2080 McDonald Avenue Rezoning

Environmental Assessment Statement

CEQR Number: 21DCP132K

Prepared For:

2080 McDonald LLC

Prepared By:

Environmental Studies Corporation

April 8th, 2022

City Environmental Quality Review
ENVIRONMENTAL ASSESSMENT STATEMENT (EAS) SHORT FORM

FOR UNLISTED ACTIONS ONLY • *Please fill out and submit to the appropriate agency* (see instructions)

Part I: GENERAL INFORMATION

1. *Does the Action Exceed Any Type I Threshold in 6 NYCRR Part 617.4 or 43 RCNY §6-15(A) (Executive Order 91 of 1977, as amended)?* ☐ YES ☒ NO

If "yes," **STOP** and **complete the FULL EAS FORM**.

2. *Project Name* 2080 McDonald Avenue

3. *Reference Numbers*

CEQR REFERENCE NUMBER (to be assigned by lead agency)	BSA REFERENCE NUMBER (if applicable)
21DCP132K	
ULURP REFERENCE NUMBER (if applicable)	OTHER REFERENCE NUMBER(S) (if applicable) (*e.g.*, legislative intro, CAPA)
210174ZMK, N210175ZRK	

4a. *Lead Agency Information*			**4b. *Applicant Information***		
NAME OF LEAD AGENCY New York City Department of City Planning			NAME OF APPLICANT 2080 McDonald LLC		
NAME OF LEAD AGENCY CONTACT PERSON Stephanie Shellooe, AICP, Director, EARD			NAME OF APPLICANT'S REPRESENTATIVE OR CONTACT PERSON Hiram A. Rothkrug, Environmental Studies Corp.		
ADDRESS 120 Broadway, 31st Floor			ADDRESS 55 Water Mill Road		
CITY New York	STATE NY	ZIP 10271	CITY Great Neck	STATE NY	ZIP 11021
TELEPHONE 212-720-3328	EMAIL sshellooe@planning.nyc.gov		TELEPHONE 718-343-0026	EMAIL hrothkrug@environmentalstudiescorp.com	

5. *Project Description*

The Applicant, 2080 McDonald LLC, is proposing a zoning map amendment to the New York City Zoning Map, Section 28c, to rezone portions of two blocks with frontage on McDonald Avenue in the Gravesend Section of Brooklyn Community District 11. The proposed zoning would replace the existing R5B and M1-1 zoning districts with a C4-4L district. The Project Area is made of up four tax lots: Block 6680, Lots 39 and 42, and Block 7087, Lots 1 and 5; with the Applicant controlling the affected lots on Block 6680. The Applicant is also proposing a zoning text amendment to Appendix F, Inclusionary Housing Designated Area, to establish a Mandatory Inclusionary Housing (MIH) area coterminous with the Project Area. These actions are collectively reffered to as the "Proposed Actions ".

The Proposed Actions would facilitate a proposal by the Applicant to construct a new mixed-use building on the Applicant-controlled Block 6680, Lots 39 and 42, containing 122 dwelling units, 19,643 gsf of commercial space, and 3,140 gsf of community facility space. Of the 122 dwelling units, 30 percent, or 37 units, would be affordable under MIH. See attached Project Description.

Project Location

BOROUGH Brooklyn	COMMUNITY DISTRICT(S) 11	STREET ADDRESS 2080 McDonald Avenue
TAX BLOCK(S) AND LOT(S) Block 6680, Lots 39 and 42, and Block 7087, Lots 1 and 5		ZIP CODE 11223
DESCRIPTION OF PROPERTY BY BOUNDING OR CROSS STREETS McDonald Avenue at Avenue S		
EXISTING ZONING DISTRICT, INCLUDING SPECIAL ZONING DISTRICT DESIGNATION, IF ANY R5B		ZONING SECTIONAL MAP NUMBER 28c

6. *Required Actions or Approvals* (check all that apply)

***City Planning Commission*:** ☒ YES ☐ NO ☐ UNIFORM LAND USE REVIEW PROCEDURE (ULURP)

☐ CITY MAP AMENDMENT	☐ ZONING CERTIFICATION	☐ CONCESSION
☒ ZONING MAP AMENDMENT	☐ ZONING AUTHORIZATION	☐ UDAAP
☒ ZONING TEXT AMENDMENT	☐ ACQUISITION—REAL PROPERTY	☐ REVOCABLE CONSENT
☐ SITE SELECTION—PUBLIC FACILITY	☐ DISPOSITION—REAL PROPERTY	☐ FRANCHISE
☐ HOUSING PLAN & PROJECT	☐ OTHER, explain:	

☐ SPECIAL PERMIT (if appropriate, specify type: ☐ modification; ☐ renewal; ☐ other); EXPIRATION DATE:
SPECIFY AFFECTED SECTIONS OF THE ZONING RESOLUTION Appendix F

***Board of Standards and Appeals*:** ☐ YES ☒ NO
☐ VARIANCE (use)
☐ VARIANCE (bulk)
☐ SPECIAL PERMIT (if appropriate, specify type: ☐ modification; ☐ renewal; ☐ other); EXPIRATION DATE:
SPECIFY AFFECTED SECTIONS OF THE ZONING RESOLUTION

***Department of Environmental Protection*:** ☐ YES ☒ NO If "yes," specify:

Other City Approvals Subject to CEQR (check all that apply)
☐ LEGISLATION
☐ RULEMAKING
☐ CONSTRUCTION OF PUBLIC FACILITIES
☐ 384(b)(4) APPROVAL
☐ OTHER, explain:
☐ FUNDING OF CONSTRUCTION, specify:
☐ POLICY OR PLAN, specify:
☐ FUNDING OF PROGRAMS, specify:
☐ PERMITS, specify:

Other City Approvals Not Subject to CEQR (check all that apply)
☐ PERMITS FROM DOT'S OFFICE OF CONSTRUCTION MITIGATION AND COORDINATION (OCMC)
☐ LANDMARKS PRESERVATION COMMISSION APPROVAL
☐ OTHER, explain:

***State or Federal Actions/Approvals/Funding*:** ☐ YES ☒ NO If "yes," specify:

7. *Site Description:* *The directly affected area consists of the project site and the area subject to any change in regulatory controls. Except where otherwise indicated, provide the following information with regard to the directly affected area.*

***Graphics*:** *The following graphics must be attached and each box must be checked off before the EAS is complete. Each map must clearly depict the boundaries of the directly affected area or areas and indicate a 400-foot radius drawn from the outer boundaries of the project site. Maps may not exceed 11 x 17 inches in size and, for paper filings, must be folded to 8.5 x 11 inches.*

☒ SITE LOCATION MAP ☒ ZONING MAP ☒ SANBORN OR OTHER LAND USE MAP
☒ TAX MAP ☐ FOR LARGE AREAS OR MULTIPLE SITES, A GIS SHAPE FILE THAT DEFINES THE PROJECT SITE(S)
☒ PHOTOGRAPHS OF THE PROJECT SITE TAKEN WITHIN 6 MONTHS OF EAS SUBMISSION AND KEYED TO THE SITE LOCATION MAP

Physical Setting (both developed and undeveloped areas)
Total directly affected area (sq. ft.): 56,507
Roads, buildings, and other paved surfaces (sq. ft.): 56,507
Waterbody area (sq. ft) and type: 0
Other, describe (sq. ft.): 0

8. *Physical Dimensions and Scale of Project* (if the project affects multiple sites, provide the total development facilitated by the action)
SIZE OF PROJECT TO BE DEVELOPED (gross square feet): 225,574
NUMBER OF BUILDINGS: 2
GROSS FLOOR AREA OF EACH BUILDING (sq. ft.): 145,209 gsf, 80,365 gsf
HEIGHT OF EACH BUILDING (ft.): up to 115 feet
NUMBER OF STORIES OF EACH BUILDING: up to 11

Does the proposed project involve changes in zoning on one or more sites? ☒ YES ☐ NO
If "yes," specify: The total square feet owned or controlled by the applicant: 31,480
The total square feet not owned or controlled by the applicant: 25,027

Does the proposed project involve in-ground excavation or subsurface disturbance, including, but not limited to foundation work, pilings, utility lines, or grading? ☒ YES ☐ NO
If "yes," indicate the estimated area and volume dimensions of subsurface permanent and temporary disturbance (if known):
AREA OF TEMPORARY DISTURBANCE: 56,195 sq. ft. (width x length)
VOLUME OF DISTURBANCE: 561,950 cubic ft. (width x length x depth)
AREA OF PERMANENT DISTURBANCE: 56,195 sq. ft. (width x length)

Description of Proposed Uses (please complete the following information as appropriate)

	Residential	***Commercial***	***Community Facility***	***Industrial/Manufacturing***
Size (in gross sq. ft.)	122,426	19,643	3,140	
Type (*e.g.,* retail, office, school)	122 units	retail		

Does the proposed project increase the population of residents and/or on-site workers? ☒ YES ☐ NO
If "yes," please specify: NUMBER OF ADDITIONAL RESIDENTS: 502 NUMBER OF ADDITIONAL WORKERS: -2
Provide a brief explanation of how these numbers were determined: Based on 2.7 persons per renter-occupied household in Neighborhood Tablation Area (Bensonhurst East) per the 2013-2017 Census ACS x 213 units; 1 employee per 425 sf

Does the proposed project create new open space? ☐ YES ☒ NO If "yes," specify size of project-created open space: sq. ft.
Has a No-Action scenario been defined for this project that differs from the existing condition? ☐ YES ☒ NO If "yes," see Chapter 2, "Establishing the Analysis Framework" and describe briefly:
9. *Analysis Year* CEQR Technical Manual Chapter 2
ANTICIPATED BUILD YEAR (date the project would be completed and operational): 2024
ANTICIPATED PERIOD OF CONSTRUCTION IN MONTHS: 18 months
WOULD THE PROJECT BE IMPLEMENTED IN A SINGLE PHASE? ☒ YES ☐ NO | IF MULTIPLE PHASES, HOW MANY?
BRIEFLY DESCRIBE PHASES AND CONSTRUCTION SCHEDULE:
10. *Predominant Land Use in the Vicinity of the Project* (check all that apply) ☒ RESIDENTIAL ☒ MANUFACTURING ☒ COMMERCIAL ☒ PARK/FOREST/OPEN SPACE ☐ OTHER, specify:

Part II: TECHNICAL ANALYSIS

INSTRUCTIONS: For each of the analysis categories listed in this section, assess the proposed project's impacts based on the thresholds and criteria presented in the CEQR Technical Manual. Check each box that applies.

- If the proposed project can be demonstrated not to meet or exceed the threshold, check the "no" box.
- If the proposed project will meet or exceed the threshold, or if this cannot be determined, check the "yes" box.
- For each "yes" response, provide additional analyses (and, if needed, attach supporting information) based on guidance in the CEQR Technical Manual to determine whether the potential for significant impacts exists. Please note that a "yes" answer does not mean that an EIS must be prepared—it means that more information may be required for the lead agency to make a determination of significance.
- The lead agency, upon reviewing Part II, may require an applicant to provide additional information to support the Short EAS Form. For example, if a question is answered "no," an agency may request a short explanation for this response.

	YES	NO
1. *LAND USE, ZONING, AND PUBLIC POLICY*: CEQR Technical Manual Chapter 4		
(a) Would the proposed project result in a change in land use different from surrounding land uses?	☐	☒
(b) Would the proposed project result in a change in zoning different from surrounding zoning?	☒	☐
(c) Is there the potential to affect an applicable public policy?	☐	☒
(d) If "yes," to (a), (b), and/or (c), complete a preliminary assessment and attach.		
(e) Is the project a large, publicly sponsored project?	☐	☒
○ If "yes," complete a PlaNYC assessment and attach.		
(f) Is any part of the directly affected area within the City's Waterfront Revitalization Program boundaries?	☐	☒
○ If "yes," complete the Consistency Assessment Form.		
2. *SOCIOECONOMIC CONDITIONS*: CEQR Technical Manual Chapter 5		
(a) Would the proposed project:		
○ Generate a net increase of 200 or more residential units?	☐	☒
○ Generate a net increase of 200,000 or more square feet of commercial space?	☐	☒
○ Directly displace more than 500 residents?	☐	☒
○ Directly displace more than 100 employees?	☐	☒
○ Affect conditions in a specific industry?	☐	☒
3. *COMMUNITY FACILITIES*: CEQR Technical Manual Chapter 6		
(a) Direct Effects		
○ Would the project directly eliminate, displace, or alter public or publicly funded community facilities such as educational facilities, libraries, hospitals and other health care facilities, day care centers, police stations, or fire stations?	☐	☒
(b) Indirect Effects		
○ **Child Care Centers:** Would the project result in 20 or more eligible children under age 6, based on the number of low or low/moderate income residential units? (See Table 6-1 in Chapter 6)	☐	☒
○ **Libraries:** Would the project result in a 5 percent or more increase in the ratio of residential units to library branches? (See Table 6-1 in Chapter 6)	☐	☒
○ **Public Schools:** Would the project result in 50 or more elementary or middle school students, or 150 or more high school students based on number of residential units? (See Table 6-1 in Chapter 6)	☐	☒
○ **Health Care Facilities and Fire/Police Protection:** Would the project result in the introduction of a sizeable new neighborhood?	☐	☒
4. *OPEN SPACE*: CEQR Technical Manual Chapter 7		
(a) Would the proposed project change or eliminate existing open space?	☐	☒
(b) Is the project located within an under-served area in the Bronx, Brooklyn, Manhattan, Queens, or Staten Island?	☒	☐
○ If "yes," would the proposed project generate more than 50 additional residents or 125 additional employees?	☒	☐
(c) Is the project located within a well-served area in the Bronx, Brooklyn, Manhattan, Queens, or Staten Island?	☐	☒
○ If "yes," would the proposed project generate more than 350 additional residents or 750 additional employees?	☐	☐
(d) If the project in located an area that is neither under-served nor well-served, would it generate more than 200 additional residents or 500 additional employees?	☐	☒

	YES	NO
5. *SHADOWS*: CEQR Technical Manual Chapter 8		
(a) Would the proposed project result in a net height increase of any structure of 50 feet or more?	☒	☐
(b) Would the proposed project result in any increase in structure height and be located adjacent to or across the street from a sunlight-sensitive resource?	☒	☐
6. *HISTORIC AND CULTURAL RESOURCES*: CEQR Technical Manual Chapter 9		
(a) Does the proposed project site or an adjacent site contain any architectural and/or archaeological resource that is eligible for or has been designated (or is calendared for consideration) as a New York City Landmark, Interior Landmark or Scenic Landmark; that is listed or eligible for listing on the New York State or National Register of Historic Places; or that is within a designated or eligible New York City, New York State or National Register Historic District? (See the GIS System for Archaeology and National Register to confirm)	☐	☒
(b) Would the proposed project involve construction resulting in in-ground disturbance to an area not previously excavated?	☒	☐
(c) If "yes" to either of the above, list any identified architectural and/or archaeological resources and attach supporting information on whether the proposed project would potentially affect any architectural or archeological resources.		
7. *URBAN DESIGN AND VISUAL RESOURCES*: CEQR Technical Manual Chapter 10		
(a) Would the proposed project introduce a new building, a new building height, or result in any substantial physical alteration to the streetscape or public space in the vicinity of the proposed project that is not currently allowed by existing zoning?	☒	☐
(b) Would the proposed project result in obstruction of publicly accessible views to visual resources not currently allowed by existing zoning?	☐	☒
8. *NATURAL RESOURCES*: CEQR Technical Manual Chapter 11		
(a) Does the proposed project site or a site adjacent to the project contain natural resources as defined in Section 100 of Chapter 11?	☐	☒
○ If "yes," list the resources and attach supporting information on whether the proposed project would affect any of these resources.		
(b) Is any part of the directly affected area within the Jamaica Bay Watershed?	☐	☒
○ If "yes," complete the Jamaica Bay Watershed Form, and submit according to its instructions.		
9. *HAZARDOUS MATERIALS*: CEQR Technical Manual Chapter 12		
(a) Would the proposed project allow commercial or residential uses in an area that is currently, or was historically, a manufacturing area that involved hazardous materials?	☒	☐
(b) Does the proposed project site have existing institutional controls (*e.g.*, (E) designation or Restrictive Declaration) relating to hazardous materials that preclude the potential for significant adverse impacts?	☐	☒
(c) Would the project require soil disturbance in a manufacturing area or any development on or near a manufacturing area or existing/historic facilities listed in Appendix 1 (including nonconforming uses)?	☒	☐
(d) Would the project result in the development of a site where there is reason to suspect the presence of hazardous materials, contamination, illegal dumping or fill, or fill material of unknown origin?	☒	☐
(e) Would the project result in development on or near a site that has or had underground and/or aboveground storage tanks (*e.g.*, gas stations, oil storage facilities, heating oil storage)?	☐	☒
(f) Would the project result in renovation of interior existing space on a site with the potential for compromised air quality; vapor intrusion from either on-site or off-site sources; or the presence of asbestos, PCBs, mercury or lead-based paint?	☐	☒
(g) Would the project result in development on or near a site with potential hazardous materials issues such as government-listed voluntary cleanup/brownfield site, current or former power generation/transmission facilities, coal gasification or gas storage sites, railroad tracks or rights-of-way, or municipal incinerators?	☐	☒
(h) Has a Phase I Environmental Site Assessment been performed for the site?	☒	☐
○ If "yes," were Recognized Environmental Conditions (RECs) identified? Briefly identify:	☐	☐
10. *WATER AND SEWER INFRASTRUCTURE*: CEQR Technical Manual Chapter 13		
(a) Would the project result in water demand of more than one million gallons per day?	☐	☒
(b) If the proposed project located in a combined sewer area, would it result in at least 1,000 residential units or 250,000 square feet or more of commercial space in Manhattan, or at least 400 residential units or 150,000 square feet or more of commercial space in the Bronx, Brooklyn, Staten Island, or Queens?	☐	☒
(c) If the proposed project located in a separately sewered area, would it result in the same or greater development than the amounts listed in Table 13-1 in Chapter 13?	☐	☒
(d) Would the proposed project involve development on a site that is 5 acres or larger where the amount of impervious surface would increase?	☐	☒
(e) If the project is located within the Jamaica Bay Watershed or in certain specific drainage areas, including Bronx River, Coney Island Creek, Flushing Bay and Creek, Gowanus Canal, Hutchinson River, Newtown Creek, or Westchester Creek, would it involve development on a site that is 1 acre or larger where the amount of impervious surface would increase?	☐	☒

	YES	NO
(f) Would the proposed project be located in an area that is partially sewered or currently unsewered?	☐	☒
(g) Is the project proposing an industrial facility or activity that would contribute industrial discharges to a Wastewater Treatment Plant and/or generate contaminated stormwater in a separate storm sewer system?	☐	☒
(h) Would the project involve construction of a new stormwater outfall that requires federal and/or state permits?	☐	☒
11. *SOLID WASTE AND SANITATION SERVICES*: CEQR Technical Manual Chapter 14		
(a) Using Table 14-1 in Chapter 14, the project's projected operational solid waste generation is estimated to be (pounds per week): 8,692		
○ Would the proposed project have the potential to generate 100,000 pounds (50 tons) or more of solid waste per week?	☐	☒
(b) Would the proposed project involve a reduction in capacity at a solid waste management facility used for refuse or recyclables generated within the City?	☐	☒
12. *ENERGY*: CEQR Technical Manual Chapter 15		
(a) Using energy modeling or Table 15-1 in Chapter 15, the project's projected energy use is estimated to be (annual BTUs): 28,552,938		
(b) Would the proposed project affect the transmission or generation of energy?	☐	☒
13. *TRANSPORTATION*: CEQR Technical Manual Chapter 16		
(a) Would the proposed project exceed any threshold identified in Table 16-1 in Chapter 16?	☒	☐
(b) If "yes," conduct the screening analyses, attach appropriate back up data as needed for each stage and answer the following questions:		
○ Would the proposed project result in 50 or more Passenger Car Equivalents (PCEs) per project peak hour?	☒	☐
If "yes," would the proposed project result in 50 or more vehicle trips per project peak hour at any given intersection? ***It should be noted that the lead agency may require further analysis of intersections of concern even when a project generates fewer than 50 vehicles in the peak hour. See Subsection 313 of Chapter 16 for more information.*	☐	☒
○ Would the proposed project result in more than 200 subway/rail or bus trips per project peak hour?	☐	☒
If "yes," would the proposed project result, per project peak hour, in 50 or more bus trips on a single line (in one direction) or 200 subway trips per station or line?	☐	☐
○ Would the proposed project result in more than 200 pedestrian trips per project peak hour?	☒	☐
If "yes," would the proposed project result in more than 200 pedestrian trips per project peak hour to any given pedestrian or transit element, crosswalk, subway stair, or bus stop?	☐	☒
14. *AIR QUALITY*: CEQR Technical Manual Chapter 17		
(a) *Mobile Sources*: Would the proposed project result in the conditions outlined in Section 210 in Chapter 17?	☐	☒
(b) *Stationary Sources*: Would the proposed project result in the conditions outlined in Section 220 in Chapter 17?	☒	☐
○ If "yes," would the proposed project exceed the thresholds in Figure 17-3, Stationary Source Screen Graph in Chapter 17? (Attach graph as needed)	☐	☒
(c) Does the proposed project involve multiple buildings on the project site?	☐	☒
(d) Does the proposed project require federal approvals, support, licensing, or permits subject to conformity requirements?	☐	☒
(e) Does the proposed project site have existing institutional controls (*e.g.*, (E) designation or Restrictive Declaration) relating to air quality that preclude the potential for significant adverse impacts?	☐	☒
15. *GREENHOUSE GAS EMISSIONS*: CEQR Technical Manual Chapter 18		
(a) Is the proposed project a city capital project or a power generation plant?	☐	☒
(b) Would the proposed project fundamentally change the City's solid waste management system?	☐	☒
(c) If "yes" to any of the above, would the project require a GHG emissions assessment based on the guidance in Chapter 18?	☐	☒
16. *NOISE*: CEQR Technical Manual Chapter 19		
(a) Would the proposed project generate or reroute vehicular traffic?	☒	☐
(b) Would the proposed project introduce new or additional receptors (see Section 124 in Chapter 19) near heavily trafficked roadways, within one horizontal mile of an existing or proposed flight path, or within 1,500 feet of an existing or proposed rail line with a direct line of site to that rail line?	☒	☐
(c) Would the proposed project cause a stationary noise source to operate within 1,500 feet of a receptor with a direct line of sight to that receptor or introduce receptors into an area with high ambient stationary noise?	☒	☐
(d) Does the proposed project site have existing institutional controls (*e.g.*, (E) designation or Restrictive Declaration) relating to noise that preclude the potential for significant adverse impacts?	☐	☒
17. *PUBLIC HEALTH*: CEQR Technical Manual Chapter 20		
(a) Based upon the analyses conducted, do any of the following technical areas require a detailed analysis: Air Quality;	☐	☒

	YES	NO
Hazardous Materials; Noise?		
(b) If "yes," explain why an assessment of public health is or is not warranted based on the guidance in Chapter 20, "Public Health." Attach a preliminary analysis, if necessary.		
18. *NEIGHBORHOOD CHARACTER*: CEQR Technical Manual Chapter 21		
(a) Based upon the analyses conducted, do any of the following technical areas require a detailed analysis: Land Use, Zoning, and Public Policy; Socioeconomic Conditions; Open Space; Historic and Cultural Resources; Urban Design and Visual Resources; Shadows; Transportation; Noise?	☐	☒
(b) If "yes," explain why an assessment of neighborhood character is or is not warranted based on the guidance in Chapter 21, "Neighborhood Character." Attach a preliminary analysis, if necessary.		
19. *CONSTRUCTION*: CEQR Technical Manual Chapter 22		
(a) Would the project's construction activities involve:		
○ Construction activities lasting longer than two years?	☐	☒
○ Construction activities within a Central Business District or along an arterial highway or major thoroughfare?	☐	☒
○ Closing, narrowing, or otherwise impeding traffic, transit, or pedestrian elements (roadways, parking spaces, bicycle routes, sidewalks, crosswalks, corners, *etc.*)?	☐	☒
○ Construction of multiple buildings where there is a potential for on-site receptors on buildings completed before the final build-out?	☐	☒
○ The operation of several pieces of diesel equipment in a single location at peak construction?	☐	☒
○ Closure of a community facility or disruption in its services?	☐	☒
○ Activities within 400 feet of a historic or cultural resource?	☐	☒
○ Disturbance of a site containing or adjacent to a site containing natural resources?	☐	☒
○ Construction on multiple development sites in the same geographic area, such that there is the potential for several construction timelines to overlap or last for more than two years overall?	☐	☒
(b) If any boxes are checked "yes," explain why a preliminary construction assessment is or is not warranted based on the guidance in Chapter 22, "Construction." It should be noted that the nature and extent of any commitment to use the Best Available Technology for construction equipment or Best Management Practices for construction activities should be considered when making this determination.		

20. *APPLICANT'S CERTIFICATION*

I swear or affirm under oath and subject to the penalties for perjury that the information provided in this Environmental Assessment Statement (EAS) is true and accurate to the best of my knowledge and belief, based upon my personal knowledge and familiarity with the information described herein and after examination of the pertinent books and records and/or after inquiry of persons who have personal knowledge of such information or who have examined pertinent books and records.

Still under oath, I further swear or affirm that I make this statement in my capacity as the applicant or representative of the entity that seeks the permits, approvals, funding, or other governmental action(s) described in this EAS.

APPLICANT/REPRESENTATIVE NAME	DATE
Kevin Corte, Environmental Studies Corp.	April 8th, 2022

SIGNATURE Kevin Corte

PLEASE NOTE THAT APPLICANTS MAY BE REQUIRED TO SUBSTANTIATE RESPONSES IN THIS FORM AT THE DISCRETION OF THE LEAD AGENCY SO THAT IT MAY SUPPORT ITS DETERMINATION OF SIGNIFICANCE.

Part III: DETERMINATION OF SIGNIFICANCE (To Be Completed by Lead Agency)

INSTRUCTIONS: In completing Part III, the lead agency should consult 6 NYCRR 617.7 and 43 RCNY § 6-06 (Executive Order 91 or 1977, as amended), which contain the State and City criteria for determining significance.

1. For each of the impact categories listed below, consider whether the project may have a significant adverse effect on the environment, taking into account its (a) location; (b) probability of occurring; (c) duration; (d) irreversibility; (e) geographic scope; and (f) magnitude.

IMPACT CATEGORY	Potentially Significant Adverse Impact YES	NO
Land Use, Zoning, and Public Policy	☐	☒
Socioeconomic Conditions	☐	☒
Community Facilities and Services	☐	☒
Open Space	☐	☒
Shadows	☐	☒
Historic and Cultural Resources	☐	☒
Urban Design/Visual Resources	☐	☒
Natural Resources	☐	☒
Hazardous Materials	☐	☒
Water and Sewer Infrastructure	☐	☒
Solid Waste and Sanitation Services	☐	☒
Energy	☐	☒
Transportation	☐	☒
Air Quality	☐	☒
Greenhouse Gas Emissions	☐	☒
Noise	☐	☒
Public Health	☐	☒
Neighborhood Character	☐	☒
Construction	☐	☒

2. Are there any aspects of the project relevant to the determination of whether the project may have a significant impact on the environment, such as combined or cumulative impacts, that were not fully covered by other responses and supporting materials? ☐ YES ☒ NO

If there are such impacts, attach an explanation stating whether, as a result of them, the project may have a significant impact on the environment.

3. Check determination to be issued by the lead agency:

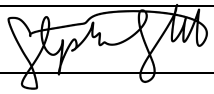
☐ **Positive Declaration**: If the lead agency has determined that the project may have a significant impact on the environment, and if a Conditional Negative Declaration is not appropriate, then the lead agency issues a *Positive Declaration* and prepares a draft Scope of Work for the Environmental Impact Statement (EIS).

☐ **Conditional Negative Declaration:** A *Conditional Negative Declaration* (CND) may be appropriate if there is a private applicant for an Unlisted action AND when conditions imposed by the lead agency will modify the proposed project so that no significant adverse environmental impacts would result. The CND is prepared as a separate document and is subject to the requirements of 6 NYCRR Part 617.

☒ **Negative Declaration:** If the lead agency has determined that the project would not result in potentially significant adverse environmental impacts, then the lead agency issues a *Negative Declaration*. The *Negative Declaration* may be prepared as a separate document (see template) or using the embedded Negative Declaration on the next page.

4. ***LEAD AGENCY'S CERTIFICATION***

TITLE	LEAD AGENCY
Director, Environmental Assessment and Review Division	Department of City Planning, acting on behalf of the City Planning Commission
NAME	DATE
Stephanie Shellooe	April 8, 2022

SIGNATURE 

NEGATIVE DECLARATION

Statement of No Significant Effect

Pursuant to Executive Order 91 of 1977, as amended, and the Rules of Procedure for City Environmental Quality Review, found at Title 62, Chapter 5 of the Rules of the City of New York and 6 NYCRR, Part 617, State Environmental Quality Review, the Department of City Planning acting on behalf of the City Planning Commission assumed the role of lead agency for the environmental review of the proposed actions. Based on a review of information about the project contained in this environmental assessment statement (EAS) and any attachments hereto, which are incorporated by reference herein, the lead agency has determined that the proposed actions would not have a significant adverse impact on the environment.

