

A. INTRODUCTION

The *City Environmental Quality Review (CEQR) Technical Manual* defines as its goal with respect to public health “to determine whether adverse impacts on public health may occur as a result of a proposed project, and if so, to identify measures to mitigate such effects.”

According to the *CEQR Technical Manual*, for most proposed projects, a public health analysis is not necessary. Where no significant unmitigated adverse impact is found in other CEQR analysis areas, such as air quality, water quality, hazardous materials, or noise, no public health analysis is warranted. If an unmitigated significant adverse impact is identified in one of these analysis areas, the lead agency may determine that a public health assessment is warranted for that specific technical area.

As described in the relevant analyses of this Supplemental Environmental Impact Statement (SEIS), upon completion of construction, Phase II of the Project would not result in significant adverse impacts in any of the technical areas related to public health. However, as discussed in Chapter 3J, “Construction Noise and Vibration,” Phase II of the Project under the Extended Build-Out Scenario would, at times, result in temporary unmitigated significant adverse noise impacts during construction but would not result in significant adverse impacts with respect to the other technical areas discussed above. Therefore, this chapter examines the potential effects of construction-period noise impacts on public health.

PRINCIPAL CONCLUSIONS

As described in the preceding chapters of this SEIS, Phase II of the Project would not result in significant adverse impacts with respect to air quality (during construction and operation of Phase II) or operational noise.

While during some periods of construction Phase II of the Project would result in significant adverse impacts related to construction noise as defined by CEQR thresholds, the predicted magnitude and duration of absolute noise levels (i.e., the sum of construction noise levels with ambient background noise levels) would not be at a level that significantly affects public health at any receptor location. Therefore, Phase II of the Project under the Extended Build-Out Scenario would not result in significant adverse public health impacts.

B. SUMMARY OF FINDINGS OF PREVIOUS ENVIRONMENTAL REVIEWS

The 2006 Final Environmental Impact Statement (FEIS) noted that while potential noise impacts during construction were determined to be significant at certain locations, noise levels would not be of a magnitude that would significantly affect public health.

C. PUBLIC HEALTH ASSESSMENT—CONSTRUCTION NOISE

As described in Chapter 4G, “Operational Noise,” according to the *CEQR Technical Manual*, a significant noise impact occurs when there is an increase in the one-hour equivalent noise level ($L_{eq(1h)}$) of between 3 and 5 decibels A-weighted (dBA), depending upon the noise level without the proposed project and that increase occurs for two or more years continuously. The CEQR noise thresholds are based on quality of life considerations and not on public health considerations. In terms of public health, significance is not determined based upon the incremental change in noise level, but is based principally upon the magnitude of the absolute noise level to which people would be exposed and duration of exposure.

The analysis presented in Chapter 3J, “Construction Noise,” indicates that of the approximately 489 buildings in the study area, elevated noise levels are predicted to occur at one or more floors of approximately 124 buildings under Construction Phasing Plan 1, at one or more floors of approximately 160 buildings under Construction Phasing Plan 2, and at one or more floors of approximately 134 buildings under Construction Phasing Plan 3. With one exception, all of the locations where significant construction noise impacts are predicted to occur either have double-glazed windows or storm windows and some form of alternative ventilation, have previously been offered these measures as mitigation subsequent to the 2006 FEIS by the project sponsors, or will be offered these measures by the project sponsors as mitigation prior to construction of Phase II. For buildings with double-glazed/storm windows and an alternate means of ventilation, interior noise levels would generally be approximately 25 to 30¹ dBA less than exterior noise levels. One building predicted to experience significant adverse noise impacts is a newly constructed residential building and significant construction noise impacts are predicted to occur at the building’s outdoor balconies. There is no feasible and practicable mitigation for the predicted significant adverse construction noise impacts at balcony locations.

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Absolute 1-hour equivalent noise levels ($L_{eq(1h)}$) predicted to occur during construction of Phase II under the Extended Build-Out Scenario would be in the mid-50s to high 70s dBA at the exterior façades of all analyzed noise receptor locations in the study area, except for one building (discussed below). This is comparable to the range of noise levels in the mid-60s to low 80s predicted by the 2006 FEIS to occur at receptors in the study area. These noise levels are also comparable to those that occur throughout residential areas of New York City. Furthermore, noise levels in this range due to construction would only occur at the exterior façades of these buildings during the day for a limited time period (typically no more than eight hours) during each day. Additionally, interior $L_{eq(1h)}$ noise levels at these buildings, with the receptor noise control measures identified above, would typically be in the mid-40s dBA or lower.

