NYC PLANNING

ENVIRONMENTAL ASSESSMENT AND REVIEW DIVISION

Anita Laremont, *Acting Director*
Department of City Planning

Vanderbilt Atlantic Holdings LLC
c/o Stefanie Marazzi
Hirschen Singer & Epstein LLP
902 Broadway, 13th Floor
New York, NY 10010

Re:	**840 Atlantic Avenue**
CEQR No.	20DCP162K
ULURP No(s).	C210249ZMK, N210250ZRK
SEQRA Classification:	Type I
Brooklyn Community District:	BK08

Dear Stefanie Marazzi,

Under City Environmental Quality Review, the lead agency is required to determine whether a proposed action may have a significant adverse impact on the environment. In accordance with this regulation, the City Planning Commission has determined that the proposed action would not have a significant adverse impact on the environment.

Enclosed is the Technical Memorandum for CEQR No. 20DCP162K, 840 Atlantic Avenue, in connection with the modifications being considered by City Council. The Technical Memorandum analyzes whether the proposed modifications would result in any significant adverse environmental impacts not already identified in the Environmental Assessment Statement (EAS) for the proposed actions. The Technical Memorandum concludes that the proposed modifications would not result in any significant adverse environmental impacts not already identified in the EAS for the proposed actions, and was issued on 9/20/2021.

Sincerely,

Stephanie Shellooe, AICP, *Deputy Director*

September 20, 2021
Date

cc: Project File
Kenneth Knuckles, Chair
City Planning Commissioners
Raju Mann, Director, City Council Land Use Division
Eric Adams, Brooklyn Borough President
Brooklyn Community Board BK08

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TECHNICAL MEMORANDUM 001
840 Atlantic Avenue EAS
CEQR No. 20DCP162K

September 17, 2021

I. INTRODUCTION

The Applicant, Vanderbilt Atlantic Holdings LLC., is seeking approval for three discretionary actions (collectively the "Proposed Actions") in order to facilitate the redevelopment of the Applicant-owned Development Site at 840 Atlantic Avenue (Block 1122, Lots 1, 9, 10, 68, 69, 70, 71) in the Prospect Heights neighborhood of Brooklyn Community District 8. The Environmental Assessment Statement (EAS) for the Proposed Actions (CEQR No. 20DCP162K) was accepted as complete and a Negative Declaration was issued on February 26, 2021 by the New York City Department of City Planning (DCP) acting on behalf of the City Planning Commission (CPC) as lead agency.

Following the publication of the EAS, modifications to the proposed zoning map amendment (210249ZMK) have been identified as under consideration by the New York City Council (the "Potential Council Modifications"). These modifications are detailed in Section II below.

This technical memorandum examines whether the Potential Council Modifications would result in any new or different significant adverse environmental impacts not already identified in the February 2021 EAS.

II. DESCRIPTION OF THE POTENTIAL COUNCIL MODIFICATIONS

The proposed rezoning area would encompass the entirety of Lots 9, 68, 69, 70, 71 and a portion of Lots 1 and 10 on Brooklyn Block 1122 (the "Rezoning Area"). The total area of the Development Site is 38,800 square feet (sf). The Rezoning Area comprises approximately 32,500 sf of lot area bounded by Atlantic Avenue to the north, Vanderbilt Avenue to the west, and Pacific Street to the south. The portion of the Development Site fronting on Pacific Street (the easternmost portion, 30 feet in width) will remain zoned R6B (approximately 4,500 sf). A small portion of the existing M1-1 zoning district (approximately 1,800 sf) would remain (approximately 20 feet of frontage along Atlantic Avenue). Although this portion of the Development Site would fall outside the rezoning area boundary and remain within the M1-1 district, it would be subject to the "25-foot rule" for split lots.[1] Under the current Proposed Actions, a C6-3X district would extend 200 feet along Atlantic Avenue, 200 feet along Vanderbilt Avenue, and 125 feet along Pacific Street.

