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## DECISION DOCUMENT

### **NYC VCP and E-Designation Remedial Action Work Plan Approval**

May 13, 2015

**Re: 535 Flushing Avenue  
276-280 Lee Avenue  
Brooklyn Block 2263, Lot 52, CD 01  
Hazardous Materials, Air Quality, and Noise “E” Designation  
E-199: 3/12/2008 Wallabout Street Rezoning – CEQR 06 DCP 007K  
OER Project Number 14EHAN422K/15CVCP048K**

The New York City Office of Environmental Remediation (OER) has completed its review of the Remedial Action Work Plan (RAWP) dated November 2014 with Stipulation Letter dated May 2015 and the Remedial Action Plan for Air Quality and Noise dated May 2015 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 7, 2014. There were no public comments.

#### **Project Description**

The development project consists of redeveloping the lot with a 6-story mixed used building (commercial and residential) with a partial cellar level, and a small concrete capped rear yard. The cellar level will consist of 1,451 ft<sup>2</sup> of open cellar space, a sprinkler room, electric meter room, hot water heater room, and an elevator machine room. The first floor will consist of two commercial spaces that front Lee Avenue, and a small residential lobby accessed from Flushing Avenue. The second floor will consist of commercial office space and a community facility office space. The third through sixth floors will consist of residential apartments.

#### **Statement of Purpose and Basis**

This document presents the remedial action for the NYC Voluntary Cleanup Program and E-Designation project known as “535 Flushing 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 Hazmat**

The remedial action selected for the 535 Flushing 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 specified by disposal facility. A Waste Characterization Report documenting sample procedures, location, analytical results shall be submitted to NYCOER prior to the start of the remedial action.
6. Excavation and removal of soil/fill exceeding Track 4 Site-Specific SCOs. For development purposes, 90% of the lot will be excavated to a depth of approximately 12 feet for construction of the proposed building's cellar. Additional excavation of the top 1 to 3 feet would be required across the remainder of the lot for construction of the building's concrete capped rear yard. Additional excavation would be required in the concrete capped rear yard areas to remove the metals hot-spots to achieve Track 4 Site-Specific SCOs. Approximately 1,930 tons of soil will be removed.
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. Removal of underground storage tanks (if encountered) and closure of petroleum spills (if evidence of a spill/leak is encountered during Site excavation) in compliance with applicable local, State and Federal laws and regulations.
9. Management of excavated materials including temporarily stockpiling and segregating to prevent co-mingling of contaminated material and non-contaminated materials as described in Appendix D.
10. Transportation and off-Site disposal of all soil/fill material at 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. Installation of a vapor barrier system below the cellar slab of the building, below the elevator pit, and below the slab-on grade portions of the building, as well as behind cellar walls of the proposed building and behind the elevator pit walls. The vapor barrier will consist of Raven Industries' VaporBlock 20 Plus, which is a seven layer co-extruded barrier made from state-of-the-art polyethylene and EVOH resins.
14. Construction and maintenance of an engineered composite cover consisting of 6 inch thick concrete building cellar slab, 6 inch thick concrete slab for the slab on-grade portion of the building, and a 4" thick concrete capped rear yard to prevent human exposure to residual soil/fill remaining under the Site.
15. Implementation of storm-water pollution prevention measures in compliance with applicable laws and regulations.
16. Performance of all activities required for the remedial action, including permitting requirements and pretreatment requirements, in compliance with applicable laws and regulations.

17. Submission of a Remedial Action Report (RAR) that describes the remedial activities, certifies that the remedial requirements have been achieved, defines the Site boundaries, and describes all Engineering and Institutional Controls to be implemented at the Site, and lists any changes from this RAWP.
18. 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.
19. The property will continue to be registered with an E-Designation by 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 535 Flushing Avenue site are as follows:

In order to satisfy the requirements of the E-designation, natural gas will be utilized at the site for space heating, hot water, and HVAC systems.

**Description of Selected Remedy for Noise**

The elements of the remedial action selected for Noise for the 535 Flushing Avenue site are as follows:

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

1. 28 dBA for the 1<sup>st</sup> and 2<sup>nd</sup> floor commercial space; and
2. 33 dBA for residential spaces.

