# PUBLIC SAFETY ANSWERING CENTER II
# CHAPTER 16: CONSTRUCTION IMPACTS

## A. INTRODUCTION

This chapter assesses the potential impacts of the construction of new buildings and infrastructure expected to result from the Proposed Action within and adjacent to the Project Site in the Pelham Parkway area of the Bronx. Construction stages and activities are first described, followed by types of impacts likely to occur during construction, and an assessment of methods that may be employed to minimize those impacts. The following chapter discusses the potential impacts resulting from the construction of the proposed Public Safety Answering Center (PSAC II) development on the approximately 8.75-acre site, as well as the establishment of a new public street, "Marconi Street," which would extend north of Waters Place to the southern boundary of the development site generally following the roadway of an existing private access roadway, Industrial Street.

Elements of the Proposed Action include the mapping of a public street and the construction of a new public facility, PSAC II, for the City of New York (the "City"), which would be a parallel operation to the existing PSAC I in Brooklyn. The Proposed Action would result in the construction of two new buildings, including an approximately 640,000 gross square foot (gsf) office building and a 500-space accessory parking structure ("proposed development") on the proposed development site, as well as infrastructure improvements within and immediately adjacent to the Project Site. The proposed office building would contain up to 14-stories (350 feet with an elevation of 374 feet) above-grade plus a single cellar level, and the accessory parking facility is expected to have three levels with rooftop green space. The proposed public street would extend north of Waters Place from a point located approximately 420 feet east of Eastchester Road for approximately 3,340 feet (0.63 miles) along the western edges of the New York State operated Bronx Psychiatric Center and the Hutchinson Metro Center office complex ("Hutchinson Metro Center") properties to the southern boundary of the proposed development site.

A Build year of 2012 is assumed for the Proposed Action, as it is reasonable to expect that the infrastructure improvements, including the establishment of Marconi Street would be implemented by then. For analysis purposes, all components of the Proposed Action are assumed to be implemented by 2012.

The conclusion of this analysis is that there would be some traffic disruption, due principally to the temporary addition of construction vehicles to the existing traffic network and some short-term construction-related noise. Other types of impacts would either be mitigated or restricted to areas within the Project Site boundaries.

## B. DESCRIPTION OF CONSTRUCTION ACTIVITIES AND SCHEDULE

Construction of the proposed PSAC II development, including related infrastructure improvements, is expected to have a duration of approximately three and a half years (42 months).

### Infrastructure Improvements

The Proposed Action involves the mapping of a new public street that would generally follow an existing private access roadway, Industrial Street, which extends north of Waters Place from a signalized intersection located to the east of the intersection of Eastchester Road and Waters Place. The proposed street segment would be mapped at a width of 60 feet for approximately 1,790 feet and 50 feet for approximately 1,550 feet. It would operate as a two-way street and would terminate in a hammerhead cul-de-sac at the southern boundary of the proposed development site. Improvements to the existing private roadway include removal of existing asphalt paving, regrading of the roadway as necessary, installing new curbs, sidewalk, and pavement, as well as installation of traffic control devices (signals, signs and striping) as needed. The grading for the sidewalks and street would use backhoes and be finished by hand labor. The new street and adjoining sidewalks would be designed and constructed to New York City Department of Transportation (NYCDOT) specifications.

The establishment of a public street would also involve the installation of several infrastructure improvements including water main with water valves and hydrants, and connection to existing water main system; storm sewer including catch basins and manholes, and connection to the existing storm sewer system; and sanitary sewer and connection to the existing sanitary sewer system. All new water and sewer lines would be designed and built in coordination with the New York City Department of Environmental Protection (NYCDEP) and would meet all of NYCDEP's requirements. In addition, electrical and telecommunications cables would also be installed within the proposed street.

It is expected that the proposed street would be built towards the end of the construction. As Industrial Street serves as the only vehicular entrance to Hutchinson Metro Center and the proposed development site, the proposed street would be constructed in segments to maintain vehicular access to the Hutchinson Metro Center, and allow construction workers and deliveries to access the proposed development site. A 24-foot wide two-lane roadway would be maintained at all times. The construction of the proposed street would be coordinated between the City and the Hutchinson Metro Center.