Under the Potential Council Modifications, portions of the currently proposed C6-3X zoning district would be replaced with C6-2A and C6-3A zoning districts. The proposed C6-3X district would extend 150 feet along Atlantic Avenue and 100 feet along Vanderbilt Avenue. The proposed C6-2A district would extend 50 feet along Atlantic Avenue. The proposed C6-3A district would extend 125 along Pacific Street and 100

[1] As outlined in Zoning Resolution Section 77-11, the "25 Foot Rule" applies to a zoning lot split between two or more zoning districts that permit different uses and bulk regulations when the width of one district on the zoning lot measures 25 feet or less at every point.

feet along Vanderbilt Avenue. The portion of the Development Site fronting on Pacific Street (the easternmost portion, 30 feet in width) will remain zoned R6B (approximately 4,500 sf). A small portion of the existing M1-1 zoning district (approximately 1,800 sf) would remain (approximately 20 feet of frontage along Atlantic Avenue). This would lower the maximum permitted building height and density of the property while allowing the Applicant to develop a similar mix of land uses as contemplated under the Proposed Actions.

III. ANALYSIS FRAMEWORK

Pursuant to the Reasonable Worst-Case Development Scenario (RWCDS) analyzed for the Proposed Actions, the 2021 EAS did not identify any significant adverse impacts. The RWCDS analyzed in the EAS consisted of the Proposed Project, a 195-foot-tall (205 feet to the bulkhead), approximately 376,432-gross square foot (gsf) mixed-use, predominantly residential building, which would maximize the available FAR. In addition, as the Proposed Actions would increase the maximum permitted commercial FAR to 6.0, for environmental review purposes, an alternate commercial RWCDS was also assessed.

Under the Proposed Actions, a C6-3X district would extend 200 feet along Atlantic Avenue, 200 feet along Vanderbilt Avenue, and 125 feet along Pacific Street. Under the Potential Council Modifications, the Rezoning Area would instead be mapped with a C6-3X district which would extend 150 feet along Atlantic Avenue and 100 feet along Vanderbilt Avenue; a C6-2A district which would extend 50 feet along Atlantic Avenue; and a C6-3A district which would extend 125 along Pacific Street and 100 feet along Vanderbilt Avenue. Under the Potential COUNCIL Modifications, the maximum building height would 205 feet, 145 feet, and 175 feet in the C6-3X, C6-2A, and C6-3A districts, respectively.

Table 1
Comparison of Existing (R6B; M1-1), Proposed (C6-3X), and Potential (C6-3X; C6-2A; C6-3A) Zoning Districts

	EXISTING	CURRENTLY PROPOSED IN EAS	POTENTIAL COUNCIL MODIFICATIONS
	R6; M1-1	C6-3X (MIH)[2]	C6-3X; C6-2A; C6-3A (MIH)[2]
Use Groups:	R6B: UG 1-4 [1] ; M1-1: UG 4-14, 16,17	UG 1-9, 14	UG 1-9, 14
Max. Floor Area Ratio (FAR):			
- Residential	2.0	9.7	9.7; 7.2; 8.5
- Community Facility	2.4	9.0	9.0; 6.5; 7.5
- Commercial	1.0	6.0	6.0; 6.0; 6.0
- Manufacturing	1.0	N/A (not permitted)	N/A (not permitted)
Building Height:			
- Max. building height	R6B: Quality Housing – max. bldg. height 55' M1-1: sky exposure plane	Commercial – sky exposure plane Residential – Max. bldg. height of 205' (wide street)	205'; 145'; 175' (wide street)
Required Accessory Parking:			
- Residential	50% of DUs	40% of DUs above 80% AMI[3]	40% of DUs above 80% AMI[3]
- General Comm. Facility	Varies by use	Varies by use	Varies by use
- General Retail or Service	Varies by use	N/A	N/A
- Manufacturing	Varies by use	N/A	N/A

Source: *New York City Zoning Resolution*
Notes:
[1] With some limitations
[2] A portion of the existing R6B zoning district would remain (approximately 4,500 sf of the Development Site).
[3] No parking required for housing meeting MIH standards in the Transit Zone; the Rezoning Area is in the Transit Zone.

The Rezoning Area would encompass the entirety of Lots 9, 68, 69, 70, 71 and a portion of Lots 1 and 10 on Brooklyn Block 1122. The total area of the Development Site is 38,800 sf and is Applicant-controlled. The Rezoning Area comprises approximately 32,500 sf of lot area bounded by Atlantic Avenue to the north, Vanderbilt Avenue to the west, and Pacific Street to the south. As noted above, the C6-3X, C6-2A, and C6-3A districts proposed as part of the Potential Council Modifications would allow the Applicant to develop a similar mix of land uses as contemplated under the Proposed Actions, but with a maximum allowable combined FAR of 7.7.