Reasons Supporting this Determination

The above determination is based on information contained in this EAS, which finds the proposed actions sought before the City Planning Commission would not have a significant adverse impact on the environment. Reasons supporting this determination are noted below.

Land Use, Zoning, and Public Policy

A detailed analysis of land use, zoning, and public policy is included in the EAS. The proposed actions are a Zoning Map Amendment to rezone the project area, Brooklyn Block 6680, Lots 39 and 42, and Block 7087, Lots 1 and 5, from R5B and M1-1 to C4-4L, and a Zoning Text Amendment to establish a Mandatory Inclusionary Housing area coterminous with the project area in the Gravesend neighborhood of Brooklyn Community District 11. The project area is situated directly west of the elevated F train line over McDonald Avenue. The proposed actions would facilitate the development of a mixed use building containing approximately 122 dwelling units, 19,650 gsf of commercial retail space, and 3,150 gsf of medical office space. For the purpose of a conservative analysis, the EAS also analyzes projected development on a non-applicant-owned site, Block 7087, Lot 1, that would include 63 dwelling units and 16,400 gsf of commercial retail space. The proposed actions are anticipated to result in a change in land use within the project area, however, given the existing mixed use character of McDonald Avenue, a wide commercial corridor, the change in land use and zoning would facilitate development that is consistent with nearby existing uses and would not constitute a significant adverse impact. Additionally, there would be no significant adverse impact to public policy.

Open Space

A detailed analysis related to open space is included in this EAS. The proposed actions would result in an increase of approximately 502 new residents, which is above the threshold described in the CEQR Technical Manual for a detailed analysis of residential open space. The open space ratio for residents in the study area would decrease by approximately 1.17% as a result of the proposed actions, which is below the 5% threshold for impacts to open space, but above 1%, which may be considered if the existing open space ratio is low. The analysis finds that while there would be a decrease in the open space ratio as a result of the increase in population, a number of qualitative factors would help to prevent an impact to open space resources, including low to moderate usage of existing open spaces within the study area, suggesting that these resources can absorb additional open space users, as well as proximity to the Ocean Parkway Malls, a large linear open space resource not included in the quantitative analysis. Additionally, the proposed development would include a private open space for building residents, which would defray some of the demand for open space generated by the proposed actions. Therefore, the proposed actions would not result in any significant adverse impacts to open space, and no further analysis is required.

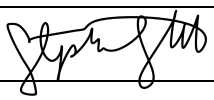
Shadows

A detailed analysis of shadows is included in the EAS. The analysis concludes that incremental shadows from the development facilitated by the proposed actions would be cast on one sunlight sensitive resource: McDonald Playground. New incremental shadows would be cast on portions McDonald Playground on three analysis days. New shadows would cover portions of the park for periods ranging from 59 minutes on the March/September analysis day; 1 hour, 59 minutes on the May/August analysis day; and 2 hours 24 Minutes on the June analysis day. Incremental shadow would be cast upon the bocce courts, playground equipment, and a small corner of the concrete open space. No part of the park would be in constant shadow, as the shadow would move across the park during the course of the day. As a result, the park would receive sufficient sunlight during the growing season, of at least four to six hours, per the CEQR Technical Manual, and the shadows would not affect user enjoyment of this resource. No other sunlight-sensitive resources would be affected by shadows generated by the proposed actions. As such, the proposed actions would not result in any significant adverse shadows impacts, and no further analysis is warranted.

Hazardous Materials, Air Quality, and Noise

An (E) designation (E-662) related to hazardous materials, air quality, and noise would be established as part of the approval of the proposed actions. Refer to "Determination of Significance Appendix: (E) designation" for the applicable (E) designation requirements. The hazardous materials, air quality, and noise analyses conclude that with the (E) designation in place, the proposed actions would not result in a significant adverse impact related to hazardous materials, air quality, or noise.

No other significant effects upon the environment that would require the preparation of a Draft Environmental Impact Statement are foreseeable. This Negative Declaration has been prepared in accordance with Article 8 of the New York State Environmental Conservation Law (SEQRA). Should you have any questions pertaining to this Negative Declaration, you may contact Rachel Antelmi at rantelmi@planning.nyc.gov.

TITLE	LEAD AGENCY
Director, Environmental Assessment and Review Division	Department of City Planning on behalf of the City Planning Commission 120 Broadway, 31st Fl. New York, NY 10271 | 212.720.3328
NAME Stephanie Shellooe	DATE April 8, 2022
SIGNATURE 	

Project Name: 2080 McDonald Avenue
CEQR # 21DCP132K
SEQRA Classification: Unlisted

TITLE Chair, City Planning Commission	
NAME Daniel R. Garodnick	DATE April 11, 2022
SIGNATURE	

Project Name: 2080 McDonald Avenue
CEQR # 21DCP132K
SEQRA Classification: Unlisted

Determination of Significance Appendix

The Proposed Action(s) were determined to have the potential to result in changes to development on the following site(s):

Development Site	Borough	Block and Lot
Projected Development Site 1	BK	Block 6680, Lots 39 and 42
Projected Development Site 2	BK	Block 7087, Lot 1

(E) Designation Requirements

To ensure that the proposed actions would not result in significant adverse impacts related to hazardous materials, air quality, and noise an (E) designation (**E-662**) would be established as part of approval of the proposed actions on **Projected Development Site 1 and Projected Development Site 2** as described below:

Development Site	Hazardous Materials	Air Quality	Noise
Projected Development Site 1		X	X
Projected Development Site 2	X	X	X

Hazardous Materials

The (E) designation requirements applicable to **Projected Development Site 2** for hazardous materials would apply as follows:

Task 1-Sampling Protocol

The applicant submits to OER, for review and approval, a Phase I of the site along with a soil, groundwater and soil vapor testing protocol, including a description of methods and a site map with all sampling locations clearly and precisely represented. If site sampling is necessary, no sampling should begin until written approval of a protocol is received from OER. The number and location of samples should be selected to adequately characterize the site, specific sources of suspected contamination (i.e., petroleum based contamination and non-petroleum based contamination), and the remainder of the site's condition. The characterization should be complete enough to determine what remediation strategy (if any) is necessary after review of sampling data. Guidelines and criteria for selecting sampling locations and collecting samples are provided by OER upon request.

Task 2-Remediation Determination and Protocol

A written report with findings and a summary of the data must he submitted to OER after completion of the testing phase and laboratory analysis for review and approval. After receiving such results, a determination is made by OER if the results indicate that remediation is necessary. If OER determines that no remediation is necessary, written notice shall be given by OER.

If remediation is indicated from test results, a proposed remediation plan must be submitted to OER for review and approval. The applicant must complete such remediation as determined necessary by OER. The applicant should then provide proper documentation that the work has been satisfactorily completed.

A construction-related health and safety plan should be submitted to OER and would be implemented during excavation and construction activities to protect workers and the community from potentially significant adverse impacts associated with contaminated soil, groundwater and/or soil vapor. This plan would be submitted to OER prior to implementation.

Air Quality

The (E) designation requirements for air quality would apply as follows:

Projected Development Site 1: *Any new residential, commercial, or community facility development on the above-referenced property must exclusively use natural gas as the type of fuel for the heating, ventilation, air conditioning (HVAC) and hot water system(s), ensure that the stack is located at the building's highest level or at least 118 feet above grade, and that the stack is located at least 100 feet from the southern lot line facing Avenue S to avoid any potential significant adverse air quality impacts.*

Projected Development Site 2: *Any new residential or commercial development on the above-referenced property must exclusively use natural gas as the type of fuel for heating, ventilating, air conditioning (HVAC), and hot water system(s) and must be fitted with low NOx (30 ppm) burners, ensure that the stack is located at the building's highest level at a minimum of 118 feet above the grade, and that the stack is located at least 145 feet from the northern lot line facing Avenue S to avoid any potential significant adverse air quality impacts.*

Noise

The (E) designation requirements for noise would apply as follows:

Projected Development Site 1: *In order to ensure an acceptable interior noise environment future residential/community facility uses must provide a closed window condition with a minimum of 35 dBA window/wall attenuation on the facades facing McDonald Avenue for floors below the rail line and the facades facing Kings Highway within 50 feet of McDonald Avenue for floors below the rail line and the facades facing Avenue S within 50 feet of McDonald Avenue for floors below the rail line and 31 dBA of attenuation on all remaining facades below and above the rail line in order to maintain an interior noise level not greater than 45 dBA for residential and community facility uses as illustrated in the EAS. In order to maintain a closed window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, central air conditioning.*

Projected Development Site 2: *In order to ensure an acceptable interior noise environment, future residential/commercial office uses must provide a closed window condition with a minimum of 35 dBA window/wall attenuation on the facades facing McDonald Avenue for floors below the rail line and the facades facing Avenue S within 50 feet of McDonald Avenue for floors below the rail line and the facades facing Avenue T within 50 feet of McDonald Avenue for floors below the rail line and 31 dBA of attenuation on all remaining facades below and above the rail line in order to maintain an interior noise level not greater than 45 dBA for residential uses or not greater than 50 dBA for commercial office uses as illustrated in the EAS. In order to maintain a closed window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, central air conditioning.*

PROJECT DESCRIPTION

Introduction

The Applicant, 2080 McDonald LLC, is seeking the Proposed Actions, described below, to facilitate the construction of a new mixed-use building on the Applicant-controlled Block 6680, Lots 39 and 42, containing 122 dwelling units, 19,643 gsf of commercial space, and 3,140 gsf of community facility space. Of the 122 dwelling units, 30 percent, or 37 units, would be affordable under MIH.

Proposed Actions

The Applicant is proposing a zoning map amendment to the New York City Zoning Map, Section 28c, to rezone portions of two blocks with frontage on McDonald Avenue in the Gravesend Section of Brooklyn Community District 11. The proposed zoning would replace the existing R5B and M1-1 zoning districts with a C4-4L district. The Project Area is made of up four tax lots: Block 6680, Lots 39 and 42, and Block 7087, Lots 1 and 5; with the Applicant controlling the affected lots on Block 6680. The Applicant is also proposing a zoning text amendment to Appendix F, Inclusionary Housing Designated Area, to establish a Mandatory Inclusionary Housing (MIH) area coterminous with the Project Area.

Description of Affected Area

The Project Area is located on the north and south sides of Avenue S between McDonald Avenue and Lake Street in the Gravesend neighborhood of Brooklyn, Community District 11. The Project Area is made up of four tax lots: Block 6680, Lots 39 and 42, and Block 7087, Lots 1 and 5. The Project Area has approximately 240 feet of frontage on McDonald Avenue, 209 feet of frontage on Avenue S, and 365 feet of frontage on Lake Street. Blocks 6680 and 7087 are split down their centerlines between two zoning districts: M1-1 to the east and R5B to the west.

Block 6680, Lot 39 is owned by the Applicant, and improved with two, two-story commercial buildings with a combined floor area of 13,280 gsf (FAR 0.81).

Block 6680, Lot 42 is also owned by the Applicant improved with a one-story community facility building with a floor area of 7,500 gsf (FAR 0.50).

Block 7087, Lot 1, is not owned by the applicant and is improved with a two-story community facility building with a floor area of 8,778 gsf (FAR 0.51)

Block 7087, Lot 5, is not owned by the applicant and is a paved lot improved with a prefabricated structure, owned and occupied by the Brooklyn Union Gas Company.

Description of Proposed Development

On Projected Development Site 1 (Block 6680, Lots 39 and 42), the Applicant proposes a new mixed-use building. Built pursuant to Quality Housing regulations, the building would contain residential, commercial, and community facility uses. The proposed building would

contain 145,209 gsf (FAR 4.60) of floor area, of which 122,426 gsf (122 DU's) would be residential, 19,643 gsf would be commercial (local retail), and 3,140 gsf would be community facility (daycare) space. The proposed building height is 85 feet. Of the 122 DU's, 30%, or 37 units, would be affordable under MIH. Forty-three (43) parking spaces would be provided for the marked-rate DU's; parking requirements are waived for affordable units because the Project Area is within a Transit Zone.

Purpose and Need

The Proposed Actions would allow for additional residential, commercial, and community facility space and would facilitate the development of the proposed mixed-use building. It would provide opportunities for the creation of new housing, including market rate and affordable dwelling units, as well as new commercial retail space to that would increase investment in the surrounding area and contribute to the overall vibrancy of the neighborhood.

Required Approvals

The proposed development requires a zoning map amendment to rezone the Development Site and a zoning text amendment to make the Rezoning Area applicable as a Mandatory Inclusionary Housing Area. The granting of the zoning map amendment is a discretionary action that is subject to both the Uniform Land Use Review Procedure (ULURP) as well as the City Environmental Quality Review (CEQR). ULURP is a process that allows public review of the Proposed Actions at four levels: the Community Board; the Borough President; the City Planning Commission; and, if applicable, the City Council. CEQR is a process by which agencies review discretionary actions for the purpose of identifying the effects those actions may have on the environment.

Reasonable Worst-Case Development Scenario (RWCDS)

The Applicant seeks zoning map and text amendments that would affect four tax lots, three of which are anticipated for redevelopment under the future with-action scenario. Existing conditions on these properties are detailed above under Description of Affected Area. In the future with the Proposed Actions, development is expected to occur on two sites. The Applicant owned sites (Block 6680, Lots 39 and 42 or "Projected Development Site 1") would be redeveloped. An additional site not controlled by the Applicant (Block 7087, Lot 1 or, "Projected Development Site 2 ") is expected to be redeveloped for the purposes of presenting a conservative analysis.

Future No Action Condition

Absent the Proposed Actions, all lots within the Project Area would remain in their current condition, as described above under Description of the Affected Area.

Future With-Action Condition

In the future with the Proposed Actions, the Applicant would redevelop Projected Development Site 1 (Block 6680, Lots 39 and 42) with a new mixed-use building. Built pursuant to Quality Housing regulations, the building would contain residential, commercial (local retail), and community facility (daycare) uses. The proposed building would contain 145,209 gsf (FAR 4.60) of floor area, of which 122,426 gsf (122 DU's) would be residential, 19,643 gsf would be commercial, and 3,140 gsf would be community facility space. The RWCDS building height would be 115 feet. Of the 122 DU's, 30%, or 37 units, would be affordable under MIH. Forty-three (43) parking spaces would be provided for the marked-rate DU's; parking requirements are waived for affordable units because the Project Area is within a Transit Zone.

An additional site not controlled by the Applicant is expected to be redeveloped for the purposes of presenting a conservative analysis. Projected Development Site 2 (Block 7087, Lot 1) is projected for redevelopment with an 80,356 gsf (FAR 4.60) building, containing 63,944 gsf (63 DU's) of residential area and 16,412 gsf of commercial area. The building would have a height of 115 feet. Of the 63 DU's, 30%, or 19 units, would be affordable under MIH. Twenty-two (22) parking spaces would be provided for the marked-rate DU's; parking requirements are waived for affordable units because the Project Area is within a Transit Zone.

Block 7078, Lot 5 is not anticipated to be redeveloped in the future with the Proposed Actions. This corner lot site that is owned by the Brooklyn Gas Company and has been in the possession of the gas company since 1972. In 2014 a new prefab non-permanent structure was placed on the sote by the utility service. Per the CEQR TM newly constructed buildings with utility uses are often excluded from development scenarios as these uses are often difficult to relocate. At this time the Applicant has confirmed that the Brooklyn Gas Company is aware of the rezoning and has no interest in selling the site or selling the development rights that would be generated if the Proposed Actions are approved. Development on this site is not considered in the RWCDS. The transfer of development rights from this site is also not considered in the RWCDS.

Analysis Increment

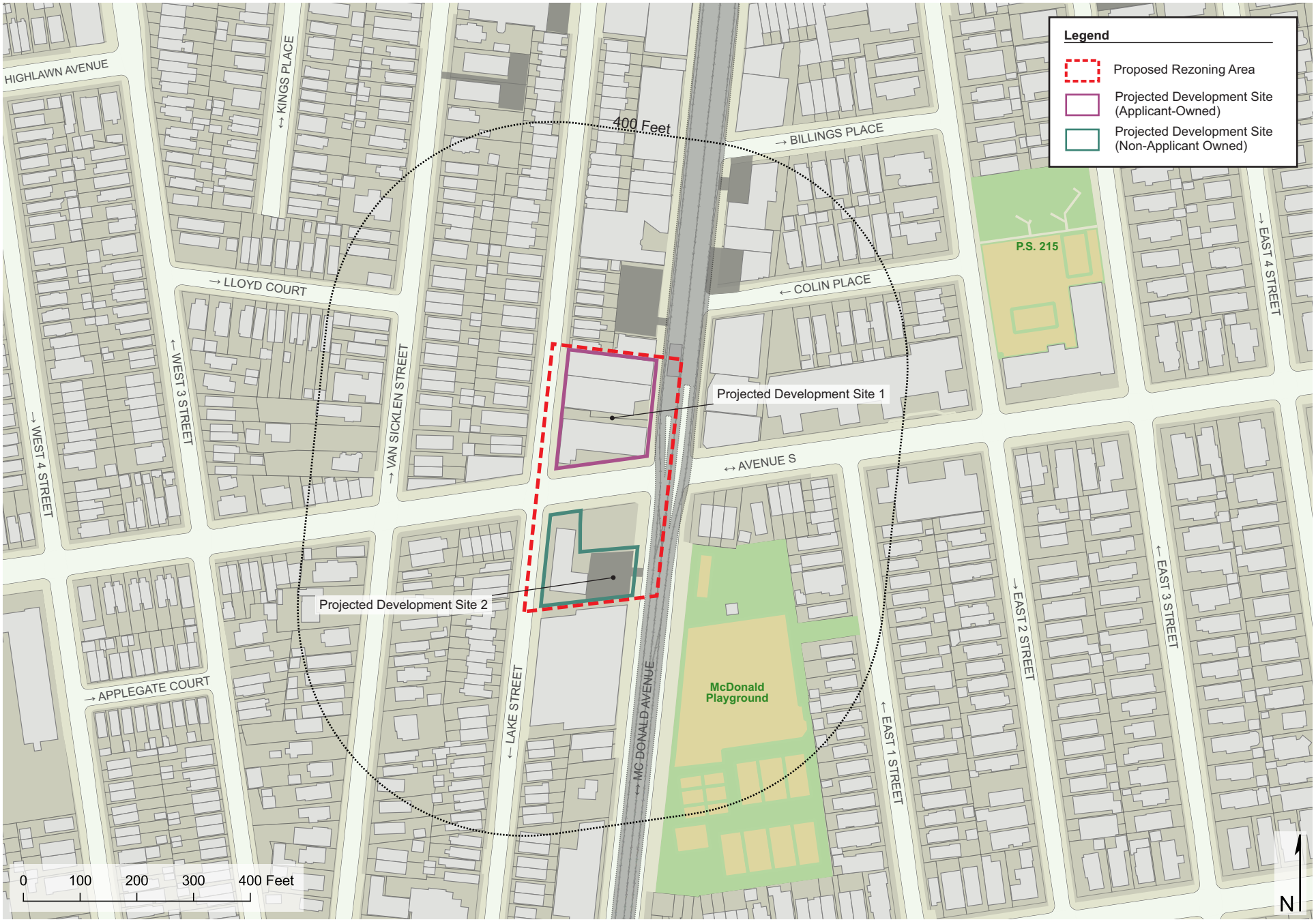
As summarized in the table below, the RWCDS includes an incremental 186,370 gsf of residential space (186 DU's, of which 56 would be affordable under MIH) and 22,838 gsf of commercial space. A reduction of 13,238 gsf of community facility space is also projected. Sixty-five (65) accessory residential parking spaces would be added. This increment is used in the technical analysis presented in this EAS.

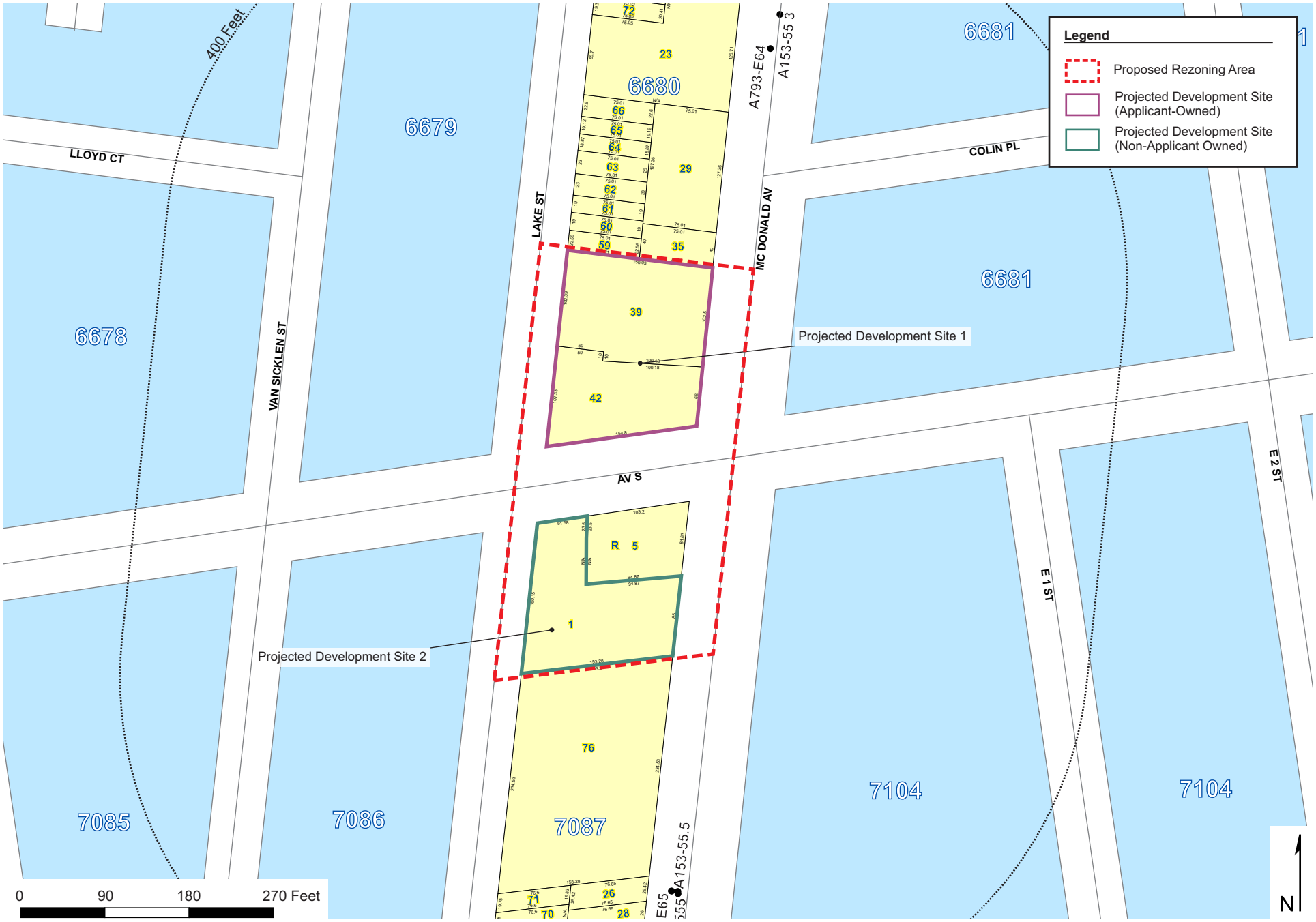
Based on an estimated 12-month approval process and an 18-month construction period for all development sites, the analysis year will be 2024.

	EXISTING CONDITION	NO-ACTION CONDITION	WITH-ACTION CONDITION	INCREMENT
Land Use				
Residential	☐ Yes ☑ No	☐ Yes ☑ No	☐ Yes ☐ No	
If "yes," specify the following:				
Describe type of residential structures	N/A	N/A	Multi-Family Units	
No. of dwelling units	N/A	N/A	186	186
No. of low- to moderate-income units	N/A	N/A	56	56
Gross floor area (sq. ft.)	N/A	N/A	186,370	186,370
Commercial	☑ Yes ☑ No	☑ Yes ☐ No	☑ Yes ☐ No	
If "yes," specify the following:				
Describe type (retail, office, other)	Retail/Utility	Retail/Utility	Retail	
Gross floor area (sq. ft.)	13,899	13,899	26,884	13,564
Manufacturing/Industrial	☐ Yes ☑ No	☐ Yes ☑ No	☐ Yes ☑ No	☐ Yes
If "yes," specify the following:				
Type of Use	N/A			
Gross floor area (sq. ft.)	N/A			
Open storage area (sq. ft.)	N/A			
If any enclosed activities, specify:	N/A			
Community Facility	☑ Yes ☐ No	☑ Yes ☐ No	☑ Yes ☐ No	
If "yes," specify the following:				
Type of Use	Ambulatory Medical/ Educational	Ambulatory Medical/ Educational	Ambulatory Medical	
Gross floor area (sq. ft.)	16,378	16,378	3,140	-13,238
Vacant Land	☐ Yes ☑ No	☐ Yes ☑ No	☐ Yes ☑ No	
If "yes", describe:	N/A	N/A	N/A	
Publicly Accessible Open Space	☐ Yes ☑ No	☐ Yes ☑ No	☐ Yes ☑ No	
If "yes," specify type (mapped City, State, or Federal Parkland, wetland-mapped or otherwise known, other):	N/A	N/A	N/A	
Other Land Uses	☐ Yes ☑ No	☐ Yes ☑ No	☐ Yes ☑ No	
If "yes," describe:	N/A	N/A	N/A	
Parking				
Garages	☐ Yes ☑ No	☐ Yes ☑ No	☑ Yes ☐ No	
If "yes," specify the following:				
No. of public spaces	N/A	N/A	0	
No. of accessory spaces	N/A	N/A	65	65
Operating hours	N/A	N/A	24/7	
Attended or non-attended	N/A	N/A	Attended	
Lots	☑ Yes ☐ No	☑ Yes ☐ No	☐ Yes ☑ No	
If "yes," specify the following:				
No. of public spaces			N/A	
No. of accessory spaces	14	14	N/A	-14
Operating hours			N/A	
Other (includes street parking)	☐ Yes ☑ No	☐ Yes ☑ No	☐ Yes ☑ No	

	EXISTING CONDITION	NO-ACTION CONDITION	WITH-ACTION CONDITION	INCREMENT
If "yes," describe:	N/A	N/A	N/A	
Population				
Residents	☐ Yes ☑ No	☐ Yes ☑ No	☑ Yes ☐ No	
If "yes," specify number:	N/A	N/A	502	502
Briefly explain how the number of residents was calculated:	Based on 2.7 persons per renter-occupied household in Neighborhood Tablation Area (Bensonhurst East) per the 2013-2017 Census ACS			
Businesses	☑ Yes ☐ No	☑ Yes ☐ No	☑ Yes ☐ No	
If "yes," specify the following:				
No. and type	Local Retail/Educational /Ambulatory Medical	Local Retail/Educational /Ambulatory Medical	Local Retail/Ambulatory Medical	
No. and type of workers by business	33 Retail, 21 Medical, 18 Educational	33 Retail, 21 Medical, 18 Educational	63 Retail, 7 Medical	30 Retail, -14 Medical, -18 Educational (-2 worker total)
No. and type of non-residents who are not workers	N/A	N/A	N/A	
Briefly explain how the number of businesses was calculated:	Retail/Educational/Medical= 1 worker/425sf			
Other (students, visitors, concert-goers, *etc* .)	☐ Yes ☑ No	☐ Yes ☑ No	☐ Yes ☑ No	
If any, specify type and number:	N/A	N/A	N/A	
Briefly explain how the number was calculated:				
Zoning				
Zoning classification	M1-1/R5B	M1-1/R5B	C4-4L	
Maximum amount of floor area that can be developed	**M1-1:** CF: 122,947 Com: 51,228 Manu: 51,228 **R5B:** Res: 69,158 CF: 122,947	**M1-1:** CF: 122,947 Com: 51,228 Manu: 51,228 **R5B:** Res: 69,158 CF: 122,947	Res: 235,649 CF: 204,912 Com: 204,912	Res: up to 166,491 CF: up to 81,965 Com: up to 153,684 Manu: up to -51,228
Predominant land use and zoning classifications within land use study area(s) or a 400 ft. radius of proposed project	R2-1, R4A, R5B, M1-1, R4 Residential, commerical, community facility, industrial, open space	R2-1, R4A, R5B, M1-1, R4 Residential, commerical, community facility, industrial, open space	R2-1, R4A, R5B, M1-1, R4 Residential, commerical, community facility, industrial, open space	

	EXISTING CONDITION	NO-ACTION CONDITION	WITH-ACTION CONDITION	INCREMENT
Attach any additional information that may be needed to describe the project. If your project involves changes that affect one or more sites not associated with a specific development, it is generally appropriate to include total development projections in the above table and attach separate tables outlining the reasonable development scenarios for each site.				


