A. INTRODUCTION

This chapter assesses the Proposed Project's effect on public health. As defined by the *City Environmental Quality Review* (CEQR) *Technical Manual*, public health is the organized effort of society to protect and improve the health and well-being of the population through monitoring; assessment and surveillance; health promotion; prevention of disease, injury, disorder, disability, and premature death; and reducing inequalities in health status. The goal of CEQR with respect to public health is to determine whether adverse impacts on human health may occur as a result of a proposed project and, if so, to identify measures to mitigate such effects.

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

The Proposed Actions consists of a series of land use actions that would facilitate the redevelopment of Block 1863, Lots 5, 10, 13, and 26 (the "Development Site") with affordable and supportive housing and community facility uses. Specifically, the Proposed Project would consist of two buildings: the Western Development ("Building 1, " on Lots 5, 10, and 13) would be developed with a 193,000 gross square foot (gsf) building consisting of 195 affordable housing units and 37,400 gsf of community facility uses (including 110 shelter beds and 6,4000 gsf of other community facility uses); and the Eastern Development ("Building 2,"on Lot 26) would be developed with a 45,000 gsf building consisting of 82 affordable housing units. As described in the relevant analyses of this EIS, the Proposed Project would not result in an unmitigated significant adverse water quality or air quality impacts, and, with the requirements of the project sponsor to the mandated through the Land Disposition Agreement (LDA), no unmitigated significant adverse impacts would occur in the areas of hazardous materials, air quality, or operational noise. However, the Proposed Project does have the potential to result in unmitigated significant adverse construction-related noise impacts at nearby sensitive receptors, as presented in Chapter 15, "Unavoidable Adverse Impacts."

B. PRINCIPAL CONCLUSIONS

The Proposed Project is not expected to result in unmitigated significant adverse impacts in the following technical areas that contribute to public health: air quality, operational noise, water quality, or hazardous materials. The Proposed Actions would result in temporary unmitigated significant adverse construction-related noise impacts at nearby residential buildings along West 109th Street and Columbus and Amsterdam avenues during portions of the construction period. While the noise levels predicted to occur during construction at these sensitive receptors would exceed the acceptable construction noise impact thresholds, these noise levels are below the level that would constitute significant adverse public health impacts. The CEQR noise thresholds are based on quality of life considerations and not on public health

considerations, and the predicted absolute noise levels at nearby sensitive receptors would be below the health-based noise thresholds. Additionally, the predicted elevated noise levels would occur intermittently during the construction period. Consequently, the unmitigated significant adverse construction noise impact that could occur at nearby sensitive receptors would not have the potential to result in a significant adverse public health impact.

C. PUBLIC HEALTH ASSESSMENT – CONSTRUCTION NOISE

As described in Chapter 12, "Construction," construction of the Proposed Project would be required to follow the requirements of the New York City Noise Control Code for construction noise control measures. Specific noise control measures will be described in a noise mitigation plan required under the New York City Noise Control Code. These measures would include a variety of source and path controls, such as ensuring that all equipment employs the manufacturer's appropriate noise reduction device(s) (e.g., mufflers) and that construction devices with internal combustion engines keep their engine's housing doors closed, covering portable compressors, generators, pumps, etc. with noise-insulating fabric, preventing vehicle engine idling on-site, and constructing a perimeter barrier construction fence. In addition, while typically an eight-foot high plywood barrier is provided around active construction sites as part of the New York City construction noise control plan, the project sponsor will provide a 15-foot-high temporary noise barrier (the maximum height allowed by the New York City Noise Code), in recognition of the noise-sensitive context of the adjoining land uses. This noise barrier would serve to considerably reduce construction noise exposure, particularly at ground level, and was incorporated into the detailed construction noise analysis. However, even with these measures, the detailed construction noise analysis presented in Chapter 12 found that predicted noise levels due to construction-related activities associated with the Proposed Project would continue to result in significant adverse construction noise impacts at adjoining residential buildings along West 109th Street and Amsterdam and Columbus avenues on a temporary basis during portions of the construction period.

