

## **A. INTRODUCTION**

This chapter assesses the potential for public health related impacts associated with the Proposed Action. For determining whether a public health assessment is appropriate, the *CEQR Technical Manual* lists the following as public health concerns for which a public health assessment may be warranted:

- Increased vehicular traffic or emissions from stationary sources resulting in significant adverse air quality impacts;
- Increased exposure to heavy metals (e.g. lead) and other contaminants in soil/dust resulting in significant adverse impacts;
- The presence of contamination from historic spills or releases of substances that might have affected or might affect ground water to be used as a source of drinking water;
- Solid waste management practices that could attract vermin and result in an increase in pest populations (e.g. rats, mice, cockroaches, and mosquitoes);
- Potentially significant adverse impacts to sensitive receptors from noise or odors;
- Vapor infiltration from contaminants within a building or underlying soil (e.g., contamination originating from gasoline stations or dry cleaners) that may result in significant adverse hazardous materials or air quality impacts;
- Actions for which the potential impact(s) result in an exceedance of accepted federal, state, or local standards.

The Proposed Action would facilitate the construction of a new Police Academy on an approximately 35-acre site in the College Point neighborhood of Queens. The proposed Academy consists of approximately 2.4 million gsf, including academic space, physical training facilities, administrative and support components, an indoor pistol range, a field house, a tactical village, a drivers training course, a police museum, and a visiting police/lecturer lodging facility. Additionally, 2,000 parking spaces will be provided on-site, including an accessory-parking garage of approximately 1,800 spaces. The proposed Academy is expected to advance recruit and in-service training in New York City, and therefore improve public safety throughout the City by providing state-of-the-art training facilities.

## **B. ASSESSMENT**

The *CEQR Technical Manual* states that a public health assessment may not be necessary for many proposed actions but indicates that a thorough consideration of health issues should be documented. In determining whether the Proposed Action has the potential to adversely affect public health, the following has been considered:

- ***Whether increased vehicular traffic or emissions from stationary sources would result in significant air quality impacts.***

The potential for these impacts was examined in Chapter 13, “Air Quality.” As described in Chapter 13, a detailed microscale modeling analysis was conducted that estimated CO and PM<sub>2.5</sub> levels near intersections in the study area that are anticipated to be affected by the Proposed

Action. The Academy's first year of operation (2014) was considered, and pollutant levels were estimated for Existing conditions and for future 2014 conditions with and without the Proposed Action. In order to select these analysis sites, traffic volumes, the traffic levels of service, and travel speeds at the major signalized intersections were evaluated with and without the Proposed Action. Analysis of site selection was based on a screening analysis that was conducted using the CEQR Technical Manual screening threshold criteria to determine where the air quality levels would most greatly be affected by the Proposed Action. The screening analysis used total traffic volumes at intersections, changes associated with speeds, and project-generated trips from the traffic analysis to make the final determination on the analysis sites for all pollutants of concern in the microscale intersection analysis. Two intersections were selected for analysis – the intersection of 30<sup>th</sup> Avenue and College Point Boulevard, and the intersection of Ulmer Street and the Whitestone Expressway southbound service road.

The results of this analysis are summarized as follows:

1. CO levels would not exceed the 8-hour standard. The highest estimated concentration (4.5 ppm) would occur at the intersection of Ulmer Street and Whitestone Expressway under the AM peak period.
2. The DEP CO *de minimis* criteria would not be exceeded at any of the analysis sites, indicating that the Proposed Action would not have the potential to cause CO impacts that are considered to be significant.
3. The Proposed Action would not cause increases above the 24-hour PM<sub>2.5</sub> STV or the annual PM<sub>2.5</sub> STV and would not result in any significant adverse impacts at any of the analysis sites based on both NYSDEC and NYCDEP criteria.
  - The highest estimated 24-hour incremental neighborhood concentration (0.84 µg/m<sup>3</sup>) would occur at the intersection of 30<sup>th</sup> Avenue and College Point Boulevard.
  - The highest estimated annual incremental neighborhood concentration (0.079 µg/m<sup>3</sup>) would occur at the intersection of 30<sup>th</sup> Avenue and College Point Boulevard.

The result of this analysis is that the mobile source impacts of the Proposed Action would not significantly impact local air quality levels.

An analysis was conducted to determine if the proposed parking facility would affect CO levels at adjacent receptors. The analysis was based on the methodology recommended in the 2001 *CEQR Technical Manual*. Emissions from vehicles traveling into and out of the facility, idling emissions from vehicle start up as well as adjacent roadway sources were considered in the evaluation. Results indicate that emissions generated from the proposed parking facility would not result in a significant adverse impact to CO levels at adjacent receptors.

A central utility plant (CUP) is proposed to provide for the heating, electrical, and hot water needs of the entire campus. Separate boilers in the individual buildings are not anticipated. The CUP will include a 1,400 kW co-generation unit with gas-fired turbines and five supplemental dual-fuel boilers (4 operational and 1 standby boilers), each at 1,250 BPH input. The co-generation unit would provide a portion of electric needs of the campus, with the remainder coming from emergency generators, the power grid and other on-site (non-polluting) renewable sources.

