OFFICE OF ENVIRONMENTAL REMEDIATION
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DECISION DOCUMENT
NYC VCP, E-Designation Remedial Action Work Plan Approval

October 26, 2023

Re: 164 4th Avenue
Brooklyn Block 420, Lot 37
Hazardous Materials, Noise E Designation,
E-601: Gowanus Neighborhood Plan - CEQR 19DCP157K - 11/23/2021
OER Project Number 22EH-N245K / 22CVCP087K

This Decision Document has been re-issued to address errata. The original Decision Document was issued on June 13, 2023. All changes are in red text.

The New York City Office of Environmental Remediation (OER) has completed its review of the Remedial Action Work Plan (RAWP) dated June 2, 2022 with Stipulation Letter dated May 26, 2023 and the Remedial Action Plan for Noise dated May 31, 2023 for the above-referenced project.

These Plans were submitted to OER under the NYC Voluntary Cleanup Program and E-Designation Program.

The RAWP was released for public comment for 30 days as required by program rule. That comment period ended on 6/17/2022. There were no public comments.

Project Description
The applicant is proposing to build a new mixed-use 17-story building with a partial cellar. The building will be used for mechanical rooms in the cellar, commercial and amenities on floor 1, residential and amenities on floors 2, 4, and 17, residential on floors 3 and 5-16.

The partial cellar requires excavation to approximately 15 feet below grade to install pile caps and a 42-inch-thick matt-foundation slab. A portion of the partial cellar requires excavation to approximately 16 feet below grade and a 54-inch-thick matt-foundation slab. The remainder of the eastern portion of the site requires excavation to approximately 5-feet below grade to construct pile caps and a 32-54-inch-thick matt foundation slab. The western portion of the site requires a maximum 5-foot-deep excavation for pile caps and a shallow excavation in the western portion of the site of an approximately two-foot excavation to construct a 10-inch-thick building slab.

Statement of Purpose and Basis
This document presents the remedial action for the NYC Voluntary Cleanup Program and E-Designation Program project known as "164 4th Avenue" pursuant to Title 43 of the Rules of the City of New York Chapter 14, Subchapter 1 and the Zoning Resolution and §43-1474 of the Rules of the City of New York.

Description of Selected Remedy for Hazardous Materials
The remedial action selected for the 164 4th Avenue site is protective of public health and the environment. Development plans changed after completion of the original RAWP. Changes to the remedy are addressed in a May 26th Stipulation Letter and are included below. The elements of the selected remedy are as follows:

1. Preparation of a Community Protection Statement and performance of all required NYC VCP Citizen Participation activities according to an approved Citizen Participation Plan.