For environmental analysis purposes, this Technical Memorandum will compare the two RWCDS programs analyzed for the Development Site in the February 2021 EAS with the future conditions under the Potential Council Modifications. Table 2 provides a comparison of the RWCDS development programs currently proposed in the EAS and the development programs under the Potential Council Modifications.

As shown in Table 2a, under the Potential Council Modifications for the Proposed Project, the Development Site would include a total of approximately 270,349 gsf of residential uses (270 DU of which 54 DUs would be affordable), approximately 50,200 gsf of commercial uses, and 7,800 gsf of community facility uses. Compared to the currently proposed development program analyzed in the February 2021 EAS, the Potential Council Modifications would result in a reduction of approximately 46 DUs (reduction of 9 affordable DUs), 4,975 gsf of commercial space, as well as a reduction of approximately 104 residents and 5 workers. There would be no change in the community facility space.

Table 2a
Comparison of Development Site (Proposed Project) – Proposed in EAS vs. Potential Council Modifications

Use	CURRENTLY PROPOSED IN EAS	POTENTIAL COUNCIL MODIFICATIONS	NET DIFFERENCE
Residential (Total)	316 DUs (312,917 gsf)	270 DUs (270,349 gsf)	**-46 (-42,568 gsf)**
Market-Rate	253 DUs	216 DUs	**-37**
Affordable	63 DUs	54 DUs	**-9**
Commercial	55,175 gsf	50,200 gsf	**-4,975 gsf**
Community Facility	7,800 gsf	7,800gsf	**No change**
Parking	90 spaces	90 spaces	**No change**
Population/Employment[1]	**CURRENTLY PROPOSED IN EAS**	**POTENTIAL COUNCIL MODIFICATIONS**	**NET DIFFERENCE**
Residents	717 residents	613 residents	**-104**
Workers	188 workers	183 workers	**-5 workers**

Notes: Estimated residents assumes 100% occupancy of dwelling units and is based on the average household size of 2.27 persons per unit in Brooklyn CD 8; retail space & community facility: 3 employees/1,000 gsf

Table 2b
Comparison of Development Site (Alternate Commercial RWCDS) – Analyzed in EAS vs. Potential Council Modifications

Use	CURRENTLY ANALYZED IN EAS	POTENTIAL COUNCIL MODIFICATIONS	NET DIFFERENCE
Residential (Total)	0	0	**N/A**
Market-Rate[1]	0	0	**N/A**
Affordable[1]	0	0	**N/A**
Commercial	216,090 gsf	216,090 gsf	**No change**
Community Facility	9,450 gsf	9,450 gsf	**No change**
Parking	0 spaces	0 spaces	**N/A**
Population/Employment[2]	**CURRENTLY PROPOSED IN EAS**	**POTENTIAL COUNCIL MODIFICATIONS**	**NET DIFFERENCE**
Residents	0 residents	0 residents	**N/A**
Workers	826 workers	826 workers	**No change**

Notes: Assumes retail space & community facility: 3 employees/1,000 gsf; office: 4 employees/1,000 gsf

As shown in Table 2b, compared to the Alternate Commercial RWCDS program analyzed in the February 2021 EAS, the Potential Council Modifications would not result in any changes.

As the Proposed Project development program is greater than the development program under the Potential Council Modifications and there is no change between the Alternate Commercial RWCDS development program analyzed in the February 2021 EAS compared to the development program under the Potential Council Modifications, the RWCDS analyzed in the February 2021 EAS is a more conservative basis for the density related impact categories (e.g., socioeconomic conditions, open space, infrastructure, and transportation), and therefore the Potential Council Modifications would not result in any new impacts in those technical areas. For site specific impacts related to hazardous materials and noise, the same (E) designation requirements identified for the Development Site would be warranted under the Potential Council Modifications to eliminate potential impacts associated with those issues if the Development Site were to be redeveloped for commercial/residential uses. For technical analyses reliant on building bulk and height, such as shadows, urban design and visual resources, historic and cultural resources, and air quality, the Proposed Project analyzed in the EAS would have a higher maximum building and streetwall heights than the development program under the Potential CPC Modifications. There would be no other observable changes to the pedestrian experience, compared to the RWCDS analyzed in the February 2021 EAS, as the Potential CPC Modifications would not result in changes to required setbacks at street level, the ground-floor plan, or the location of curb cuts or building entrances.

