A. INTRODUCTION

Public health involves the activities that society undertakes to create and maintain conditions in which people can be healthy. Many public health concerns are closely related to air quality, hazardous materials, construction, and natural resources. 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."

The CEQR *Technical Manual* indicates that for most proposed projects, a public health analysis is not necessary. Where no significant 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. Per *CEQR Technical Manual* guidance, a public health assessment is warranted and provided below as potential unmitigated significant adverse operation and construction noise impacts may occur.

B. NOISE

As discussed in Chapter 16, "Noise," the Proposed Action would result in incremental noise increases at the intersection of 26th Avenue and 4th Street in exceedance of the CEQR impact criteria during the weekday AM and midday peak hours, and therefore would constitute a significant adverse noise impact, pursuant to CEQR. With implementation of the attenuation measures to be mandated through a noise (E) designation assigned to the project site, no significant adverse impacts would result on project site buildings.

Significant adverse noise impacts could potentially occur at two non-Applicant owned existing sensitive receptors (Receptor Location 2 at the intersection of 26th Avenue and 4th Street), and therefore potential measures to mitigate noise impacts at these locations will be examined, in consultation with the lead agency, the New York City Department of City Planning (DCP), between the Draft and Final Environmental Impact Statement (EIS). Potential mitigation measures for mobile source noise impacts may include the rerouting of traffic where feasible, traffic calming measures, which could result in lower noise levels than predicted in the analysis, and/or other measures including installation of new attenuated windows, air conditioning units or other measures in non-Applicant owned buildings.

While the significant adverse noise impact identified at Receptor Location 2 may be able to be mitigated by the above measures, if this impact is determined to be unmitigatable between Draft and Final EIS, it will be identified as such and a discussion will be included in Chapter 22, "Unavoidable Adverse Impacts."

Assessment

According to the *CEQR Technical Manual*, noise in and around homes may decrease quality of life by disrupting sleep or interfering with conversations. Chronic noise exposure may raise blood pressure and has been suggested to contribute to myocardial infractions, as well as to interfere with language development in children. Prolonged exposure to levels above 85 A-weighted decibels (dBA) will

eventually harm hearing. Episodic and unpredictable exposure to short-term impacts of noise at high decibel levels may also affect health.

As indicated in Chapter 16, "Noise" of this Draft EIS, the significant adverse noise impact, identified at Receptor Location 2, would occur over a geographically limited area, and the Proposed Action would not result in prolonged exposure to levels above 85 dBA (See Table 16-7 in Chapter 16, "Noise"). The With-Action L_{10} for the AM, midday, and PM peak hour was measured at 69.2, 69.3, and 78.2 dBA, respectively. These noise measurements are significantly lower than the CEQR threshold of 85 dBA. The Proposed Action is not anticipated to cause excessively high chronic noise exposure and, therefore, is not expected to result in a significant adverse public health impact related to noise.

C. CONSTRUCTION NOISE

As described in Chapter 16, "Noise," according to the CEQR Technical Manual, a significant noise impact occurs when there is an increase in the one-hour equivalent noise level ($L_{eq(1)}$) of between 3 and 5 decibels A-weighted (dBA), depending upon the noise level without the proposed project. 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 noise level and duration of exposure.

Construction noise is regulated by the requirements of the New York City Noise Control Code (also known as Chapter 24 of the Administrative Code of the City of New York, or Local Law 113), the New York City Department of Environmental Protection (DEP) Notice of Adoption Rules for Citywide Construction Noise Mitigation (also known as Chapter 28), and the United States Environmental Protection Agency's (EPA's) noise emission standards. These local and Federal requirements mandate that specific construction equipment and motor vehicles meet specified noise emission standards; that construction activities be limited to weekdays between the hours of 7AM and 6 PM; and that construction materials be handled and transported in such a manner as not to create unnecessary noise. For weekend and after hours work, permits would be required to be obtained, as specified in the New York City Noise Control Code. In addition, EPA requirements mandate that certain classifications of construction equipment meet specified noise emission standards. Beyond the EPA construction equipment noise emission standards, equipment noise levels quieter than those of typical construction equipment would be achieved for certain construction equipment through better engine mufflers, refinements in fan design and/or improved hydraulic systems. Path controls (e.g., the placement of equipment and implementation of barriers between equipment and sensitive receptors) could include portable noise barriers, enclosures, acoustical panels, and curtains, dependent on feasibility and practicality. However, even with these noise control measures, construction activities would be expected to result in substantially elevated noise levels that would exceed CEQR noise magnitude impact criteria at nine existing residential/community facility buildings and one existing open space.

Between the DEIS and FEIS, a more refined construction noise analysis will be undertaken to more precisely determine the magnitude and duration of the elevated noise levels resulting from construction at these locations. Additionally, the Applicant has committed to further evaluate potential mitigation measures for construction noise impacts, as discussed above (see Chapter 20, "Mitigation"). This approach includes both source and path controls that exceed measures typical of standard construction practices.

Assessment

With the proposed noise attenuation measures included as part of the construction program and the partial mitigation measures proposed, the magnitude and duration of the noise levels at receptor locations would not result in any significant adverse public health impacts. Even if an unmitigated construction noise impact is identified, neither the extent nor the duration of the noise exposure would be great enough to constitute a significant adverse public health impact.