2. Performance of a Community Air Monitoring Program for particulates and volatile organic carbon compounds.
3. Establishment of Track 4 Site-specific Soil Cleanup Objectives (SCOs).
4. Site mobilization involving Site security setup, equipment mobilization, utility mark outs and marking & staking excavation areas.
5. Completion of a Waste Characterization Study prior to excavation activities. Waste characterization soil samples will be collected at a frequency dictated by disposal facility(s).
6. Excavation and removal of soil/fill exceeding Track 4 Site Specific SCOs.
7. The project design plans were updated to reconfigure the lowest levels. The current design includes a site-wide excavation to construct a 17-story building with a partial cellar for mechanical purposes in the northeast portion of the Site. The partial cellar requires excavation to approximately 15 feet below grade to install pile caps and a 42-inch-thick matt-foundation slab. A portion of the partial cellar requires excavation to approximately 16 feet below grade and a 54-inch-thick matt-foundation slab. The remainder of the eastern portion of the site requires excavation to approximately 5-feet below grade to construct pile caps and a 32-54-inch-thick matt-foundation slab. The western portion of the site requires a maximum 5-foot-deep excavation for pile caps and a shallow excavation in the western portion of the site of an approximately two-foot excavation to construct a 10-inch-thick building slab. The entire footprint of the Site will be excavated to a depth of approximately 24 feet below grade for development purposes. A small portion of property will be excavated to 26 feet below grade for removal of hotspot areas and/or placement of elevator pit(s).
8. Screening of excavated soil/fill during intrusive work for indications of contamination by visual means, odor, and monitoring with a PID. Appropriate segregation of excavated media on-Site.
9. Management of excavated materials including temporarily stockpiling and segregating in accordance with defined material types and to prevent co-mingling of contaminated material and non-contaminated materials.
10. Removal of any additional USTs encountered during construction. Registration of USTs and reporting of any petroleum spills associated with UST's and appropriate closure of these petroleum spills in compliance with applicable local, State and Federal laws and regulations.
11. Transportation and off-Site disposal of all soil/fill material at licensed or permitted facilities in accordance with applicable laws and regulations for handling, transport, and disposal, and this plan. Sampling and analysis of excavated media as required by disposal facilities.
12. Collection and analysis of twelve (12) end-point samples at the base of the excavation to confirm the performance of the remedy with respect to attainment of SCOs. Samples will be analyzed for the contaminants of concern: VOCs, semivolatile organic compounds, arsenic, lead and mercury.
13. Import of materials to be used for backfill and cover in compliance with this plan and in accordance with applicable laws and regulations.
14. An engineered composite site cover will be placed over the entire footprint of the Site. The composite cover system will be comprised of concrete foundation/slabs. Construction of an engineered composite cover consisting of a 42-inch-thick to 4-foot-thick concrete building slab across approximately 2/3 of the Site and a 10-inch-thick concrete slab across the remainder of the Site. The full footprint of the proposed building will be capped with concrete. The composite cover system is an engineering control for the remedial action. The remedial engineer will certify in the Remedial Action Report (RAR) that the composite cover system was designed and properly installed to prevent exposure to remaining soil/fill.
15. Installation of an overlapping secant pile retaining wall around the entire perimeter of the Site for support of excavation and hydraulic isolation of residual groundwater contamination remaining beneath the Site. The secant pile wall will also prevent onsite migration of impacted groundwater.
16. Installation of a waterproofing/vapor barrier system beneath the lowest building slab, below and around the elevator pit, and outside of sub-grade foundation sidewalls to grade to mitigate soil vapor migration into the building. The vapor barrier system will consist of products from Precon Products, Stego Industries, and W.R. Meadows. Precon (73-mil) will be installed beneath the basement slabs and the outside the foundation walls. Stego Wrap (20-mil) will be utilized under the foundation slab for the slab-on-grade portions of the building, and MEL-ROL (56-mil) will be installed on two side foundation walls or OER-approved equivalents. MEL-ROL liquid membrane (or an OER-approved equivalent) will be applied to double-formed walls and to seal holes in the membrane and around penetrations. All welds, seams and penetrations will be properly sealed to prevent preferential pathways for vapor migration. The vapor barrier system is an environmental control (EC) for the remedial action. The remedial engineer will

certify in the RAR that the vapor barrier system was designed and properly installed to mitigate soil vapor migration into the building. Performance of all activities required for the remedial action, including acquisition of required permits and attainment of pretreatment requirements, in compliance with applicable laws and regulations.