Gases from both the co-generation unit and the boilers would be exhausted into the atmosphere via one common stack that would be approximately 140 ft tall (approximately 35 feet higher than the roof of CUP building).

Emissions from CUP have the potential to affect both proposed and nearby existing sensitive land uses. Analyses were therefore conducted, using the EPA AERMOD dispersion model and

EPA/CEQR recommended dispersion options, to determine whether these impacts would be significant.

The following analyses were conducted:

1. An analysis to estimate the potential impacts of CUP emissions on the Police Academy's sensitive land uses;
2. An analysis to estimate the potential impacts of the CUP emissions on surrounding existing land uses; and
3. An analysis to estimate the potential impacts of existing "major" sources (i.e., those with 20 or more MMBtu/hr heat input) on the proposed sensitive land uses.

Analyses were conducted as follows:

- The pollutants considered for the analyses are SO<sub>2</sub>, NO<sub>2</sub>, and PM<sub>10</sub>.
- Analyses were conducted with and without building downwash using latest five consecutive years of meteorological data from LaGuardia Airport (2002-2006). While pollutant concentrations were estimated at all receptor sites, only the highest concentrations are reported.

Estimated short-term and annual pollutant concentrations were added to appropriate background levels, and maximum total pollutant concentrations were compared with NAAQS to determine whether there would be the a potential violation of these standards. The result of the analysis of CUP emission impacts on proposed buildings is that the maximum total estimated 24-hour and annual SO<sub>2</sub> concentrations, 24-hour PM<sub>10</sub> concentrations, and annual NO<sub>2</sub> concentrations are all expected to be below the applicable NAAQS. The result of this analysis, therefore, is that no exceedances of the NAAQS for all applicable pollutants are predicted as a result of the CUP emission impacts on proposed- buildings. Additionally, the CUP emissions are not predicted to significantly impact existing nearby land uses.

The potential impacts of Asphalt Plant combustion emissions on proposed buildings are analyzed in Chapter 13. As discussed in detail in that chapter, maximum impact was found (with downwash effects) at the Firearms / Driver Training (EVOC) area (near Block 4321, Lot 49), at a distance of approximately 500 feet from asphalt plant. The total maximum estimated pollutant concentrations at any of the receptor sites are below the applicable NAAQS standards. As such, the asphalt plant emissions are not predicted to significantly impact the proposed project buildings.

As discussed in detail in Chapter 13, the Proposed Action would not result in a violation of any applicable air quality standard or cause an exceedance of the significant threshold value. As such, the potential air quality impacts of the Proposed Action are not considered to be significant.

- ***If there is an increased potential for exposure to contaminants in soil or dust or vapor infiltration from contaminants within a building or underlying soil that may result in significant adverse hazardous materials or air quality impacts.***

The Proposed Action has this potential, although the magnitude of the impact is not expected to be substantially beyond what occurs at most urban sites. The hazardous materials assessment presented in Chapter 7, "Hazardous Materials" identified the presence of subsurface contamination due to historic and existing uses at the Project Site and the surrounding area that require remediation in the future with the Proposed Action. The subsurface investigations involved extensive testing throughout the project site. The Phase II ESI results indicated fill soil

throughout the project site has elevated levels of various VOCs and SVOCs, which are characteristic of urban fill. The results also indicated elevated levels of a variety of contaminants in the groundwater, which can be attributed to the fill and the turbid nature of the groundwater samples that were collected.

Standard measures for addressing areas of contamination identified thus far are outlined in Chapter 17, "Mitigation." Typical mitigation measures include remedial activities (remediation) such as excavation of contaminated soil or installation of a groundwater pump and treat system, as well as institutional and engineering controls that may already be in place or may be inherent to the planned redevelopment (e.g., paving an area for parking results in a "cap" that prevents direct contact with contaminated soil below). Intrusive activities (construction) at most previously developed urban sites would involve mitigation in the form of proper soil handling and management, preparation and adherence to a site-specific Health and Safety Plan (HASP) that considers the presence of contaminants, and implementation of a Community Air Monitoring Plan (CAMP). NYCDEP must approve any Remedial Action Plans and construction HASPs prior to undertaking mitigation (remedial) activities at the Project Site. NYSDEC must also approve any remedial plans related to spill cleanup. Any necessary remediation would be performed in accordance with all City, state, and federal regulations and protocols prior to the commencement of construction. As a result, the Proposed Action would not result in significant adverse impacts related to hazardous materials.

- ***Whether solid waste management practices could attract vermin and result in an increase in pest populations.***

No solid waste management practices are proposed beyond those that occur at most other non-residential uses found in the City. These practices would include all contemporary solid waste collection and containment practices and conformance with the laws of the New York City Board of Health. The proposed development would occur in an area that is currently served by both private commercial carters (for non-residential uses) and the New York City Department of Sanitation residential and municipal trash and recycling pickups. The Proposed Action would not affect the delivery of these services, or place a significant burden on the City's solid waste management system.