### Proposed Development

The Proposed Action would facilitate the construction of an approximately 640,000 gsf office building containing up to approximately 14-stories (350 feet with an elevation of 374 feet) and 500-space accessory parking facility with three levels and rooftop green space. If all necessary approvals are granted, construction of the proposed development is expected to commence in 2009, and continue for duration of approximately 42 months, with move-ins beginning in mid 2012. It is expected that the proposed development would be fully occupied by the end of 2012, and therefore this is the analysis year used for analysis purposes throughout this draft Environmental Impact Statement (DEIS).

Construction would proceed in several stages, some of which would overlap, including: environmental remediation, site preparation, foundations, and below-grade construction (including excavation, grading and infrastructure improvements); superstructure construction; and building finishes, parking, and final site finishes and improvements (e.g., sidewalks, landscaping, lighting).

Typical equipment used for excavation and pouring foundation would include cranes, jackhammers, loaders, pneumatic rock excavating rigs, and dump trucks. Equipment that would be used in construction would include excavators, cranes, dump trucks, pumps, exterior hoists, and concrete trucks. Trucks would remain in use for material supply and construction waste removal. It is expected that the construction of the core and shell would employ the greatest number of construction workers, and a wide variety of supplies would have to be delivered to the site.

Construction activities would normally take place on Monday through Friday, although the delivery and installation of certain critical pieces of equipment could occur during off-peak hours (i.e., nighttime or weekend hours). Hours of construction are regulated by the New York City Department of Buildings (NYCDOB) and apply in all areas of the City. In accordance with those regulations, almost all work could occur between 7:00 AM and 6:00 PM on weekdays, although some workers would arrive and begin to prepare work areas before 7:00 AM. Typically, work would end at 3:30 PM, but could be extended until 6:00 PM for 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. Extended workday activities may not include all construction workers on site, but only those involved in the specific task. Extended workdays would occur during foundation and superstructure tasks, and limited extended workdays could occur during other tasks over the course of construction.

Occasionally, Saturday or overtime hours would be required to complete some time-sensitive tasks. Weekend work requires a permit from the NYCDOB and, in certain instances, approval of a noise mitigation plan from the NYCDEP under the City's Noise Code. The New York City Noise Control Code, as amended December 2005 and effective July 1, 2007 limits construction (absent special circumstances as described below) to weekdays between the hours of 7:00 AM and 6:00 PM, and sets noise limits for certain specific pieces of construction equipment. Construction activities occurring after hours (weekdays between 6:00 PM and 7:00 AM and 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 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 be on Saturday from 7:00 AM with worker arrival and site preparation to 5:00 PM for site cleanup.

Access to the proposed development site would be tightly controlled. The work area 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. Unauthorized access would be prevented after work hours and over the weekends. Material deliveries to the site would be highly controlled and scheduled. Unscheduled or haphazard deliveries would not be allowed. To aid in adhering to the delivery schedules, flaggers would be employed at each of the entry and exit gates. The flaggers would control trucks entering and exiting the site, so that they would not interfere with one another and minimize disruptions to local on-street traffic.

Construction staging would most likely occur within the proposed development site itself. Due to the relative isolation of the proposed development site, construction efforts would not be expected to extend into adjacent streets or effect pedestrian circulation. Appropriate measures would be taken to maintain pedestrian access between the Pelham Parkway and the Hutchinson Metro Center at all times.

## Environmental Remediation

Construction of the proposed PSAC II development would begin with environmental remediation to address hazardous materials currently existing on the site. The environmental remediation would be conducted under a Remedial Work Plan (RWP) and Health and Safety Plan (HASP) to be approved by the NYCDEP. The New York State Department of Environmental Conservation (NYSDEC) must also approve any remedial plans related to spill cleanup.

As described in Chapter 7, "Hazardous Materials" and in Chapter 18, "Mitigation," measures would be taken to avoid potential adverse impacts during construction activities due to the presence of subsurface soil and groundwater contamination resulting from on-and potentially off-site sources and lead-based paint. Excavation and construction activities could disturb hazardous materials and increase pathway for human exposure. However, impacts would be avoided by performing construction activities in accordance with the following protocols:

- All material that needs to be disposed of (e.g., excess fill or fill unsuitable for reuse due to contamination) would be disposed of off-site in accordance with applicable federal, state, and local requirements. In the event that soil containing petroleum is discovered during excavation activities (e.g., through staining, discoloration, or odor), such soil would be segregated, stockpiled, sampled for characterization purposes sufficient to meet the requirements of the applicable disposal facility, transported off-site by a licensed transporter and disposed of in an approved treatment or disposal facility in accordance with all applicable federal, state, and local regulations and guidelines. If soil containing other potentially contaminated (non-petroleum) material (e.g., stained soils, odors, etc.) is discovered during excavation, such soil would also be segregated, stockpiled, sampled to determine whether the material requires off-site disposal or can be reused on site under impervious surfaces or the acceptable impacted soil cap. If the material requires off-site disposal, the sampling would meet the applicable regulations and guidelines. Soil with no indication of petroleum or other contamination could be reused on-site under impervious surfaces or the acceptable imported soil cap.