Therefore, the assessment in Section IV below focuses on the technical areas with the greatest potential for new impacts as a result of the Potential Council Modifications.

IV. ASSESSMENT OF POTENTIAL IMPACTS

As described below, the Potential Council Modifications at the Development Site would not alter the conclusions for the environmental areas examined in the February 2021 EAS. The Potential Council Modifications would not result in any significant adverse impacts beyond those disclosed in the EAS. Nor have any circumstances changed since publication of the EAS, such as proposed background developments, that would create the potential for additional significant impacts as a result of the Proposed Actions that were not previously identified.

As noted above, the Proposed Project was assessed for the massing-related technical areas of shadows, urban design and visual resources, historic and cultural resources, and air quality. As outlined in the EAS, no significant adverse impacts were anticipated in these technical areas as a result of the Proposed Project; however, for the Proposed Project, an (E) designation (E-604) would be assigned to Block 1122, Lots 1, 9, 10, 68-71, which would mandate the fuel type and stack location for the Proposed Project's heating, ventilation, and air conditioning (HVAC) systems. Under the Potential Council Modifications, the maximum building height for portions of the Proposed Project would change (refer to Table 1). Therefore, the 18-story, 195-foot-tall (205-feet to the bulkhead) Proposed Project analyzed in the shadows, urban design and visual resources, historic and cultural resources, and air quality analyses would now be 17-stories with a height of 185-feet.

Shadows

With the Potential Council Modifications, the maximum building height in the future with the Proposed Actions would be 185-feet, reducing the maximum shadow radius from the 885 feet analyzed in the EAS to approximately 795 feet. As the 185-foot-tall Proposed Project would have a smaller shadow radius than that analyzed in the EAS, the Potential Council Modifications would result in less incremental shadow coverage than the RWCDS analyzed for the Proposed Actions. Therefore, the Potential Council Modifications, like the Proposed Actions, would not result in any new significant adverse shadow impacts, and the conclusions presented in the February 2021 EAS remain unchanged.

Historic and Cultural Resources

The historic and cultural resources assessment provided in the EAS analyzed the 195-foot-tall Proposed Project, and concluded that it would not result in significant adverse impacts. The reduction in the permitted maximum building height under the Potential Council Modifications would not alter the relationship of any identified historic architectural resources to the streetscape, compared to the Proposed Project analyzed in the February 2021 EAS, and would not result in any significant adverse impacts to historic and cultural resources. Therefore, the conclusions presented in the February 2021 EAS remain unchanged.

Urban Design and Visual Resources

The urban design and visual resources assessment provided in the EAS analyzed the 195-foot-tall Proposed Project, and concluded that it would not result in significant adverse impacts. The reduction in the permitted maximum building height under the Potential Council Modifications would not result in a different pedestrian experience compared to the Proposed Project analyzed in the February 2021 EAS, and would not result in any significant adverse impacts on urban design and visual resources. Therefore, the conclusions presented in the February 2021 EAS remain unchanged.

Air Quality

The air quality analysis provided in the EAS analyzed the 195-foot-tall (205-feet to the bulkhead) Proposed Project for potentially significant adverse impacts. In addition to screening out the potential for significant mobile source impacts, the air quality analysis provided in the EAS analyzed the heating, ventilation, and air conditioning (HVAC) impacts of the Proposed Project on existing land uses, which considered the potential HVAC impacts on two nearby taller existing buildings. As emissions from heating, ventilation, and air conditioning (HVAC) system of the 195-foot-tall Proposed Project may impact existing buildings located within 400 feet of the proposed building that are taller or the same height as the proposed builiding, a detailed HVAC analysis was warranted. One of these buildings is a proposed 29-story (312 foot-tall) building at 809 Atlantic Avenue (Block 2010 Lots 1 and 59). The other building is an existing 17-story mixed residential and commercial building located at 550 Vanderbilt Avenue (Block 1129 Lot 200), which is approximately 202 feet tall (at roof level) and includes roof-top penthouses that rise to a height of approximately 213 feet. As such, a detailed analysis was conducted for the Proposed Project and an (E) designation that required a stack setback and the exclusive use of natural gas in the HVAC systems was imposed on the Development Site (Block 1122, Lots 1, 9, 10, 68-71).

