OFFICE OF ENVIRONMENTAL REMEDIATION
100 Gold Street – 2nd Floor
New York, New York 10038

Shaminder Chawla
Acting Director
Tel: (212) 788-8841

DECISION DOCUMENT
NYC VCP, E-Designation Remedial Action Work Plan Approval

February 23, 2024

Re: 870 - 888 Atlantic Avenue
Brooklyn Block 1122, Lots 21, 26
Hazardous Materials, Air Quality, Noise E Designation,
E-642: 870 - 888 Atlantic Avenue Rezoning - CEQR 21DCP146K - 4/28/2022
OER Project Number 22EHAN389K / 24CVCP020K

The New York City Office of Environmental Remediation (OER) has completed its review of the Remedial Action Work Plan (RAWP) dated December 2023 with Stipulation Letter dated February 2024 and the Remedial Action Plan for Air Quality and Noise dated January 2024 for the above-referenced project.

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

The RAWP was released for public comment for 30 days as required by program rule. That comment period ends on 03/08/2024. Any public comments received may alter the proposed remedial action.

Project Description
New 17-story mixed use with a cellar. The cellar will be utilized as utility rooms, elevator use, retail storage, community use, laundry, and parking use; the first floor will be utilized as parking, community use, lobby, bike storage, vestibule, packaging, compactor, mechanical and utility rooms, residential, and retail use; the mezzanine level will be utilized as bicycle storage, building amenity, and residential use; the second floor will be utilized as building amenity and residential use; floors 3-17 will be utilized as residential apartments; the roof will be utilized as community space and elevator bulkhead use.

Statement of Purpose and Basis
This document presents the remedial action for the NYC Voluntary Cleanup Program and E-Designation Program project known as "880 Atlantic 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 880 Atlantic Avenue site is protective of public health and the environment.

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 Use SCOs. Excavation for the new 17-story building will now range from 17 feet below grade surface (bgs) to 21 feet bgs for the construction of footings and three elevator pits. Nonbuilding areas in the southern and eastern portions will be excavated to depths between 1-foot bgs and 4-feet bgs for the installation of concrete slab on grade and footings. A lead hotspot in the northeast portion (SB-6 (5'-7')) will be delineated and over excavated to achieve Site-Specific SCOs. The new cellar will occupy approximately 95% of the Site footprint.
7. Screening of excavated soil/fill during intrusive work for indications of contamination by visual means, odor, and monitoring with a PID.
8. 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.
9. Removal of all UST's that are encountered during soil/fill removal actions. Registration of tanks 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.
10. 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. Appropriate segregation of excavated media on-Site.
11. Collection and analysis of end-point samples to determine the performance of the remedy with respect to attainment of SCOs.
12. Import of materials to be used for backfill and cover in compliance with this plan and in accordance with applicable laws and regulations.
13. Construction of an engineered composite cover consisting of a 3-foot-thick concrete mat slab with a 6-inch clean granular sub-base beneath all building areas, and a 6-inch poured concrete on a 6-inch sub-base in sidewalk areas.
14. Installation of a vapor barrier system consisting of vapor barrier beneath the building slab and outside of sub-grade foundation sidewalls to mitigate soil vapor migration into the building The vapor barrier system will consist of 20-mil Stego Wrap manufactured by Stego Industries or approved equal below the slab throughout the full building area and outside all sub-grade foundation sidewalls. All welds, seams and penetrations will be properly sealed to prevent preferential pathways for vapor migration. The vapor barrier system is an Engineering Control 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.
15. Installation of a sub-slab depressurization system (SSDS) consisting of a network of horizontal pipe set in the middle of a gas permeable layer immediately beneath the building slab and vapor barrier system. The horizontal piping will consist of fabric wrapped, perforated schedule 40 4-inch PVC pipe connected to a 6-inch steel or cast- 15 iron riser pipe that penetrates the slab and travels through the building to the roof. The gas permeable layer will consist of a 10-inch-thick layer of ASTM #5 gravel. The pipe will be finished at the roof line with a 6-inch goose neck pipe or rain cap to prevent rain infiltration. The SSDS is an Engineering Control for the remedial action. The remedial engineer will certify in the RAR that the SSDS was designed and properly installed to establish a vacuum in the gas permeable layer and a negative (decreasing outward) pressure gradient across the building slab to prevent vapor migration into the building.
16. Operation of the SSDS (i.e.: active or passive) will be determined upon completion of the lowest level foundation and post-installation soil vapor intrusion (SVI) evaluation. SVI will include analysis of three sub-slab soil gas samples (SS-1, SS-2, SS-3) and three co-located indoor air samples (IA-1, IA-2, and IA-3), and one outdoor ambient air sample (OA-1) to evaluate the post-SSDS installation conditions and to determine if the system's operation requirements. If the system is determined to operate as active, a fan/blower will be installed on each riser at the roof.
17. Construction and operation of a cellar-level parking garage with high volume air exchange in conformance with NYC Building Code.
18. 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.
19. Implementation of storm-water pollution prevention measures in compliance with applicable laws and

regulations.