Legend
Proposed Rezoning Area
Projected Development Site (Applicant-Owned)
Projected Development Site (Non-Applicant Owned)
400 Feet
Projected Development Site 1
Projected Development Site 2
HIGHLAWN AVENUE
KINGS PLACE
LLOYD COURT
WEST 3 STREET
WEST 4 STREET
VAN SICKLEN STREET
BILLINGS PLACE
COLIN PLACE
P.S. 215
EAST 4 STREET
AVENUE S
APPLEGATE COURT
LAKE STREET
MC DONALD AVENUE
McDonald Playground
EAST 1 STREET
EAST 2 STREET
EAST 3 STREET
0 100 200 300 400 Feet
N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Proposed Rezoning Area
Projected Development Site (Applicant-Owned)
Projected Development Site (Non-Applicant Owned)
Projected Development Site 1
Projected Development Site 2
400 Feet
LLOYD CT
VAN SICKLEN ST
LAKE ST
MC DONALD AV
COLIN PL
AV S
E 2 ST
E 1 ST
A793-E64
A153-55 3
A153-55.5
E65
6678
6679
6680
6681
7085
7086
7087
7104
0
90
180
270 Feet
N


FINANCE NEW • YORK
MARTHA E. STARK COMMISSIONER
NYC Digital Tax Map
Effective Date : 12-07-2008 10:13:55
End Date : Current
Brooklyn Block: 6680
N
W
E
S
Legend
Streets
Miscellaneous Text
Possession Hooks
Boundary Lines
Lot Face Possession Hooks
Regular
Underwater
Tax Lot Polygon
Condo Number
Tax Block Polygon
Proposed Rezoning Area
Projected Development Site (Applicant-Owned)
Projected Development Site (Non-Applicant Owned)
KINGS PL
VAN SICKLEN ST
LAKE ST
MC DONALD AV
BILLINGS PL
COLIN PL
LLOYD CT
AV S
E 2 ST
E 1 ST
CONDO # 773
CONDO # 856
6678
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Projected Development Site 1
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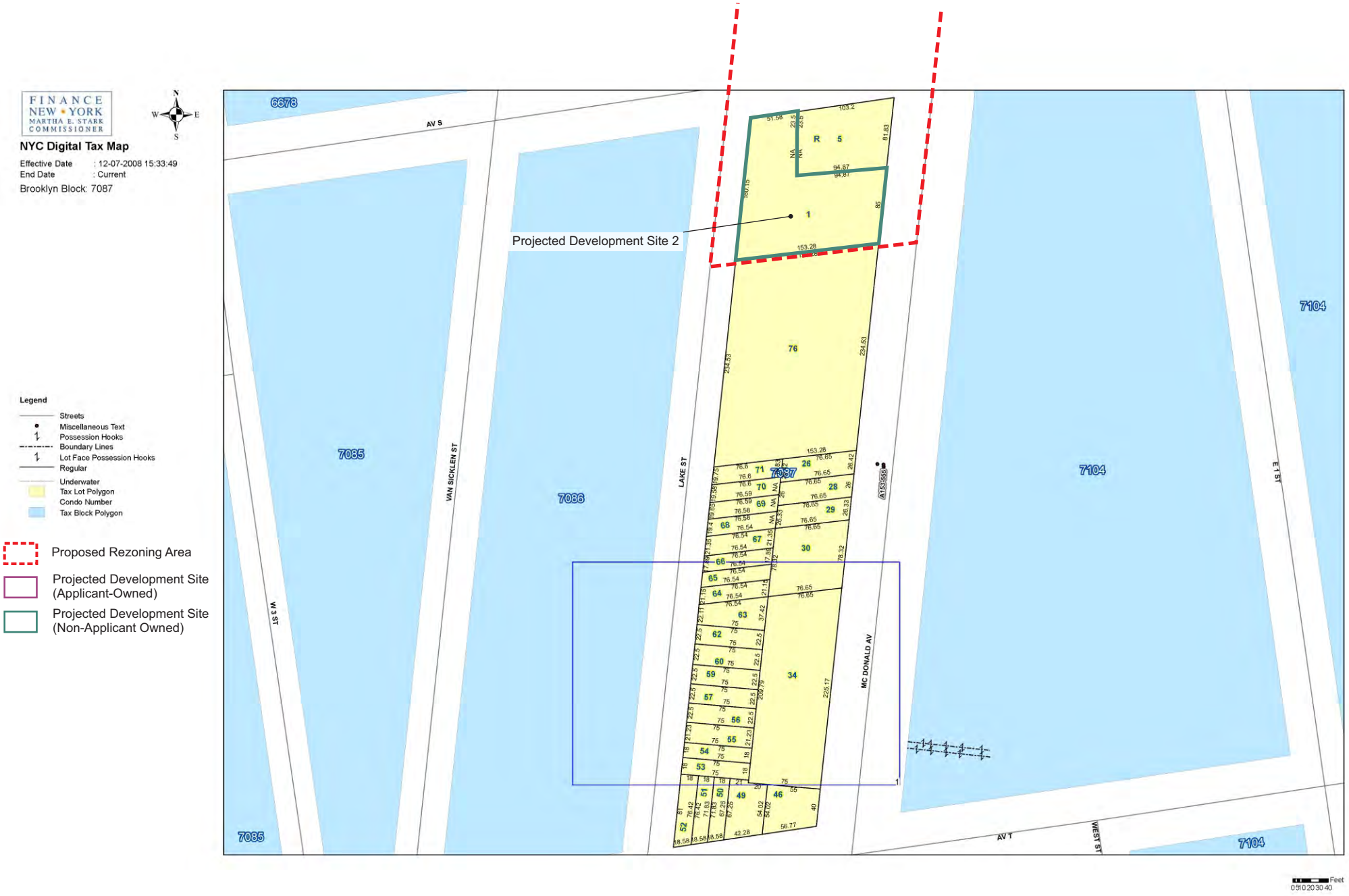
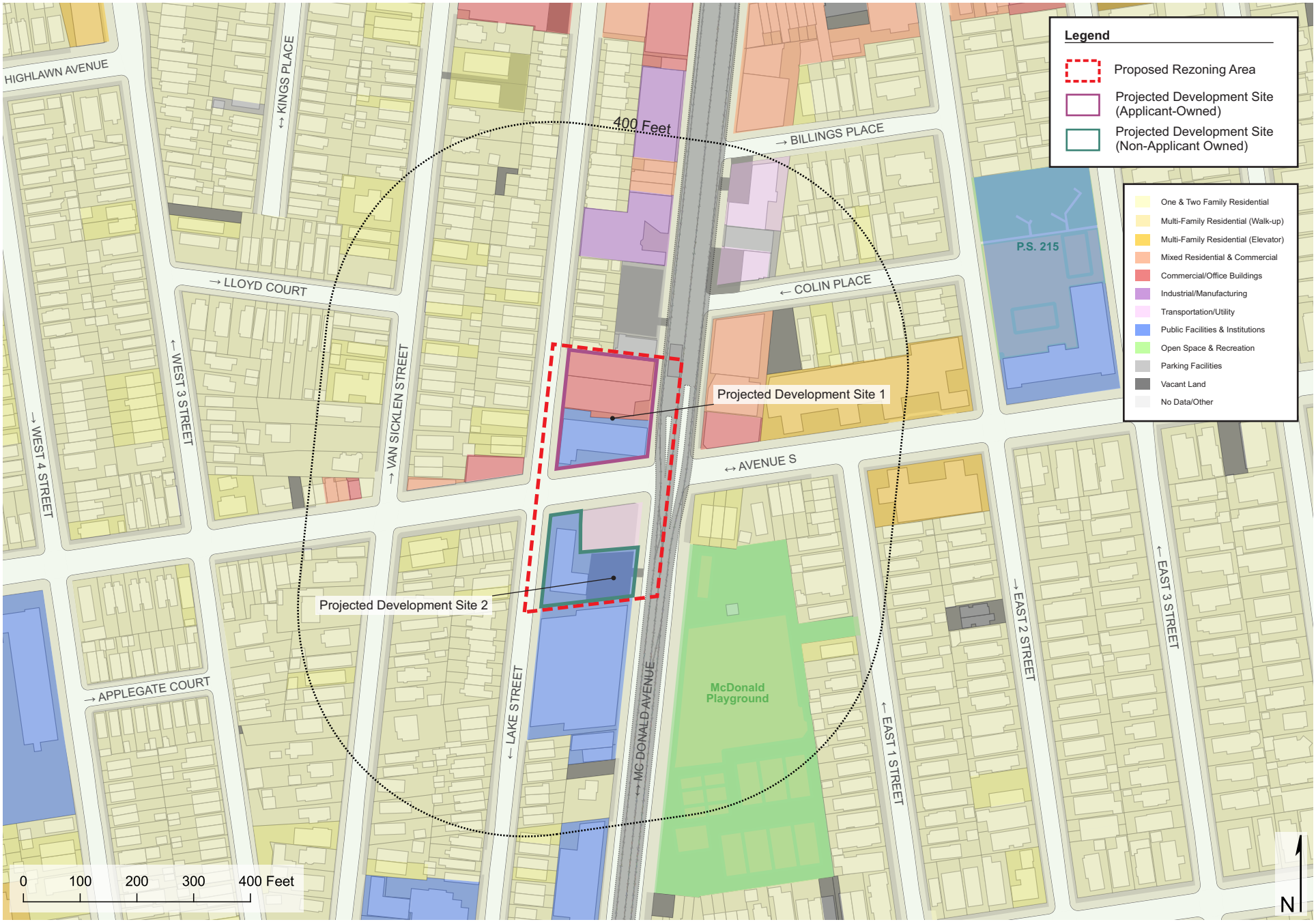
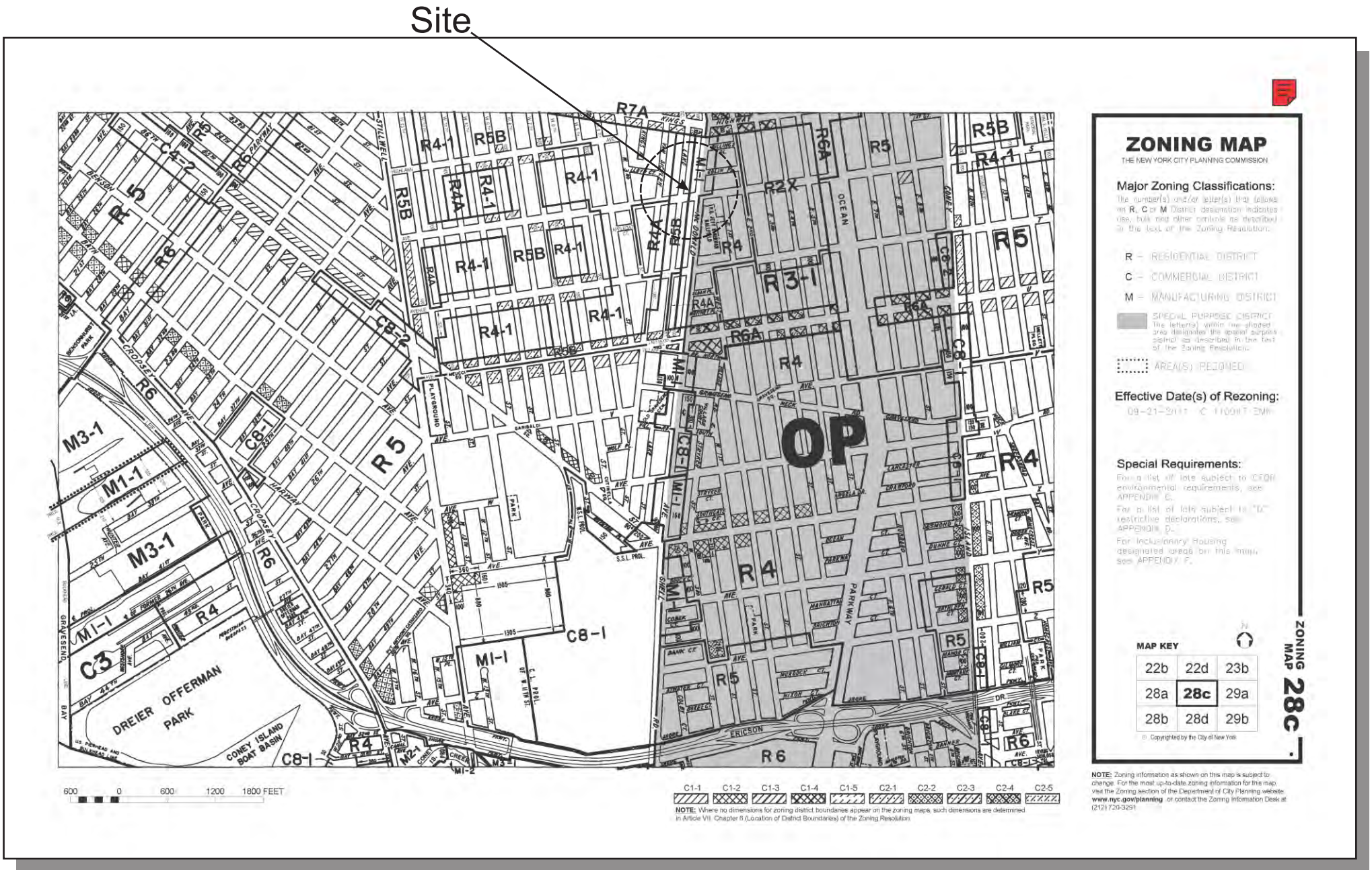
Feet


FINANCE NEW • YORK
MARTHA E. STARK COMMISSIONER
NYC Digital Tax Map
Effective Date : 12-07-2008 15:33:49
End Date : Current
Brooklyn Block: 7087
Projected Development Site 2
Legend
Streets
Miscellaneous Text
Possession Hooks
Boundary Lines
Lot Face Possession Hooks
Regular
Underwater
Tax Lot Polygon
Condo Number
Tax Block Polygon
Proposed Rezoning Area
Projected Development Site (Applicant-Owned)
Projected Development Site (Non-Applicant Owned)
6678
7085
7086
7087
7104
AV S
VAN SICKLEN ST
W 3 ST
LAKE ST
MC DONALD AV
E 1 ST
AV T
WEST ST
Feet


Legend
Proposed Rezoning Area
Projected Development Site (Applicant-Owned)
Projected Development Site (Non-Applicant Owned)
One & Two Family Residential
Multi-Family Residential (Walk-up)
Multi-Family Residential (Elevator)
Mixed Residential & Commercial
Commercial/Office Buildings
Industrial/Manufacturing
Transportation/Utility
Public Facilities & Institutions
Open Space & Recreation
Parking Facilities
Vacant Land
No Data/Other
400 Feet
Projected Development Site 1
Projected Development Site 2
HIGHLAWN AVENUE
KINGS PLACE
BILLINGS PLACE
LLOYD COURT
COLIN PLACE
P.S. 215
WEST 4 STREET
WEST 3 STREET
VAN SICKLEN STREET
AVENUE S
APPLEGATE COURT
LAKE STREET
MC DONALD AVENUE
McDonald Playground
EAST 1 STREET
EAST 2 STREET
EAST 3 STREET
0
100
200
300
400 Feet
N


Site
ZONING MAP
THE NEW YORK CITY PLANNING COMMISSION
Major Zoning Classifications:
R - RESIDENTIAL DISTRICT
C - COMMERCIAL DISTRICT
M - MANUFACTURING DISTRICT
SPECIAL PURPOSE DISTRICT
AREA(S) REZONED
Effective Date(s) of Rezoning:
Special Requirements:
MAP KEY
22b 22d 23b
28a 28c 29a
28b 28d 29b
ZONING MAP 28c
© Copyrighted by the City of New York
NOTE: Zoning information as shown on this map is subject to change. For the most up-to-date zoning information for this map, visit the Zoning section of the Department of City Planning website: www.nyc.gov/planning or contact the Zoning Information Desk at (212) 720-3291
600 0 600 1200 1800 FEET
C1-1 C1-2 C1-3 C1-4 C1-5 C2-1 C2-2 C2-3 C2-4 C2-5
NOTE: Where no dimensions for zoning district boundaries appear on the zoning maps, such dimensions are determined in Article VII, Chapter 8 (Location of District Boundaries) of the Zoning Resolution.
R7A
R5B
R6A
R5
R4-1
R4A
R2X
R3-1
R4
OCEAN
M3-1
M1-1
C8-1
C8-2
C3
M2-1
M3-1
OP
PARKWAY
DREIER OFFERMAN PARK
CONEY ISLAND BOAT BASIN
ERICSON
BAY
GRAVESEND


Legend
Proposed Rezoning Area
Projected Development Site (Applicant-Owned)
Projected Development Site (Non-Applicant Owned)
400 Feet
Projected Development Site 1
Projected Development Site 2
HIGHLAWN AVENUE
KINGS PLACE
BILLINGS PLACE
LLOYD COURT
COLIN PLACE
EAST 4 STREET
WEST 3 STREET
VAN SICKLEN STREET
WEST 4 STREET
AVENUE S
APPLEGATE COURT
LAKE STREET
MC DONALD AVENUE
EAST 2 STREET
EAST 3 STREET
EAST 1 STREET
0 100 200 300 400 Feet
N

2080 MCDONALD AVENUE REZONING

ENVIRONMENTAL ASSESSMENT STATEMENT (EAS)

INTRODUCTION

Based on the analysis and screens contained in the Environmental Assessment Statement Short Form, the analysis areas that require further explanation include land use, zoning, and public policy; community facilities; open space; shadows; historic and cultural resources; urban design and visual resources; hazardous materials; transportation; air quality; noise; neighborhood character; and construction. Subject headers correspond with the relevant chapters of the 2020 *CEQR Technical Manual.*

4. LAND USE, ZONING, AND PUBLIC POLICY

Introduction

The analysis of land use, zoning and public policy characterizes the existing conditions of the Development Site and the surrounding study area; anticipates and evaluates those changes in land use, zoning and public policy that are expected to occur independently of the proposed project; and identifies and addresses any potential impacts related to land use, zoning and public policy resulting from the project. Various sources have been used to prepare a comprehensive analysis of land use, zoning and public policy characteristics of the area, including field surveys, studies of the neighborhood, census data, and land use and zoning maps.

The Proposed Actions involves the mapping of a C4-4L district in place of existing R5 and M1-1 districts to facilitate the applicant's proposed construction of a mixed-use building on Projected Development Site 1. Two additional properties would be rezoned as a result of the Proposed Actions and one is also anticipated for mixed-use development.

Land Use, Zoning, and Public Policy Study Area

In order to assess the potential for project-related impacts, a study area has been defined that includes the area located within 400 feet of the Project Area. This 400-foot area is the area within which the Proposed Actions have the potential to affect land use, land use trends, zoning, or public policy. The study area is generally bounded by Billings Place to the north, East 1st Street to the east, Avenue T to the south, and Van Sicklen Street to the west. (See Figure 1, Site Location.)

Existing Conditions

Land Use

The Project Area is located on the north and south sides of Avenue S between McDonald Avenue and Lake Street in the Gravesend neighborhood of Brooklyn, Community District 11. The Project Area is made up of four tax lots: Block 6680, Lots 39 and 42, and Block 7087, Lots 1 and 5. The Project Area has approximately 240 feet of frontage on McDonald Avenue, 209 feet of frontage on Avenue S, and 365 feet of frontage on Lake Street. Blocks 6680 and 7087 are split down their centerlines between two zoning districts: M1-1 to the east and R5B to the west.

Projected Development Site 1 is controlled by the Applicant and consists of Block 6680, Lots 39 and 42 (2080 McDonald Avenue). Lot 39 is improved with two, two-story commercial buildings with a total floor area of 13,280 gsf (FAR 0.81). Lot 42 is improved with a one-story community facility building with a floor area of 7,500 gsf (FAR 0.50). The lots have a combined floor area of 26,513 sf.

Projected Development Site 2 consists of Block 7087, Lot 1 (121 Lake Street). The 17,078 sf lot is improved with a two-story community facility building with a floor area of 8,778 gsf (FAR 0.51)

Block 7087, Lot 5 (2086 McDonald Avenue), which is a paved lot with an area of 7,637 sf, owned and occupied by the Brooklyn Union Gas Company. It contains a pre-fabricated structure (619 sf) which is accessory to the utility use on the site.

McDonald Avenue runs north-south through the study area with the elevated F train tracks running above the street. Land uses along McDonald Avenue in the study area are predominantly institutional, commercial, and industrial, with a large playground at the south end of the study area. Away from the McDonald Avenue frontage, the study area is almost entirely residential. (See Figure 3, Land Use Map.)

Zoning

In 2005, the Homecrest Rezoning was adopted. The rezoning covered a swath of area directly west of McDonald Avenue and the Project Area. The project entailed a set of zoning map and text amendments for an approximately 120-block area in the eastern part of the Homecrest neighborhood in Brooklyn's Community District 11. The purpose of the rezoning was to preserve the existing neighborhood scale and character with lower density and contextual zoning districts, preventing new development inconsistent with that low-rise character. The rezoning encouraged residential development on selected wide streets with good access to mass transit and a character already defined by large apartment buildings – Avenue P, Quentin Road and Kings Highway and, to a lesser extent, along Bay Parkway and 65th Street. Along these corridors, the mid-density contextual zoning districts established height limits consistent with neighboring apartment houses to prevent development of overly large community facility and mixed residential/community facility buildings.

The Project Area is currently zoned R5B and M1-1. The study area also includes areas zoned R4 and R4A.

The R5B district is a contextual residential district that allows a maximum FAR of 1.35 for residential use; the maximum allowable lot coverage is 55 percent. The maximum height is 33 feet and parking is required for approximately 66% of dwelling units.

M1 zoning districts are light industrial districts, often mapped as buffer zones between M2 and M3 districts and residential areas. M1 zoning districts permit Use Groups 4-14 and 16-17 and uses typically include woodworking shops, auto repair shops, and wholesale/storage facilities. These uses are usually located in one and two-story warehouse buildings. The M1-1 zoning district allows a maximum FAR of 1.0 for light manufacturing and industrial uses and allows an FAR of

2.4 for community facility uses. The maximum building height is based on a sky-exposure plane, which begins 30 feet above the street line.

R4 districts permit residential and community facility use (Use Groups 1 through 4). Residential use permits a maximum FAR of 0.9 and a maximum height of 35 feet. Community facility use permits a maximum FAR of 2.0. The district allows a lot coverage of up to 60% and front yards are required. R4A is a contextual district that permits residential use up to an FAR of 0.75 (with a 20% attic allowance) and community facility uses up to an FAR of 2.0. The maximum permitted height is 35 feet. Front, rear, and two side yards are required.

Public Policy

Other than the Zoning Resolution discussed above, no other public policies apply to the Affected Area or the surrounding 400-foot radius study area. The Affected Area is not covered by any 197-a Community Development Plans, is not within any designated New York State Empire Zone or New York City Industrial Business Zone (IBZ), is not within the NYC Coastal Zone Boundary, and is not located within a critical environmental area, a significant coastal fish and wildlife habitat, a wildlife refuge, or a special natural waterfront area. The Proposed Actions do not involve the siting or displacement of any public facilities.

Future No-Action Scenario

Land Use

Absent the Proposed Actions, all lots within the Project Area would remain in their current condition, as described above.

The surrounding land uses within the immediate study area are expected to remain largely unchanged by the build year of 2024. No new development is anticipated to occur within the 400-foot study area by 2024.

Zoning

In the future without the Proposed Actions, the provisions of the existing R5 zoning district would continue to apply to the Project Area. No change would occur on the Development Site or the other Projected Development Sites. The surrounding zoning districts within the immediate study area are expected to remain largely unchanged by the build year of 2024.

Public Policy

In the future without the Proposed Actions, any new development within the Project Area would continue to be governed by the provisions of the underlying zoning districts. No other public policy initiatives would pertain to the Project Area or to the 400-foot study area around the property by the project build year of 2024. In addition, no changes are anticipated to the zoning districts and zoning regulations or to any public policy documents related to the Affected Area or the surrounding study area by the project build year.

Future With-Action Scenario

Land Use

In the future with the Proposed Actions , the Applicant will redevelop Projected Development Site 1 (Block 6680, Lots 39 and 42) with a new mixed-use building. Built pursuant to Quality Housing regulations, the building would contain residential, commercial (local retail), and community facility (daycare) uses. The proposed building contains 145,209 gsf (FAR 4.60) of floor area, of which 122,426 gsf (122 DU's) would be residential, 19,643 gsf would be commercial, and 3,140 gsf would be community facility space. The RWCDS building height would be 115 feet. Of the 122 DU's, 30%, or 37 units, would be affordable under MIH. Forty-three (43) parking spaces would be provided for the marked-rate DU's; parking requirements are waived for affordable units because the Project Area is within a Transit Zone.

Projected Development Site 2 (Block 7087, Lot 1) is projected for redevelopment with an 80,356 gsf (FAR 4.60) building, containing 63,944 gsf (64 DU's) of residential area and 16,412 gsf of commercial area. The building would have a height of 115 feet. Of the 64 DU's, 30%, or 19 units, would be affordable under MIH. Twenty-two (22) parking spaces would be provided for the marked-rate DU's; parking requirements are waived for affordable units because the Project Area is within a Transit Zone.

Zoning

In the future with the Proposed Actions , a C4-4L district would be mapped over the project area (see attached Zoning Change Map). Additionally, a zoning text amendment to Appendix F of the Zoning Resolution (ZR) to make the Project Area applicable as a Mandatory Inclusionary Housing (MIH) Area, Option 1 or 2.

The C4-4L district permits a maximum FAR of 4.0, or 4.6 with the Inclusionary Housing Program. The maximum building height for lots fronting on an elevated rail line is 100 feet, or 80 feet when not fronting on an elevated rail line. Parking is required for 50 percent of dwelling units, or 30 percent if the lot is 10,000 sf or less. Parking is waived if 15 or fewer spaces would be required.

The proposed zoning would allow for residential development in the Project Area while allowing for commercial development. It would provide opportunities for the creation of new housing, including market rate and affordable dwelling units, as well as new commercial retail space to that would increase investment in the surrounding area and improve the overall vibrancy of the neighborhood. The development proposed by the Applicant would not result in any non-conforming uses or non-complying developments, as the proposed development would comply with the proposed C4-4L zoning district.

Therefore, the Proposed Actions and the resulting proposed development are not expected to result in any significant adverse impacts or conflicts with the zoning in the study

Public Policy
No impact to public policies would occur as a result of the Proposed Actions. The proposed mixed-use development on the Development Site would be in accordance with the proposed zoning district. The inclusion of the MIH program will help bring much-needed low-income housing to this neighborhood of Brooklyn. The proposed zoning district would be consistent with zoning and bulk regulations in the study area and would be appropriate given the location of the Project Area and its proximity to public transit.

Conclusion

Land Use
The Affected Area already contains a mix of residential, commercial, and light industrial properties. No significant adverse impacts related to land-use would occur as a result of the proposed rezoning.

No potentially significant adverse impacts related to land use are expected to occur as a result of the Proposed Actions. Therefore, further analysis of land use is not warranted.

Zoning
The proposed zoning map amendment to C4-4L is appropriate given the context of the Project Area. The Development Site is located on a heavily-trafficked street in an area that is developed with both residential and commercial uses. The proposed zoning is similar to the zoning patterns of the 2005 Homecrest Rezoning, which established contextual R4 through R7 districts on the western side of McDonald Avenue. Thus, the increase in height and FAR permitted by this proposal is consistent with what is already permitted in the area.

A zoning text amendment to designate the Affected Area a MIH-designated area will allow an increased FAR on the Development Site and will provide the Applicant with the ability to provide affordable dwelling units on-site. Through MIH, the Applicant and all future owners will be required to provide a percentage of permanently affordable housing units on the lots affected by the Proposed Actions .

No significant adverse impacts related to zoning are expected to occur as a result of the Proposed Actions, and a further assessment of zoning is not warranted.

Public Policy
In accordance with the stated public policies within the study area, the Proposed Actions would be suitable for the Affected Area and the study area as a whole. No potential significant adverse impacts related to public policy are anticipated to occur as a result of the Proposed Actions and further assessment of public policy is not warranted.

7. OPEN SPACE

Introduction

For the purposes of CEQR, open space is defined as publicly- or privately-owned land that is publicly accessible and has been designated for leisure, play, or sport; or land that is set aside for the protection and/or enhancement of the natural environment. Under CEQR, an open space analysis is conducted to determine whether or not a Proposed Actions would have either a direct impact resulting from the elimination or alteration of open space or an indirect impact resulting from overtaxing the use of open space. The analyses focus only on officially designated existing or planned public open space. Open space may be public or private and may include active and/or passive areas. Active open space is the part of a facility used for active play such as sports or exercise and may include playground equipment, playing fields and courts, swimming pools, skating rinks, golf courses, lawns and paved areas for active recreation. Passive open space is used for sitting, strolling, and relaxation with benches, walkways, and picnicking areas. Certain spaces such as lawns can be used for both active and passive recreation.

An open space analysis may be necessary when an action would potentially have a direct or indirect effect on open space. A direct impact would physically change, diminish or eliminate an open space or reduce its utilization or aesthetic value. An indirect impact could result from an action introducing a substantial new user population that would create or exacerbate an overutilization of open space resources. An open space analysis considers both direct and indirect open space impacts. There are no open space resources on or directly adjacent to the Project Area. There would be no direct open space impacts resulting from the Proposed Actions . Therefore, this section discusses the potential for indirect open space impacts of the Proposed Actions .

According to the *CEQR Technical Manual*, an indirect open space impact could occur if a Proposed Actions would generate more than 200 residents or 500 workers. However, in an under-served area, even 50 additional residents or 125 additional employees could result in indirect open space impacts. The Project Area is located in an area considered to be under-served by open space in Brooklyn Community District 11 and the Proposed Actions are anticipated to introduce approximately 502 new residents and -2 employees to the study area. Therefore, a preliminary analysis has been conducted to determine whether significant indirect open space impacts could occur as a result of the increased residential population.

