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

April 12, 2021

Re: 1401 Inwood Avenue, 1400 Cromwell Avenue
Bronx Block 2857, Lot 1
Hazardous Materials, Noise E Designation
E-442: Jerome Avenue Rezoning - CEQR 17DCP019X - 3/21/2018
OER Project Number 21EH-N074X / 21CVCP021X

The New York City Office of Environmental Remediation (OER) has completed its review of the Remedial Action Work Plan (RAWP) dated January 2021 with Stipulation Letter dated January 18, 2021 and the Remedial Action Plan for Noise dated April 2021 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 December 10, 2020. There were no public comments.

Project Description
The proposed use of the Site will be a 6-story charter school. The development will consist of a school building with an outdoor plaza in the center of the school. The first floor will consist of 11,952 square feet with a cafeteria, kitchen, mechanical room, and classrooms. The second floor will consist of 12,054 square feet with classrooms and administrative space. The third floor will consist of 12,054 square feet with classrooms and administrative space. The fourth floor will consist of 12,053 square feet with classrooms and administrative space. The fifth floor will consist of 12,055 square feet with classrooms, network offices, and other administrative space. The sixth floor will consist of 7,278 square feet with a gymnasium, and 4,629 square feet of outdoor play area.

Statement of Purpose and Basis
This document presents the remedial action for the NYC Voluntary Cleanup Program and E-Designation Program project known as "1400 Cromwell Avenue" pursuant to Title 43 of the Rules of the City of New York Chapter 14, Subchapter 1 and the Zoning Resolution and §24 - 07 of the Rules of the City of New York.

Description of Selected Remedy for Hazardous Materials
The remedial action selected for the 1400 Cromwell 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 SCOs. The entire footprint of the Site will be excavated to a depth approximately between two (2) and six (6) feet below grade, for development purposes. The site is currently sloped in elevation from west (higher elevation) to east (lower elevation). The site will be excavated to meet the elevation requirements for the slab to be constructed on grade. Current foundation design includes grade beams, which will be excavated to a depth of two (2) to four (4) feet below grade surface in grade beam and pile locations.
7. 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.
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 USTs that are encountered during soil/fill removal actions. Registration of tanks and reporting of any petroleum spills associated with USTs and appropriate closure of these petroleum spills in compliance with applicable local, State and Federal laws and regulations.
10. Closure of Spill No. 20-08388 and any associated groundwater remediation will be managed under NYSDEC authority.
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 the RAWP. Sampling and analysis of excavated media as required by disposal facilities.
12. Collection and analysis of eight (8) post-excavation confirmation soil samples to determine the performance of the remedy with respect to attainment of SCOs.
13. Import of materials to be used for backfill and cover in compliance with the RAWP and in accordance with applicable laws and regulations.
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 Raven Industries VaporBlock® Plus™ vapor barrier below the slab throughout the full building area, below/around the elevator pit, and outside all sub-grade foundation sidewalls to grade. A 30-mil vapor barrier will be installed beneath the structure's slab in areas where SSDS piping is not installed (Raven Industries Absolute Barrier Y30BAC), below the Center Hall, Stairwell C, elevator, and Guidance 1 on the first floor. 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 closure report that the vapor barrier system was designed and properly installed to mitigate soil vapor migration into the building.
15. Construction of an engineered composite site cover over the entire footprint of the Site. The composite cover system will be comprised of four-inch concrete foundation connected with grade beams and pile caps/footings, followed by two inches of insulation, and 8 to 10 inches of ¾-inch clean stone and SSDS piping in all building foundation areas. The central outdoor plaza will consist of a five-inch thick concrete mechanical pad to the north, a pour and play rubberized fill and concrete pavers with a gravel substrate below the pavers and play pad rubber surface.
16. Installation of an active sub-slab depressurization system (SSDS) immediately beneath the building slab and vapor barrier system. The SSDS will consist of two (2) independent networks of horizontal pipe set in the middle of a gas permeable layer immediately beneath the building slab on the east and western portions of the building. The area of the foundation below the Center Hall, Stairwell C, elevator, and Guidance 1 rooms will include a 30-mil vapor barrier connected to the foundation wall grade beams and tie beams, as piping does not run below this area. The horizontal piping will consist of fabric wrapped, perforated schedule 40 4-inch PVC pipe connected to two (2) separate 6-inch steel or cast iron riser pipes that penetrate the slab and route vertically via enclosed risers through the building to the roof. The gas permeable layer will be one (1) continuous layer of ¾- inch bluestone beneath the building footprint. Sub-slab features will consist of a 10-inch thick layer of 3/4-inch clean stone around 36-inch wide trenches for all underground piping, and an 8-inch thick layer of ¾ -inch clean stone in the remainder of the footprint, followed by a vapor barrier, two inches of insulation, and four inches of concrete slab. Sub-slab piping will run below tie beams where needed throughout the foundation of the building. SSDS risers will terminate at or above the roof line with a 6-inch goose neck pipe to prevent rain infiltration. The active

SSDS will include two (2) hard-wired RadonAway RP265 (or higher) blowers installed on the roof line and a pressure gauge and alarm located in accessible areas on first floor. The system's exhaust points will be located at least 10 feet away from windows and publicly accessible outdoor areas, and at least 15 feet away from air-intakes serving indoor ventilation systems. Up to nine (9) permanent pressure monitoring points will be installed on the first floor to allow for continued monitoring of sub-slab conditions. The active SSDS is an Engineering Control for the remedial action. The remedial engineer will certify in the closure report that the active 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.