As presented in Chapters 13, "Mitigation," and 15, "Unavoidable Adverse Impacts," potential noise mitigation measures—including voluntary outreach efforts by the project sponsor to improve window/wall attenuation for identified sensitive receptors, continued construction noise monitoring, and enhanced community outreach and coordination with regard to the construction schedule and anticipated high noise periods—were explored and will continue to be evaluated between the DEIS and FEIS. A final description of construction noise mitigation measures will be presented in the FEIS, taking into consideration public comments received on the potential measures discussed in the DEIS and the feasibility and practicability of such measures. The incorporation of feasible and practicable mitigation measures will substantially reduce construction noise exposure, but is not expected to eliminate the significant adverse impact; therefore construction noise is considered an unavoidable significant adverse impact.

Assessment

The *CEQR Technical Manual* construction noise impact thresholds are based on quality of life considerations. These differ from public health considerations, which employ distinct criteria that are appropriate in the public health context. In terms of public health, significance is not determined based on the incremental change in noise level, but is based principally upon the magnitude of noise level and duration of exposure. As presented in the *CEQR Technical Manual,* these criteria are appropriate because they more closely relate to public health concerns. For example, prolonged exposure to levels above 85 dBA will eventually harm hearing; episodic and unpredictable exposure to short-term impacts of noise at

high decibel levels (i.e., above 85 dBA) may also affect health. Accordingly, it is appropriate to evaluate magnitude of noise level and duration of exposure when examining public health.

As presented in Chapter 12, "Construction," during Building 1's construction, the maximum interior noise levels at residential receptors would exceed the 45 dBA CEQR building interior impact criterion by up to seven dBA, 16 dBA, and 14 dBA during the initial site preparation, the building construction phase (represented by Month 7), and exterior finish (represented by Month 26) construction phases, respectively, on at least one floor at the following locations: 124, 126, 132, 134, 136, 138, 140, 142, 144, 170, and 172 West 109th Street and 973, 981, 983, 985, and 987 Amsterdam Avenue. Construction noise levels would be substantially less and would not exceed 45 dBA criterion at the ground level of the buildings shielded by the construction noise barrier, and at no point during Building 1's construction would the maximum interior noise levels predicted at the impacted residential buildings approach the 85 dBA public health-based noise impact threshold. As such, construction of Building 1 would not have the potential to result in public health impacts.

During the construction of Building 2, the maximum interior noise levels at residential receptors would exceed the 45 dBA CEQR building interior impact by up to ten dBA, 15 dBA, and 13 dBA during the initial site preparation, building construction (represented by Month 7), and exterior finishing (represented by Month 21) construction phases, on at least one floor at the following locations: 102, 106, and 110 West 109th Street and 980 Columbus Avenue. Construction noise levels would be substantially less and would not exceed 45 dBA criterion at the ground level of the buildings shielded by the construction noise barrier, and at no point during Building 2's construction would the maximum interior noise levels predicted at the impacted residential buildings approach the 85 dBA public health-based noise impact threshold. As such, construction of Building 1 would not have the potential to result in public health impacts.

It should also be noted that, while the worst-case peak month construction period were conservatively assumed to occur during extended durations, by its very nature, construction noise varies substantially day to day depending on the specific work activities being undertaken. The predicted elevated noise levels due to construction would occur intermittently during the construction period and, therefore, would not constitute a prolonged duration of elevated noise levels for public health impact determination purposes. Noise levels during certain hours or days would be lower than the worst-case noise levels determined as part of the construction noise analysis; and outside of the construction work hours, when residents are more likely to be at home and (when residences would be most sensitive to noise), these receptors would not experience elevated noise levels as a result of construction. Lastly, as discussed in Chapter 12, the project sponsor has committed to forming a Construction Advisory Group (CAG) through Community Board (CB) 7. The CAG would be comprised of local stakeholders, elected officials, the contractor, the project sponsor, and City agencies. The CAG would review plans, monitor community impacts, and implement a communication system and notifications so as to inform area residents of the anticipated work and avoid unpredictable exposure to short-term impacts of noise at high decibel levels. Consequently, the unmitigated significant adverse construction noise impact that would occur at nearby residential buildings would not have the potential to result in a significant adverse public health impact.