Study Area

Open space study areas are defined to allow analysis of both the nearby open spaces and the population using the open spaces. They are generally defined by a reasonable walking distance that users would travel to reach local open space and recreation areas – typically 0.5 mile for residential users. The 0.5 mile radius is then adjusted by identifying all census tracts with at least 50 percent of their area within the generalized 0.5-mile study area. The boundary drawn around

these census tracts becomes the open space study area. See Figure 7-1 for a map of the open space study area.

Existing Conditions

Study Area Population

The study area population was estimated using data from the 2017 U. S. Census ACS Data for the census tracts located fully or at least 50 percent within the one-half mile study area. As shown in Table 7-1, in 2017 the study area contained a total of 42,946 residents within the 15 study area census tracts.

Table 7-1: Open Space Study Area Population

Census Tract	Total Population (2018)
394	2464
396	1824
398	2665
400	3344
406	3533
408	3499
410	1977
412	3161
414.01	1653
414.02	1783
416	2357
418	2598
422	3523
424	3752
426	4373
Study Area Total	**42,946**
Source: US Census ACS Demographic and Housing Estimates. 2014-2018 American Community Survey 5-Year Estimates	

Open Space Resources

Within the open space study area, there are six publicly accessible facilities, including one playground that is part of the PlaNYC Schoolyards to Playgrounds program. See Figure 4-1, Open Space Facilities and Census Tracts and Table 7-2, Inventory of Open Space Resources. The six publicly owned and accessible facilities provide a total of 13.17 acres of open space.

Figure 7-1: Open Space Facilities and Census Tracts



Table 7-2: Inventory of Open Space Resources

Map No.	Name	Block	Lot	Acreage
1	McDonald Playground	7104	17	3.48
2	P.S. 215 Playground	6681	169	1.23
3	Ocean Parkway Greenway	Ocean Parkway between Avenue P. and Avenue V.		6.63
4	Lady Moody Triangle	Avenue U and Village Road North		0.05
5	Old Gravesend Cemetery	7146	1	1.65
			Total	**13.04**

Open Space Ratio

Based on the ratio of publicly accessible open space acreage to the study area population, a determination of the adequacy of open space resources in the study area was quantified. The resultant computation for the study area was then compared with the City's planning goal as expressed in the *CEQR Technical Manual* of 2.5 acres per 1,000 population.

The *CEQR Technical Manual* considers an action to result in significant impacts to open space resources if it would decrease the open space ratio substantially, thereby reducing the availability of open spaces for an area's population. In areas with low open space ratios a decrease as small as 1% could result in adverse impacts. The open space study area exhibits an open space ratio of 0.3036 acres per 1,000 residents, (based on 13.04 acres of existing open space divided by the 2014-2018 American Community Survey study area population estimate of 42,946 persons).

Table 7-3: Open Space Ratios

	Existing / No-Action	Future With-Action
	13.04	13.04
Study Area Population	42,946	43,448
Open Space Ratio (Acres/1,000 Residents)	0.3036	0.3001 / -1.17%

No-Action Condition

In the future without the Proposed Actions, no changes are anticipated to the study area open space ratio. No significant residential developments are anticipated, nor or are any changes to study area open spaces.

With-Action Condition

Study Area Population

The net increase of 186 dwelling units resulting from the Proposed Actions is expected to generate approximately 502 residents, based on the average household size of 2.7 residents in renter occupied households in the Bensonhurst East Neighborhood Tabulation Area. Adding these residents to the Future No-Action population of 42,946 results in a future with-action population of 43,448.

Open Space Resources

No new open spaces are planned to be added to the study area by the project's build year of 2024, and no changes are anticipated to the existing open spaces. Therefore, in the future with-action condition, the project study area would contain approximately 13.04 acres of open space, the same as under existing conditions.

Open Space Ratio

The projected open space ratio in the future with the Proposed Actions would be 0.3001 acres per 1,000 residents (based on 13.04 acres of open space and a study area population of 43,139), compared with the ratio of 0.3036 acres per 1,000 residents under existing and no-action conditions. This represents a decrease of approximately 0.0035 acres per 1,000 persons or a 1.17 percent reduction in the open space ratio. The community would continue to be under-served by the city's open space resources and would continue to not meet DCP's open space planning goals. Table 7-3 shows the calculation of open space ratios for the Existing/No-Action and Future With-Action conditions.

The proposed development would result in a decrease of 1.17 percent in the open space ratio in the open space study area. According to the *CEQR Technical Manual,* in under-served areas, a detailed analysis may be warranted even if the open space ratio decreases by less than five percent. The Proposed Actions would reduce the open space ratio by 1.17 percent, the open space ratio would not decrease substantially relative to existing conditions where the open space ratio is already below average. Further, the applicant's proposal for Projected Development Site 1 includes indoor and outdoor recreation space for building tenants. These include ball courts on the 4th floor roof terrace, and garden spaces on the 1st floor roof terrace.

A detailed open space assessment is included below as a decrease of even one percent may result in open space impacts given the low open space ratio in the existing, no-action, and with-action conditions.

Detailed Analysis

Per the CEQR Technical Manual, a detailed open space analysis typically breaks down study area population by age group and details the amount and quality of various types of open space to assess the availability of particular types of open space for particular age groups. In conducting this assessment, the analysis focuses on where shortfalls in open space exist now (or in the future), to identify whether the shortfalls are a result of the Proposed Actions.

Existing Open Space

As visualized in Figure 7-1, there are a total of six open space resources within the census tracts that are more than 50% contained in the ½ mile radius around the Project Area. These open space resources are described below and summarized in **Table 7-4: Detailed Inventory of Open Space Resources.**

McDonald Playground

The McDonald Playground is located along McDonald Avenue across the street from the Project Site. It contains several basketball courts, handball courts, tennis courts, bocce courts and a children's playground. Most of the 3.48 acres in the playground are reserved for active recreation. There is a large, paved area in the center of the playground. There are also benches at the periphery of the playground. Most of the area of this resource is used for active recreation.

Lady Moody Triangle

Lady Moody Triangle is located to the north of the Project Area and is formed by the intersection of Avenue U and Village Road North. The landscaped triangle is named after Lady Deborah Moody, who founded the town of Gravesend, naming it after her hometown in the Old World. Lady Moody became the first woman in the New World to receive a land patent and to write the first town charter in English in New Netherland. The triangle contains planted areas within its 0.05 acres allowing for passive recreation.

Old Gravesend Cemetery

The Old Gravesend Cemetery is located t to the south of the Project Area on McDonald Avenue. Established by Lady Deborah Moody in 1643, the landmarked cemetery is home to more than 350 gravestones, ranging in dates from the mid-18th century to the mid-1900s. Those buried there include early settlers of Brooklyn, Revolutionary War veterans and maybe even Lady Moody herself. Gravesend Cemetery was landmarked in 1976, alongside the parallel Van Sicklen Family Cemetery. It was transferred to the Parks

Department in 2003. The cemetery is part of the New York City Parks Department's Citywide Monuments Conservation Program. Though often closed for restoration work the cemetery offers passive recreation on its 1.65 acres.

Ocean Parkway Greenway

Five and a half miles long, it stretches from Prospect Park to Brooklyn's beaches at Coney Island. The parkway is flanked by two greenswards, planted with trees and grass, which lend the road a park-like atmosphere and provide a place for pedestrians to stroll. These spaces provide an area for mainly passive recreation.

P.S. 215 Playground

The playground facilities at P.S. 215 (Morris H. Weiss School) are part of the Schoolyards to Playgrounds program. The program renovates existing playgrounds and opens these to the public during non-school hours. The playground at P.S. 215 contains paved areas with basketball courts, playground equipment and open planted areas which allow for mainly active recreation.

Table 7-4: Detailed Inventory of Open Space Resources

Map Key	Open Space Resource Name	Block	Lot(s)	Total Size (Acres)	Passive Acres	Active Acres	Condition	Utilization
1	McDonald Playground	7104	17	3.48	0	3.48	Poor	Moderate
2	PS 215 Playground	6681	169	1.23	0	1.23	Fair	Moderate
4	Ocean Parkway Greenway	Ocean Pkwy btwn Ave. P & Ave. V		6.63	6.63	0	Fair/Poor*	Moderate
5	Lady Moody Triangle	Avenue U/ Village Rd. North		0.05	0	0.05	Fair	Low
6	Old Gravesend Cemetery	7146	1	1.65	1.65	0	Fair	Moderate
Total				**13.04**	**8.28**	**4.76**		

**Zone 6 Overall Condition and Cleanliness: Fair; Zone 7 Overall Condition and Cleanliness: Unacceptable*
Source: nycgovparks.org/parks

Study Area Population

The Study Area population was estimated using data from the 2014-2018 U. S. Census ACS data for the census tracts located fully or at least 50 percent within the one-half mile study area. As discussed above, the population the study area contained a total of 29,040 residents within the 9 relevant census tracts.

Table 7-5 summarizes the age distribution of the study area population and compares it to Brooklyn and New York City as a whole. As shown, the study area has a **larger** distribution of children and teenagers through age 19; a **smaller** share of people aged 20 to 64 years; and a larger share of seniors compared to Brooklyn and New York City as a whole.

Table 7-5 Study Area Age Characteristics

SELECTED AGE CATEGORIES	Study Area	Brooklyn	New York City
Ages 4 and younger	8.8%	7.4%	6.5%
Ages 5 to 9 years	6.6%	6.2%	5.6%
Ages 10 to 14 years	6.5%	5.9%	5.5%
15 to 19 years	5.7%	5.4%	5.4%
20 to 64 years	57.5%	61.7%	62.9%
65 years and over	14.9%	13.2%	14.1%
Source: Census ACS Demographic and Housing Data, American Community Survey 2012-2016			

Within a given area, the age distribution of a population affects the way open spaces are used and the need for various types of recreational facilities. Typically, children 4 years old or younger use traditional playgrounds that have play equipment for toddlers and preschool children. Children ages 5 through 9 typically use traditional playgrounds, as well as grassy and hard-surfaced open spaces, which are important for such activities as ball playing, running, and skipping rope. Children ages 10 through 14 use playground equipment, court spaces, little league fields, and ball fields. Teenagers' and young adults' needs tend toward court game facilities such as basketball and field sports. Adults between the ages of 18 and 44 continue to use court game facilities and fields for sports, along with more individualized recreation such as rollerblading, biking, and jogging that require bike paths, promenades, and vehicle-free roadways. Adults also gather with

families for picnicking, ad hoc active sports such as Frisbee, and recreational activities in which all ages can participate. Senior citizens engage in active recreation such as handball, tennis, gardening, and swimming, as well as recreational activities that require passive facilities.

Given the range of age groups present in the study area population, the study area has need for both active and passive recreation facilities. However, the Study Area may have a greater need than for passive open space that can used by seniors and younger children.

Quantitative Assessment

If the Proposed Actions are approved the Proposed Development will introduce new residents the Study Area. When compared to the "No-Action" condition the total open space ratio will decline by 1.17% in the "With-Action" condition. The changes are summarized in **Table 7-5: OSR Changes** below. As such further qualitative analysis is warranted and provided below.

Table 7-5: OSR Change

	Existing	No-Action	With-Action	Pct. Change
Population	42,946	42,946	43,448	-1.16%
Total OS	13.04	0.3036	0.3001	-1.17%
Active OS	4.76	0.1108	0.1095	-1.19%
Passive OS	8.28	0.1928	0.1906	-1.15%

Qualitative Assessment

As discussed above, the Study Area has a higher share of older adults and young children than both Brooklyn and New York City as a whole. This indicates that the Study Area would require more passive open space than the citywide average. Also, there is a larger share of school-age children in the Study Area which require active open spaces resources such as ballcourts. As demonstrated above in Table 7-4 Detailed Inventory of Open Space Resources the majority of available open space offers passive recreation. While McDonald Playground located across he street from the Project Site offers mainly active recreation. A Park inspection reports from Sept. 2020) accessed via the Dept. of Parks and Recreation website indicates an "unacceptable" level of weeds at McDonald Playground. Other reports from Dec. 2020 indicate that both Ocean Parkway Malls Zones 6 and 7 had an unacceptable level of litter. This may be attributed, in part, to the increase in usage seen during the COVID-19 pandemic. Neither of these issues are expected to severely impact the use nor enjoyment of these resources

Lastly, the Proposed Development includes amenities such as indoor and outdoor recreational space for building tenants. The tenant recreational space is divided into three rooftops for a total of 14,445 square feet of space. This includes ball courts and garden spaces, and other outdoor amenities. These resources are not accessible to the public. The inclusion of these spaces in the Proposed Development may limit the usage of public open space resources by the building's residents.

Conclusion

If the Proposed Actions are approved new development in the Project Area will introduce new residents to the Study Area. The Proposed Actions are anticipated to reduce the total open space ratio within the Study Area by 1.17 %. A reduction greater than 1% in open space ratios could create significant adverse impacts within the Study Area as the existing open space ratios are very low. The Study Area currently has a total open space ratio of 0.3 acres per 1,000 residents which is significantly below the city's target of 2.5 acres of open space per 1,000 residents. The 1% threshold in the CEQR TM is not an impact threshold rather, it is an analysis threshold that suggests that without mitigating qualitative factors a significant adverse open space impact is possible. The detailed analysis presented in this chapter suggests that, the Study Area may have a greater need for passive open space than the citywide average, given that young children and seniors make up a larger share of the Study Area population. The qualitative factors of this assessment demonstrate that existing resources are in fair condition and that existing spaces provide a larger proportion of passive recreation space (which as discussed above better reflects the open space usage of the study area population based on demographic distribution. Further, open space resources in the area show low to moderate usage which suggests that these spaces are able to absorb additional open space users. The Proposed Development includes private recreational space for building tenants. This is expected to defray some of the demand for open space generated by the Proposed Actions. Finally, the relative proximity of the Ocean Parkway Malls (a large linear open space resource) constitutes an additional qualitative factor that should be considered in this assessment.

Based on the quantitative and qualitative analysis provided above the Proposed Actions do not have the potential to result in significant adverse open space impacts.

8. SHADOWS

Introduction

Under CEQR, a shadow is defined as the circumstance in which a building or other built structure blocks the sun from the land. An adverse shadow impact is considered to occur when the shadow from a proposed project falls upon a publicly accessible open space, a historic landscape, or other historic resource if the features that make the resource significant depend on sunlight, or if the shadow falls on an important natural feature and adversely affects its uses or threatens the survival of important vegetation. An adverse impact would occur only if the shadow would fall on a location that would otherwise be in sunlight; the assessment therefore distinguishes between existing shadows and new shadows resulting from a proposed project. Finally, the determination of whether the impact of new shadows on an open space or a natural or historic resource would be significant is dependent on their extent and duration. In general, shadows on City streets and sidewalks or on other buildings are not considered significant under CEQR. In addition, shadows occurring within an hour and a half of sunrise or sunset generally are not considered significant under CEQR.

According to the 2020 *CEQR Technical Manual*, a preliminary shadow screening is not required unless the project would include a net height increase or addition of at least 50 feet or if it would contain shorter structures that might cast substantial new shadows on an adjacent park, sunlight-sensitive historic resource, or an important natural resource. A shadows screening is required for this project since the projected development resulting from the Proposed Actions exceeds 50 feet in height.

Preliminary Screening Assessment

Tier I Screening Assessment

The Proposed Actions would result in the development of a 9-story building on Projected Development Site 1 and another 9-story building on Projected Development Site 2. These buildings would reach a maximum height of 115 feet. Based on *CEQR Technical Manual* guidelines, the longest shadow that any building would cast during the year (except within an hour and a half of sunrise or sunset which is not deemed to be of concern) is 4.3 times its height. Applying the 4.3 factor to the proposed maximum building height of 115 feet would result in a maximum shadow distance of approximately 495 feet. There are two sunlight-sensitive resources in the vicinity of the Project Area, as indicated on Figure 8-1. McDonald Playground (number 1 on Figure 8-1) is located directly east-southeast from the Project Area, within the maximum possible shadow radius. The playground at P.S. 215 (number 2 on Figure 8-1) is outside of the maximum possible shadow radius and therefore would not be affected by the Proposed Actions .

An additional resource, the State / National Registry Listed Hubbard House is also within the study area. As this resource does not contain any sunlight-sensitive features such as stained glass or architecturally significant facade treatment ir has been excluded from this analysis.

McDonald Playground is almost entirely paved, with the exception of trees planted along the edges of the park and separating some of the play areas. The park provides a paved playground with play equipment, bocce ball courts, handball courts, tennis courts, basketball courts, and an expansive unprogrammed paved play area. The park has an area of 3.48 acres. Due to the proximity of the Projected Development Sites to McDonald Playground, a Tier II Assessment is warranted.

Figure 8-1: Tier 1 Screening Assessment



Figure 8-2: Tier 2 Screening Assessment



Tier 2 Screening Assessment

Based on the Tier 1 assessment, which showed the potential for the longest shadow to reach a sunlight-sensitive open space resource, a Tier 2 assessment was prepared. A Tier 2 assessment located the area south of the Project Area that cannot be cast in shadow. This area in New York City is between -108 and +108 degrees from true north.

The above Tier 2 screening assessment (Figure 8-2) shows the area south of the Projected Development Sites that cannot be shadowed by the projected development. As illustrated in the figure, approximately two-thirds of McDonald Playground would not be affected by project-generated shadows. However, the northern portion of the playground could still experience new shadows from the project and further assessment is required.

Tier 3 Screening Assessment

A Tier 3 screening assessment was prepared for the four representative days of the year set forth in the *CEQR Technical Manual:* December 21, the winter solstice and shortest day of the year; March 21/September 21, the equinoxes; May 6, the midpoint between the summer solstice and the equinox (and equivalent to August 6); and June 21, the summer solstice and the longest day of the year. The *CEQR Technical Manual* defines the temporal limits of a shadow analysis period to fall from an hour and a half after sunrise to an hour and a half before sunset. In accordance with the *CEQR Technical Manual*, surrounding buildings are not included in the Tier 3 shadow assessment model, nor are the elevated train tracks that run along McDonald Avenue.

A Tier 3 screening assessment has been performed as McDonald Playground lies within the area that could be shaded by project-generated development (see Figures 8-3 through 8-6). As shown on the attached Tier 3 Screening Assessment diagram, shadows from the projected buildings on Development Site 2 could potentially reach McDonald Playground on three of the four analysis days: March 21, May 6, and December 21.

New shadows would be cast by the building on Projected Development Site 2 on the McDonald Playground during the following analysis periods:

- March 21, 3:30 pm and 4:29 pm;
- May 6, 3:30 pm, 4:30 pm, and 5:18pm; and
- June 21, 4:00 pm, 5:00pm, and 6:01pm.