20. 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.
21. 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.
22. 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 Air Quality

The elements of the remedial action selected for Air Quality for the 880 Atlantic Avenue site are as follows:

The Air Quality E-Designation (E-642) for Block 1122 and Lots 21 and 26 requires the following: Any new residential, community facility and/or commercial development must exclusively use natural gas as the type of fuel for the heating, ventilating, and air conditioning (HVAC) and hot water systems. If the HVAC and hot water systems exhaust through a single stack, the stack must be located at the highest tier and at least 190 feet above grade; If the HVAC and hot water systems exhaust through two separate stacks, the western-most exhaust stack must be located at the highest tier and at least 190 feet above grade, and at least 30 feet away from the lot line of Lot 21 facing Vanderbilt Avenue, and the eastern-most exhaust stack must be located at the highest tier and at least at least 180 feet above grade and at least 125 feet away from the lot line facing Vanderbilt Avenue to avoid any potential significant adverse air quality impacts.

In order to satisfy the requirements of the E-designation, electric equipment will be utilized at the site for space heating, hot water, and/or HVAC systems. The community facility, building amenity and laundry on the cellar will be provided with cooling and heating via VRF heat pump system with condenser CU-C.C, model #PURY-EP144TNU-A-(- BS), installed on the roof terrace of the 2nd floor and ducted air handlers AH-C.C1, AH- C.C3, model #PEFY-P48NMAU-E4 & AH-C.C2 model #PEFY-P24NMAU-E4 and wall mounted air handlers in laundry AH-LNDR model #PKFY-P12NLMU-E. The fresh air of 550 cfm in the community facility & building amenity will be provided via the F.A.I. louver on the 1st floor mezzanine from Pacific Street.

The fresh air of 125 cfm & 1,000 cfm in the laundry will be provided via ducts from the roof on the 2nd floor.

The community facility on the 1st floor will be provided with cooling and heating via VRF heat pump system with condenser CU-1.CF, model #PUHY-EP96TNU-A(-BS), installed on the roof terrace of the 2nd floor and ducted air handlers AH-1.CF1, AH- 1.CF2, model #PEFY-P48NMAU- 7 E4 & #PEFY-P30NMAU-E4. The fresh air of 350 cfm in the community facility will be provided via F.A.I. louver on the 1st floor of Atlantic Avenue.

The vestibule, mail room, package room, corridor, lounge on the 1st floor is provided with cooling and heating via VRF heat pump system with condenser CU-LNG, model #PUHY-EP192TNU-A(- BS), installed on the roof terrace on the 2nd floor and ducted air handlers AH-1.LNG1, AH1.LNG2, AH-1.LNG3, AH-1M.LNG4, model #PEFY-P54NMAU-E4, #PEFY-P30NMAU-E4, #PEFY-P27NMAU-E4. The fresh air of 600 cfm in the vestibule, mail room, package room, corridor will be provided via F.A.I. louver on the 1st floor of Atlantic Avenue. The fresh air of 150 cfm in the lounge will be provided via F.A.I. louver on the 1st floor mezzanine from Pacific Street.

The commercial space (Retail) on the 1st floor will be provided with heating via QMARK Electric Wall & Ceiling Unit Heaters, total quantity six (6) units. The fresh air of 970 cfm in the commercial space (retail) will be provided via F.A.I. louver on the 1st floor from Atlantic Avenue. The amount of cfm will be finalized by the future tenant fit-out project and will be filed by a separate application.

The building amenity on the 1st floor mezzanine will be provided with cooling and heating via VRF heat pump system with condenser CU-1M.BA, model #PUHY-EP96TNU-A(-BS), installed on the roof terrace of the 2nd floor, and ducted air handlers AH-1M.BA1, AH-1M.BA2, model #PEFY-P48NMAU-E4 & #PEFY-P36NMAU-E4. The fresh air of 350 cfm in the building amenity will be provided via F.A.I. louver on the 1st floor mezzanine from Atlantic Avenue.