17. The proposed passive sub-slab depressurization system (SSDS) for the Site includes one system beneath the 10-inch-thick portion of the building foundation and includes a network of horizontal pipes set in the middle of a gas-permeable layer which are manifolded into a vertical riser pipe leading to a stack on the roof equipped with a wind turbine for exhausting any sub-slab gas. The passive SSDS installation will adhere to October 2006 Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York, prepared by NYSDOH, and all applicable portions of the Building Code of the City of New York, including but not limited to the 2014 New York City Mechanical Code, Chapter 5, Section MC 512-Subslab Exhaust Systems. As such, the point of exhaust for the SSDS will be: at least 6 inches above the roof; and at least 10 feet from any adjoining or adjacent buildings, operable windows, HVAC intakes, supply registers, or any other air inlets. To the extent practicable, the exhaust point will be located 10 feet above the roof, and 25 feet away from any relevant building openings or air handlers to serve as a proactively conservative exhaust point design. Additionally, a vapor barrier/waterproofing system comprised of Precon, StegoWrap and Mel-Rol, or an OER approved equivalent, is included in the building design below the entire building and up the walls to grade to mitigate the potential for soil vapor intrusion. The exhaust point will be at least 10 feet above any rooftop recreational spaces.
18. A passive SSDS design drawings will be submitted to OER prior to the pre-construction meeting. The drawings will include:
    a. Passive SSDS configuration: including layout of SSDS piping beneath the 10-inch-thick slab portion of the Site, gas permeable aggregate layer cross section and two permanent sub-slab monitoring point locations presented as an overlay on the foundation plans of the building and lowest level floor plans;
    b. Passive SSDS riser diagrams;
    c. Rooftop equipment plan: the HVAC roof plan identifying the exhaust location(s) and labeling distances to all operable openings, air intakes and occupied spaces (e.g., rooftop recreational space).
19. After the foundation is completed and the first two stories are enclosed, a soil vapor investigation (SVI) will be conducted to determine if the SSDS can remain passive or if activation is warranted. The soil vapor investigation will consist of the collection of three sub-slab soil vapor samples from permanent monitoring points installed the building slab, three indoor air samples (in conjunction with sub slab samples) and one indoor air sample and one outdoor air sample for volatile organic compounds. The results will be compared against the New York State Department of Health's (NYSDOH) matrix values for soil vapor contamination in New York State. If the SVI testing indicates an active SSDS is necessary, a post construction meeting is required with consultant, developer and building superintendent.
20. The SSDS drawings will be filed with New York City Department of Buildings (DOB) and proof of filing will be submitted to OER prior to the pre-construction meeting and/or prior to the start of major excavation.
21. If the SSDS becomes an active system, a deed restriction will be placed on the property to document the installation, and continued operation, of the active SSDS. The deed restriction can be removed if OER determines that the active SSDS has achieved its goals and is no longer warranted.
22. Performance of all activities required for the remedial action, including acquisition of required permits and attainment of pretreatment requirements, in compliance with applicable laws and regulations.
23. Dewatering in compliance with city, state, and federal laws and regulations. Extracted groundwater will either be containerized for off-site licensed or permitted disposal or will be treated under a permit from New York City Department of Environmental Protection (NYCDEP) to meet pretreatment requirements prior to discharge to the sewer system.
24. Implementation of storm-water pollution prevention measures in compliance with applicable laws and regulations.
25. Submission of a RAR that describes the remedial activities, certifies that the remedial requirements have been achieved, defines the Site boundaries, lists any changes from this RAWP, and describes all Engineering and Institutional Controls to be implemented at the Site.
26. Submission of an approved Site Management Plan (SMP) in the Remedial Action Plan (RAR) for long-term management of residual contamination, including plans for operation, maintenance, monitoring,

inspection and certification of Engineering and Institutional Controls and reporting at a specified frequency.

27. The property will continue to be registered with an E-Designation at the NYC Buildings Department. Establishment of Engineering Controls and Institutional Controls in this RAWP and a requirement that management of these controls must be in compliance with an approved SMP. Institutional Controls will include prohibition of the following: (1) vegetable gardening and farming; (2) use of groundwater without treatment rendering it safe for the intended use; (3) disturbance of residual contaminated material unless it is conducted in accordance with the SMP; and (4) higher level of land usage without OER-approval.