Figure 8-3: Tier 3 Screening Assessment for the December 21 Analysis Day

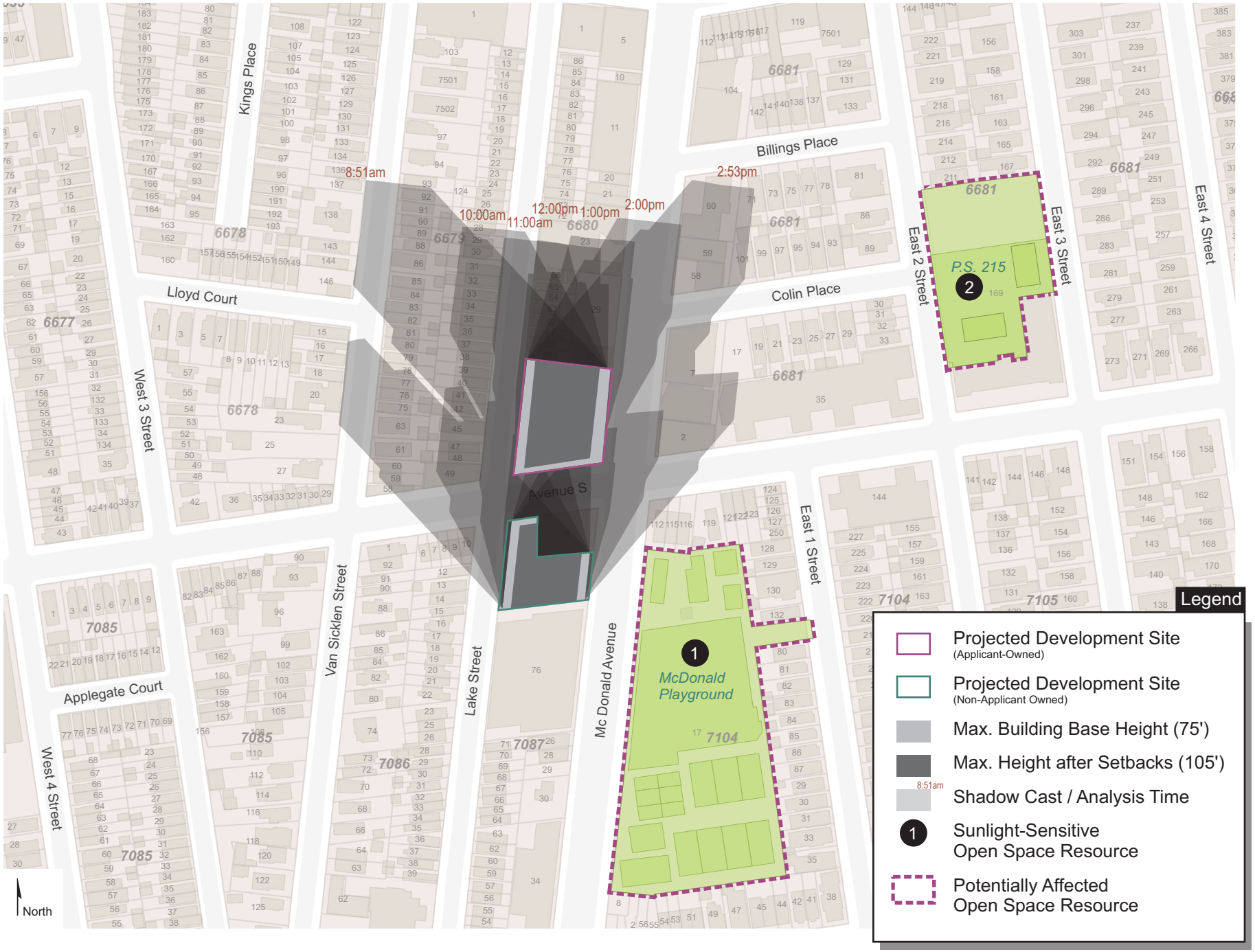


Figure 8-4: Tier 3 Screening Assessment for the March 21 Analysis Day

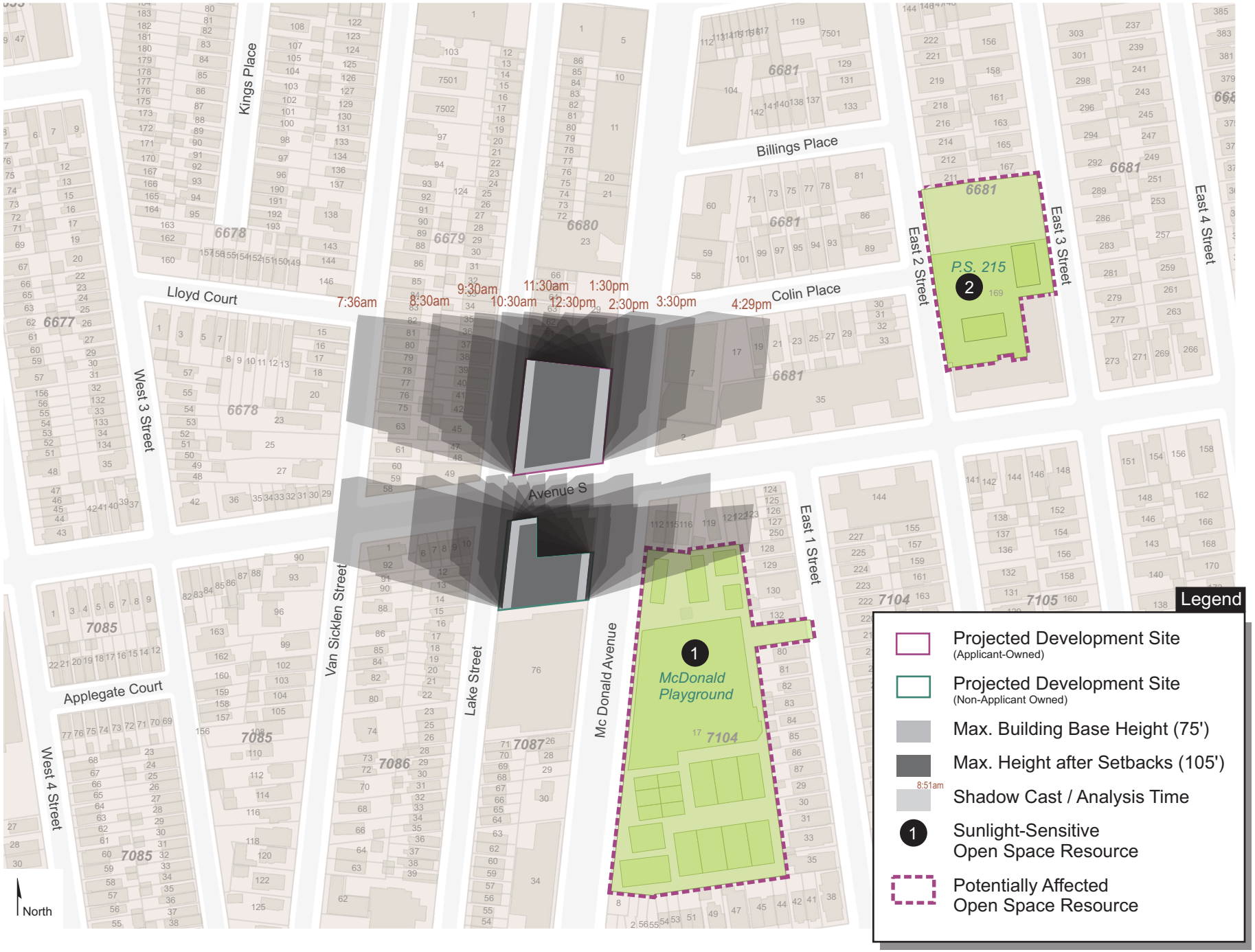


Figure 8-5: Tier 3 Screening Assessment for the May 6 Analysis Day

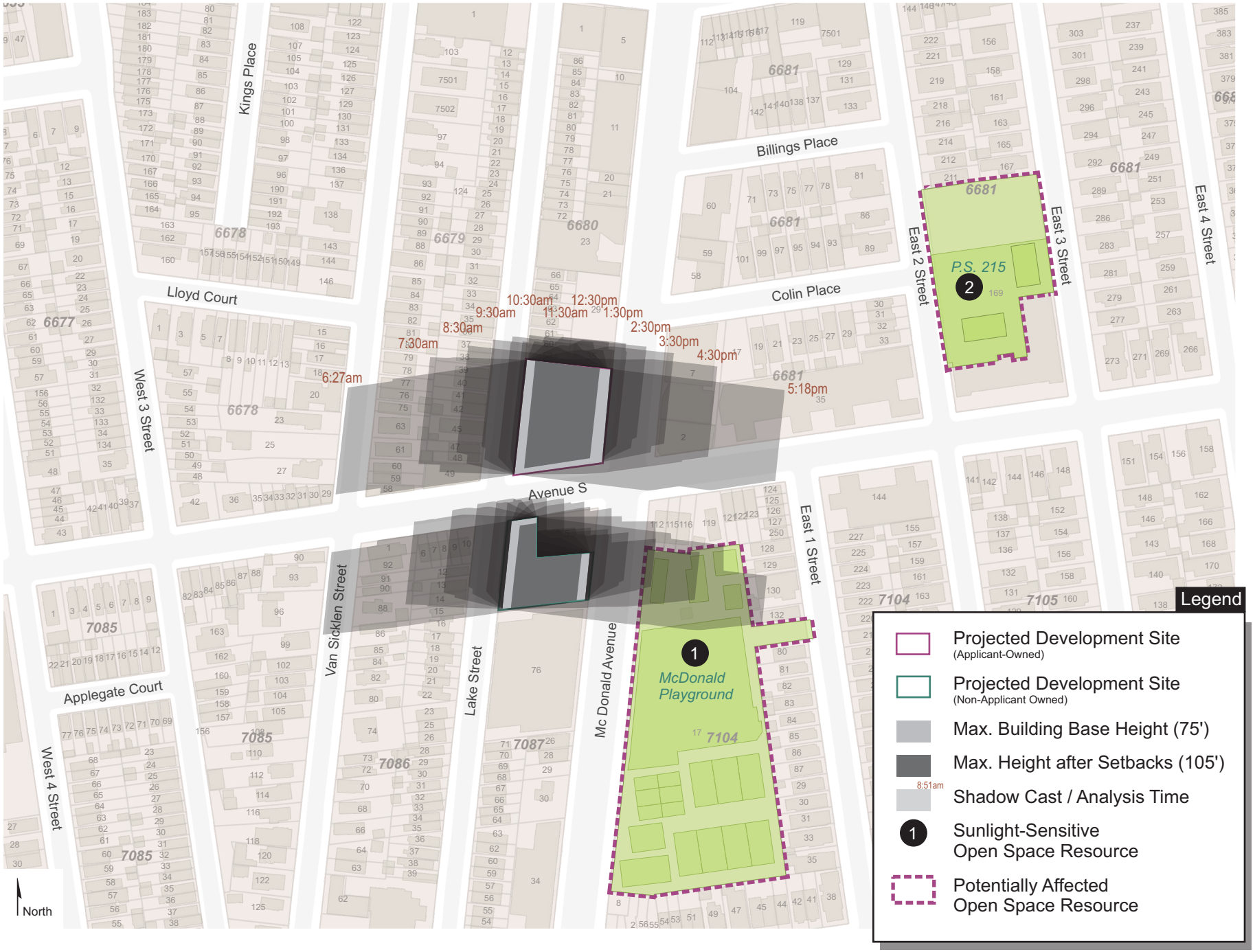
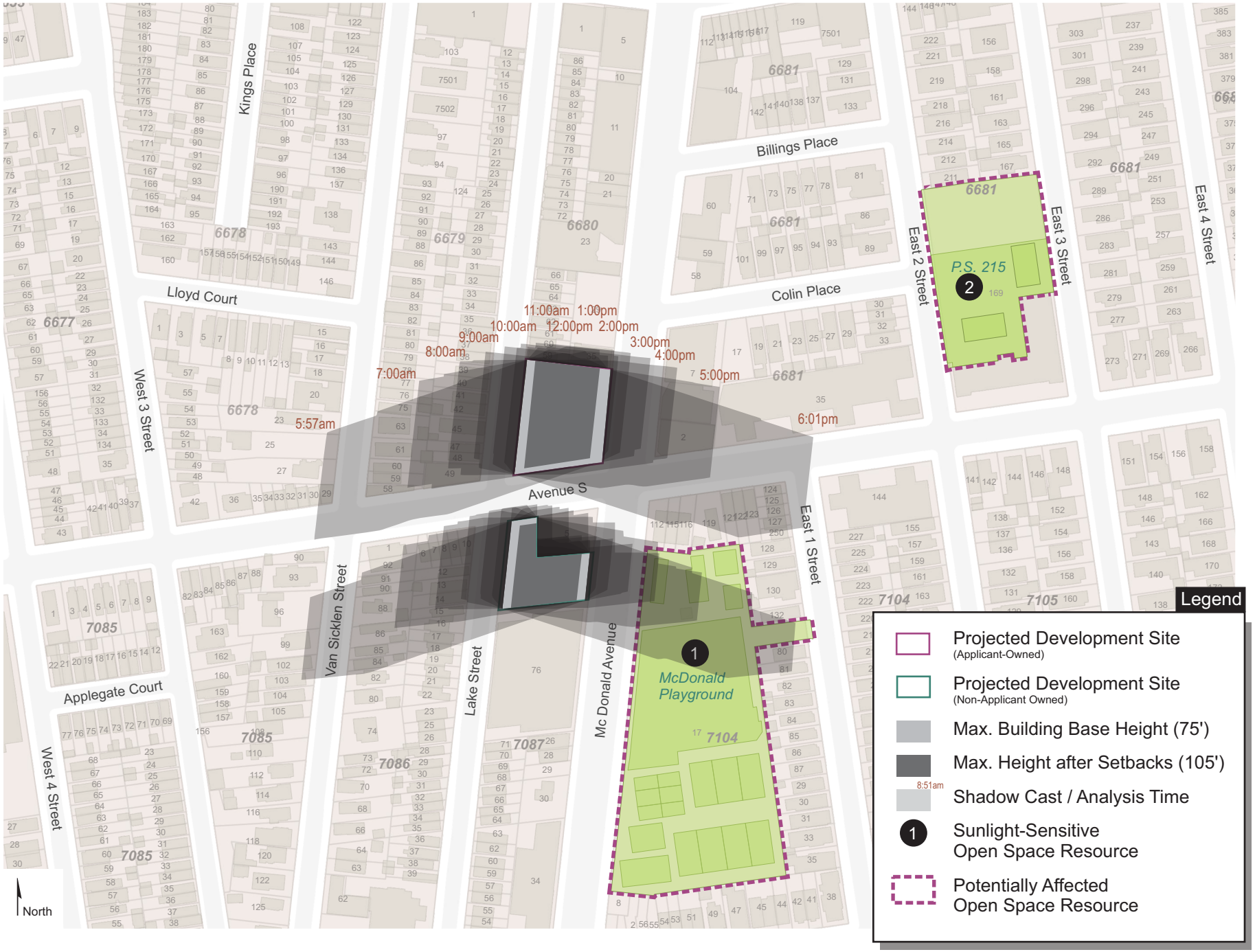


Figure 8-6: Tier 3 Screening Assessment for the June 21 Analysis Day



Detailed Analysis

Significance of Shadows Impacts

Based on CEQR Technical Manual criteria and as shown in the Tier 3 incremental impact screening impact assessment diagrams (Figures 8-3 through 8-6), shadows from the proposed buildings on Projected Development Sites 2 would cover portions of McDonald Playground. These new shadows would extend over a period of approximately one hour on March 21, nearly two hours on May 6, and approximately two hours on June 21. The longest shadow on the park would occur on June 21 at 6pm, when shadows from project-generated development would fall over the northern portion of the park.

The new shadows would fall on the bocce courts, the childrens' play area, the northeastern corner of the unprogrammed, paved play area, and the paved entryway to the park on East 1st Street during spring and summer evenings. The majority of the park would not experience any new shadows, including on the handball, basketball, and tennis courts. The park is currently undergoing renovation on the northern portion of the park. The renovations were expected to be completed in May 2022. Due to the COVID-19 pandemic, these renovations have been delayed and a new completion date has not been determined. Illustrative plans for the renovations are provided below. They show that the northern portion of the park would include new shade trees, play equipment, a splash pad and other sunlight sensitive features.

As demonstrated in **Figure 8-7: Incremental Impact Assessment for Mar. 21st**, the buildings on Projected Development Site 2 would cast shadows on the northern portion of the playground from 3:30PM to 4:29PM. These shadows lasting 59 minutes would cover the bocce court and playground equipment.

As demonstrated in **Figure 8-8: Incremental Impact Assessment for May. 6th**, the buildings on Projected Development Site 2 would cast shadows on the northern portion of the playground from 3:17PM to 5:18 PM. These shadows lasting 1 hour and 59 minutes would cover the bocce court and playground equipment.

As demonstrated in **Figure 8-9: Incremental Impact Assessment for Jun. 21st**, the buildings on Projected Development Site 2 would cast shadows on the northern portion of the playground from 3:37PM to 6:01 PM. These shadows lasting 2 hour and 24 minutes would cover the bocce court and playground equipment and a corner of the concrete open space.



NYC Parks

McDonald Playground | Schematic Design

Figure 8-7: View of 3D model from south, including intervening structures

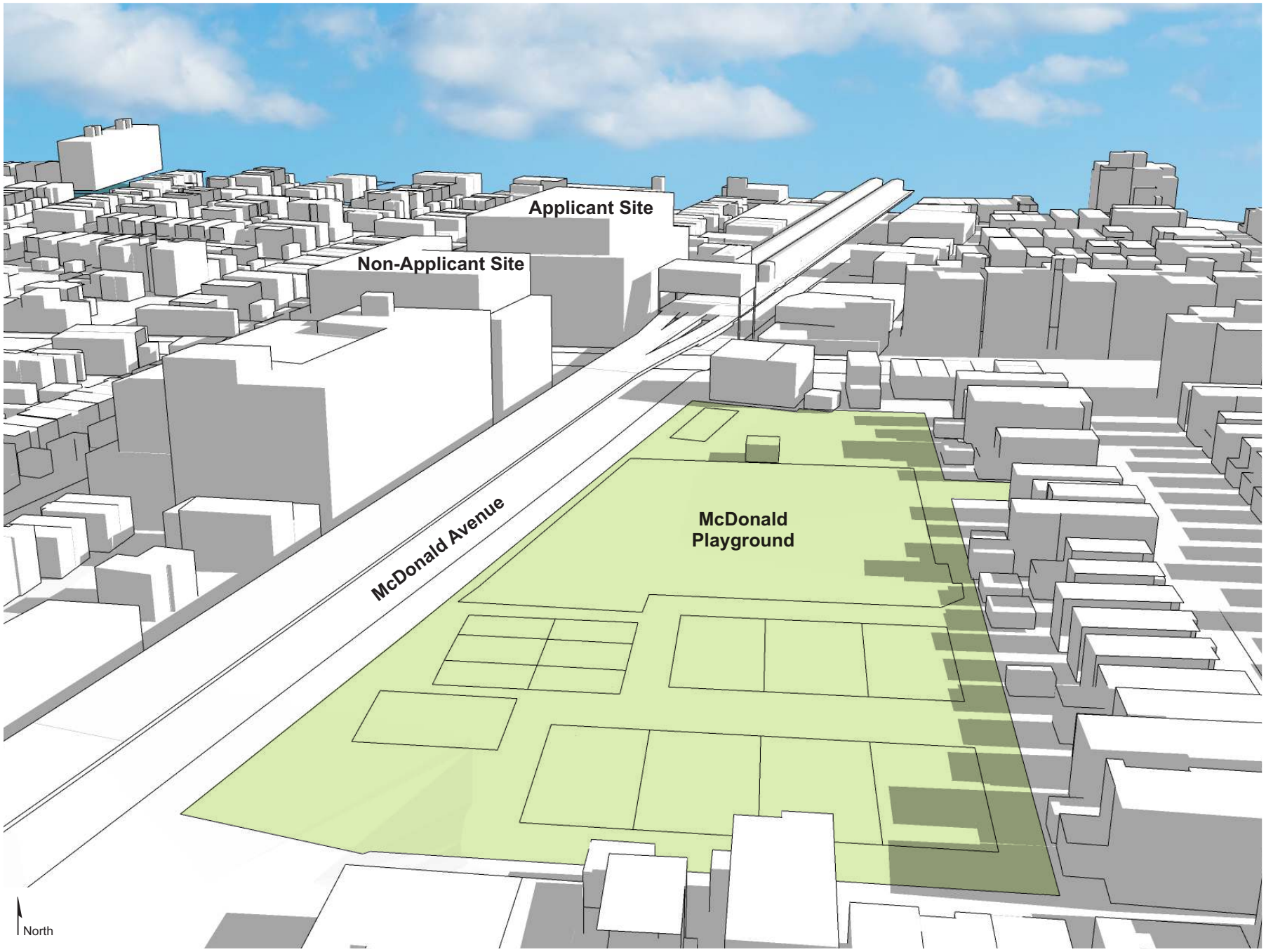


Figure 8-8: Detailed Analysis for the March 21 Analysis Day



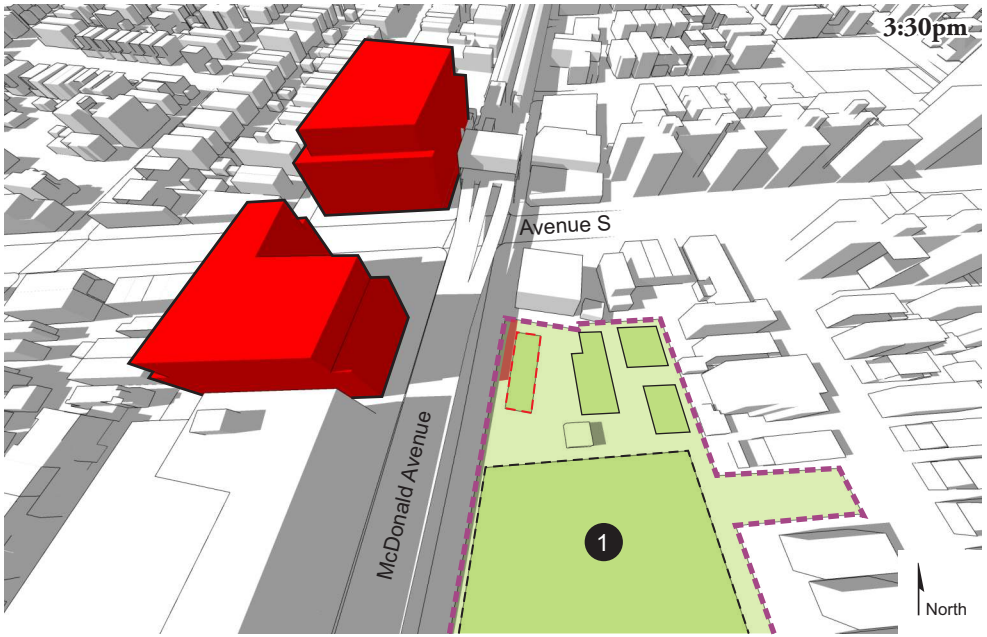


Shadows Cast on Sunlight-Sensitive Resource | 2:58pm – 4:29pm

Legend

- Projected Development Sites
- 8:51am Shadow Cast / Analysis Time
- 1 Sunlight-Sensitive Open Space Resource
- Potentially Affected Open Space Resource
- American Handball Courts
- Bocce Court
- Concrete Open Space
- Basketball Courts
- Tennis Courts
- Playground

Figure 8-9: Detailed Analysis for the May 6 Analysis Day



Shadows Cast on Sunlight-Sensitive Resource | 3:19pm – 5:18pm

Legend

- Projected Development Sites
- 8:51am Shadow Cast / Analysis Time
- 1 Sunlight-Sensitive Open Space Resource
- Potentially Affected Open Space Resource
- American Handball Courts
- Bocce Court
- Concrete Open Space
- Basketball Courts
- Tennis Courts
- Playground



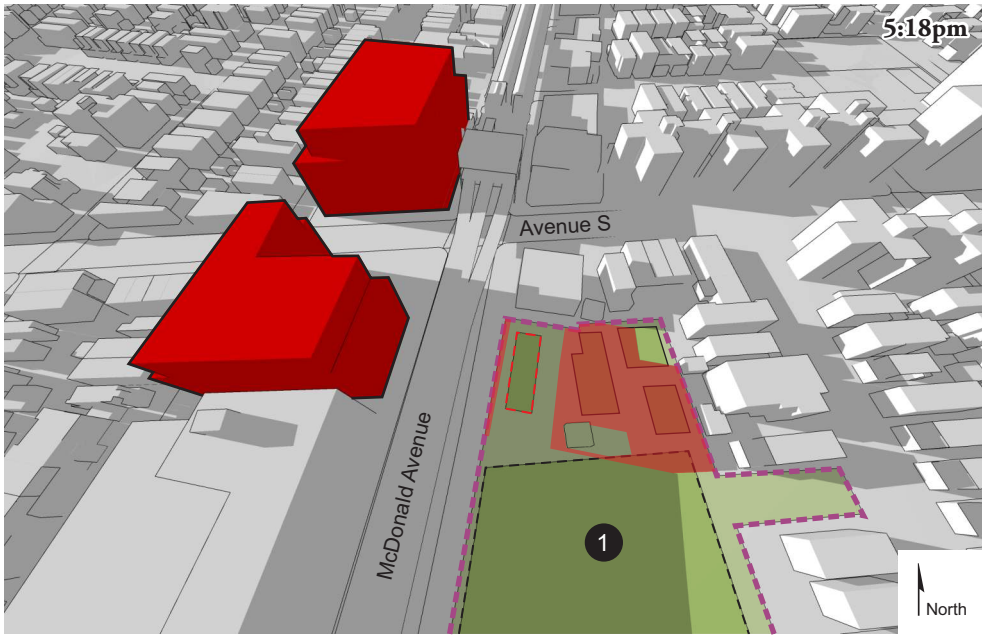
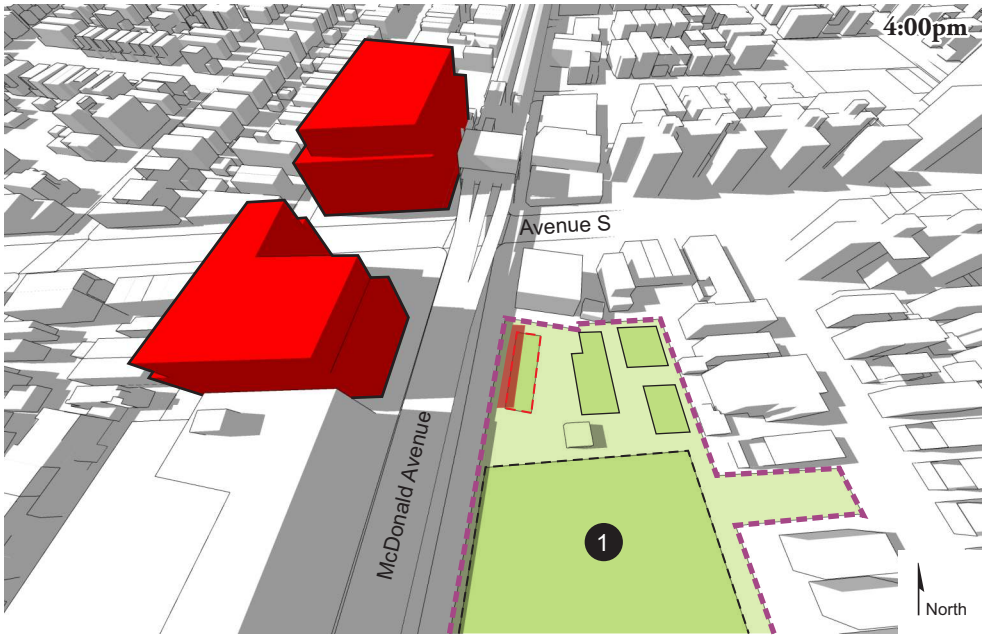


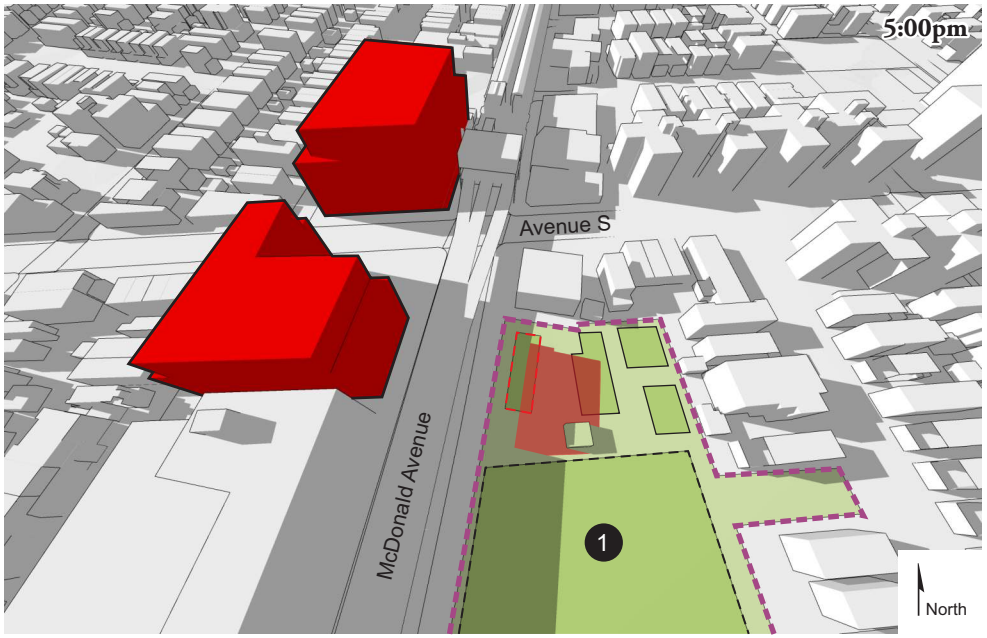
Figure 8-10: Detailed Analysis for the June 21 Analysis Day

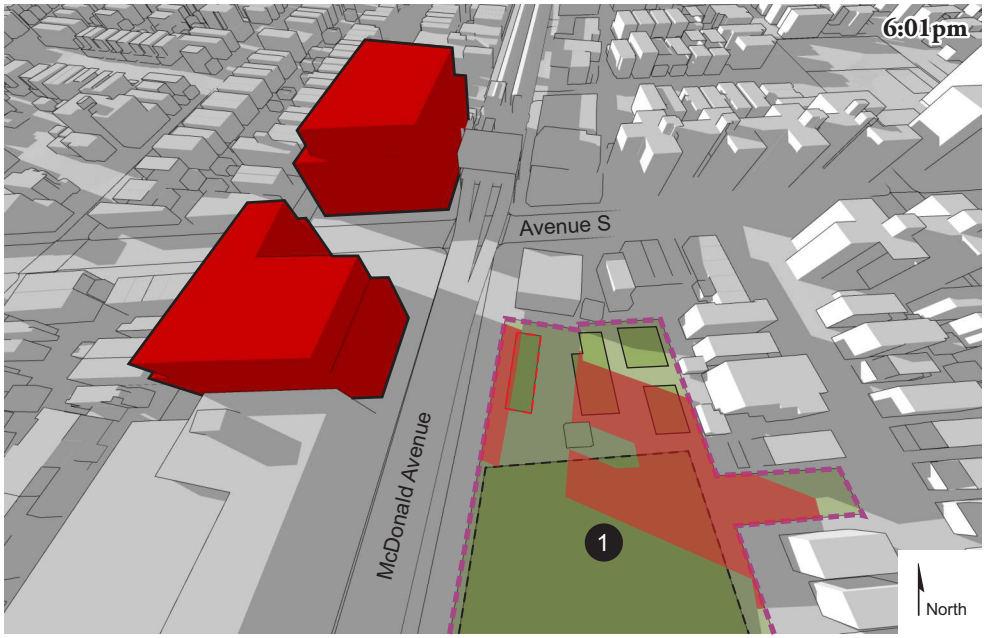


Shadows Cast on Sunlight-Sensitive Resource | 3:39pm – 6:01pm

Legend

- Projected Development Sites
- 8:51am Shadow Cast / Analysis Time
- 1 Sunlight-Sensitive Open Space Resource
- Potentially Affected Open Space Resource
- American Handball Courts
- Bocce Court
- Concrete Open Space
- Basketball Courts
- Tennis Courts
- Playground





Conclusion

The building on Projected Development Sites 2 would cast new shadows on portions of McDonald Playground during the spring and summer. Per the CEQR TM "where the incremental shadows from the project fall on sunlight sensitive features or uses, additional analysis is conducted to assess the loss of sunlight relative to sunlight that would be available without the project. It is appropriate to estimate shadow patterns on the affected area of the open space or resource throughout the day in order to assess how shadows, both incremental shadows from the project and shadows cast by the existing structures, affect the sensitive features. It should also be assessed whether these sensitive features are already subject to substandard light conditions in the absence of additional incremental shadows from the project. The assessment should consider all shadows on the portion of the sunlight sensitive features or uses affected by the project's incremental shadow throughout the day. The analysis should be undertaken for each of the months of interest where the effects of incremental shadows from the project could become significant."

As demonstrated in Figure 8-3, the building on Projected Development Site 2 does not have the potential to cast shadows on McDonald Playground in December. The benches, paths, and other potential passive recreation amenities would not be affected by incremental shadows. No active recreation amenities would be affected by incremental shadows in these months.

As demonstrated in Figure 8-7, the building on Projected Development Site 2 would cast incremental shadows on McDonald Playground in March. Incremental shadows would affect the new amenities being added in the park's renovation. These include, shade trees, benches, splash pads and play equipment. Per the CEQR TM, analysis of shadows begins 1.5 hours after sunrise and 1.5 hours before sunset. On March 21st this corresponds to 7:36AM to 4:29PM. As demonstrated in the figure, when project generated shadows enter the park at 2:58PM there are virtually no shadows cast on the park from neighboring buildings, nor the elevated F train track. From 7:36AM to 2:58PM the park receives a total of 7 hours and 22 minutes of direct sun. Per, the CEQR TM, 4-6 hours of direct sunlight are needed for non-shade tolerant uses or plantings. The 59 minutes of incremental shadows in the future With-Action scenario would not alter the use and enjoyment of the active recreation features, and more than 4-6 hours of sunlight would continue to reach plantings during the growing season.

As demonstrated in Figure 8-8, the building on Projected Development Site 2 would cast incremental shadows on McDonald Playground in May. Incremental shadows would affect the new amenities being added in the park's renovation. These include, shade trees, benches, splash pads and play equipment. Per the CEQR TM, analysis of shadows begins 1.5 hours after sunrise and 1.5 hours before sunset. On May 6th this corresponds to 6:27 AM to 5:18 PM. As demonstrated in the figure, when project generated shadows enter the park at 3:19 PM there are virtually no shadows cast on the park from neighboring buildings, nor the elevated F train track. From 6:27AM to 3:19 PM the park receives a total of 8 hours and 52 minutes of direct sun. Per, the CEQR TM, 4-6 hours of direct sunlight are needed for non-shade tolerant uses or plantings. The 119 minutes of incremental shadows in the future With-Action scenario would not alter the use and enjoyment of the active recreation features, and more than 4-6 hours of sunlight would continue to reach plantings during the growing season.

As demonstrated in Figure 8-9, the building on Projected Development Site 2 would cast incremental shadows on McDonald Playground in June. Incremental shadows would affect the new amenities being added in the park's renovation. These include, shade trees, benches, splash pads and play equipment. Per the CEQR TM, analysis of shadows begins 1.5 hours after sunrise and 1.5 hours before sunset. On June 21st this corresponds to 5:57 AM to 6:01 PM. As demonstrated in the figure, when project generated shadows enter the park at 3:39 PM there are virtually no shadows cast on the park from neighboring buildings, nor the elevated F train track. From 5:57AM to 3:39 PM the park receives a total of 9 hours and 42 minutes of direct sun. Per, the CEQR TM, 4-6 hours of direct sunlight are needed for non-shade tolerant uses or plantings. The 142 minutes of incremental shadows in the future With-Action scenario would not alter the use and enjoyment of the active recreation features, and more than 4-6 hours of sunlight would continue to reach plantings during the growing season.

No other open space on sunlight-sensitive resource would be affected by shadows generated by the Proposed Actions. Therefore, the Proposed Actions would not result in significant shadow impacts, and no further analysis is necessary.

9. HISTORIC AND CULTURAL RESOURCES

Introduction

The 2020 *City Environmental Quality Review (CEQR) Technical Manual* identifies historic resources as districts, buildings, structures, sites, and objects of historical, aesthetic, cultural, and archaeological importance. This includes designated New York City Landmarks (NYCL); properties calendared for consideration as landmarks by the New York City Landmarks Preservation Commission (LPC); properties listed in the State/National Registers of Historic Places (S/NR) or contained within a district listed in or formally determined eligible for S/NR listing; properties recommended by the New York State Board for listing on the S/NR; National Historic Landmarks (NHL); and properties not identified by one of the programs listed above, but that meet their eligibility requirements. An assessment of historic/archaeological resources is usually needed for projects that are located adjacent to historic or landmark structures or within historic districts, or projects that require in-ground disturbance, unless such disturbance occurs in an area that has already been excavated.

Archaeological

The proposed project would involve construction potentially resulting in ground disturbance of a site that has not previously experienced extensive excavation. The New York City Landmarks Preservation Commission (LPC) has been contacted to determine whether the Project Area may have archaeological significance. In a letter dated January 13th, 2021 the LPC has noted that none of the lots within the Project Area demonstrate archaeological significance. This letter is included as an appendix to this EAS.

Architectural

The structures that would be demolished as a result of the Proposed Actions do not have historic or cultural significance. The New York City Landmarks Preservation Commission (LPC) has been contacted to determine whether the Project Area may have architectural significance.In a letter dated January 13th, 2021 the LPC has noted that none of the lots within the Project Area demonstrate archaeological significance. This letter is included as an appendix to this EAS.

The letter notes that an LPC designated landmark (also S/NR listed), the Hubbard House at 2138 McDonald Avenue is within the study area radius of the Project Area. The Hubbard House has been included in relevant analysis sections of this EAS (notably Shadows above).

10. URBAN DESIGN AND VISUAL RESOURCES

Introduction

An assessment of urban design is needed when a project may have effects on any of the elements that contribute to the pedestrian experience of public space. A preliminary assessment is appropriate when there is the potential for a pedestrian to observe, from the street level, a physical alteration beyond that allowed by existing zoning. An assessment would be appropriate for the following:

1. Projects that permit the modification of yard, height, and setback requirements; and

2. Projects that result in an increase in built floor area beyond what would be allowed 'as-of-right'.

The Proposed Actions would facilitate a proposal by the Applicant to construct a new mixed-use building on the Applicant-controlled Block 6680, Lots 39 and 42, containing 122 dwelling units, 19,643 gsf of commercial space, and 3,140 gsf of community facility space. Of the 122 dwelling units, 30 percent, or 37 units, would be affordable under MIH. Additional development is projected for Block 7087, Lot 1 which is not controlled by the applicant.

Existing Conditions

The Project Area is located on the north and south sides of Avenue S between McDonald Avenue and Lake Street in the Gravesend neighborhood of Brooklyn, Community District 11. The Project Area is made up of four tax lots: Block 6680, Lots 39 and 42, and Block 7087, Lots 1 and 5. The Project Area has approximately 240 feet of frontage on McDonald Avenue, 209 feet of frontage on Avenue S, and 365 feet of frontage on Lake Street. Blocks 6680 and 7087 are split down their centerlines between two zoning districts: M1-1 to the east and R5B to the west.

