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Public Health

This chapter addresses the effect of the Proposed Actions on public health. As defined by the *2021 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.

Introduction

The *CEQR Technical Manual* states that a public health assessment is not necessary for most projects. Where no significant unmitigated adverse impact is found in other CEQR analysis areas related to public health—such as air quality, water quality, hazardous materials, or noise—no public health analysis is warranted. If, however, an unmitigated significant 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.

As described in the relevant analyses of this EIS, upon completion of construction, the Proposed Actions would not result in significant adverse impacts in any of the technical areas related to public health. The Proposed Actions could result in significant adverse noise impacts during construction of the Proposed Projects. The relevant analyses for the consideration of public health impacts are summarized and reviewed in this chapter.

Principal Conclusions

The Proposed Actions would not result in any significant adverse public health impacts as defined in the *CEQR Technical Manual*. During operation, the Proposed Actions would not result in unmitigated significant adverse impacts in the areas of air quality, noise, water quality, or hazardous materials. While significant adverse noise impacts could occur during construction, these would be temporary impacts resulting from conditions that are common during the construction of high-rise buildings in New York City. Excessive noise can affect health through the disruption of sleep or hearing. While noise during the construction period would reach applicable impact thresholds at several receptors, these thresholds are based on quality-of-life considerations as opposed to public health considerations. Noise levels during the construction period would not be high enough to constitute a public health concern. Therefore, construction of the Proposed Project would not result in chronic exposure to high levels of noise, prolonged exposure to noise levels above 85 dBA, or episodic and unpredictable exposure to short-term impacts of noise at high decibel levels, as per the *CEQR Technical Manual*. Consequently, construction of the Proposed Project would not result in a significant adverse public health impact.

Methodology

As noted above, the *CEQR Technical Manual* states that where no significant unmitigated adverse impact is found in other CEQR analysis areas related to public health—such as air quality, water quality, hazardous materials, or noise—no public health analysis is warranted. If, however, an unmitigated significant 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.

Assessment

Operational Period

Hazardous Materials

Potential health exposures from hazardous materials in soil and dust include metals, hazardous compounds, or dust conditions that the public can be exposed to through ingestion, inhalation, or dermal contact. Health effects of exposure can lead to poisonings, gastroenteric illnesses, chronic illnesses, asthma, or respiratory complaints. The potential for health impacts associated with hazardous materials can be evaluated in terms of potential concentrations from the analysis in **Chapter 8, Hazardous Materials.**

As detailed in **Chapter 8, Hazardous Materials**, Phase I Environmental Site Investigations (ESAs) identified Recognized Environmental Conditions (RECs) and Business Environmental Risks (BERs) at both of the development sites. The potential for an impact relating to this condition would be reduced or eliminated through subsurface investigation and, if applicable, remediation on Development Site 1 (Manhattan Block 1102, Lot 11) and Development Site 2 (Manhattan Block 1103, Lot 36). Compliance in association with testing for and remediation of hazardous materials, if

necessary, on the development sites would be conducted under the administration of New York City Department of Environmental Protection (DEP).

In addition to the above, regulatory requirements pertaining to building materials containing ACM, LBP and/or PCBs would be addressed under standard demolition/renovation procedures. With the implementation of the above measures, there would be no significant adverse impacts with respect to hazardous materials, and therefore there would be no potential for a significant adverse public health impact related to hazardous materials.

Air Quality

Potential health exposures from inhalation of air pollutants such as fine particles, CO, NO_2 and ozone can lead to the exacerbation of asthma symptoms and can contribute to poor cardiovascular and respiratory health outcomes. Health effects may also occur from exposure to other pollutants from combustion and process emissions such as VOCs. The potential for health impacts associated with air quality conditions can be evaluated from the results of the analysis detailed in **Chapter 11, Air Quality**.

As detailed in **Chapter 11, Air Quality**, no significant adverse air quality impacts are anticipated from mobile or stationary sources of air pollution associated with the Proposed Projects.