- If dewatering is required for construction, there would be a potential for contact with contaminated groundwater. Testing to date indicated that, except for one Temporary Test Well (TWP) point location, the groundwater would meet NYCDEP sewer discharge requirements. The sample collected at TWP05, located along Industrial Street near the ball fields on the Bronx Psychiatric Center's campus, exceeded NYCDEP's sewer discharge limit for lead in the unfiltered metals treatment. Based on this finding, additional testing would be performed, as conditions may vary around the Project Site, and if necessary, pretreatment would be conducted prior to the water discharge to the City's sewer system, as required by the NYCDEP permit/approval requirements. If discharge into storm sewers is required during dewatering, additional sampling and laboratory analysis would be conducted, as required by the NYSDEC State Pollutant Discharge Elimination System (SPDES) permit/approval requires.

- Since much of the soil sampled does not meet the most stringent guidelines for unrestricted use, any area that would not be covered by imperious surfaces would be capped with at least two feet of certified, clean fill and vegetative top soil.

- Due to the presence of Target Compound List (TCL) Volatile Organic Compounds (VOCs), TCL Semi-Volatile Organic Compounds (SVOCs), and metal concentrations above applicable standards at the Project Site, a Community Air Monitoring Plan (CAMP) would be developed in accordance with the NYSDEC DER-10 Regulations to minimize

potential airborne contaminants release as a direct result of construction activities. The CAMP requires real-time monitoring for VOCs and particulates (i.e., dust) at the downwind perimeter of each designated work area when certain activities are in progress at contaminated sites.

- All activities involved disturbance of existing soils would be conducted in accordance with a HASP that would detail measures to reduce the potential for exposure (e.g., dust control procedures for SVOCs and metals) and a soil management plan (SMP) would include measures to identify and manage known contamination and unexpectedly encountered contamination. The HASP would meet the requirement set forth by the Occupational, Safety and Health Administration (OSHA), the New York State Department of Health (NYSDOH), the NYCDEP, and any other applicable regulations.

- Any activities with the potential to disturb lead-based paint, such as the removal of the chain-link fencing from the site, would be performed in accordance with the applicable Occupational Safety and Health Administration regulation (OSHA 29 CFR 1926.62 - Lead Exposure in Construction).

With the implementation of these measures, no significant adverse impacts related to hazardous materials would result from demolition and/or construction activities on the Project Site.

## Site Preparation, Foundations, and Below-Grade Construction

Typically, soil excavation and foundation construction for a development of this size takes approximately seven to nine months to complete, and can be carried out concurrently with hazardous materials sampling, and, as required, remediation and disposal. Excavation and foundation work includes the use of bobcats, rockbreakers, loaders, pumps, motorized concrete buggies, concrete pumps, jackhammers, pneumatic compressors, and a variety of small, mostly handheld tools, as well as dump trucks and concrete trucks.

The Project Site would be excavated for utilities and below grade uses. As mentioned above, all material that needs to be disposed of (e.g., excess/unsuitable fill) would be disposed of off-site in accordance with applicable federal, state, and local requirements. In addition, any contaminated soil encountered during excavation would be properly disposed of. The site would be graded so that the foundations could be excavated, and final elevations established. The paved accessory parking lots occupying the southern portion of the development site would be cleared.

Following grading, construction of the proposed accessory parking facility and office building's foundation and below-grade elements would begin. Foundation work would include pile driving and pouring concrete footings and foundation. Ready-mix concrete trucks would deliver concrete to the site. For structures of this type, the foundations would typically be slab on-grade with supporting piles. Blasting is not anticipated to occur during construction. This phase of work is expected to require approximately 9 to 12 months. Construction equipment would include pneumatic rock excavating rigs, excavators, cranes, dump trucks, pumps, and concrete trucks.