The Applicant-controlled Project Site (**Projected Development Site 1**) consists of Block 6680, Lots 39 and 42. Two additional properties are affected by the Proposed Actions and one is anticipated to be redeveloped under the RWCDS: Block 7087, Lot 1 (**Projected Development Site 2**)

Projected Development Site 1 is controlled by the Applicant and consists of Block 6680, Lots 39 and 42 (2080 McDonald Avenue). Lot 39 is improved with two, two-story commercial buildings with a total floor area of 13,280 gsf (FAR 0.81). Lot 42 is improved with a one-story community facility building with a floor area of 7,500 gsf (FAR 0.50). The lots have a combined floor area of 26,513 sf.

Projected Development Site 2 consists of Block 7087, Lot 1 (121 Lake Street). The 17,078 sf lot is improved with a two-story community facility building with a floor area of 8,778 gsf (FAR 0.51)

McDonald Avenue runs north-south through the study area with the elevated F train tracks running above the street. Land uses along McDonald Avenue in the study area are predominantly institutional, commercial, and industrial, with a large playground at the south end of the study area. Away from the McDonald Avenue frontage, the study area is almost entirely residential.

Lake Street facing south (Projected Site 1 at left)



No-Action Scenario

Lake Street facing south (Projected Site 1 at left)



With-Action Scenario

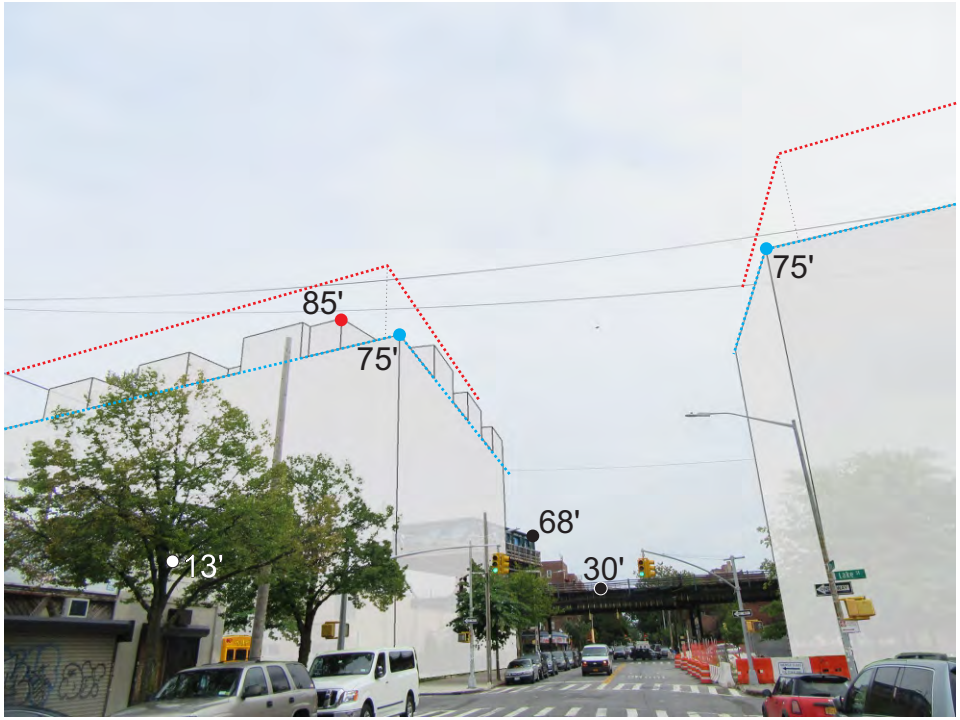
- Maximum Permitted Base Height (75')
- Proposed Base Height
- Maximum Permitted Building Height (105')
- Proposed Building Height

Avenue S facing east (Projected Site 1 at left, Projected Sites 2 & 3 at right)



No-Action Scenario

Avenue S facing east (Projected Site 1 at left, Projected Sites 2 & 3 at right)



With-Action Scenario

- Maximum Permitted Base Height (75')
- Proposed Base Height
- Maximum Permitted Building Height (105')
- Proposed Building Height

Avenue S facing west (Projected Site 1 at right, Projected Sites 2 & 3 at left)



No-Action Scenario

Avenue S facing west (Projected Site 1 at right, Projected Sites 2 & 3 at left)



With-Action Scenario

- Maximum Permitted Base Height (75')
- Proposed Base Height
- Maximum Permitted Building Height (105')
- Proposed Building Height

Future No-Action Condition

In the future without the Proposed Actions , no changes in use or built form are anticipated within the project area.

Future With-Action Condition

In the future with the Proposed Actions, the Applicant will redevelop **Projected Development Site 1** (Block 6680, Lots 39 and 42) with a new mixed-use building. Built pursuant to Quality Housing regulations, the building would contain residential, commercial (local retail), and community facility (daycare) uses. The proposed building contains 145,209 gsf (121,960 zsf, FAR 4.60) of floor area, of which 122,426 gsf (122 DU's) would be residential, 19,643 gsf would be commercial, and 3,140 gsf would be community facility space. The RWCDS building height would be 115 feet. Of the 122 DU's, 30%, or 37 units, would be affordable under MIH. Forty-three (43) parking spaces would be provided for the marked-rate DU's; parking requirements are waived for affordable units because the Project Area is within a Transit Zone.

Projected Development Site 2 (Block 7087, Lot 1) is projected for redevelopment with an 80,356 gsf (FAR 4.60) building, containing 63,944 gsf (64 DU's) of residential area and 16,412 gsf of commercial area. The building would have a height of 115 feet. Of the 64 DU's, 30%, or 19 units, would be affordable under MIH. Twenty-two (22) parking spaces would be provided for the marked-rate DU's; parking requirements are waived for affordable units because the Project Area is within a Transit Zone.

Assessment

The study area lacks a single cohesive built character and is characterized by a wide variety of land uses, building types, and other built features. The dominant element in the McDonald Avenue streetscape is the elevated train tracks, while Avenue S is a moderately-trafficked, primarily residential street in this area. Moving away from McDonald Avenue, the study area is residential, primarily consisting of two- and three-story homes but also with larger apartment buildings along Avenue S. As shown in the attached streetscape renderings, the development resulting from the Proposed Actions would be taller than the surrounding buildings. Development resulting from the Proposed Actions would provide a buffer between the subway tracks and the surrounding low-rise residential buildings while providing opportunities for local retail space and much-needed affordable housing.

The proposed zoning district (C4-4L) was created by the city to promote contextual development along elevated rail corridors. McDonald Avenue is a commercial corridor with elevated rail. The proposed building, as well as any development occurring on the non-applicant-controlled sites, would adhere to the underlying floor area, yard, height, and setback regulations of the proposed zoning district. There are no visual resources, open spaces, or natural features in the project area that could be affected by the Proposed Actions . There would be no significant adverse effects relating to urban design or visual character.

12. Hazardous Materials

Hydro Tech Environmental, Corp. (Hydro Tech) performed a Phase I Environmental Site Assessment (Phase I ESA) at the Subject Property located at 2080 – 2082 McDonald Avenue & 325-343 Avenue S in Brooklyn, New York. The Phase I ESA was performed to meet or surpass the American Standard of Testing Materials Standard for Phase I Environmental Site Assessments E 1527-13. The purpose of the assessment was to characterize the environmental quality of the Subject Property through the identification of Recognized Environmental Conditions. All work was performed under the supervision of a Hydro Tech Project Manager and under the guidance of a Hydro Tech geologist.

Hydro Tech has collected information through a number of sources including, but not limited to a property and neighborhood inspection by trained environmental personnel, a review of historical and current information collected from various federal, state, county and municipal agencies and personnel interviews with Site representatives.

Completion of the Phase I ESA concluded that it was necessary to conduct further testing on the subject site. Environmental Studies Corporation (ESC) has performed a Phase 2 investigation to establish existing soil, soil vapor and ground water quality conditions and a comparison to relevant regulatory agency and standard practice guidelines and standards. A Phase 2 Environmental Investigation Work Plan and Health and Safety Plan (HASP) were prepared which outlined the means and methods of the subsurface investigation. All work was completed in accordance with ASTM E1903-97 Standard Guide for Environmental Site Assessments: Phase 2 Environmental Site Assessment Process.

The scope of work was implemented to determine whether the subsurface soil, water and soil vapor quality conditions at the subject property. The scope of work included the following elements:

- Completed a geophysical investigation which included an electromagnetic survey and ground penetrating radar (GPR) survey.

- Performed six (6) soil test borings (B-1, B-2, B-3, B-4, B-5 and B-6) and collected two soil samples from each soil boring location a surface (0 - 2ft) and a deeper sample from (12-14ft) to match the excavation depth of the proposed building.

- Installed two (2) temporary groundwater monitoring wells (GW-1 and GW-2). Collected five soil vapor samples (SV-1, SV-2, SV-3, SV-4 and SV-5) at a depth of the proposed building foundation depth.

- Prepared a written comprehensive report of findings.

The Phase I ESA, Phase II ESA, Health and Safety Plan (HASP), and Remedial Action Plan (RAP) were all reviewed by the New York City Dept. of Environmental Protection (DEP). Correspondence between the applicant and DEP can be found as an appendix to this EAS. The findings of the Phase I ESA and Phase II ESA are summarized below.

Phase I ESA Summary

The Subject Property is located as 2080-2082 McDonald Avenue & 325-343 Avenue S, Brooklyn, New York. The Subject Property is an irregular shaped parcel approximately 15,050 square feet in area and contains one 1-story building with a partial basement that is vacant. The remaining portions of the Subject Property consist of landscaped lawns. The last known occupant of the building was "Cerebral Palsy of New York City". The building is 7,500 square feet in area and has a partial basement beneath the western portion.

The interior of the building consists of carpeted, wooden floors, sheetrock walls and metal sheeting ceilings. Ceramic tiles flooring is located in several rooms at the Subject Property. The exterior of the building consists of brick and concrete finish.
There exists four (4) gas-fired boilers are located in the basement. The Subject Property is connected to the municipal water, sewer, and electric services. The gas meters are located in the basement. The electric and water meters are located in the eastern portion of the building. The utilities enter the Subject Property via Avenue S and McDonald Avenue. Access to the Subject Property is via Avenue S. The topography of the Subject Property and its vicinity is generally level.

The results of the Site inspection and an evaluation of the United States Geological Survey (USGS) 7.5 Minute Topographic Map containing the properties indicate there are four sensitive receptors present within a ⅛-mile radius of the Subject Property: UCPA of New York City; PS.215 Morris H. Weiss School; Fias Afterschool Program IS. 228 and Tun Pediatric Center. Hydro Tech does not believe that the Subject Property should adversely impact upon the sensitive receptors.

Historical Use

Based on a review of available information provided and/or obtained for the Subject Property as of the date of this ESA, it appears that the Subject Property was developed prior 1895. The Subject Property consisted a three lots, one lot partially developed with one (1) 2- story and 1-story dwelling and one (1) 1-story stable. According to the 1950 Sanborn Map, the lots were merged into single lot that was partially developed with one (1) 1-story building identified as "Clothing Manufacturing". This is also evident from the historic aerials. The manufacturing of clothes typically involves common processes such as dyeing, which uses numerous chlorinated solvents and petroleum products. It appears

that this manufacturing use took place for almost 10 years. This historic use may have impacted soil and groundwater beneath the Subject Property. Thus, the historic use of Subject Property as manufacturing may have impacted the environmental quality of the Subject Property and considered a REC.

The adjacent properties are identified as residential, commercial, manufacturing, public institution and vacant. The eastern adjacent property located at 353 Avenue S is upgradient to the Subject Property. According to the City Directory it is listed as "Forman Max Clothes Cleaner" in 1934. This cleaner is further discussed in the Section 5.0. No other current or historic use of the other adjacent properties should impact the environmental quality of the Subject Property.

Records Review

Federal, State, Local and Tribal hazardous waste databases were reviewed with respect to the Subject Property and surrounding properties. ASTM E 1527 specifies the search area for each database. In addition, all orphan sites (those without adequate information for mapping purposes) listed in the database search were also reviewed, evaluated and incorporated (as needed).

The review and evaluation of the above Federal and State/Tribal/Local Databases indicates that the Subject Property is not identified in any of the databases.
One (1) adjacent property is listed in the Historic Auto database. The adjacent property located at 2068 McDonald Avenue is situated northeast and upgradient to the Subject Property. It is identified as "Kings Way Auto Works Inc." for the years 2003 through 2007. This listing of adjacent property should not impact upon the environmental quality of the Subject Property and should not be considered as a REC.

One (1) adjacent property is listed in the Historic Cleaner database. The adjacent property located at 353 Avenue S is situated east-southeast and upgradient to the Subject Property. It is identified as "Neva Cleaners Tailoring and Laundry" for the year of 1996. This property is further discussed in this report.

Fifteen (15) sites are listed on the Leaking Underground Storage Tanks (LTANKs) database within a 0.5-mile radius of the Subject Property. No LTANKs are associated with any of the adjacent properties. All the 15 LTANKs sites have been cleaned up to the satisfaction of the NYSDEC and are considered closed. None of these LTANK sites should impact upon the environmental quality of the Subject Property due to various factors such as their location relative to groundwater flow direction, their current regulatory status, the nature of the spills and/or their proximity to the Subject Property and not considered a REC.

Ten (10) sites are listed in the New York Spills database within a 0.125-mile radius of the Subject Property. Two (2) spill sites are related to the adjacent property and discussed as follows:

- The first adjacent site is identified as "Benson Hurst Substation", located at 2074 McDonald Avenue; north and upgradient to the Subject Property. Spill #0508184 occurred on October 8, 2005 due to the equipment failure of a 5 gallons of unknown petroleum. A can in Cap Bank #5 was on fire, which was extinguished and spilled 2 oz. non PCB oil. No sewers or waterways, private property were affected. It is mentioned that the material was owned by Con Edison and no sampling is necessary. The spill was cleaned up to the satisfaction of the NYSDEC and considered closed on November 30, 2005.

- The second adjacent site is identified as "115 Lake Road", located at 115 Lake Road; south- southwest and downgradient to the Subject Property. Spill #9410330 occurred on October 3, 1994 due to the equipment failure. It is indicated that 1 gallon of #2 fuel oil was released due to pump failure. The spill was cleaned up to the satisfaction of the NYSDEC and considered closed on October 3, 1994.

Both the adjacent spill sites should not impact upon its environmental quality due to the nature of the spills and their current regulatory status.

Nine (9) out of 10 spill sites are cleaned up to the satisfaction of the NYSDEC and considered closed. The remaining one active spill site is as follows: The active site is identified as "Dweck Residence"; located at 40 Colin Place, which is 468 feet to the east-northeast and upgradient/crossgradient to the Subject Property. Spill#1002377 reports unknown quantity of #2 fuel oil spill occurred due to unknown cause. It is mentioned in the database that the spill was called when the caller saw oil seeping up from ground in between two residence and no information related to soil or groundwater is mentioned.

This active spill site should not impact upon the environmental quality of the Subject Property due to its location relative to groundwater flow direction, nature of the spills and/or their proximity to the Subject Property.

None of the closed NY Spill sites should impact upon the environmental quality of the Subject Property due to various factors such as their location relative to groundwater flow direction, their current regulatory status, the nature of the spills and/or their proximity to the Subject Property.

One (1) Brownfield site is listed in the database and are located within 0.5-mile of the Subject Property. The site is identified as "Off-Site Foundation for Torah Studies Project" located at 402 Avenue U, which is 1,948 feet to the south-southeast and downgradient to the Subject Property. This brownfield site should impact upon its environmental quality

due to various factors such as the site's current regulatory status, the nature of the listing and the site's location to the Subject Property relative to groundwater flow direction.
A vapor encroachment screening consisting of a Tier 1 evaluation of Potential Vapor Encroachment Conditions (PVEC) was performed in accordance with ASTM E2600-10. A Tier 1 evaluation determines the presence or likely presence of a PVEC based upon Federal, State and Local database search results and includes an evaluation of distance, depth to water, potential migration pathways, groundwater flow direction, hydraulic barriers, soil characteristics and other factors impacting soil vapor migration.
The results of the Tier 1 evaluation indicate no PVECs associated with the Subject Property. The Neva Cleaners Tailoring and Laundry facility identified in the historical cleaner database and the Forman Max Clothes Cleaner identified in the City Directory is in excess of 100 feet from the Subject Property.

None of the remaining properties identified in the databases, including Orphan Sites, should impact upon the environmental quality of the Subject Property.

Site Inspection

The following pertinent information was obtained during the Subject Property Reconnaissance:

1. Industrial Processes

No evidence of historical industrial processes was observed at the Subject Property.

2. Suspect Asbestos-Containing Materials

No suspect asbestos-containing materials were identified at the Subject Property.

3. Suspect Lead-Based Paint

Peeling paint was identified on the interior wall of the eastern and central portion of the building. Due to the age of the building at the Subject Property, peeling paint is suspected to contain lead. The suspect presence of lead-based paint may impact upon the environmental quality of the Subject Property and should be considered a REC. No other visual evidence of suspect lead-based peeling paint was identified at the Subject Property.

4. Lead in Water

The City of New York is provided with potable water from a series of reservoirs located to the north and northwest of the city. The City of New York is responsible for maintaining the quality of this potable water. The Subject Property is served by public water.

5. Drum Storage Areas

No current or former drum storage areas were observed at the Subject Property.

6. Storage Tanks

An inactive 10,000-gallon aboveground storage tank (AST) was observed in the basement. This AST is encased in a concrete vault with no weep holes observed; the concrete vault is in fair condition. A fuel oil petro meter is identified along the western wall of the basement. No stains, odors or evidence of spills was identified in the vicinity of the vault. The vent pipe and fill port for the AST are located along the eastern property boundary. No stains, odors or evidence of spills was identified in the vicinity of the fill or vent pipe. The presence of this AST without weep holes should be considered a REC. No other fill or vent pipes were observed at the Subject Property. No presence of former or current USTs were observed at the Subject Property.

7. Subsurface Drainage Structures/Drains/Sumps

No current or former subsurface drainage structures, such as drywells, leaching pools or cesspools were identified at the Subject Property.

No evidence of current or former septic/waste water/storm water discharge systems is identified at the Subject Property.

Two (2) exterior floor drains were identified on the ramp located at northern portion of the Subject Property. The floor drains reportedly discharge to the municipal sewer. The presence of the floor drains should not impact upon the environmental quality of the Subject Property.

No other evidence of former or current floor drain was observed. One slop sink was identified in one of the room in the southern portion of the building at the Subject Property. No stains, odors or evidence of spills was observed in or near the slop sink. The slop sink discharges to the municipal sewer. The slop sink should not impact upon the environmental quality of the Subject Property.

8. PCB-Containing Equipment

Other than fluorescent lighting ballasts, no suspect PCB-containing equipment was identified at the Subject Property.

9. Monitoring / Potable Water Wells

No monitoring wells/ potable water wells were identified at the Subject Property. No monitoring wells /potable wells were identified at the adjacent properties.

10. Mold

No visual evidence of mold was identified at the Subject Property.

11. Pits, Ponds, or Lagoons

No waste disposal pits, ponds or lagoons were observed at the Subject Property. No evidence of former pits, ponds, pools of liquid or lagoons were observed at the Subject Property.

12. Wetlands

No evidence of wetlands or wetlands growth is identified at the Subject Property. The location of the Subject Property and its vicinity do not appear in the USA National Wetlands Inventory.

13. Staining/Stressed Vegetation

No significant staining was identified at the Subject Property. No stressed vegetation was observed at the Subject Property.

14. Fill / Land Disposal / Solid Waste

No visual areas of fill or evidence of land disposal of solid waste material(s) were observed at the Subject Property.

15. Engineering Controls

No engineering controls were noted at the Subject Property.

16. Odors/Air Emissions

No odors indicative of petroleum, chemical or hazardous substance spill or release were identified at the Subject Property. No evidence of air emissions or air emission equipment was identified at the Subject Property.

17. Hazardous Substance / Petroleum Containers

No hazardous substance or petroleum containers were observed at the Subject Property.

18. Radon

USEPA's recommended action level is 4 picoCuries/liter and the average radon gas concentrations predicted in the Brooklyn area is 1.3 picoCuries/liter. Since Brooklyn is located in a Low Radon Potential area, radon gas should not represent a potential environmental concern that would warrant the sampling for radon gas at the Subject Property.

Phase II ESA Summary

Geophysical Survey

An Electromagnetic (EM) Magnetometer survey was conducted in an attempt to identify any possible unknown magnetic anomalies such as underground storage tanks (USTs) on the site. ESC used a Fisher TW-6 magnetometer in the inductive phase mode over the

property accessible areas in an overlapping grid pattern. The results of the survey indicated no evidence of any magnetic anomalies indicative of USTs. However an above ground former heating oil tank is presently located in the building's basement.

Soil Conditions

The results of this subsurface investigation have found urban fill soil with and total metals above unrestricted use cleanup objectives at concentrations that can be found in urban fill soils around the New York Metropolitan area. This contamination is not a result of historical spills, commercial or industrial process releases related to the prior site occupancy or uses. It is from historical fill placement and demolished building structures and is limited in vertical extent to only the fill soil found onsite. The remaining underlying native soils are clean and meet NYSDEC Part 375 unrestricted soil cleanup standards.

Groundwater Quality

Groundwater was sampled from two locations on the property. Total metals were found above AWQ standards. Elevated total concentrations are likely a result of sediment turbidity from grab samples collected. The samples which were filtered prior to metals analysis representing dissolved metal concentrations found Manganese and Sodium above AWQ standards.

Soil Vapor Conditions

Results of the soil vapor investigation identified volatile organic compounds (VOCs) related to petroleum compounds above laboratory method detection limits. These VOC's are likely resulting from the urban fill materials and interchange with the ambient air surrounding the project site and adjacent neighborhood. The soil vapor conditions found are common of what is usually measured in shallow soils in the metropolitan New York neighborhoods.

Recommendations

There are no recommendations for additional testing or remedial action being made at this time. Urban fill and native soil exported offsite should be transported and disposed in accordance with New York State Department of Environmental Conservation (NYSDEC) Part 365 regulations.

The new building construction should have an engineered polyethylene vapor barrier under occupied areas of the building. The vapor barrier should be a minimum thickness

of 20 mils under the foundation slab and foundation sidewalls in order to prevent any potential vapor migration into the building structure.

A Remedial Action Plan (RAP) detailing the installation of a vapor barrier and a Construction Health and Safety Plan (CHASP) should be written describing the means and methods for the vapor barrier installation and excavation and disposal of impacted soils.

Conclusion

The Phase I Environmental Site Assessment identified Recognized Environmental Conditions (RECs) on Projected Development Sites 1 and 2. A Phase II ESA was prepared for the applicant owned Projected Development Site 1 (Block 668, Lots 39 and 42). A RAP and HASP were submitted to DEP for review. As mentioned above correspondence with DEP has been included as an appendix to this EAS.

As sampling and testing cannot occur on the non-applicant owned sites within the Project Area prior to any soil disturbance on these properties, an (E) designation related to hazardous materials will be assigned to Rezoning Area as described below.

To avoid any potential impacts associated with hazardous materials, an (E) designation (E-662) will be established on the Projected Development Site 2 (Block 7087, Lot 1)

The text of the (E) designation (E-662) is as follows:

Task 1:

The Applicant submits to OER, for review and approval, a Phase 1 of the site along with a soil and groundwater testing protocol, including a description of methods and a site map with all sampling locations clearly and precisely represented. If site sampling is necessary, no sampling should begin until written approval of a protocol is received from OER. The number and location of sample sites should be selected to adequately characterize the site, the specific source of suspected contamination (i.e., petroleum-based contamination and nonpetroleum based contamination), and the remainder of the site's condition. The characterization should be complete enough to determine what remediation strategy (if any) is necessary after review of sampling data. Guidelines and criteria for selecting sampling locations and collecting samples are provided by OER upon request.

Task 2:

A written report with findings and a summary of the data must be submitted to OER after completion of the testing phase and laboratory analysis for review and approval. After receiving such results, a determination is made by OER if the results indicate that remediation is necessary. If OER determines that no remediation is necessary, written notice shall be given by OER. If remediation is indicated from the test results, a proposed remediation plan must be submitted to OER for review and approval. The Applicant must complete such remediation as determined necessary by OER. The Applicant should then provide proper documentation that the work has been satisfactorily completed. An OER approved construction-related health and safety plan would be implemented during evacuation and construction and activities to protect workers and the community from potentially significant adverse impacts associated with contaminated soil and/or groundwater. This plan would be submitted to OER for review and approval prior to implementation.

With these measures and an (E) Designation in place, no significant adverse impacts are anticipated as a result of the approval of the Proposed Actions.

16. TRANSPORTATION

INTRODUCTION

To determine the potential for the Proposed Actions to result in significant adverse transportation impacts, trip generation (Level 1) and trip assignment (Level 2) screening analyses were performed pursuant to the methodologies identified in the *2020 CEQR Technical Manual*. Based on the proposed mixed-use development trip generation (Level 1) and trip assignment screening (Level 2) analyses results, it was determined that the Proposed Actions would not result in significant transportation impacts, as detailed below.

PROJECTED SITES

The Project Area consists of three Projected Sites, and they are as follows:

Projected Development Site 1 (Block 6680, Lots 39 and 42) is located at 2074, 2080 McDonald Avenue, and Projected Development Site 2 (Block 7057, Lot 1) at 3121 Lake Street, in Gravesend neighborhood of the Brooklyn, community district 11. The Projected Development Site 1 (Block 6680, Lots 39 and 42) is in the block bounded by Kings Highway, a two-way eastbound/westbound roadway on the north; McDonald Avenue, a two-way northbound/southbound roadway on the east; Lake Street, a one-way northbound roadway on the west and Avenue S, a two-way eastbound/ westbound roadway on the south. Projected Development Site 2, (Block 7057, Lot 1) is in the block bounded by Avenue S, a two-way eastbound/westbound roadway on the north; McDonald Avenue, a two-way northbound/southbound roadway on the east; Lake Street, a one-way northbound roadway on the west and Avenue T, a two-way eastbound/westbound roadway on the south.

The Projected Sites are shown in **Figure 1**, as well as the proposed Site Plan (Transportation Appendix).

EXISTING CONDITIONS

Currently, the projected sites include a total of 13,280 gsf of commercial local retail and 16,278 gsf of community facility (Professional Medical Office) throughout the projected sites, as summarized in **Table 1**.

NO-ACTION SCENARIO

Absent the Proposed Actions, the projected sites would remain the same as the existing conditions, as summarized in **Table 1**.

WITH-ACTION SCENARIO

The Proposed Actions would facilitate a mixed-use development of 186 d.u. (186,370 gsf), 36,055 gsf of commercial local retail space, and 3,140 gsf of community facility (daycare facility), as summarized in **Table 1**. In total, the proposed mixed-use development would include a total of 75 on-site accessory parking spaces. The proposed on-site accessory parking facility would include an ingress and egress point on Lake Street, as shown in the proposed Site Plan.

Table 1: Development Program: Existing/No-Action, With-Action Conditions and Increment

	Existing/No-Action Conditions	**With-Action Condition**	**Increment**
Proposed Floor Area by Use (GSF)			
Residential D.U. gsf	0	186 d.u. (186,370 gsf)	+186 d.u. (186,370 gsf)
Commercial Local Retail	13,280 gsf	36,055 gsf	+22,775 gsf
Community Facility-Medical Office	16,278 gsf	0	-16,278 gsf
Community Facility- Daycare Facility	0	3,140 gsf	+3,140 gsf
Accessory parking spaces	14	75	61

Based on the approved RWCDS.

INCREMENT

The transportation analyses are based on the net difference between the proposed actions and no-action scenario. The Proposed Actions would result in an increase of 186 new residential dwelling units (186,370 gsf), 22,775 gsf of net commercial local retail space, 3,140 gsf of community facility (daycare facility) space, and decrease of 16,278 gsf of community facility (professional medical office) space, as summarized in **Table 1**. The proposed actions would also provide a net increase of 61 accessory parking spaces on-site. The proposed parking facility would be accessed from Lake Street, as shown in the proposed Site Plan (Transportation Appendix).

PRINCIPAL CONCLUSIONS

The following detailed trip generation (Level-One Screening) and trip assignment (Level-Two Screening) analyses are conducted for the Projected Development Sites, as are summarized and shown in **Tables 2** through **7** (trip generation analyses) as well as **Figures 2** through **5 (**trip assignments) in the Transportation Appendix.

<u>Traffic</u>

Based on the results of trip generation (Level 1) and trip assignments (Level 2) screening analyses, it is concluded that in the future build condition, none of the intersections in the study area would experience 50 or more vehicle trip-ends, during any peak hours, as summarized in **Tables 4 and 7** as well as **Figure 2** (as presented in the Transportation Appendix). Therefore, in accordance with the *2020 CEQR Technical Manual* 50 vehicle trip ends threshold, the vehicle trip ends generated by the Proposed Actions would not result in any conditions, that would require a detailed assessment of traffic and parking impacts.

Parking

An on-site accessory parking facility with 75 spaces would be provided by the proposed project. The proposed on-site accessory parking facility would include an ingress/egress point on Lake Street, as shown in the proposed Site Plan. The vehicular traffic, generated by the proposed project would be screened as detailed below, and per the *2020 CEQR Technical Manual,* no detailed parking assessment would be required.