The building amenity on the 2nd floor will be provided with cooling and heating via VRF heat pump system with condenser CU-2.BA, model #PUHY-EP96TNU-A(-BS), installed on the roof terrace of the 2nd floor, and ducted air handlers AH-2.BA1, AH-2.BA2, model #PEFYP48NMAU-E4. The fresh air of 400 cfm in the building amenity will be provided via F.A.I. louver on the 2nd floor of Pacific Street.

The 5,000 cfm fresh air intake to the parking area in the cellar will be provided via duct from the roof on the 2nd floor.

The ventilation of the residential corridors and trash compactor rooms are achieved by ERV-1 with Dehumidification Coil, installed on the roof over bulkhead level providing 60 cfm corridor supply per floor & 50 cfm exhaust per trash room per floor. Energy Recovery Ventilator (ERV) manufactured by Klima, model #U-ERV-Coil-1200.

The elevator machine rooms will be provided with cooling only via wall mounted air handlers AHA.EMR & AH-B.EMR, model #PKA-A12HA7 and condensers CU-C.EMR installed on the roof terrace of the 2nd floor & CU-R.EMR installed on the roof over bulkhead level, model #PUYA12NKA7.

All condensers described above are manufactured by Mitsubishi.

The electrical baseboard heaters provide adequate heat in the various mechanical/water/fire pump rooms, corridors, compactor room, storages and in the staircases. 8 Each residential unit will be supplied with hot water by a storage type individual electrical water heater HWH-1, located in the dedicated closets inside the apartment. The HWHs, manufactured by A.O.SMITH, PROLINE MOD#ENLB-50.

The laundry room in the cellar will produce hot water by a storage type individual electrical water heater HWH-2. The HWH, manufactured by A.O.SMITH, GOLD Xi SERIES MOD# DVE-120- 54 will be installed in the cellar.

The hot water supply in the restroom on the cellar & compactor room on the 1st floor will be provided by an instantaneous, electric water heater made by EEMAX, MOD #SPEX55T-ML.

An Air Quality Installation Report (IR) will be submitted to OER following the implementation of the remedial action defined in this RAP. The IR will document that the remedial work required under this RAP has been completed and has been performed in compliance with this plan.

Description of Selected Remedy for Noise

The elements of the remedial action selected for Noise for the 880 Atlantic Avenue site are as follows:

The Noise E-642 for Block 1122 and Lots 21 and 26 requires the following: “To ensure an acceptable interior noise environment, future residential/community facility uses must provide a closed-window condition with a minimum of 31 dBA window/wall attenuation on all facades in order to maintain an interior noise level not greater than 45 dBA for residential and community facility uses. To maintain a closed-window condition, an alternate means of ventilation must also be provided. An alternate means of ventilation includes, but is not limited to, air conditioning.”

The requirements of the E-Designation are as follows: In order to meet the requirements of the E-Designation, the following window/wall attenuation requirement will be achieved at the locations described below:

1. 31 dBA window/wall attenuation on all facades

The following windows will be installed:

Façade Floor Range	**OITC Rating**	**OITC Certification**	**Manufacturer and Model**	**Glazing**
South and North Façades 1st floor and Mezzanine East and West Façades Cellar (Commercial)	34 (required 31)	See ASTM E-90 acoustical report for the exact window and glazing in Appendix F- Report No. P5909.01-113-11-R0, Data File No. P5909.01A1	CS55 Fixed Window manufactured by Tehnomarket Doo	38 mm IG (10 mm laminated exterior, 16 mm argon, 12 mm laminated interior)
North, East, and West Façades Floors 2-17 South Façade Floors 1-17, Roof (Residential)	35 (required 31)	See ASTM E-90 acoustical report for the exact window and glazing in Appendix F- Report No. P5899.01-113-11-R0, Data File No. P5899.01A	Lineal 62 Fixed Window manufactured by Tehnomarket Doo	38 mm IG (12 mm laminated exterior, 16 mm argon, 10 mm laminated interior)
North and South Façades Floors 2-17 West Façade Floors 11-14 (Residential)	31 (required 31)	See ASTM E-90 acoustical report for the exact window and glazing in Appendix F- Report No. H9053.03-113-11-R0, Data File No. H9053.03A	Lineal Plus 62 Operable (Tilt-Turn) Window manufactured by Technomarket Doo	1-1/8" IG (1/4" annealed exterior, 5/8" air space, ¼" laminated interior)
North Façade Floors 2-12 and 14-16 South Façade Floors 2-17 (Residential)	31 (required 31)	See ASTM E-90 acoustical report for the exact window and glazing in Appendix F- Report No. P5911.03-113-11-R0, Data File No. P5911.01C	T67 Sliding Door System manufactured by Tehnomarket Doo	30 mm IG (8 mm annealed exterior, 16 mm argon, 6 mm annealed interior)
North and South Façades 1st Floor (Commercial)	33 (required 31)	See ASTM E-90 acoustical report for the exact window and glazing in Appendix F- Report No. P5900.03-113-11-R0, Data File No. P5900.01C	Lineal 62 Door manufactured by Tehnomarket Doo	32 mm IG (8 mm annealed exterior, 18 mm argon, 6 mm annealed interior)