## Superstructure

Following installation of foundations, the construction of the parking facility and office building's superstructures would commence, including the construction of building shell and core. Construction of the exterior enclosure or "shell" would include construction of the building's framework

(installation of beams and columns), floor decks, facades (exterior walls and cladding) and roof construction. These activities would require the use of tower cranes, compressors, personnel and material hoists, front-end loaders, concrete pumps, on-site bending jigs, welding machines, and a variety of handheld tools, in addition to the delivery trucks bringing construction materials to the site.

Construction of the buildings' superstructures is anticipated to last approximately 6 to 16 months. As the frame is installed, work would commence on interior infrastructure— mechanical, electrical, and plumbing systems—and enclosure. This would include the installation of heating, ventilation, and air conditioning (HVAC) equipment and ductwork, the running of electrical lines within the building, and interior installation of water supply and wastewater pumping. Installation and checking of elevator and life safety systems would also take place at this stage. Interior construction would take approximately 8 to 12 months. It would be phased to overlap with the completion of the core and shell so that a significant amount of interior work is performed before the core and shell are completed. Equipment used during interior construction would include exterior hoists, pneumatic equipment, delivery trucks, and a variety of small handheld tools.

### Building Finishes and Sidewalks

This phase of building construction is the exterior and interior finishes. The work would involve final roofing and finishing details on the exterior walls. While this construction is taking place, the sidewalks would be built. This phase would overlap with the superstructure phase and is anticipated to take about 10 to 12 months. Thus, between the superstructure and building finishes, these two phases of construction should take about 24 months. Equipment used during interior construction would include exterior hoists, pneumatic equipment, and delivery trucks.

## C. POTENTIAL IMPACTS DURING CONSTRUCTION

Construction of the proposed PSAC II development may be disruptive to the surrounding area during the approximately 42-month construction period. In accordance with guidelines presented in the *CEQR Technical Manual*, the technical areas for which the potential for impact is assessed include land use and neighborhood character, socioeconomic conditions, community facilities, open space, historic resources, natural resources, hazardous materials, infrastructure, traffic and parking, transit and pedestrian, air quality, and noise impacts.

### Land Use And Neighborhood Character

A construction impact analysis of land use and neighborhood character would typically be needed if construction requires continuous use of property for an extended duration, thereby affecting the nature of the land use and character of the neighborhood. This may occur, for example, if construction activity (such as staging) would occur on a particular site in a neighborhood for an extended period of time.

As is typical with large construction projects, the proposed development would cause some disruptions to activities in the surrounding area, particularly during periods of peak construction activity. These disruptions would be temporary in nature with overall construction anticipated to last 42 months. Construction would not alter surrounding land uses, although certain types of activities would be intrusive to adjacent mapped open spaces areas abutting the site to the north and east. The Pelham and

the Hutchinson River Parkways, and an Amtrak right-of-way generally sever the proposed development site from surrounding residential areas, and therefore, the area of the proposed construction is largely separated from the community, and such disruptions would not be significant. The closest residential uses are located more than 500 feet from the site across the Pelham and the Hutchinson River Parkways. Additionally, in the latter stages of construction, when work would take place primarily within building shells, effects on surrounding uses would be substantially reduced. Vehicular access to the Hutchinson Metro Center would be maintained at all times when the proposed street is being built.

An appropriate protective barrier (fence) would be installed on the perimeter of the proposed development site to protect the public. This fencing would reduce potentially undesirable views of the construction site and buffer noise emitted from construction activities. All construction-staging activities, including the storage of materials and equipment would occur within the development site, therefore disruptions to the surrounding area would be minimized and would not alter surrounding land uses or intrude on neighborhood character. The construction of the proposed development would be similar to construction at any other site in the city, and the NYCDOB would regulate the hours of construction operation.

There would be a temporary increase in noise levels in the immediate vicinity of the site due to the operation of the on-site construction equipment and construction trucks and construction workers coming to and from the site, and loading and unloading, but this would not result in a significant change in neighborhood character given the current nature of the commercial, light-industrial/warehousing and transportation uses in the immediate vicinity of the proposed development site.

The Proposed Action would not result in significant or long-term adverse impacts on the local land use patterns or the character of the nearby area, as construction activities would be temporary in nature with external construction lasting slightly less than three years.

## Socioeconomic Conditions

A detailed analysis may be conducted if a proposed action would entail construction of a long duration that could affect the access and therefore viability of a number of businesses, and could cause the failure of those businesses and affect neighborhood character.