Transit

Subway and Bus Lines

Based on the results of trip generation (Level 1) screening analysis, it is concluded that in the future build condition, the Proposed Actions would generate, respectively fewer than 200 and 50 or more peak hour subway and bus line trip ends, during the AM, and PM peak hours, as summarized in **Table 2** (as presented in the Transportation Appendix). Therefore, in accordance with the *2020 CEQR Technical Manual* 200 and 50 subway and bus trip end thresholds, the subway and bus trip ends generated by the Proposed Actions would not result in any conditions, that would require a detailed assessment of transit impacts.

Pedestrian

Based on the results of the trip generation (Level 1) and trip assignment (Level 2) screening analyses, it is concluded that in the future with the Proposed Action, none of the pedestrian elements in the study areas would experience 200 or more peak hour pedestrian trip ends, as summarized in **Tables 3 and 6** and shown in **Figures 3 through 5** for the Weekday Midday, PM and Saturday Midday peak hours, respectively (as presented in the Transportation Appendix). Therefore, in accordance with the *2020 CEQR Technical Manual* 200 pedestrian trip end threshold per pedestrian element, during any peak hour, the pedestrian trip ends generated by the Proposed Action would not result in any conditions, that would require a detailed assessment of pedestrian impacts.

BUILD YEAR/PROJECT PHASING

Based on an estimated 12-month approval process and approximately less than 24-month construction period, the build year is assumed to be 2024. The proposed mixed-use development would be developed spontaneously.

PRELIMINARY ANALYSIS METHODOLOGY AND SCREENING ASSESSMENTS

The *2020 CEQR Technical Manual* recommends a two-tier screening procedure for the preparation of a "preliminary analysis" to determine if quantified analyses of transportation conditions are warranted. As discussed below, the preliminary analysis begins with a trip generation analysis (Tier 1) to estimate the volume of person and vehicle trip ends attributable to the Proposed Action. If the Proposed Action is expected to result in fewer than 50 peak hour vehicle trip ends and fewer than 200 peak hour transit or pedestrian trip ends, further quantified analyses are not warranted. When these thresholds are exceeded, detailed trip assignments (Tier 2) are performed to estimate the project trip ends at specific transportation elements and to identify potential locations for further analyses. If the trip assignments show that the Proposed Action would result in 50 or more peak hour vehicle trip ends at an intersection, 200 or more peak hour subway trip ends at a station, 50 or more peak hour bus trip ends in one direction along a bus route, or 200 or more peak hour pedestrian trip ends traversing a pedestrian element, then further quantified analyses may be warranted to assess the potential for significant adverse impacts on traffic, transit, pedestrians, and parking.

LEVEL 1 SCREENING ASSESSMENTS

A Level 1 trip generation screening assessment was conducted for the proposed actions, as summarized in **Tables 2 through 7,** to estimate the numbers of person and vehicle trip ends by mode of transportation generated by the Proposed Actions during the Weekday AM, midday, PM, and Saturday Midday peak hours (as presented in the Transportation Appendix). These trip estimates were then compared to the *CEQR Technical Manual* thresholds to determine if a Level 2 screening and/or quantified operational analyses would be warranted.

The Proposed Actions would generate a total of 176, 580, 461, and 445 person trip-ends; 32, 44, 60, and 49 vehicle trip ends; 27, -37, 56, and 21 subway trip ends; 1, 3, 9, and 6 bus trip ends; and 147, 534, 393, and 392 pedestrian trip ends, during the Weekday AM, Midday, PM and Saturday Midday peak hours, respectively. Based on the results of trips generated by the Proposed Actions, as summarized in **Tables 2 through 7**, a level-two screening (trip assignment) analysis would be required for vehicle trip-ends for the Weekday PM peak hour. A level-two screening (trip assignment) analysis would also be required for pedestrian trip-ends, for the Weekday Midday, PM and Saturday Midday peak hours, as described below.

LEVEL 2 SCREENING ASSESSMENTS

A Level 2 screening assessment involves the distribution and assignment of projected trips to the transportation network and the determination of whether specific locations are expected to experience incremental trips exceeding *2020 CEQR Technical Manual* thresholds. Typically, if the results of this analysis show that the Proposed Action would result in 50 or more peak hour vehicle trip ends through an intersection, 50 or more peak hour bus trip ends on a bus line in a single direction, 200 or more peak hour subway trip ends per station, or 200 or more peak hour pedestrian trip ends per pedestrian element, further quantified analyses may be warranted to evaluate the potential for significant adverse traffic, transit, pedestrian, and parking impacts.

Vehicular Trip Ends

Based on the results of trip generation screening analysis, it is concluded that in the future build condition, the Proposed Actions would generate 32 (1 inbound and 31 outbound), 44 (22 inbound and 22 outbound), 60 (40 inbound and 20 outbound), and 49 (27 inbound and 22 outbound) peak hour vehicle trip ends, during the AM, Midday, PM, and Saturday Midday peak hours, respectively, as summarized in **Tables 4 and 7** (as presented in the Transportation Appendix).

Based on trip assignment (Level 2), and as shown in **Figure 2** (as presented in Transportation Appendix) for the PM peak hour, none of the intersections in the study areas would experience 50 or more vehicle trip ends, during the PM peak hour. Therefore, in accordance with the *CEQR Technical Manual* 50 vehicle trip end threshold, the vehicle trip ends generated by the Proposed Actions would not result in any conditions that would require the need for a detailed assessment of vehicle and parking impacts.

Subway Trip Ends

Based on the results of trip generation (Level 1) screening analysis, the Proposed Actions would generate a total of 27, and 56 subway trip ends during the AM, and PM peak hour time periods, respectively, as summarized in **Table 3** (as presented in the Transportation Appendix).

Currently, the Kings Highway (F trian) subway station, is located within a 1/4 mile walking distance from the project site (Transit Zone) in the study area.The Proposed Actions would generate less than 200 subway trip ends per subway station during any peak hour time period, and in accordance with the *CEQR Technical Manual* criteria, would not result in any conditions that would require the need for a detailed assessment of subway impacts.

Bus Trip Ends

Based on the results of trip generation (Level 1) screening analysis, the Proposed Actions would generate a total of 1, and 9 bus trip ends during the AM, and PM peak

hour time periods, respectively, as summarized in **Tables 3** (as presented in the Transportation Appendix).

Currently, B82 and B82-SBS bus lines serve the study areas, along Kings Highway. The Proposed Action would generate less than 50 bus trip ends per bus line, and per direction during any peak hour time period, and in accordance with the *CEQR Technical Manual* criteria, would not result in any conditions that would require the need for a detailed assessment of bus impacts.

Pedestrian Trip Ends

Based on the results of trip generation (Level 1) screening analysis, the Proposed Actions would generate a total of 147, 534, 393, and, 392 pedestrian trip ends during the AM, Midday, PM, and Saturday Midday peak hour time periods, respectively, as summarized in **Tables 3 and 6** (as presented in the Transportation Appendix). Based on trip assignment (Level 2), and as shown in **Figures 3 through 5** (as presented in Transportation Appendix) for the Weekday Midday, PM and Saturday Midday peak hours, respectively, none of the pedestrian elements in the study areas would experience 200 or more pedestrian trip ends, during the Weekday Midday, PM and Saturday Midday peak hours. Therefore, in accordance with the *CEQR Technical Manual* 200 pedestrian trip end threshold, the pedestrian trip ends generated by the Proposed Actions would not result in any conditions that would require the need for a detailed assessment of pedestrian impacts.

TRANSPORTATION PLANNING ASSUMPTIONS

Trip generation factors for the Proposed Actions were determined based on information from the *2020 City Environmental Quality Review (CEQR) Technical Manual (Table 16-2)*, modal split data provided by *NYCDOT*, *Stevenson Commons FEIS, Table 11-5*, and vehicle occupancy rates from the recently approved EIS, *East New York FEIS, Table 13-8.* The travel demand assumptions and trip generation sources are summarized in **Table 2 for Weekday and Table 5 for Saturday** (as presented in the Transportation Appendix), and detailed below.

Professional Medical Office

Trip generation rates, daily temporal distribution, modal split information, and vehicle occupancy rates are based on the NYCDOT survey results for a similar professional medical office, located within a ¼ -mile radius of a subway station (Brooklyn Transit Zone, Kings Highway Subway Station F train). Truck trip rates are based on the *East New York FEIS, Table 13-8.*

The surveyed modal split results for medical office use found that approximately 24% would travel by car, 6% would travel by taxi, 9% would travel by bus, 59% would travel

by subway and 2% would travel by foot. The above information is summarized in **Table 2 for Weekday and Table 5 for Saturday**.

Residential Development

The *2020 CEQR Technical Manual (table 16-2)* is utilized for trip generation rates, including daily temporal distribution and truck trip rates. *2015-2019 American Community Survey (ACS) Journey-to Work (JTW) data for Census Tract #'s 410, 412, 414.01, 422 and 424* in Brooklyn, NY is used to estimate modal split information and auto occupancy rate. Auto occupancy rate is calculated at 1.103 and taxi occupancy rate of 1.3 is based on the *East New York FEIS, Table 13-8*.

The estimated modal split data for residential use found that approximately 27.8% would travel by car, zero (0) percent would travel by taxi, 5.5% would travel by bus, 50.8% would travel by subway, 15.9% would travel both by foot, and other mode of travel, such as bicycle, as shown in **Exhibits A and B and Table 2 for Weekday and Table 5 for Saturday**.

Commercial Local Retail

The *2020 CEQR Technical Manual* (Table 16-2) was utilized for trip generation rates, including temporal distribution, and truck trip rates. Modal split information and vehicle occupancy rates are based on the recent NYCDOT survey results for a similar local retail space, located within a ¼ -mile radius of a subway station (Brooklyn Transit Zone, Kings Highway Subway Station F train), as is summarized in **Table 2 for weekday and Table 5 for Saturday** (as presented in the Transportation Appendix).

The estimated modal split results for local commercial retail use found that approximately 11% would travel by car, 0% would travel by taxi, 2% would travel by bus, 3% would travel by subway, and 84% would travel both by foot, and other mode of travel, such as bicycle, as shown in **Table 2 for Weekday and Table 5 for Saturday**.

Daycare Facility

Students & Parents

Trip generation rates, daily temporal distribution, and vehicle occupancy rates are based on the NYCDOT rates for daycare facility, as is summarized in **Table 2 for Weekday and Table 5 for Saturday**. Truck trip rates are based on the *Stevenson Commons FEIS, Table 11-5.* 2015-2019 American Community Survey (ACS) Journey-to-Work (JTW) for Census Tract numbers 410, 412, 414.01, 422, and 424 in Brooklyn NY is used to estimate modal split data for students and parents

The estimated modal split results for daycare facility (students and parents) use found that approximately 27.8% would travel by car, 0% would travel by taxi, 5.5% would travel by bus, 50.8% would travel by subway and 15.9% would travel both by foot, and

other mode of travel, such as bicycle, as shown and summarized in **Exhibits A and B and Table 2 for Weekday and Table 5 for Saturday**.

Staff

Trip generation rates, daily temporal distribution, and vehicle occupancy rates are based on the NYCDOT rates for daycare facility, as is summarized in **Table 2 for Weekday and Table 5 for Saturday**. 2012-2016 American Community Survey (ACS) Reverse-Journey-to-Work (RJTW) for Census Tract numbers 410, 412, 414.01, 422, and 424 in Brooklyn NY is used to estimate modal split data for staff.

The estimated modal split results for daycare facility (staff) use found that approximately 39.6% would travel by car, 0% would travel by taxi, 6.5% would travel by bus, 23.7% would travel by subway and 32.2% would travel both by foot, and other mode of travel, such as bicycle, as shown and summarized in **Exhibit C** and **Table 2 for Weekday and Table 5 for Saturday**.

Conclusion

Based on the above detailed screening analyses, the Proposed Actions would not have any potentially significant adverse transportation impacts on the neighborhood transportation system, and further analyses would not be warranted.

17. AIR QUALITY

Introduction

Analysis Framework

Ambient air quality, or the quality of the surrounding air, may be affected by air pollutants produced by motor vehicles, referred to as "mobile sources"; by fixed facilities, usually referenced as "stationary sources"; or by a combination of both. Under CEQR, an air quality assessment determines both a proposed project's effects on ambient air quality as well as the effects of ambient air quality on the project. The analysis followed the *New York City Environmental Quality Review 2020 Technical Manual*.

Air Pollutants and Applicable Standards and Guidelines

Criteria Pollutants - National Air Quality Standards

EPA has established national ambient air quality standards (NAAQS) for seven of the most common air pollutants—known as "criteria" pollutants. The presence of these pollutants in ambient air is generally due to numerous diverse and widespread sources of emissions. The NAAQS primary standards are designed to protect public health with adequate margin of safety. The NAAQS secondary standards are designed to protect the public welfare from adverse effects, including those related to effects on soils, water, vegetation, visibility, and other aspects. As required by the Clean Air Act, EPA periodically conducts comprehensive reviews of the scientific literature on health and welfare effects associated with exposure to the criteria air pollutants. The NAAQS have been adopted as the ambient air quality standards for the State of New York.

The New York State Department of Environmental Conservation (NYSDEC) measures air pollutants at more than 50 sites across the state using continuous and/or manual instrumentation. These sites are a mix of federally-mandated and supplemental monitoring networks. The primary NAAQS and background concentrations, from the nearest federally-mandated monitoring station(s), of the pollutants that a detailed analysis was conducted for are presented in **Table 17-1**.

Table 17-1: NAAQS and Background Concentration Published in the NYSDEC 2019 Report

Pollutant	Averaging Period	National and State Standards	Background Concentration	Monitoring Station
$PM_{2.5}$	24-Hour	35 µg/m^3	19.7 µg/m^3	Division Street
	Annual	12 µg/m^3	9.0 µg/m^3	
NO_2	1-Hour	188 µg/m^3	103.6 µg/m^3	Queens College
	Annual	100 µg/m^3	26.8 µg/m^3	
Note: Background concentrations NYSDEC Ambient Air Quality Report for 2019				

NO_2 NAAQS

The 1-hour NO_2 NAAQS was promulgated in the United States in February 2010. The 1-hour standard is based on a percentile rank from the annual distribution of daily maximum 1-hour values, averaged across the number of years processed. The 1-hour NO_2 modeled design value is based on the 98th percentile, or 8th highest, of the daily maximum 1-hour values across the year.

For typical multi-year modeling analysis based on 5 years of National Weather Service (NWS) meteorological data, the modeled design value is the 5-year average of the 8th highest values for NO_2.

Nitrogen oxide (NOx) emissions from combustion consist predominantly of nitric oxide (NO) at the source. The NOx in these emissions is then gradually converted to NO_2. For determining compliance with the 1-hour standard, the EPA has developed a three-tiered modeling approach: a) Tier 1, the most conservative approach, assumes a full (100%) conversion of NOx to NO_2. b) Tier 2 is the Ambient Ratio Method 2 (ARM2) which assumes ambient equilibrium between NO and NO_2. AERMOD multiplies Tier 1 impacts with default ambient ratios, or source-specific NO_2/NO_x in-stack ratio (ISR) data (the national default minimum and maximum ambient ratios for the primary facility are 0.5 and 0.9, respectively.) c) Tier 3, which is the most precise approach, accounts for the chemical transformation of NO emitted from the stack to NO_2 within the source plume using hourly ozone background concentrations.

NYC Guidelines

The city's *de minimis* criteria are used to determine the significance of the incremental increase in CO and $PM_{2.5}$ concentrations that would result as a consequence of the proposed project. The CO criteria set the minimum change in 8-hour average CO concentration that constitutes a significant environmental impact. Significant increase of CO concentrations in New York City are:

- An increase of 0.5 parts per million (ppm) or more in the maximum 8-hour average CO concentration at a location where the predicted No-Action 8-hour concentration is equal to 8 ppm or between 8 ppm and 9 ppm; or
- An increase of more than half the difference between baseline (i.e., No-Action) concentrations and the 8-hour standard, when No-Action concentrations are below 8 ppm.

The following criteria are used for determination of significant adverse $PM_{2.5}$ incremental impacts for projects subject to CEQR:

- Predicted 24-hour maximum $PM_{2.5}$ concentration increase of more than half the difference between the 24-hour background concentration and the 24-hour standard; or
- Predicted annual average $PM_{2.5}$ concentration increments greater than 0.1 $\mu g/m^3$ at ground level on a neighborhood scale (i.e., the annual increase in concentration representing the average over an area of approximately 1 square kilometer, centered on the location where the maximum ground-level impact is predicted for stationary sources; or for mobile sources, at a distance from a roadway corridor similar to the minimum distance defined for locating neighborhood scale monitoring stations); or
- Predicted annual average $PM_{2.5}$ concentration increments greater than 0.3 $\mu g/m^3$ at any receptor location for stationary sources.

Accordingly, 24-hour $PM_{2.5}$ *de minimis* is an increment of 7.65 $\mu g/m^3$, and annual $PM_{2.5}$ concentration increments of 0.3 $\mu g/m^3$ for stationary source and 0.1 $\mu g/m^3$ for mobile source. As no CO mobile source detailed analysis is required, the CO *de minimis* value is not shown.

Noncriteria Pollutants

The NYSDEC Department of Air Resources established short-term (one-hour) and annual concentrations standards for certain noncriteria pollutants. The standards are acceptable ambient levels for these pollutants, which are based on human exposure. The New York State standards for noncriteria pollutants are published in the DAR-1 guidance document (latest version dated February 12, 2021). DAR-1 presents Annual and Short-Term Guideline Concentrations (AGCs and SGCs, respectively) for contaminants that range in toxicity from high to low. The AGCs and SGCs are annual and 1-hour guideline concentrations, respectively, for potentially toxic or carcinogenic air contaminants. In addition, NYSDEC also regulates pollutants that produce discomfort due to odors, where significant discomfort is evaluated on quantity, characteristic, or duration.

Mobile Source Analysis

According to the *CEQR Technical Manual,* projects may result in significant mobile source air quality impacts when they increase or cause a redistribution of traffic, create any other mobile sources of pollutants (e.g., diesel trains, helicopters, boats), or add new uses near mobile sources (e.g., roadways, garages, parking lots). Detailed analyses are required to predict whether a proposed action could potentially result in significant adverse air quality impact if certain threshold criterions are met or exceeded. Proposed actions that do not meet or exceed the threshold criterions (screen out) are not expected to result in mobile source impacts.

Screening Assessment

Project-Generated Traffic

Screening analyses for the project's peak hour auto traffic and peak hour heavy-duty diesel vehicle (HDDVs) traffic were conducted. Per the *CEQR Technical Manual*, a detailed analysis for carbon monoxide (CO) is required if the generate peak hour auto traffic or diversion of existing peak hour traffic would result in an increment of 170 auto trips (in this area of the city). A detailed analysis for particles with an aerodynamic diameter of less than or equal to 2.5 micrometers ($PM_{2.5}$) is required if the generate peak hour HDDVs traffic or its equivalent in vehicular emissions, depending on the type of road, would be met or exceeded.

According to the transportation analysis for this project, the proposed project would generate a total of 32, 44, 60 and 49 net vehicle trip ends (inbound and outbound combined) during the AM, MD, PM, and Saturday MD peak hour periods, respectively. These total project-generated traffic would include 4 and 2 trucks during the weekday AM and MD peak-hour periods, respectively, and no trucks otherwise. The peak-hours project generated traffic would not exceed the threshold of 170 vehicular trips (condition outlined in Sections 210 of Chapter 17 of *the CEQR Technical Manual*). Therefore, no CO detailed analysis is required.

The $PM_{2.5}$ equivalent truck calculation in vehicular emission screen ranges from 12 to 23 HDDVs depending on the type of road. For analysis purpose, it was assumed that all vehicles would travel on either Avenue S, a collector roadway (19 HDDVs), or Lake Street, which is a paved road (12 HDDVs). All autos were assumed to be LDGT1 class vehicles, based on guidance from the New York City Department of City Planning (DCP) for similar projects. The worst-case HDDVs or its equivalent in vehicular emissions would result in a maximum of 28.9 equivalent trucks.

Table 17-2 shows the project-generated traffic (inbound and outbound combined) and the results of the *CEQR Technical Manual* Equivalent Truck Calculation.

Table 17-2: *CEQR Technical Manual* Equivalent Truck Calculations

Roadway	Roadway Classification (Threshold HDDVs screen) [1]	Peak-Hour Period	Truck Per Hour	Auto Per Hour	Equivalent Truck	Pass / Fail
Avenue S	Collector (20)	AM	4	28	8.5	Pass
		MD	2	42	9.8	Pass
		PM	0	60	11.9	Pass
		SAT MD	0	49	9.7	Pass
Lake Street	Paved (12) [2]	AM	4	28	16.8	Fail
		MD	2	42	21.9	Fail
		PM	0	60	28.9	Fail
		SAT MD	0	49	23.6	Fail

Note:
1. Roadway classification obtained from the New York State Department of Transportation (NYSDOT) map application. https://gis3.dot.ny.gov/html5viewer/?viewer=FC.
2. Paved road screen threshold is 12.46 HDDVs. Screening results from worksheet in the *CEQR Technical Manual Appendices*.

As seen in **Table 17-2**, the project-generated HDDVs traffic or its equivalent in vehicular emissions exceed the equivalent truck calculations threshold of 12 HDDVs during all peak-hour periods. Therefore, a detailed analysis is required.

Parking Garage

Based on CEQR guidelines, the maximum capacity of a parking garage is evaluated against a threshold criterion to predict whether the potential impacts associated with mobile source emissions are significant. The threshold criteria level, per CEQR guidelines, is 85 off-street parking spaces. If the threshold is met or exceeded, a detailed analysis is warranted. The increment between the future with-action and no-actions scenarios is 75 off-street parking spaces, less than the 85 parking spaces threshold criterion. Therefore, no detailed air quality analysis is required, and no significant mobile source air quality impacts are expected from vehicular emission generated at the proposed project's off-street parking spaces.

Existing Mobile Sources

According to the *CEQR Technical Manual*, projects that would result in new sensitive uses within 200 feet of an atypical roadway or near other major mobile source of pollutant may result in significant adverse mobile source air quality impacts. The proposed project is not located near a highway or a very large parking facility. Therefore, no detailed analysis is required.

Project-Generated Traffic Detailed Analysis

$PM_{2.5}$ detailed analysis was conducted for the intersection of Avenue S and Lake Street using MOVES2014b and CAL3QHCR. The PM peak hour traffic was analyzed as the equivalent truck

calculation in vehicular emissions was the greatest during that peak-hour period. Existing vehicle classification on Avenue S was obtained in the field (see Noise Chapter, Table 19-8). Existing vehicle classification on Lake Street was based on Avenue S classification, excluding busses and heavy trucks (articulate trucks). Existing traffic counts on Avenue S was obtained from the New York State Department of Transportation (NYSDOT) for Station 026133. Existing traffic counts on Lake Street was based on the NYSDOT data for East 2nd Street Station 025130. Traffic annual background growth rates, obtained from the *CEQR Technical Manual,* were used to project the No-Action traffic. The project-increment was added to the No-Action traffic to project the With-Action traffic.

Vehicular emissions were compiled with the EPA Motor Vehicle Emission Simulator (MOVES) version 2014b. Fugitive dust emissions were added to the MOVES output to calculate the short-term $PM_{2.5}$ emission factors (annual fugitive dust emissions are negligible, based on similar projects). Slit loading factors for all roadways were obtained from the *CEQR Technical Manual*. In addition, a conservative assumptions of "dry" road conditions was used for the short-term calculation (precipitation reduced silt loading).

Dispersion analysis was conducted with the EPA's CAL3QHCR dispersion model version 13196. $PM_{2.5}$ concentrations were predicted with model-ready JFK Airport meteorology data, obtained from DCP for another project. Models specified settling and deposition velocities of 0-meter per second, 60-minute averaging time, and urban surface roughness of 108-centimeter (applicable to single family residential land use). Links were modeled as free flowing, at grade, links. Short-term receptors were placed in the middle of sidewalks, at 1.8-meter height, and around the intersection in spaced intervals. Annual receptors were placed 15-meters from the curb side, at 1.8 meters height, and in spaced intervals. Satellite imagery was used to locate links and receptors. The satellite imagery is a map application built into Lakes Environmental, Inc. CALRoad commercial version of CAL3QHC/R.

The With-Action 24-hour $PM_{2.5}$ concentration and the annual $PM_{2.5}$ increment between the With-Action and No-Action concentration were evaluated with the NYC Guideline, *de minimis*. **Table 17-3** shows the dispersion analysis results.

Table 17-3: Project-Generated With-Action Traffic Dispersion Analysis Results

Pollutant and Averaging Time	Increment (Modeled) Concentration	Threshold Concentration	Threshold Standard
$PM_{2.5}$ 24-hour	4.44 µg/m^3	7.65 µg/m^3	*de minimis*
PM2.5 Annual Increment (1)	0.08 µg/m^3	0.1 µg/m^3	*de minimis*

Note.
1. Annual $PM_{2.5}$ concentration is for the With-Action traffic. As the total concentration is less than the *de minimis*, no analysis is needed for the No-Action scenario.

As seen in **Table 17-3**, the Proposed Actions $PM_{2.5}$ increment concentrations do not exceed the *de minimis* (24-hour or annual averaging times). Therefore, no significant adverse air quality impacts are expected at intersections effected by the Proposed Actions.

HVAC Systems Analysis

The HVAC analysis considers the potential for emissions from the HVAC system of the proposed project to significantly impact existing land uses (project-on-existing), and the potential of the proposed project to significantly impact each other (project-on-project). Based on CEQR guidelines, a preliminary screening analysis is to be conducted as a first step to predict whether the potential impacts of the heat and hot water system(s) boiler emissions can be significant. The screening analysis determines the threshold of development size below which the action would not have a significant impact. This CEQR screening procedure is applicable to buildings that are not less than 30 feet from the nearest building of similar or greater height. Otherwise, a detailed dispersion analysis is required.

Screening Analysis

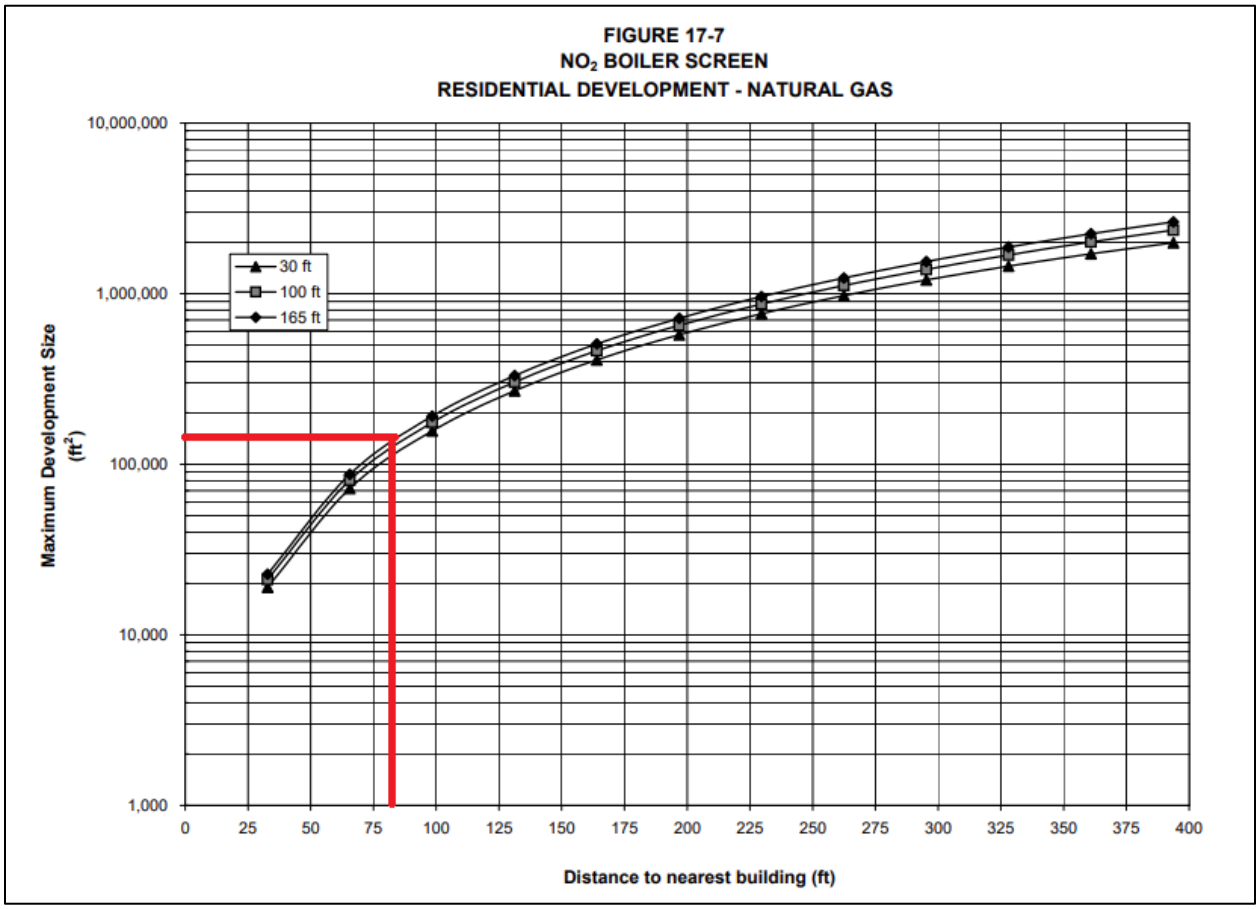
A screening analysis was performed, using the methodology described in the *CEQR Technical Manual*, to determine if the heating, ventilation, air conditioning and hot water systems of the RWCDS would result in potential air quality impacts.

