development sites, including warehouse/manufacturing, transportation/utility, commercial, vacant buildings, and vacant land. Construction of the projected developments anticipated to result from 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 likely occur between 7:00 AM and 4:00 PM. Construction workers would typically arrive before the AM peak commuter period and depart before the PM peak hour, and therefore would not represent a substantial increment during the area's peak travel periods. Truck movements typically would 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 development sites. 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 at times would result in temporary closings of sidewalks adjacent to the sites.

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 either public transportation or private automobile to travel to and from the development sites. As with other workers in the area, parking demand may be accommodated either on-street or at public off-street parking facilities available in the area. However, as discussed in Chapter 3.15, on-street parking is nearly fully utilized during the weekday and off-street availability is limited and expected to become more so in the future. Therefore, it may be necessary for construction workers to seek parking beyond the parking study area radius of ¼ mile from any construction site within the rezoning area.

Overall, no construction-related significant adverse impacts to traffic and/or parking would be expected to occur as a result of the proposed actions.

Air Quality

Construction activity has the potential to impact local air quality due to fugitive dust (particulate) emissions from land clearing operations and mobile source emissions (hydrocarbons, nitrogen oxide, and carbon monoxide).

Fugitive Emissions

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. The United States Environmental Protection Agency (EPA) has suggested, in general, an overall emission rate of about 1.2 tons of particulate matter per acre per month of active construction from all phases of land clearing operations with no fugitive dust control measures. However, this is a national estimate and actual emissions would vary widely depending on many factors, including the intensity and type of land clearing operations. 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 development sites. Therefore, the fugitive source emissions generated by the proposed action would not be significant.

Mobile Source Emissions

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.

The number of construction-related vehicle trips generated by the proposed action would be relatively small. Additionally, the emissions from such vehicles as well as from construction equipment would occur over the 10 years following the adoption of the proposed action and be dispersed throughout the proposed action area and vicinity. Therefore, there would be no construction-related significant adverse impacts from potential mobile source emissions.

Noise

The operation of construction equipment on the projected development sites, as well as construction and delivery vehicles traveling to and from the sight, could temporarily impact noise and vibration levels in the community during the construction period. 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 (refer to Table 3.19-1). Noise caused by construction activities would vary widely, depending on the phase of construction—land clearing and excavations, foundation and capping, erection of structural steel, construction of exterior walls, etc.—and the specific task being undertaken.

Construction noise associated with the proposed action is expected to be similar to noise generated by other residential and commercial construction projects in the city. Increased noise levels caused by construction activities can be expected to be most significant during the early phases of construction. The most significant noise source associated with the construction equipment would be the use of pile-drivers. This intrusive noise would be heard by the employees at surrounding businesses and the residents who live within several blocks of the development sites; however, this construction noise would be temporary in nature.

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 development sites.
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 7:00 AM and 6:00 PM; and that construction material be handled and transported in such a manner as not to create unnecessary noise. These regulations would be 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.

Thus, while there may be short periods of time when noise is greater than the Noise Control Code, these regulations would be followed in such a matter that no significant adverse impacts would be expected to result from the proposed action.

Table 3.19-1
Typical Noise Emission Levels for Construction Equipment

Equipment Item	Noise Level at 50 Feet (dBA)
Air Compressor	81
Asphalt Spreader (paver)	89
Asphalt Truck	88
Backhoe	85
Bulldozer	87
Compactor	80
Concrete Plant	831
Concrete Spreader	89
Concrete Mixer	85
Concrete Vibrator	76
Crane (derrick)	88
Delivery Truck	88
Diamond Saw	902
Dredge	88
Dump Truck	88
Front End Loader	84
Gas-driven Vibro-compactor	76
Hoist	76
Jackhammer (Paving Breaker)	88
Line Drill	98
Motor Crane	83
Extractor	101
Pump	76
Roller	80
Shovel	82
Truck	88

Notes:
1 Wood, E. W. and A. R. Thompson, *Sound Level Survey, Concrete Batch Plant: Limerick Generating Station*, Bolt Beranek and Newman, Inc., Report 2825, Cambridge, MA, May 1974.
2 New York State Department of Environmental Conservation, *Construction Noise Survey*, Report No. NC-P2, Albany,
NY, April 1974.

Sources: Patterson, W. N., R. A. Ely, and S. M. Swanson, *Regulation of Construction Activity Noise*, Bolt Beranek and
Newman, Inc., Report 2887, for the Environmental Protection Agency, Washington, D. C., November 1974. Except for footnoted items.

CONCLUSION

Construction-related activities resulting from the proposed action are not expected to have any significant adverse impacts on any impact category except historic resources.

Inadvertent construction-related damage could potentially occur to one eligible historic resource. This significant adverse impact would be unmitigated because development activity on development sites nearby or adjacent to this eligible resource would occur as-of-right.

With respect to construction-related impacts, this resource would be afforded limited protection under DOB regulations applicable to all buildings located adjacent to construction sites; however, since the resource is not S/NR-listed or NYCLPC-designated, it would not be afforded special protections under DOB's *TPPN 10/88*. The resource would be provided a measure of protection from construction as New York City Building Code Section 27-166 (C26-112.4), which requires 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. Additional protective measures afforded under DOB *TPPN 10/88*, which apply to designated historic resources, would not be applicable in this case, unless the eligible resource is designated in the future prior to the initiation of construction. If the resource is not designated, however, it would not be subject to the above construction protection procedures, and may therefore be adversely impacted by adjacent development resulting from the proposed action.

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, NYCDOB, NYCDEP, and NYCEDC (where applicable), among others.