The number of project-generated trips and incremental parking spaces would be below *CEQR Technical Manual* thresholds. Therefore, no adverse air quality impacts are expected from the mobile sources generated by the Proposed Projects.

An analysis of the nearby atypical source (New York Route 9A, a.k.a. Twelfth Avenue, an arterial road) showed emissions from vehicles traveling along Route 9A are not expected to produce concentrations at the proposed building on West 54th Street that exceed the National Ambient Air Quality Standards (NAAQS).

As described in **Chapter 11**, development under the Proposed Actions would pass the HVAC and hot water screening nomographs provided by the *CEQR Technical Manual*. Therefore, significant adverse impacts are not expected from the project's HVAC and hot water system. To ensure that there are no significant adverse impacts, there would be an E-Designation for air quality specifying the location and minimum height for HVAC equipment at each site and that such equipment must only be powered by natural gas.

An analysis of existing light industrial/manufacturing uses in the surrounding study area determined that no adverse air quality impacts are expected from these types of sources on the Proposed Projects.

The analysis of nearby major sources located at the ConEdison W 59th Street found that concentrations at the proposed buildings from emissions of the plant's boilers and combustion turbine would be less than the NAAQS.

There would be no significant adverse impacts with respect to air quality, and therefore there would be no potential for a significant adverse public health impact related to air quality.

Noise

Prolonged exposure to high noise levels has the potential to decrease quality of life, raise blood pressure and myocardial infarctions. Chronic exposure to levels above 85 dBA will eventually harm

hearing. Noise modeling results from **Chapter 13, Noise** assess whether there will be exceedances of allowable noise levels that may result in public health impacts.

As detailed in **Chapter 13, Noise**, a noise assessment was conducted to determine whether the Proposed Actions would significantly increase sound levels from mobile and stationary sources at existing noise receptors, and if the new noise receptors that would be introduced would be in an acceptable ambient sound level environment.

The Proposed Actions are not anticipated to introduce any substantial stationary source noise generators. The design and specifications for the building's mechanical equipment would incorporate sufficient noise reduction devices that would comply with applicable noise regulations and standards, including the standards contained in the revised New York City Noise Control Code.

Regarding interior noise conditions for the future With-Action buildings at the development sites, the noise assessment identified the following minimum window/wall attenuation requirements for Development Site 1: for residential uses, a minimum of 37 dBA window/wall attenuation on the western façade facing Twelfth Avenue, on the southern façade facing W 54th Street within 50 feet of Twelfth Avenue and on the northern façade facing W 55th Street within 50 feet of Twelfth Avenue, 28 dBA window/wall attenuation on the remaining southern façade facing W 54th Street and on the eastern façade facing Eleventh Avenue within 50 feet of W 54th Street, and 31 dBA window/wall attenuation on the remaining northern façade facing W 55th Street and on the eastern façade facing Eleventh Avenue within 50 feet of W 55th Street, to maintain an interior noise level (L10) not greater than 45 dBA for residential use. For commercial office uses, the required attenuation along each respective facade would be 5 dBA lower in order to maintain an interior noise level (L10) not greater than 50 dBA for commercial office use.

The noise assessment identified the following minimum window/wall attenuation requirements for Development Site 2: for residential uses, a minimum of 31 dBA window/wall attenuation on the northern façade facing W 56tth Street, on the western façade facing Twelfth Avenue within 50 feet of W 56th Street, on the eastern façade facing Eleventh Avenue, and on the southern façade facing W 55th Street within 50 feet within Eleventh Ave, and 28 dBA window/wall attenuation on the remaining southern facing W 55th Street and on the western façade facing Twelfth Avenue within 50 feet of W 55th Street, to maintain an interior noise level (L10) not greater than 45 dBA for residential use. For commercial office uses, the required attenuation along each respective facade would be 5 dBA lower in order to maintain an interior noise level (L10) not greater than 50 dBA for commercial office use. With the implementation of these attenuation requirements acceptable interior noise conditions for residential uses would be maintained and, no significant adverse noise impacts would occur. The attenuation requirements would be memorialized in (E) Designations for both development sites. Therefore, there would be no potential for a significant adverse public health impact related to noise.