Glass One is the sole distributor of Tehnomarket D.O.O. in the United States of America for aluminum windows and doors. A certified letter clarifying the relationship between Glass One Group Inc and Tehnomarket D.O.O. can be found in Appendix F: Acoustical Laboratory Test Reports.

The acoustical reports described above are representative of the acoustical performance of all proposed windows/doors/curtain walls. Color coded elevations and the labeled window schedule attached in Appendix E show the locations of the window/ door types.

The applicant commits to demonstrating that the selected manufacturer's window products achieve the minimum OITC requirement outlined in the table above. If the selected manufacturer does not have ASTM E90 test on file for the specific window assemblies to be installed, a mockup will be laboratory tested as per ASTM E90 to demonstrate compliance with the minimum OITC requirement.

3.3 Alternate Means of Ventilation

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. **Trickle Vents:** Installing Trimvent 90 Aluminum slot ventilator or equal trickle vents manufactured by Titon in all bedroom and living room windows. Fresh air will be provided to all bedrooms and living rooms by the trickle vents. Trickle vents are installed at a frequency of at least one trickle vent per window. Manufacturer specifications for the trickle vents are included as Appendix G. Floor plans showing the locations of trickle vents are included in Appendix H.

    - The cooling and heating in every residential unit will be provided via mini split electric heat pump system with condensers, model #PUMY-P36NKMU3(-BS) & #PUMY-P48NKMU3(-BS), manufactured by Mitsubishi. The fourteen (14) condensers will be installed on the roof terrace of the 2nd floor and the two hundred thirty-one (231) condensers will be installed on the bulkhead and roof over bulkhead. Each condenser will be connected to the ducted air handlers, installed in each living/ bedroom space. The cooling capacities of air handlers vary from 18.0 MBH to 36.0 MBH and depend on the cooling load of particular space inside the apartments. The heating capacities of air handlers vary from 20.0 MBH to 40.0 MBH and depend on the heating load of particular space inside the apartments. Air handling units manufactured by Mitsubishi Model No. are PEFY-P18NMAU-E4 (600 CFM), PEFY-P24NMAU-E4 (800 CFM), PEFY-P30NMAU-E4 (1,000 CFM), PEFY-P36NMAU-E4 (1,200 CFM).

2. **Compliance with Mechanical Code:** Providing outside air to commercial spaces and common areas such as lobbies and corridors in accordance with the NYC Mechanical Code. The plans and specifications are in compliance with the 2022 NYC Mechanical Code, 2022 NYC Building Code, 2022 NYC Plumbing Code and the 2020 NYC ECC.

A letter from the engineer who designed the dedicated fresh air/ HVAC system describing the system, the equipment involved (stating the manufacturer and model information), and how fresh air is delivered into each of the living spaces is attached as Appendix I.

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

2/23/2024

Date

Justin Holder
Project Manager

2/23/2024

Date

Maurizio Bertini, Ph.D
Assistant Director

cc: Elie Pariente, EMP Capital Group - epariente@empcapitalgroup.com
Ralph Kowalcyzk R.A., Issac & Stern Architects, P.C. - ralph@issacstern.com
Ezgi Karayel, Vektor Consultants - ezgi@vektorconsultants.com
David Klein, Vektor Consultants - dklein@vektorconsultants.com
Shaminder Chawla, Zach Schreiber, Maurizio Bertini, Michelle Sarro
Justin Holder, PMA-OER