As modified by the Potential Council Modifications, a lower-density alternative – a mixed use building with a maximum building height of 185-feet – is now being considered. As such, additional analyses were conducted.

As the Potential Council Modifications would result in a decrease in maximum allowable building height and floor area, the Proposed Project analyzed in the EAS would represent the worst-case scenario for the mobile source air quality screening assessment. However, based on the lower height of the Proposed Project as a result of the Potential Council Modifications, additional analyses of the potential impacts of the emissions from the HVAC systems of the Proposed Project on nearby taller buildings were conducted. The results of these analyses are provided with this technical memorandum.

As shown in Table 3 and Figure 1, a screening analysis of the Proposed Project under the Potential Council Modifications determined that it failed the HVAC screening analysis, and a detailed analysis is required.

Figure 1: HVAC Screening Analysis Nomograph for the Proposed Project under the Potential Council Modifications

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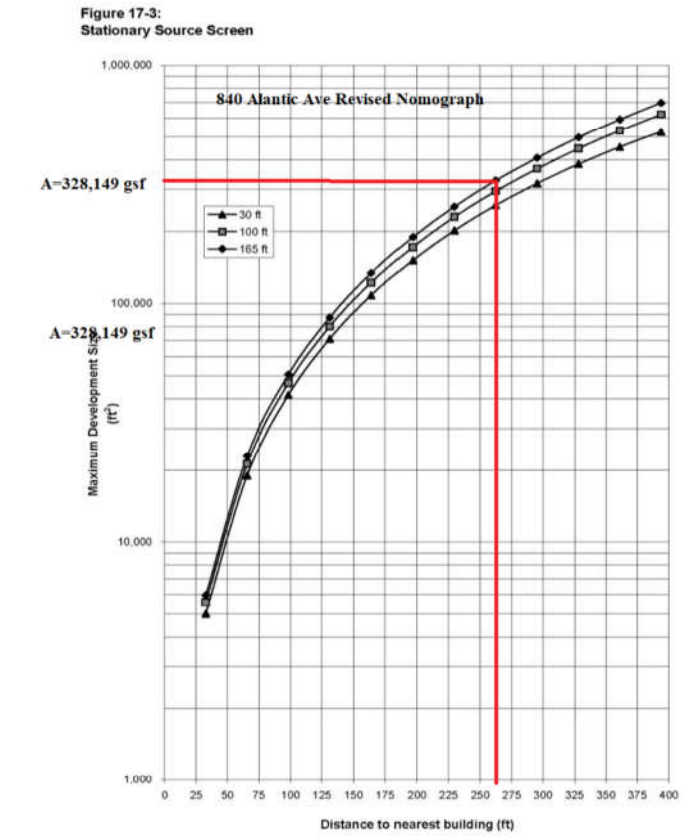


Table 3
HVAC Screening Analysis of the Proposed Project under the Potential Council Modifications

Site	Block/ Lot	Total Floor Area	Stack Height	Nearest Building	Distance Between Buildings	Threshold Distance CEQR Figure 17-3	CEQR Figure 17-3 Results	
		sq. ft.	feet		feet	feet	Pass	Fail
Proposed Development	Block 1122, Lots 1, 9, 10, 68-71	328,129	188	Existing 17-story 550 Vanderbilt Ave Building	115	263		**Fail**
				Future Proposed Building, 809 Atlantic Ave	200			**Fail**

The detailed analysis utilizing the United States Environmental Protection Agency's (USEPA's) AERMOD model was conducted to analyze the potential HVAC impacts of the Proposed Project under the Potential Council Modifications on existing surrounding land uses.

As a result of the lower proposed building height, two nearby existing buildings would be affected. One of these buildings is a proposed 29-story (312 foot-tall) building at 809 Atlantic Avenue (Block 2010 Lots 1 and 59). The other building is an existing 17-story mixed residential and commercial building located at 550 Vanderbilt Avenue (Block 1129 Lot 200), which is approximately 202 feet tall (at roof level) and includes roof-top penthouses that rise to a height of approximately 213 feet.