Construction of the proposed development would not result in any temporary or long-term significant adverse impacts on socioeconomic conditions in the study area. The proposed development site is relatively severed from the surrounding area, bounded by the associated mapped open space of Pelham and the Hutchinson River Parkways to the north and east, respectively, and partially bounded by the Amtrak right-of-way to the east. Therefore, area commercial businesses located in the vicinity of the Project Site would not be disrupted due to such construction activities. As noted above, access to businesses near the Project Site would not be impeded, and most businesses are not expected to be significantly affected by any temporary reduction in the amount of pedestrian foot traffic that could occur as a result of construction activities. During the construction of the proposed public street, vehicular access to the Hutchinson Metro Center would be maintained at all times. An approximately 24-foot two-way roadway would be maintained at all times to allow the employees, and visitors of businesses at the Hutchinson Metro Center and Mercy College’s faculty, staff and students to access the Hutchinson Metro Center.

It should be noted that construction of the proposed development would have direct, positive economic impacts resulting from expenditures on labor, materials, and services as well as generated

indirect benefits created by expenditures by material suppliers, construction workers, and others involved in development on the Project Site. Based on preliminary estimates, the total investment for the construction of the proposed PSAC II development is estimated at approximately $650 million (in 2007 dollars) in hard costs (actual construction).

As a result of the direct expenditure associated with the proposed development ($650 million in construction costs), the direct employment based is estimated at about 3,769 person years of employment (a person year is equivalent of one employee working full-time for one year). In addition to direct employment, the total employment resulting from construction expenditures would also include jobs in business establishments providing goods and services to the contractors and resulting indirect and generated employment. The total direct and generated jobs from the construction of proposed PSAC II development are estimated to generate an additional 2,074 person-years of employment in New York City, bringing the total direct and generated jobs from the construction of the proposed development to 5,843 person years. In the larger New York State economy, it is estimated that the proposed development would generate 7,495 person years of indirect employment, bringing the total direct and generated jobs from the construction of the project to 11,264 person years of employment.

The direct wages and salaries during construction period are estimated at approximately $188 million. Total direct and generated wages and salaries resulting in New York City from construction of the proposed development are estimated at approximately $273 million. In the broader New York State economy, including New York City, total direct and generated wages and salaries from construction of the project are estimated at approximately $519 million.

## Community Facilities

A construction impact analysis may be conducted for any community facility that would be directly affected by construction (e.g., if construction would disrupt services of the facility, change an entrance, or close the facility temporarily, etc.).

There are no community facilities within or immediately adjacent to the Project Site. Construction of the proposed development would not block or restrict access to any facilities in the area, and would not affect emergency response times significantly. NYPD and FDNY emergency services and response times would not be significantly affected due to the geographic distribution of the police and fire facilities and their respective coverage areas. Although community facilities in the area may be affected by construction noise, they would not experience significant adverse impacts.

## Open Space

According to the *CEQR Technical Manual*, a construction impacts analysis for open space may be conducted if an open space resource would be used for an extended period of time for construction-related activities, such as construction staging, or if access to the open space would be impeded during construction activities.

Construction activities would not displace any existing open spaces. Construction of the proposed PSAC II development would occur in close proximity to the associated mapped open spaces of the Pelham Parkway and the Hutchinson River Greenway. All open spaces are expected to remain open during the entire construction period, and access to these open spaces would not be compromised at any time. As described in the Transit and Pedestrians section below, appropriate measures would be taken to maintain pedestrian access between the Pelham Parkway and the Hutchinson Metro Center.

Construction activities would be conducted with the care mandated by the close proximity of open spaces to the proposed development site. Dust control measures—including watering of exposed areas and dust covers for trucks—would be implemented to ensure compliance with Section 1402.2-9.11 of the New York City Air Pollution Control Code, which regulates construction-related dust emissions.

During heavier periods of construction, construction activities on the site would at times be disruptive or noticeable to users of the Pelham Parkway malls and pedestrian pathway and the Hutchinson River Greenway, which border the northern and eastern edges of the proposed development site. Construction activities are noisy (e.g., pile driving, truck traffic), and this noise would be perceptible at along these linear green spaces (see discussion under "Noise"). However, the impacts associated with the construction of the proposed development would be temporary, and therefore, would not be considered significant adverse impacts to park users.