At 497 Dean Street, which is represented in the construction noise analysis of this SEIS by receptor Site 14, the analysis predicts noise $L_{eq(1h)}$ levels up to approximately 84 dBA at upper floors on the rear and side exterior façades during the construction of the immediately adjacent Building 15. However, these high noise levels would occur for a limited time period (typically no more than eight hours) during each day and for a limited duration (one to two years) during

¹ Buildings designed and constructed to provide a specific level of noise attenuation may provide a higher level of attenuation than 30 dBA.

the construction period. Additionally, this building has double-glazed windows and an alternate means of ventilation, which would be expected to result in interior $L_{eq(1h)}$ noise levels in the high 40s dBA or lower. This is the only building at which exterior $L_{eq(1h)}$ noise levels in excess of 80 dBA are predicted to occur, because Building 15 is the only building included in the Project that would be constructed on the same block as another existing building. In New York City, high noise levels such as this typically occur when construction activities take place immediately adjacent to an existing receptor location. Based upon the magnitude of the noise levels and the limited duration of possible exposure, no significant public health impacts would be expected to occur for residents of this building.

As described above, there is one recently constructed residential building with outdoor balconies predicted to experience significant adverse noise impacts as a result of construction of Phase II of the Project under Construction Phasing Plan 1. At this location, there are no feasible or practicable mitigation measures to mitigate the construction noise impacts. Absolute noise levels at this location are predicted to be in the range of mid-50s to mid-60s dBA which is in the “acceptable” to “marginally acceptable” category according the *CEQR Technical Manual* criteria. Based upon the magnitude of the noise levels and the limited duration of possible exposure, no significant public health impacts would be expected to occur for residents of this building.

Construction of the proposed project would not result in any significant adverse noise impacts at existing open spaces within the study area. However, the absolute noise levels at these open space locations are predicted to be in the range of mid-50s to mid-60s. Based upon the magnitude of the noise levels and the limited duration of possible exposure, no significant public health impacts would be expected to occur at these open space locations.

On-site construction activities under any of the three analyzed illustrative construction phasing plans would produce $L_{10(1)}$ noise levels at certain Project open space areas up to approximately the low 80s dBA during certain periods of construction. Based upon the magnitude of the noise levels and the limited duration of possible exposure, no significant public health impacts would be expected to occur for users of the Project open spaces.

The predicted absolute noise levels within sensitive uses, at publicly accessible open space locations, and at the balcony location mentioned above, would be below Occupational Safety and Health Administration (OSHA) health-based noise thresholds which were developed to protect workers from hearing loss due to long-term exposure to noise. While construction activities would produce noise levels of a magnitude that at times are annoying and intrusive, and would be considered undesirable, construction activities would only occur for a limited number of hours per day, and for a limited time period at any location. The noise levels shown in Chapter 3J, “Construction Noise and Vibration” represent worst-case hourly noise levels with construction in the configuration and locations that would tend to create the highest level of noise at the nearby receptors. Since construction activities and the configuration of construction equipment may vary from hour to hour during the day and from day to day during the year, these maximum hourly noise levels may not occur continuously throughout the construction period. Furthermore, normal weekday work would begin at 7:00 AM and would end by 3:30 PM, and therefore significant noise activities would not occur after this time except for infrequent circumstances such as continuous concrete pours during construction, so construction noise would not occur constantly throughout the construction period. With the proposed noise reduction program and the partial mitigation measures proposed, and based upon the limited durations of these noise levels at any

location, the noise produced by construction activities would not result in a significant adverse public health impact.

The *CEQR Technical Manual* also states that episodic and unpredictable exposure to short-term impact noise at high decibel levels may affect health. The equipment expected to be used in construction of Phase II of the Project that would produce impact noise includes hydraulic break rams, jackhammers, and powder-actuated hammers. The hydraulic break ram would be used only at-grade during excavation activities and would consequently be shielded from the adjacent receptor locations by the site-perimeter noise barriers. Jackhammers would also operate only at-grade and would be shielded from adjacent receptor locations by the site-perimeter noise barriers. The powder-actuated hammers would be used at upper floors of the buildings being constructed to affix safety netting, but produce maximum instantaneous noise levels comparable to or less than that of other construction equipment that operate continuously over a longer period (see Table 3J-1). The noise associated with these three types of equipment is included in the exterior noise levels discussed above, which would be no higher than the high 70s dBA at all but one location in the study area, and no higher than the mid-80s dBA at one location in the study area. These noise levels would not constitute the type of high decibel levels that could affect public health based on short-term exposure, and consequently impact noise associated with construction of Phase II of the Project would not result in a significant adverse public health impact.

D. COMPARISON OF SEIS FINDINGS AND PREVIOUS FINDINGS

Consistent with the findings of the 2006 FEIS, noise levels produced by construction activities associated with Phase II of the Project under the Extended Build-Out Scenario would not be of a magnitude and duration to result a significant adverse public health impact. *