Water Quality

Potential exposures to contaminated water (potable, non-potable, and recreational) from ingestion or secondary contact can cause infectious disease, neurologic effects, and kidney or other organ system effects, or cancers. The potential effects of a project's impact of water quality can be assessed from its potential to impact surrounding natural resources or water systems as analyzed in **Chapter 9, Water and Sewer Infrastructure** (no analysis of natural resources was warranted per *CEQR Technical Manual* guidance, and the Proposed Actions would have no significant adverse impacts with respect to natural resources).

As discussed in **Chapter 9, Water and Sewer Infrastructure,** the Proposed Actions would have no significant adverse impacts related to water quality. The Proposed Actions would result in a total daily water demand of approximately 0.23 million gallons per day (mgd), which is lower than the *CEQR Technical Manual* screening threshold of 1 mgd; therefore the Proposed Actions would not result in any significant adverse impacts on the water supply. The total volume of sanitary runoff and stormwater generated by the Proposed Actions as part of the combined sewer system would discharge into the North River Water Resource Recovery Facility (WRRF). The incremental increase of 0.073 million gallons (mg)in combined sewage flow during a stormwater event would represent an estimated 0.10 percent of the North River WRRF's SPDES-permitted capacity. The projected increase in combined sewage would not cause the North River WRRF to exceed its operational capacity or SPDES-permitted capacity.

The incorporation of the appropriate stormwater source control Best Management Practices (BMPs) that would be required as part of the site connection approval process, with the review and approval of NYC DEP, would reduce the overall volume of sanitary sewer discharge and stormwater runoff as well as the peak stormwater runoff rate from the development sites.

Therefore, the Proposed Actions would not result in any significant adverse combined sewage impacts. As such, there would be no potential for significant adverse public health impacts related to water quality.

Construction Period

Hazardous Materials

As discussed above and detailed in **Chapter 8, Hazardous Materials**, the potential for significant adverse impacts related to hazardous materials resulting from the Proposed Actions would be precluded through the placement of (E) designations on the development sites. There would be no potential for public health impacts related to hazardous materials during the construction period.

Air Quality

As detailed in **Chapter 16, Construction**, measures required to reduce pollutant emissions during construction include all applicable laws, regulations, and the City's building codes. These include dust suppression measures, idling restriction, and the use of ultra-low sulfur diesel (ULSD) fuel and best available tailpipe reduction technologies. With the implementation of these emission reduction measures, the dispersion modeling analysis of construction-related air emissions for both on-site and on road sources determined that particulate matter ($PM_{2.5}$ and PM_{10}), annual-average nitrogen dioxide (NO_2), and carbon monoxide (CO) concentrations would be below their corresponding *de minimis* thresholds or National Air Quality Ambient Standards (NAAQS), respectively. Therefore, construction of the Proposed Projects would not result in significant adverse air quality impacts during construction, and there would be no potential for significant adverse public health impacts related to construction-period air quality.

Noise

As detailed in **Chapter 16, Construction**, construction of the Proposed Projects would involve standard construction activities and practices for buildings in New York City. Foundation installation and superstructure phases of construction are typically when the noisiest activities occur. The exterior

and interior fit-out phases of construction typically involve minimal exterior equipment and substantially quieter noise conditions. The development sites are near existing residential, community facility, and commercial land uses.

Construction noise from mobile sources was evaluated from 6:00 AM to 7:00 AM, when construction traffic would be greatest since this is the period that most worker vehicles and trucks arrive at the development sites. Noise from mobile sources between 6:00 AM and 7:00 AM would increase up to 2.9 dBA compared to the existing conditions during construction of the Proposed Developments. As the construction mobile source noise levels would not increase by 3 dBA or more, there would be no significant adverse noise impacts from mobile sources.

Construction noise from stationary sources was evaluated using the Cadna-A sound prediction model at 33 noise sensitive receptors (buildings or building façades) for five different phases of construction. Construction noise levels were found to exceed the relevant impact thresholds such that there would be potential for the project to result in significant adverse construction noise impacts due to stationary sources.