## Historic Resources

Construction impacts may occur on historic resources if in-ground disturbances or vibrations associated with project construction undermines the foundation or structural integrity of nearby historic resources. These impacts are typically assessed for any action involving construction activities within 400 feet of a historic resource. There are no known architectural resources on the Project Site, nor are there any historic structures within a 400-foot radius of the site. Therefore, development on the proposed development would not to have any direct, physical effects on these off-site resources.

The New York City Landmarks Preservation Commission (NYCLPC) has determined that the Project Site is not sensitive for archaeological resources and therefore, construction on the Project Site would not result in any significant adverse impacts on archaeological resources.

## Hazardous Materials

The construction-period hazardous materials impacts of the proposed PSAC II development are described above in "Environmental Remediation."

## Infrastructure

Infrastructure impacts may occur if project construction would affect or disrupt infrastructure service for extended or intermittent periods over a long period of time—for example, if in-ground construction would disturb a water main causing a long-term interruption in service. Another example for a large project would be the extensive number of construction-related heavy trucks and their effect on pavement conditions. If such disruptions were expected, a more detailed analysis would be warranted.

As the Proposed Action will add to the existing infrastructure system, no disruptions of existing services are expected (except to make connections, typically carried out overnight or during off-periods). All infrastructure improvements would meet the standards and specifications of NYCDEP and would have to be approved by that agency. NYCDEP regularly repairs, relocates, and replaces water and sewer lines without disruption to service. Therefore, no significant adverse impacts to the infrastructure systems or to users are expected.

As with the water and sewer lines, new electrical and telecommunication service lines would have to be connected to the proposed development. Energy and telecommunications suppliers regularly repair, relocate and replace lines without disruption to service. Therefore, no significant adverse impacts to the systems or to its users are expected.

## Traffic and Parking

A construction impact analysis of traffic is typically conducted when construction activity is expected to be long term and would generate sufficient traffic from employees and trucks to cause potential traffic impacts, or would result in lane closings or traffic diversions, disrupting area traffic flow. Construction of the proposed development is not expected to create extensive or long-term construction-related impacts on traffic or parking conditions in the surrounding area.

It is anticipated that all construction staging for the proposed development would be accommodated on-site, and no street closures are expected. As described above, during the construction of the proposed development, vehicular access to the Hutchinson Metro Center would be maintained at all times. A maintenance and protection plan of traffic (MPT plan) would be prepared in coordination with the NYCDOT to maintain safe and convenient vehicular access to the Hutchinson Metro Center and proposed development site during construction of the proposed PSAC II facility and the reconstruction of Industrial Street (proposed public street). Traffic impacts can be minimized using construction sequencing and lane closure management measures within an overall MPT plan. The MPT plan would require that a 24-foot wide, two-way roadway be maintained at all times during construction to provide access between Waters Place and the Hutchinson Metro Center and proposed development site. This would allow for one moving lane in each direction as is currently provided along the existing Industrial Street.

During construction, there would be new vehicle trips to and from the Project Site, including trips generated by construction workers traveling to and from the site, and truck trips associated with the movement of material and equipment, as well as construction waste. The number of construction workers on-site at any one time, and the number of daily truck trips to and from the site would vary, depending on the stage of construction. Although a detailed construction plan has yet to be finalized, based on other construction projects in New York City, it is estimated that the average number of construction workers on-site would be as follows:

- The below-grade work, including excavation, grading, and foundations, would require an average of approximately 35 workers on-site depending on the exact tasks being performed.
- Workers required for the construction of the core and shell would average about 300 workers but could reach as high as 400 during some periods.
- Workers involved in interior construction would typically average approximately 150 on-site at any one time, with a maximum of approximately 250 during some periods.[1]

Construction would predominantly occur between 7:00 AM and 3:30 PM during weekdays. Construction workers would usually 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. Given the Project Site's location more than a ½-mile away from any subway station, most construction workers would likely use private automobiles to access the site, and would likely travel routes similar to those that would be used by PSAC II employees in the future with the

[1] The average number of construction workers for construction phases is based on data from the *New York Stock Exchange- New Facility FEIS,* December 2000.

Proposed Action. It is expected that the proposed accessory parking structure containing 500 spaces would be constructed early in order to provide parking on-site for construction workers.