The planned 809 Atlantic Avenue building is approximately 200 feet further from the Development Site than the existing building at 550 Vanderbilt Avenue building which is about 115 feet from the Development Site. Therefore, the highest potential impacts could likely to occur at the 550 Vanderbilt Avenue building, particularly near the top of the penthouse. Based on these worst-case impacts, revisions to the rooftop setbacks of the HVAC exhaust stack necessary to avoid significant air quality impacts were determined for the Proposed Project under the Potential Council Modifications. The exhaust stacks of the Proposed Project should be located on the highest roof-top tier and at least 188 feet above grade and at least 53 feet from the northern lot line facing Atlantic Avenue. Therefore, revisions to the (E) designation for air quality for the Development Site would be necessary to ensure these requirements.

The maximum estimated pollutant concentrations -- with and without downwash (wind flow) affects -- on the nearby buildings are provided in Tables 4, 5, and 6.

Table 4: $PM_{2.5}$ Analysis Results with Downwash

Site ID	Receptor Buildings	Maximum 24-hour Impact	Maximum Annual Impact	CEQR Significant Impact Criteria	
				24-hour	Annual
		µg/m³	µg/m³	µg/m³	µg/m³
		2.95	0.07	8.6	0.3
Newly Proposed Development	Existing and Future Buildings	Total 24-hour Average Conc[1]	Annual Average Conc[2]	NAAQS	
				24-hour	Annual
		µg/m³	µg/m³	µg/m³	µg/m³
		20.8	7.6	35	12

Table 5: $PM_{2.5}$ Analysis Results without Downwash

Site ID	Receptor Buildings	Maximum 24-hour Impact	Maximum Annual Impact	CEQR Significant Impact Criteria	
				24-hour	Annual
		µg/m³	µg/m³	µg/m³	µg/m³
		3.65	0.1	8.6	0.3
Proposed Development	Existing and Future Buildings	Total 24-hour Average Conc[1]	Annual Average Conc[2]	NAAQS	
				24-hour	Annual
		µg/m³	µg/m³	µg/m³	µg/m³
		21.5	7.7	35	12

1. Maximum total $PM_{2.5}$ 24-hr concentration includes a maximum average impact of 2.7 ug/m³ and a background concentration of 17.8 ug/m³.
2. Maximum total $PM_{2.5}$ annual concentration includes a maximum annual average impact and a background concentration of 7.6 ug/m³.

Table 6: NO_2 Analysis Results with Downwash

Site ID	Receptor Building	Total 1-hour NO_2 Conc.[1]	Total Annual NO_2 Conc.[2]	NAAQS 1-hr/Annual
		µg/m³	µg/m³	µg/m³
Proposed Development	Existing and Future Buildings	182.7	28.3	188/100

Table K-7: NO_2 Analysis Results without Downwash

Site	Receptor Building	Total 1-hour NO_2 Conc.[1]	Total Annual NO_2 Conc.[2]	NAAQS 1-hr/Annual
		µg/m³	µg/m³	µg/m³
Newly Proposed Development	Existing and Future Buildings	182.7	28.6	188/100

1. Maximum total 1-hour NO_2 concentrations includes a maximum impact and a background concentration of 104 ug/m³.
2. Maximum total NO_2 annual concentration includes a maximum impact and background concentrations of 27.6 ug/m³.

With the revised (E) designation on the Development Site, the Proposed Project under the Potential Council Modifications would not cause significant adverse air quality impacts. The revised (E) designation will include (1) restrictions on the location of stacks and minimum stack heights for any community facility, commercial, and residential developments, and (2) the exclusive use of natural gas in the HVAC systems.

The revised language of the (E) designation that would apply to the Development Site under the Potential Council Modifications for Block 1122, Lots 1, 9, 10, 68-71 is as follows:

Block 1122, Lots 1, 9, 10, 68, 69, 70, 71: Any new residential, commercial, and/or community facility development on the above-referenced property must exclusively use natural gas as the type of fuel for heating, ventilating, and air conditioning (HVAC) systems and hot water equipment, and must ensure the HVAC system and hot water equipment stack is located within Lot 1 at the highest tier at least 188 feet above grade, no more than 53 feet from the northern lot line facing Atlantic Avenue, and at least 49 feet from the western lot line facing Vanderbilt Avenue, to avoid any potential significant adverse air quality impacts.

As all future development on the Development Site would be required to comply with the revised (E) designation above, no significant adverse air quality impacts would result, and the conclusions of the February 2021 EAS otherwise remain unchanged.