Description of Selected Remedy for Noise

The elements of the remedial action selected for Noise for the 164 4th Avenue site are as follows:
The following windows will be installed:

Façade Floor Range	OITC Rating	OITC Certification	Manufacturer and Model	Glazing
East and South Façades Floor 1 Commercial	26 (required 26, assumed framing loss 3 dBA) Full Assembly	Full assembly rating based on glass only OITC 29 manufacturer data. Full assembly ASTM E90 test report to be provided to OER prior to purchase and installation.	Storefront system with Viracon glass or OER approved equivalent.	1/4" glass – 1/2" argon space – 1/4" glass
East and West Façades Floors 1, 2, and 4 Amenity	26 (required 26, assumed framing loss 3 dBA) Full Assembly	Full assembly rating based on glass only OITC 29 manufacturer data. Full assembly ASTM E90 test report to be provided to OER prior to purchase and installation.	Casement window with Viracon glass or OER approved equivalent.	1/4" glass – 1/2" argon space – 1/4" glass
North, East, and South Façades Floor 17 Amenity	23 (required 23, assumed framing loss 3 dBA) Full Assembly	Full assembly rating based on glass only OITC 26 manufacturer data. Full assembly ASTM E90 test report to be provided to OER prior to purchase and installation.	Casement window with Viracon glass or OER approved equivalent.	1/8” glass – 3/8” air space – 1/8" glass
All Façades Floors 2 to 10 (less than 100’ above street level) Residential	31 (required 31, assumed framing loss 3 dBA) Full Assembly	Full assembly rating based on glass only OITC 34 manufacturer. Full assembly ASTM E90 test report to be provided to OER prior to purchase and installation.	Casement window with Viracon glass or OER approved equivalent.	1/4" glass – 1/2" air space – 3/8” glass
North and East Façades Floor 5 (less than 100’ above street level) Residential Terrace Door	31 (required 31, assumed framing loss 3 dBA) Full Assembly	Full assembly rating based on glass only OITC 34 manufacturer. Full assembly ASTM E90 test report to be provided to OER prior to purchase and installation.	Terrace Door with Viracon glass or OER approved equivalent.	1/4" glass – 1/2" air space – 3/8” glass
All Façades Floors 11 to 17 (more than 101’ above street level) Residential	28 (required 28, assumed framing loss 3 dBA) Full Assembly	Full assembly rating based on glass only OITC 31 manufacturer data. Full assembly ASTM E90 test report to be provided to OER prior to purchase and installation.	Casement window with Viracon glass or OER approved equivalent.	1/4" glass – 3/4" air space – 1/4" glass

In order to satisfy the requirements of the E-Designation, Alternate Means of Ventilation (AMV) will be installed in order to maintain a closed window condition. AMV for this project will be achieved by:

1. **PTAC Units:** Installing RSXC09 and RSXC13 PTAC units manufactured by Ice Air, LLC in all residential units. Fresh air will be provided to all bedrooms and living rooms by the PTAC units. Installing RSXC18 PTAC unit manufactured by Ice Air, LLC in the 17th Floor Amenity space. Fresh air will be provided to this amenity space by the PTAC unit. The PTAC units continuously provide outdoor air via a motorized automatic opening, which come factory installed with manufacturer warranty.
2. **Combination of Dedicated Fresh Air/ HVAC System**. Installing HE2XRTH model energy recovery unit manufactured by RenewAire on the 4th Floor roof and serving the 2nd Floor Sports Center and 1st Floor office and amenities for heating and cooling. Fresh air intakes on the unit and associated ductwork will provide fresh air to each office and amenity space. In all cases, the rate of outside air (cfm) delivered to each amenity space will meet or exceed that specified in the 2022 New York City Mechanical Code table 403.3.1.1.
3. **Compliance with Mechanical Code:** Providing outside air to commercial spaces and common areas such as lobbies and corridors in accordance with the 2022 NYC Mechanical Code.

The remedies for the Hazardous Materials and Noise E Designations described above conform to the promulgated standards and criteria that are directly applicable, or that are relevant and appropriate and takes into consideration OER guidance, as appropriate.

10/26/23
Date

Adrian Singleton
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10/26/23
Date

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