- ***Potentially significant adverse impacts to sensitive receptors from odors.***

No new odor sources would be created as a result of the Proposed Action. In fact, the proposed Academy would include upgrades to the on-site drainage ditch, including water purification intended to eliminate existing odors due to the tidal influence of the waterway.

- ***Potentially significant adverse impacts to sensitive receptors from noise.***

The potential for these impacts was examined in Chapter 14, "Noise." A total of four noise receptor locations were analyzed immediately adjacent to the Project Site, including one on Ulmer Street, one on 28<sup>th</sup> Avenue, one at the intersection of 28<sup>th</sup> Avenue and College Point Boulevard, and one on 31<sup>st</sup> Avenue, near the primary access to the vehicle impoundment facility. The Proposed Action would result in changes to noise conditions in the study area, due to the development of the proposed Academy, which would generate increases in traffic. Additionally, the proposed EVOC course would create new noise in the area. As described in detail in Chapter 14, "Noise," the Proposed Action would not result in significant new sources of noise. Some temporary noise impacts may be created due to tire squeal and sporadic siren use on the EVOC course, but these noise sources are expected to be of short duration.

To assess the potential for vehicular traffic to cause a noise impact at intersections within the study area, a preliminary evaluation of key intersections was carried out. Based on the NYC *CEQR Technical Manual* and subsequent revisions to its procedures, if the Proposed Action would increase traffic volumes by 100 percent or more, resulting in an increase of 3 dBA or more, then the affected intersections may warrant further analysis. No intersection would experience a 100 percent increase in traffic volume due to the project-generated vehicles. Therefore, none of the intersections would require additional study. The remaining analysis will instead focus on the noise levels at the site as experienced by nearby sensitive receptors.

Based on the projected noise levels for No-Build Conditions, an impact would occur if noise levels were to increase by 3.0 dBA. As all of the project-generated vehicles would be passenger cars, the relative increases in noise level are low. In comparison to No-Build Conditions, the noise levels at the monitored sites range from 0.0 dBA to 2.8 dBA. These increases would not be perceptible. In addition, the sites would fall into the same CEPO-CEQR noise categories as for No-Build Conditions. Thus no noise impacts due to increased traffic are anticipated.

As the proposed shooting range would be located inside an insulated and soundproofed range, no sounds would be perceptible outside of the building. Therefore, the only other unique source of noise generated by the proposed Academy would be the EVOC course. The EVOC driver-training track would cover eight acres on a rooftop behind (to the south of) the Firearms and Tactics facility. Therefore the Firearms and Tactics facility, which rises nearly 70 feet above the level of the EVOC track, would act as a barrier between the anticipated EVOC noise source and the residential neighborhoods to the north and northwest. The number of training vehicles typically ranges between eight and nine per drill with sirens engaged in consecutive fashion for 1.5 minutes per vehicle. For the Proposed Action, the primary sources of noise during the EVOC training would be squealing tires during vehicular maneuvers and siren noise. Noise levels from the EVOC training include the barrier effect of the wall for the Firearms and Tactics facility. Total  $L_{10}$  noise levels range from 63.0 to 75.6 dBA under No-Build Conditions and from 63.1 to 88.9 dBA under Build Conditions. The noise level increments would not cause the residential units to be classified into a higher CEQR noise exposure category. All increases in noise levels are below 3.0 dBA except for the Fairfield Inn and the rear wall of All Nations Church. The potential noise level increments of 12.2 and 9.8, respectively, would represent impacts temporarily during the EVOC activities approximately ½ hour per day. These noise level increments are conservatively high, as the 78-foot height of the tactical village building would shield the church from some of the EVOC noise. Therefore, no significant adverse impacts are projected for the Proposed Action.

Based on projected  $L_{10}$  traffic noise levels along 28<sup>th</sup> Avenue and Ulmer Street, the office, academic, and lodging areas would fall within 75 to 80 dBA, which would place them in the Marginally Unacceptable II CEQR category. Therefore, the window-wall attenuation to be provided by the structure should be 35 dBA. This attenuation can be achieved through installing double-glazed windows on a heavy frame in masonry structures or windows consisting of laminated glass. The NYC *CEQR Technical Manual* states that when maximum  $L_{10}$  levels are greater than 70 dBA, alternate means of ventilation should be incorporated into building, and building attenuation is required. Since some of the buildings would be used for office purposes, more refined analyses during final design may indicate that a lower building attenuation value of 30 dBA may be suitable.

In addition, mechanical equipment such as heating, ventilation, and air conditioning systems would be designed to meet all applicable noise regulations and requirements, and would be designed to produce noise levels which would not result in any significant increases in ambient noise levels.

No activities are proposed that would exceed accepted City, state, or federal standards with respect to public health.

For the reasons stated above, no significant adverse impacts are expected to public health as a result of the Proposed Action.