The following windows will be installed:

<b>Façade Floor Range</b>	<b>OITC Rating</b>	<b>OITC Certification</b>	<b>Manufacturer and Model</b>	<b>Glazing</b>
COMMERCIAL Windows East and South Facades 1 <sup>st</sup> Floor (W4 and W5)	31	See ASTM E90 Sound Transmission loss Test Report (E4498.01-113-11) in Appendix 3 of the Window/Wall Attenuation in Appendix F.	Series/Model CW50 Two-Lite Curtain Wall System	1-1/16" IG (1/4" annealed exterior, 1/2" air space, 5/16" annealed interior)
COMMERCIAL Doors South Facade 1 <sup>st</sup> Floor (Door 108 and 109)	32	Rating based on glass only (see Saflex Acoustical Guide in Appendix 3 of the Window/Wall Attenuation in Appendix F).	Storefront doors manufactured Viracon Acoustical Glass	1/4" laminated glass (1/8" glass, 0.060" lamination, 1/8" glass)
COMMERCIAL Windows East and South Facades Floor 2 (W1B, W2B and W2C)	26	See ASTM E90 Sound Transmission loss Test Report in Appendix 3 of the Window/Wall Attenuation in Appendix F. Project No. 11381-Pella-2 Report Date: 10/17/2012	Pella Designer Series Casement Window	5/8" IG (3/32" exterior, 7/16" air space, 3/32" interior, 1-3/16" air space, 3/32" secondary panel )

Façade Floor Range	OITC Rating	OITC Certification	Manufacturer and Model	Glazing
COMMERCIAL Windows East and South Facades Floor 2 (W3)	24	See ASTM E90 Sound Transmission loss Test Report in Appendix 3 of the Window/Wall Attenuation in Appendix F. Project No. 8472-Pella-2 Report Date: 12/19/2011	Pella Proline Series Clad Vent Casement Window	11/16" IG (3/32" exterior, 1/2" air space, 3/32 interior glass)
RESIDENTIAL Windows All Facades Floors 3-6 and PH (W1A and W2A)	30	See ASTM E90 Sound Transmission loss Test Report in Appendix 3 of the Window/Wall Attenuation in Appendix F. Project No. ESP-012098-Pella-1 Report Date: 12/17/2012	Pella Designer Series Casement Window	5/8" IG (1/4" exterior, 1/4" air space, 1/8" interior, 1-1/8" air space, 1/8" secondary panel )
RESIDENTIAL Doors South Facade Floors 3 and 5 (Doors 310 and 509)	29	See ASTM E90 Sound Transmission loss Test Report in Appendix 3 of the Window/Wall Attenuation in Appendix F. Project No. C7575.0-113-11 Report Date: 05/03/13	Pella Designer Series, Model 2 SSIII – In- Swing Patio Door	5/8" IG (1/8" exterior, 3/8" air space, 1/8" interior, 1" air space, 1/8" tempered secondary panel )
RESIDENTIAL Doors South Facade Floor 3 (Door 321)	27	See ASTM E90 Sound Transmission loss Test Report in Appendix 3 of the Window/Wall Attenuation in Appendix F. Project No. 10606-Pella-1 Report Date: 07/20/2012	Pella Designer Series Sliding Patio Door	5/8" IG (1/8" exterior, 3/8" air space, 1/8" interior, 1-1/8" air space, 1/8" secondary panel )
RESIDENTIAL Doors South Facade Floors 4, 5 and PH (Doors 322, 518 & 703)	29	See ASTM E90 Sound Transmission loss Test Report in Appendix 3 of the Window/Wall Attenuation in Appendix F. Project No. 30160-06-72360-1 Report Date: 02/02/2006	Pella Architect Series Type II AS Sliding Patio Door	23/32" IG (1/8" exterior, 9/32" air space, 5/16" laminated interior)

The façade masonry will have an OITC rating of 48 dBA or greater to accomplish the window/wall attenuation requirements outlined above.

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 Variglaze® trickle vents manufactured by Titon in windows on the 3<sup>rd</sup> through 5<sup>th</sup> floors at a rate of one per bedroom and one per living room. Fresh air will be provided to all bedrooms and living rooms by the trickle vents. Floor plans showing the installation location of each of the trickle vents are included in Appendix A. Manufacturer specifications for the trickle vents are included as Appendix F.
2. **Compliance with 2014 Mechanical Code:** Providing outside air to commercial spaces, office spaces and common areas such as lobbies and corridors in accordance with the 2014 NYC Mechanical Code. The owner will be fitting out the HVAC equipment for the commercial space.

The remedies for Hazardous Materials, Air Quality, and Noise 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.

May 13, 2015



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Date

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Amanda Duchesne, Project Manager

May 13, 2015



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Date

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Shaminder Chawla, Deputy Director

May 13, 2015



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Date

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Zach Schreiber, Ph D., Assistant Director

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