17. 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.
18. Implementation of storm-water pollution prevention measures in compliance with applicable laws and regulations.
19. Submission of a Remedial Action Report (RAR) that describes the remedial activities, certifies that the remedial requirements have been achieved, defines the Site boundaries, lists any changes from the RAWP, and describes all Engineering and Institutional Controls to be implemented at the Site.
20. Submission of an approved Site Management Plan (SMP) in the 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.
21. Recording of a Declaration of Covenants and Restrictions that includes a listing of Engineering Controls and Institutional Controls and a requirement that management of these controls must be in compliance with an approved SMP.
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 the 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 1400 Cromwell Avenue site are as follows:

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

1. 28 dBA on the northern, eastern, and western façades
2. 31 dBA on the southern façade

Façade Floor Range	**OITC Rating**	**OITC Certification**	**Manufacturer and Model**	**Glazing**
Southern Façade Floors 1-6 Classroom & Office space All exterior windows to receive glazing type GL-2	31 (Required 31)	Acoustical laboratory report no. K0253.06-113-11-R0 conforming to ASTM E-1332 and ASTM 90 and manufacturer's letter for YKK AP YES TU for the exact window and glazing.	YKK AP YES 45 XT and Viracon 1-1/8" insulating coated laminated glass	5/16" laminated exterior glass ply; ½" air space Argon gas filled, 5/16" interior laminated – identical to Lab Report.
Western & Eastern Façades, including interior courtyard facades (eastern and western)	30 (Required 28)	Acoustical laboratory report no. K0253.01-113-11-R0 conforming to ASTM E-1332 and ASTM 90 and manufacturer's letter for YKK	YKK AP YES 45 XT and Viracon 1" insulating coated glass	¼" laminated exterior glass ply; ½" air space Argon gas filled; ¼" interior ply – identical to Lab Report.

Façade Floor Range	OITC Rating	OITC Certification	Manufacturer and Model	Glazing
Floors 1-6 Classroom & Office space All exterior windows to receive glazing type GL-3		AP YES TU for the exact window and glazing.	(VE1-2M)	

The northern facing façade does not have windows leading to classrooms or offices.

YKK AP's YES 45 TU and YES 45 XT Storefront systems are identical in overall dimension, glazing pocket design, gaskets, air and water performance, and glazing thickness accommodation. The only difference between the two is an additional thermal break. Based on this information, the acoustical test report for YES 45 TU is sufficient for both YES 45 TU and YES 45 XT. Viracon glass for 1" and 1-1/8" glass compositions match the exact composition of glass utilized in the YES 45 XT system and will be used as the glazing.

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. **Central System:** Installing six rooftop units RTU-1 through RTU-6, (Manufacturer: Trane, Model: YHH300, YCH600, YHD240, YCH600, and YHH300) with a condensing system manufactured by Mitsubishi (Model PUY-A12NKA7) on the roof. Fresh air intakes are located on the roof and air handling units and associated ducting will provide fresh air to all six floors as follows:
   - RTU-1 supplying condition supply air with required fresh air rates to floors 1 through 5. Fresh air will be distributed with 10x8 supply and returns to each classroom.
   - RTU-2 supplying condition supply air with required fresh air rates to floors 1 through 5. Fresh air will be distributed with 24x16 supply and returns to each classroom.
   - RTU-3 supplying condition supply air with required fresh air rates to the sixth floor gymnasium. Fresh air will be distributed with supply and return ducts to gymnasium through wall to roof.
   - RTU-4 supplying condition supply air with required fresh air rates to floors 2 through 5. Fresh air will be distributed with 22x10 and 16x10 supply and returns to each classroom.
   - RTU-5 supplying condition supply air with required fresh air rates to floors 2 through 4. Fresh air will be distributed with supply and return ducts to each classroom.
   - RTU-6 supplying condition supply air with required fresh air rates to a portion of floor 1.

   In all cases, the rate of outside air (cfm) delivered to each floor will meet or exceed that specified in the 2014 New York City Mechanical Code table 403.3.

2. **Compliance with Mechanical Code:** Providing outside air to all remaining areas of the building including corridors, lobbies, and offices in accordance with the NYC 2014 Mechanical Code. Direct outside air is being provided and achieved through the mechanical ductwork that runs from the rooftop units and distributed along each occupiable space.

The remedies for 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.

April 12, 2021

Date

Shirley Chen
Project Manager

April 12, 2021

Date

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Assistant Director

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