As described in **Chapter 16, Construction**, construction noise impacts would occur at the existing commercial office building at 619 West 54th Street (R32) located east of Development Site 1. In total, construction activities would cause exterior and interior noise impacts on one commercial office receptors due to exceedances of the thresholds for exterior increase in noise and/or thresholds for acceptable interior noise levels for commercial office uses.

With the adherence to existing construction noise regulations and the implementation of a Construction Noise Mitigation Plan, as required by the New York City Noise Code, including an 8-foot construction noise barrier, construction noise would still exceed the thresholds for significant construction noise impacts prior to mitigation. However, as described in **Chapter 18, Mitigation,** based on street and field observations, the building at 619 West 54th Street (R32) already has a central air conditioning system as an alternate means of ventilation, as well as single-paned windows that appear to be modern and of good quality with thicker than normal glass. As there are no further practicable and feasible mitigation considered to fully mitigate identified significant adverse impacts related to construction noise, noise levels at this building would at times during the construction period exceed the impact criteria,. Therefore, as described in **Chapter 21, Unavoidable Adverse Impacts,** the Proposed Actions would have the potential to result in significant adverse noise impacts due to construction that would remain unmitigated.

The construction noise impact thresholds are based on quality-of-life considerations as opposed to public health considerations. An impact found pursuant to a quality-of-life framework (i.e., a significant adverse construction noise impact) does not necessarily indicate that an impact would occur when the analysis area is evaluated in terms of public health (i.e., a significant adverse public health impact). As such, the magnitude of construction noise levels and duration of exposure during construction were considered when examining public health. Noise in and around residences may decrease quality of life by disrupting sleep or interfering with conversations. Prolonged exposure to levels above 85 dBA will eventually harm hearing. The predicted construction-period noise impacts identified and described in **Chapter 16, Construction**, would not constitute chronic exposure to high levels of noise because of the temporary and intermittent nature of construction-period noise. The maximum predicted construction noise levels associated with the Proposed Project would occur over a limited duration during the construction period based on the amount and type of construction work occurring in the construction work areas. Construction activity would typically be limited to the typical construction hours of 7 AM to 3 PM with extended shifts not going beyond 6 PM, leaving the

remainder of the day and the evening unaffected by construction noise. For the receptors at which significant adverse construction noise impacts were predicted to occur that represent indoor uses (i.e., not open space), the building façade at impacted receptor would provide at least 32 dBA of window/wall attenuation, ensuring interior L_{10} noise levels during construction activity no greater than 57.3 dBA, and, thus, interior noise levels would not exceed 85 dBA (L_{eq}) at any receptor locations for any phase of construction. In addition, the potential for noise effects related to construction sources would be temporary and localized and is not expected to rise to area-wide level impacts that would warrant a detailed public health assessment. Therefore, given the magnitude and duration of the construction noise at nearby spaces, construction associated with the Proposed Project would not result in significant adverse public health impacts due to construction noise.

Water Quality

As detailed above, the protection of nearby natural resources is important to the maintenance of water quality, which is connected to public health. As noted in **Chapter 16, Construction**, construction of the Proposed Projects would incorporate low flow plumbing fixtures to reduce sanitary flow in accordance with the New York City Plumbing Code, and that stormwater best management practices would be required in accordance with the NYC DEP Unified Stormwater Rule (USWR) guidelines, which includes requirements for bringing the development sites into compliance with the allowable stormwater release rate. The incorporation of the appropriate sanitary flow and stormwater source control storm management practices would reduce the overall volume of sanitary sewer discharge and stormwater runoff as well as the peak stormwater runoff rate from the development sites, and the sewer capacity at the North River WRRF is expected to adequately handle wastewater flow resulting from the Proposed Projects. As such, construction of the Proposed Projects is not expected to result in a significant adverse impact on the City's water and sewer infrastructure, and therefore there would be no public health impacts related to water quality during the construction period.