Based on 2000 Census reverse journey to work data, approximately 74 percent of workers in the surrounding area drive to work and approximately 1.3 percent arrive by taxi. As construction workers are often required to travel to a work site with the tools of their trade, it is possible that they would have a somewhat higher auto mode share than typical workers in the area. For the purposes of determining construction worker travel demand, it is conservatively assumed that approximately 80 percent of construction workers would drive to the site. Assuming a vehicle occupancy of 1.14 persons per auto/taxi (based on 2000 Census reverse journey to work data), it is estimated that construction workers would generate approximately 290 vehicle trips during the weekday 6:30 to 7:30 AM and 2:30 to 3:30 PM hours during periods of peak construction. (This estimated conservatively assumes that all construction worker trips would occur during the peak hours.) It should be noted that worker trips during construction are expected to occur during the same peak hours, as would trips by PSAC II employees once the proposed development is completed.

As noted above, in addition to auto and taxi trips by construction workers, construction of the proposed development would generate truck trips associated with the movement of material and equipment, as well as construction waste. Truck movements would typically be spread throughout the day on weekdays, and would generally occur between the hours of 7:00 AM and 3:30 PM, depending on the period of construction. When possible, the scheduling of deliveries and other construction activities would take place during off-peak travel hours. Truck holding and staging would typically be accommodated on the development site.

Trucks en route to and from the proposed development during construction would use NYCDOT-designated truck routes to access the Project Site. Based on data from other construction projects in New York City, it is anticipated that construction of the proposed PSAC II development would generate from 20 to 30 truck trips over the course of a weekday during periods of peak construction activity. Conservatively assuming that roughly 20 percent of these trips occur during each peak hours, approximately six peak hour truck trips would occur during periods of peak construction.

Overall, it is anticipated that during periods of peak construction activity, upwards of approximately 296 auto, taxi and truck trips would be generated in each peak hour. As discussed in Chapter 12, "Traffic and Parking," under the typical operating conditions, the proposed PSAC II development would generate an estimated 366 vehicle trips in the weekday AM peak hour and 372 vehicle trips in the midday. As the net increase in vehicle trips at analyzed intersections during construction would be smaller than the net increase resulting from the Proposed Action, it is anticipated that traffic impacts during construction would be fewer in number and of lesser magnitude than with the typical operating condition of the proposed PSAC II development. The mitigation measures developed to address the Proposed Action's significant adverse traffic impacts (refer to Chapter 18, "Mitigation") would therefore fully mitigate any traffic impacts likely to result from vehicle trips at the Project Site during construction of the proposed PSAC II development. As such, some or all of these measures may need to be implemented during the proposed development's construction phase.

## Transit and Pedestrians

A construction impact analysis of transit and pedestrian facilities may be conducted when construction activity is expected to be long in term with a closure, relocation or narrowing of a pedestrian facility (sidewalk, walkway or stairway) or transit access (bus stop or subway entrance) to allow for construction related activity.

Construction activity at the Project Site is not expected to impact any existing transit facilities. Appropriate measures would be taken to maintain pedestrian access between the Pelham Parkway, which the Bx 12 bus route travels along, and the Hutchinson Metro Center during all construction efforts. In all cases, pedestrian access would be maintained, with provisions for pedestrian safety (such as barriers, signage, sidewalk sheds, etc.) implemented as required by City building codes and NYCDOT.

Considering that pedestrian trips generated by construction workers would occur during off-peak hours, primarily along pedestrian routes with low to moderate background pedestrian traffic, no significant adverse impacts associated with the projected increment of construction-related pedestrian trips are anticipated. Appropriate measures for maintaining temporary sidewalks and overhead protections would be provided throughout construction.

## Air Quality

Possible impacts on local air quality during construction of the proposed development on the Project Site include:

- Fugitive dust (particles and particulate matter) emissions from land clearing operations, excavation, materials transfer, and vehicle travel on paved and unpaved roads;
- Mobile source emissions, including hydrocarbons, nitrogen oxide, and carbon monoxide.

New York City Local Law 77 was passed in December 2003 in order to reduce air pollutants emitted by non-road construction equipment used on City projects. This law requires the use of ultra-low sulfur diesel (ULSD) and "best available technology" (BAT) for reducing emissions from non-road equipment greater than 50 horsepower. The law applies to "any diesel-powered non-road vehicle that is owned by, operated by or on the behalf of, or leased by a City Agency." Therefore, construction projects undertaken by city agencies, either directly or through contractors, would be required to meet the requirements of Local Law 77. Adherence to Local Law 77 would reduce the level of emissions from the on-site construction equipment and from the trucks transporting material to and from the construction sites.

### *Fugitive Emissions*

Fugitive dust emissions could occur from land clearing, excavation, hauling, dumping, spreading, grading, compaction, wind erosion, and traffic over paved and 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 type of fugitive dust control methods employed. The USEPA 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 may 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 (greater than 100 microns in diameter), which are expected to settle within a short distance (within 20 to 30 feet) 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 PSAC II development on the Project

Site. As a result, no significant air quality impacts from fugitive dust emissions would be anticipated during construction.

### *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 houses wherever possible;
- The existing number of travel lanes would be maintained to the maximum extent possible;
- Idling of delivery trucks or other equipment would not be permitted during unloading or other inactive times.

While it would be expected that there would be a localized increase in mobile source emissions, these emissions are not expected to significantly impact air quality. Moreover, any such impacts, while minimal, would also be temporary. Therefore, no significant air quality construction impacts from mobile sources are anticipated.

## Noise

Impacts on noise levels during construction of the proposed PSAC II development include noise and vibration from construction equipment operation, and noise from construction and delivery vehicles traveling to and from the site. The severity of impact 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. Typical noise levels of construction equipment that may be employed during the construction process are listed in Table 16-1. Noise levels caused by construction activities would vary widely, depending on the phase—land clearing and excavations, 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 stages of construction. The most significant noise source associated with the construction equipment would be the use of jackhammers, paving breakers, and pile drivers. This noise would be intrusive and would be heard by the employees at surrounding businesses and the residents that live within several blocks of the Project Site. 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 Project Site.

Construction noise is regulated by the New York City Noise Control Code and by USEPA 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 carefully followed. In addition, appropriate low-noise emission level equipment and operational procedures would be used. Directives to the construction contractor would ensure compliance with noise control measures.

Therefore, construction noise at the Project Site would be similar to other development projects in the city, and would not result in significant adverse impacts.

**TABLE 16-1**
**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 | 83 (1) |
| Concrete Spreader | 89 |
| Concrete Mixer | 85 |
| Concrete Vibrator | 76 |
| Crane (derrick) | 76 |
| Delivery Truck | 88 |
| Diamond Saw | 90 (2) |
| Dredge | 88 |
| Dump Truck | 88 |
| Front End Loader | 84 |
| Gas-driven Vibro-compactor | 76 |
| Hoist | 76 |
| Jack Hammer (Paving Breaker) | 88 |
| Line Drill | 98 |
| Motor Crane | 83 |
| Pile Driver/Extractor | 101 |
| Pump | 76 |
| Roller | 80 |
| Shovel | 82 |
| Truck | 88 |
| Vibratory Pile Driver/Extractor | 89 (3) |

**Notes:**
[1] Wood, E.W. and A.R. Thompson, Sound Level Survey, Concrete Batch Plan; 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.
[3] F.B. Foster Company, Foster *Vibra Driver/Extractors, Electric Series Brochure*, W-925-10-75-5M.
**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 DC, November 1974, except for notated items.

## Public Health

During construction of the proposed PSAC II development, traffic associated with passenger vehicles, as well as heavy-duty trucks, is expected to increase, potentially contributing to increases in particulate matter (PM) levels in the area. However, these emissions are not expected to significantly affect public health. Most of the increase in vehicle trips associated with the proposed development would be from gasoline vehicles, which emit relatively little PM. The total peak number of heavy-diesel vehicles generated by the proposed development during construction at any intersection is below the threshold (21 trucks per hour at any intersection) currently being used on projects sponsored by the NYCDEP to determine whether an air quality impact analysis of PM smaller than 2.5 microns is necessary.

## D. CONCLUSION

Construction of the proposed PSAC II development would create some disruptions and inconveniences on surrounding land uses, but these would be temporary in nature and would be minimized, as the proposed development is required to comply with various regulations. The proposed PSAC II development will also coordinate with the NYCDEP to ensure that hazardous materials concerns are addressed and therefore impacts related to hazardous material will be avoided. In addition, effects of the proposed development on transportation and air quality are also governed by applicable government regulations and no impacts related to these areas are expected to occur.

Accordingly, with its compliance to applicable regulations and construction management practices, the Proposed Action would not result in significant adverse impacts during project construction.