The potential for the heat and hot water system(s) to have a significant adverse impact on nearby receptors depends on the type of fuel that would be used by the HVAC system, the height of the stack venting the emissions, the distance to the nearest building of similar or greater height, the building's use which effects the emissions, and the square footage of the development that would be served by the system. The *CEQR Technical Manual* screening analysis is based on these factors. A detailed analysis is required if the screening analysis failed.

In addition, as screening analysis is only applicable to a single smokestack, for the purposes of a cumulative screening analysis emissions from multiple stacks are combined in a single stack situated as close as possible to the receiving building. The following screening analyses were performed:

1. Projected Development Site 1 RWCDS on Projected Development Site 2: A residential building, 115 feet high, containing 145,209 gsf of floor area and natural gas would be the type of fuel used in the building's HVAC system. A distance of 80 feet, the distance between the Projected Development Site 1 and Projected Development Site 2, was used in the screening analysis. The CEQR nomograph depicted on Figure 17-7 of the *CEQR Technical Manual Appendices* was used for the screening analysis. This nomograph is for natural gas fueled boiler serving a residential development. **Figure 17-1** (using Figure 17-7 of the *CEQR Technical Manual Appendices*) shows the screening analysis.

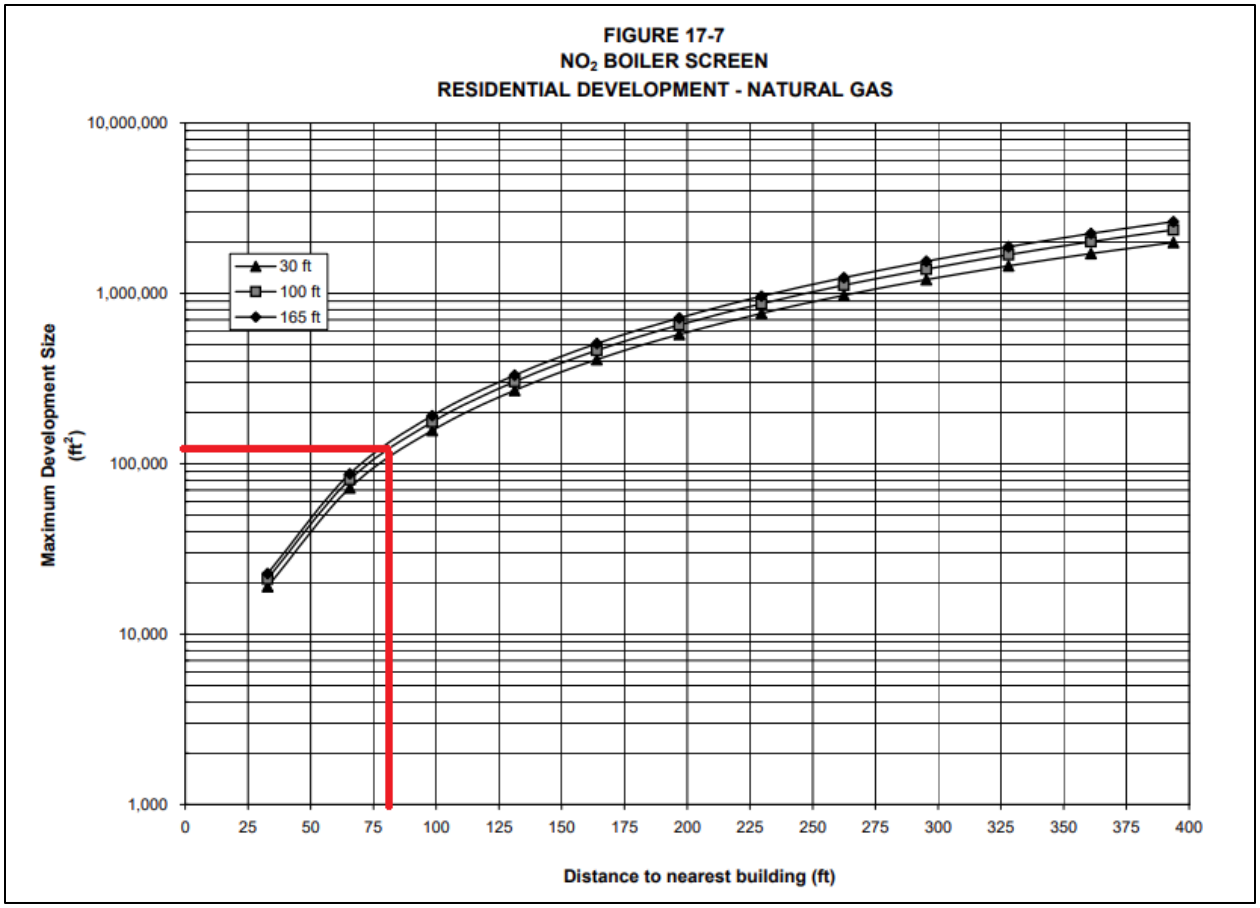
Figure 17-1: Projected Development Site 1 on Projected Development Site 2 HVAC Screen



As seen in the screening analysis **Figure 17-1** (using Figure 17-7 of the *CEQR Technical Manual Appendices*), the line is above the curve. As such, a detailed analysis is required for Projected Development Site 1 potential impact on the other Projected Development Sites.

2. Projected Development Site 2 on Projected Development Site 1: The Projected Development Site 2 as a 115-foot-tall residential building, containing 116,105 gsf (combined gsf of Projected Development Site 2). Natural gas would be used in the HVAC system(s). A distance of 80 feet, the distance between the Projected Development Site 2 and Projected Development Site 1, was used in the screening analysis. **Figure 17-2** (using Figure 17-7 of the *CEQR Technical Manual Appendices*) shows the screening analysis.

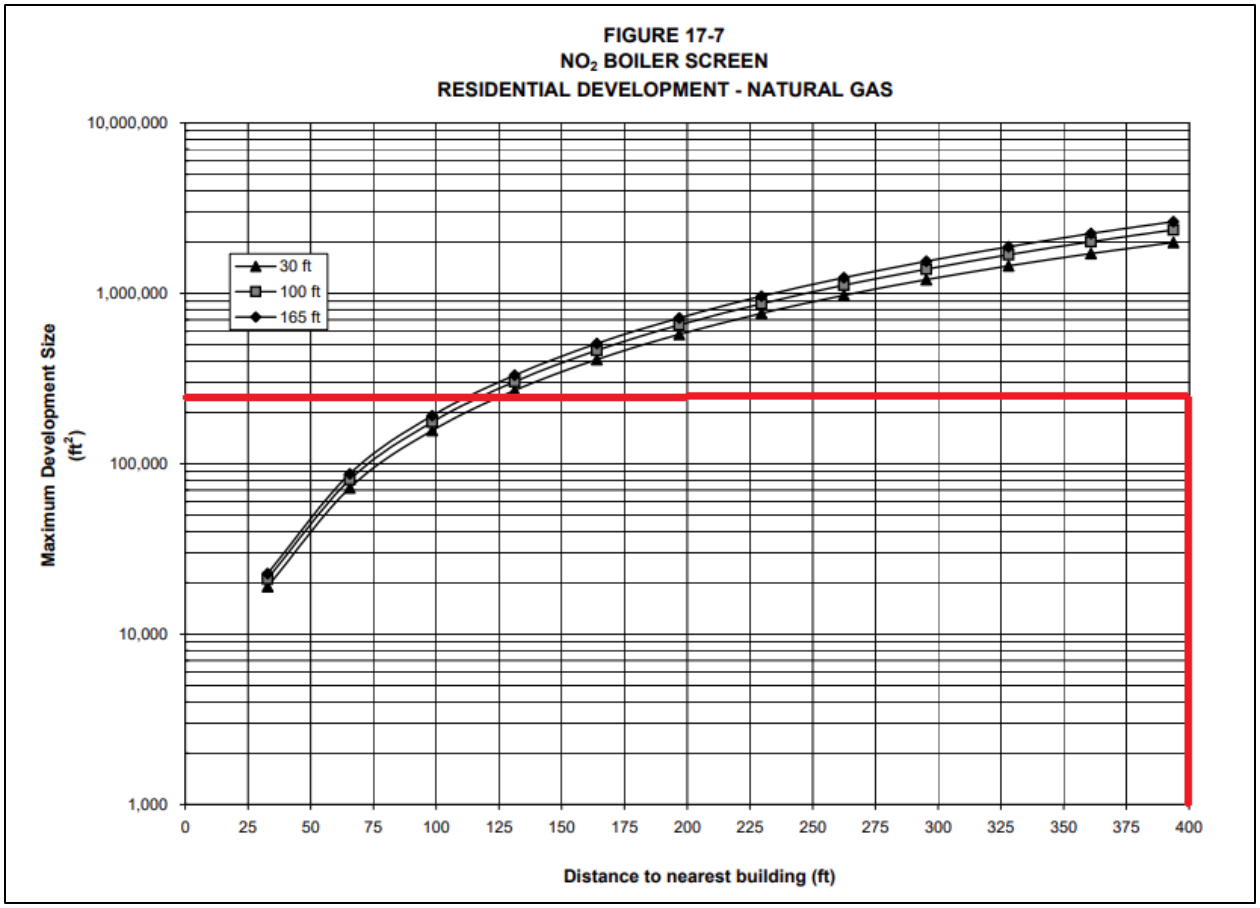
Figure 17-2: Projected Development Site 2 on Projected Development Site 1 – HVAC Screen



As seen in the screening analysis **Figure 17-2** (using Figure 17-7 of the *CEQR Technical Manual Appendices*), the line is on the curve. As such, a detailed analysis is required for Projected Development Site 2 potential impact on the Projected Development Site 1.

3. Project-on-Existing – Projected Development Sites 1 and 2 on existing land uses: The Projected Development Sites 1 and 2 as a 115-foot-tall residential building, containing 261,314 gsf (combined gsf of Projected Development Sites 1 and 2). Natural gas would be used in the HVAC system(s). A distance of 400 feet, the *CEQR Technical Manual* maximum distance, was used in the analysis as no existing building 115-foot or taller is located within 400 feet of the Projected Development Sites. The CEQR nomograph depicted on Figure 17-7 of the *CEQR Technical Manual Appendices* was used for the screening analysis. This nomograph is for natural gas fueled boiler serving a residential development. **Figure 17-3** (using Figure 17-7 of the *CEQR Technical Manual Appendices*) shows the screening analysis.

Figure 17-3: Cumulative Project Screening Analysis on Existing Land Uses – HVAC Screen



As seen in the screening analysis **Figure 17-3** (using Figure 17-7 of the *CEQR Technical Manual Appendices*), the line is below the curve. As such, the proposed project passes the HVAC screening analysis on existing land uses.

Detailed Analysis

Methodology

A stationary source modeling was conducted to evaluate the potential impacts associated with the boilers stacks emissions. Lakes Environmental MPI executable was used in the analysis. The MPI executable take advantage of computers with multiple processors, reducing run-time significantly. Lakes Environmental has adjusted the US EPA AERMOD source code and recompiled the model to parallelize the processing of receptors. The latest MPI executable (used in the analysis) modified the EPA's AERMOD latest executable model version 19191. The AERMOD model incorporates air dispersion based on planetary boundary layer turbulence structure and scaling concepts, including treatment of both surface and elevated sources, and both simple and complex terrain. The analysis was conducted assuming stack tip downwash and elimination of calms. The Building Profile Input Program (BPIP) was run with the downwash

effect enabled. All analyses were conducted using the latest five consecutive years of meteorological data (2015-2019), obtained from the NYSDEC, Division of Air Resources, BAQAR, Impact Assessment and Meteorology Section. Surface data used in the analysis is from JFK Airport, upper air data is from Brookhaven station, New York. The meteorological data was processed using the latest versions of AERMINUTE, AERSURFACE and AERMET. The meteorological data provided hour-by-hour wind speeds and directions, stability states, and temperature inversion elevations over the 5-year period. The population in Brooklyn county, obtained from the U.S. Census Bureau 2019, was specified to account for the effects of increased surface heating from an urban area on pollutant dispersion under stable atmospheric conditions.

The pollutants of concern of natural gas fueled boilers are NO_2 and $PM_{2.5}$. The boilers' energy intensities were calculated based on energy consumption rate, obtained from the *CEQR Technical Manual Appendices*, corresponding to residential use in the buildings. Emissions were calculated based on emission factors obtained from the EPA's AP-42 manual for external combustion sources[1]. All fuel was assumed to be consumed during the 100-day (or 2,400 hour) heating season, based on the *CEQR Technical Manual*. **Table 17-4** shows the boilers' energy intensities and pollutants emission rates.

Table 17-4: RWCDS HVAC Systems Short-term and Annual Emission Rates

Site ID	Development Site RWCDS Floor Area (gsf)	Boiler's Energy Intensity (MMBtu); Fuel Used	Pollutant	Short-term Emission Rate (g/s)	Annual Emission Rate (g/s)
Projected Development Site 1	145,209	3.65; Natural gas	NO_2	4.51E-02	1.23E-02
			$PM_{2.5}$	3.43E-03	9.38E-04
Projected Development Site 2	80,356	2.02; Natural gas low-NOx	NO_2	1.25E-02	3.42E-03
			$PM_{2.5}$	1.90E-03	5.19E-04

Projected Development Sites 1 and 2 boiler stacks' diameters and stacks exit temperatures were estimated based on values obtained from the New York City Department of Environmental Protection (DEP) "CA Permit" database for the corresponding boiler sizes (i.e., rated heat input or million Btu per hour)[2]. The stacks exit velocities were calculated based on the fuel dry volume of combustion components per unit of heat content. The boilers stacks were placed 3 feet above the roofline and as close as possible to the receiving building, and a stack(s) set back distance(s) was specified if impact was predicted.

The Projected Development Sites were modeled as buildings that cover their entire lot(s) area(s) (the wall façade located on the outer lot lines) and rise to their RWCDS heights. Buildings in the

[1] EPA. *Compilation of Air Pollutant Emission Factors AP-42 Fifth Edition, Vol. 1:* Chapter 1: External Combustion Sources, https://www3.epa.gov/ttn/chief/ap42/ch01/final/c01s04.pdf. July 1998.
[2] DEP "CA Permit" database obtained from the New York City Department of City Planning, February 2020.

surrounding area were accounted for in the downwash effect on plums dispersions (BPIP). Receptors on the receiving building were placed on all wall façade from the ground floor to roof-top height in spaced intervals.

The USGS National Elevation Dataset (NED) 1/3 arc-second resolution (GeoTIFF dataset), the terrain data set recommended by the US EPA for use in the United States for regulatory purposes, was used to process buildings base elevations. The base elevations of receptors and stacks were set to their buildings base elevations. Roof heights of buildings in the area were obtained from the NYC Building Footprint database[3].

24-hour $PM_{2.5}$ was modeled with 1st highest output concentration, which is the *de minimis* design value. NO_2 concentrations at Projected Development Site 2 were modeled with 8th highest concentration (the NAAQS design value) and a Tier 2 approach (ARM 2), where the national default in-stack and ambient ratios of 0.5 and 0.9, respectively, were applied.

Results of Dispersion Analyses

As previously mentioned, each pollutant averaging time was modeled twice—with building wake effect enabled/disabled. The predicted concentration is the highest concentration of these. The Tier 1 or 2 NO_2 1-hour and annual averaging times modeled concentrations were added to the background concentrations. $PM_{2.5}$ modeled concentrations were evaluated with the NYC Guidelines threshold criterions. Result of the HVAC dispersion NO_2 and $PM_{2.5}$ analyses are shown in **Table 17-5**.

Table 17-5: HVAC Dispersion Analysis Results

Pollutant and Averaging Time	Increment (Modeled) Concentration (μg/m³)	Background Concentration (μg/m³)	Evaluated Concentration (μg/m³)	Threshold Concentration (μg/m³)	Threshold Standard
Site 2 – on - Site 1					
1-hour NO_2	53.66	103.6	**157**	**188**	NAAQS
Annual NO_2	0.92	26.8	**28**	**100**	NAAQS
24-hour $PM_{2.5}$	2.95	19.6	**2.95**	**7.65**	*de minimis*
Annual $PM_{2.5}$	0.13	9.3	**0.13**	**0.3**	*de minimis*
Site 1 – on - Site 2					
1-hour NO_2	81.17	103.6	**185**	**188**	NAAQS
Annual NO_2	1.17	26.8	**28**	**100**	NAAQS
24-hour $PM_{2.5}$	4.59	19.6	**4.59**	**7.65**	*de minimis*
Annual $PM_{2.5}$	0.13	9.3	**0.13**	**0.3**	*de minimis*

[3] City of New York, nyc-geo-metadata (May 03, 2016); https://data.cityofnewyork.us/Housing-Development/Building-Footprints/nqwf-w8eh

As seen in **Table 17-5**, the NO_2 predicted concentrations are less than the NAAQS and the $PM_{2.5}$ concentrations are less than the *de minimis*. The concentrations shown in **Table 17-4** were predicted with certain restrictions to ensure that no significant adverse air quality impact(s) would occur. The restrictions for the Proposed Actions are specified in the Air Quality E-Designations that would be placed on the Development Site(s). The E-Designation language related to the heating and hot water systems is as follows:

(E) Designation (E-662)

Block 6680, Lots 39 and 42 (Projected Development Site 1): ***Any new residential, commercial, or community facility development on the above-referenced property must exclusively use natural gas as the type of fuel for the heating, ventilation, air conditioning (HVAC) and hot water system(s), ensure that the stack is located at the building's highest level or at least 118 feet above grade, and that the stack is located at least 100 feet from the southern lot line facing Avenue S to avoid any potential significant adverse air quality impacts.***

Block 7087, Lot 1 (Projected Development Site 2): ***Any new residential or commercial development on the above-referenced property must exclusively use natural gas as the type of fuel for heating, ventilating, air conditioning (HVAC), and hot water system(s) and must be fitted with low NOx (30 ppm) burners, ensure that the stack is located at the building's highest level at a minimum of 118 feet above the grade, and that the stack is located at least 145 feet from the northern lot line facing Avenue S to avoid any potential significant adverse air quality impacts.***

Industrial and Major Sources

Introduction

As outlined in the *CEQR Technical Manual*, projects that would introduce new uses near industrial sources may result in potentially significant adverse air quality impacts. The study area considers industrial sources within 400 feet of the Project Area. Industrial sources are identified as commercial, industrial, or processing facilities that are likely to have New York City Department of Environmental Protection (DEP) processing permits.

Land Survey Methodology

Information regarding potential emissions of toxic air pollutants from existing industrial sources within 400 feet of the proposed project, were developed using the following procedure:

A study area was developed that includes all nonresidential facilities located within 400 feet of the proposed project;

Satellite images, Google Street View, and online searches were used to identify and categorize facilities;

A fieldwork investigation/observation was conducted on June 8th, 2018 to affirm the online study findings, identify any other likely industrial source in the study area, and to obtain more information about facilities;

The New York City Department of Environmental Protection (DEP) online Clean Air Tracking System (CATS) was consulted to determine whether air emissions permits had been issued for any of the nonresidential zoned lots; and

A formal request was sent to the DEP to review the current and expired status processing type permits identified in the DEP online CATS database (with blocks and lot numbers).

Study Result – Industrial Sources Toxic Air Emission

Twenty-eight (28) lots within 400 feet of the Project Area were identified as nonresidential land uses that could potentially have NYC operational permits. **Table 17-6** shows the DEP CATS record search results, and the current land uses identified in the land survey study, where entries are color coded according to their land use category.

Table 17-6: Land Use Within 400 Feet of the Project Area, Including DEP Record

Block	Lot	Address	CATS info	Current Use (Land Survey)
6678	30	293 Avenue S	No Record	Laser Care (personal care)
	31	291 Avenue S	No Record	Modern Décor (retail)
	32	289 Avenue S	No Record	Just 4 U Yoga (recreation)
6679	49	311 Avenue S	No Record	Unoccupied/vacant
	58	111 Van Sicklen	No Record	Beauty salon, nail salon
	124	Lake Street	No Record	Vacant Land
6680	11	2004 McDonald Avenue	Cancelled: PA003770, PA003870, PA032972, PA033072, CA098791, CA098891	Furniture showroom
	20	2024 McDonald	No Record	Restaurant, vacant
	21	2026 McDonald Avenue	Expired: CB144907	Tire store/garage
	23	2030 McDonald Avenue	No Record	Home care, furniture store, gym, home décor store
	29	2050 McDonald	No Record	Parking lot
	35	2060 McDonald	No Record	Bottle redemption center
	39	2074 McDonald Avenue	Expired: CA211093	Projected Development Site
	42	2080 McDonald Avenue	Expired: CA209589, CA209489	Projected Development Site
6681	2	2075 McDonald Avenue	Cancelled: PA001070	99 Cent store, deli
	7	2055 McDonald Avenue	Expired: CA135386	Supermarket
	17	Colin Place	No Record	
	58	2043 McDonald Avenue	Expired: PB001708, GA002489 Cancelled: PA015793, PA015693	Vacant – building for lease (previously auto body)
	59	2033 McDonald Avenue	No Record	Wholesale/warehouse clothing
	60	2023-29 McDonald Avenue	No Record	Car wash, auto mechanic, auto collision work (no painting)
7087	1	121 Lake Street	No Record	Project Area

Block	Lot	Address	CATS info	Current Use (Land Survey)
	5	Lake Street	Expired: CR571514 Current: CR719415	Project Area
	26	2132 McDonald Avenue	No Record	Religious/school building
	28	2134 McDonald Avenue	Expired: CA064897	Religious/school building
	29	2136 McDonald Avenue	No Record	Parking lot
	34	2170 McDonald Avenue	Expired: CA251894	School/ public facility building
	76	143 Lake Street	Expired: PA064494	School building

As seen in **Table 17-6**, no emission source operates in the study area. The auto body repair facility at 2043 McDonald Avenue (Block 6681, Lot 58) ceased operation approximately one year ago, and the building is under renovation. The supermarket owner across the street confirmed that the facility is vacant. The owner/manager of the auto collision workshop, located at 2023-29 McDonald Avenue (Block 6681, Lot 60), stated that cars are sent to another facility to be painted. During the site visit, all the garage doors were opened, and no evidence of spray-painting activity was evident (painted doors, fine dust, toxic smell, etc.). One of the facilities located at 2030 McDonald Avenue (Block 6680, Lot 23), suspected to be an auto body shop from the look of its front gate, was identified as a gym and a class was in progress during the site visit. The gym's manger indicated that they left the front gate as is. Therefore, no analysis was warranted, and no significant air quality impacts are predicted from industrial or manufacturing facilities.

Major and Large Sources

As outlined in the *CEQR Technical Manual*, projects that would introduce new uses near major sources, large sources, and odor producing facilities may result in potentially significant adverse air quality impacts. The study area considers major sources, large sources, and odor producing facilities within 1,000 feet of the Project Area. Major emission sources are identified as those sources located at Title V facilities that require Prevention of Significant Deterioration permits; large emission sources are identified as sources located at facilities which require a State facility permit. Solid waste or medical waste incinerators, asphalt and concrete plants, power generating plants, large boilers of large public facilities, and large industrial facilities are typical type of sources requiring these permits. Odor producing facilities are operations that have the potential to cause discomfort, such as: solid waste management facilities, water pollution control plants (i.e., sewage treatment plants), and incinerators.

No existing large combustion sources, such as power plants, cogeneration facilities, etc., located within 1,000 feet of the Project Area were identified. In addition, no odor producing facility was identified within 1,000 feet of the Project Area. The nearest Title V facility is the NYC-TA Coney Island Yard, located at 2556 McDonald Avenue, and 4,100 feet from the Project Area. As such, no analysis was warranted.

Conclusion

Based on the analysis, conditions associated with the proposed project would not result in any violations of the ambient air quality standards. Therefore, there is no reason to believe that the proposed project would result in any potentially significant adverse stationary or mobile source air quality impacts, and further assessment is not warranted.

18. Noise

Introduction

Equity Environmental Engineering, LLC (Equity) conducted noise monitoring on Tuesday, April 6, 2021 and Tuesday, December 9, 2021 in support of zoning map amendment. The Project Site is bound by McDonald Avenue to the east, Avenue S to the south, and Lake Street to the west. The Project Area consists of Block 6680 Lots 39, 42, and Block 7087 Lots 1, and 5 within Brooklyn Community District 11.

McDonald Avenue is a two-way street with two moving north-south bound lanes with curbside parking. Avenue S is a two-way street two moving east-west bound lanes with curbside parking. Lake Street is a one-way street with one moving north-bound lane with curbside parking. Local intersections are controlled by traffic signals and stop signs. An elevated rail line is located above McDonald Avenue.

An assessment of the potential for adverse effects on project occupants from ambient noise is warranted. The projected development would not create a significant stationary noise generator. Additionally, project-generated traffic would not double vehicular traffic on nearby roadways, and therefore would not result in a perceptible increase in vehicular noise. Therefore, this noise assessment is limited to an assessment of ambient noise that could adversely affect occupants of the development. The predominant noise source at the Affected Area is vehicular traffic on surrounding streets and rail movements.

Framework of Noise Analysis

Noise is defined as any unwanted sound, and sound is defined as any pressure variation that the human ear can detect. Humans can detect a large range of sound pressures, from 20 to 20 million micropascals, but only those air pressure variations occurring within a particular set of frequencies are experienced as sound. Air pressure changes that occur between 20 and 20,000 times a second, stated as units of Hertz (Hz), are registered as sound.

Because the human ear can detect such a wide range of sound pressures, sound pressure is converted to sound pressure level (SPL), which is measured in units called decibels (dB). The decibel is a relative measure of the sound pressure with respect to a standardized reference quantity. Because the dB scale is logarithmic, a relative increase of 10 dB represents a sound pressure that is 10 times higher. However, humans do not perceive a 10-dB increase as 10 times louder. Instead, they perceive it as twice as loud.

Sound is often measured and described in terms of its overall energy, taking all frequencies into account. However, the human hearing process is not the same at all frequencies. Humans are less sensitive to low frequencies (less than 250 Hz) than mid-frequencies (500 Hz to 1,000 Hz) and are most sensitive to frequencies in the 1,000- to 5,000-Hz range. Therefore, noise measurements are often adjusted, or weighted, as a

function of frequency to account for human perception and sensitivities. The most common frequency weightings used are the A- and C-weightings. These weight scales were developed to allow sound level meters, which use filter networks to approximate the characteristic of the human hearing mechanism, to simulate the frequency sensitivity of human hearing. The A-weighting is the most commonly used for environmental measurements, and sound levels measured using this weighting are denoted as dBA. The letter "A" indicates that the sound has been filtered to reduce the strength of very low and very high frequency sounds, much as the human ear does. C-weighting gives nearly equal emphasis to sounds of most frequencies. Mid-range frequencies approximate the actual (unweighted) sound level, while the very low and very high frequency bands are significantly affected by C-weighting.

Table 19-1: Noise Levels of Common Sources

Sound Source	SPL (dB(A))
Air Raid Siren at 50 feet	120
Maximum Levels at Rock Concerts (Rear Seats)	110
On Platform by Passing Subway Train	100
On Sidewalk by Passing Heavy Truck or Bus	90
On Sidewalk by Typical Highway	80
On Sidewalk by Passing Automobiles with Mufflers	70
Typical Urban Area	60-70
Typical Suburban Area	50-60
Quiet Suburban Area at Night	40-50
Typical Rural Area at Night	30-40
Isolated Broadcast Studio	20
Audiometric (Hearing Testing) Booth	10
Threshold of Hearing	0
Notes: A change in 3dB(A) is a just noticeable change in SPL. A change in 10 dB(A)Is perceived as a doubling or halving in SPL.	
Source: 2021 CEQR Technical Manual	

The following is typical of human response to relative changes in noise level:

- 3-dBA change is the threshold of change detectable by the human ear;
- 5-dBA change is readily noticeable; and
- 10-dBA change is perceived as a doubling or halving of the noise level.

The SPL that humans experience typically varies from moment to moment. Therefore, various descriptors are used to evaluate noise levels over time. Some typical descriptors are defined below.

- L_{eq} is the continuous equivalent sound level. The sound energy from the fluctuating SPLs is averaged over time to create a single number to describe the

mean energy, or intensity, level. High noise levels during a measurement period will have a greater effect on the L_{eq} than low noise levels. L_{eq} has an advantage over other descriptors because L_{eq} values from various noise sources can be added and subtracted to determine cumulative noise levels.

- L_{max} is the highest SPL measured during a given period of time. It is useful in evaluating L_{eq}s for time periods that have an especially wide range of noise levels.

- $L_{eq(24)}$ is the continuous equivalent sound level over a 24-hour time period.

The sound level exceeded during a given percentage of a measurement period is the percentile-exceeded sound level (L_X). Examples include L_{10}, L_{50}, and L_{90}. L_{10} is the A-weighted sound level that is exceeded 10% of the measurement period.

The decrease in sound level caused by the distance from any single noise source normally follows the inverse square law (i.e., the SPL changes in inverse proportion to the square of the distance from the sound source). In a large open area with no obstructive or reflective surfaces, it is a general rule that at distances greater than 50 feet, the SPL from a point source of noise drops off at a rate of 6 dB with each doubling of distance away from the source. For "line" sources, such as vehicles on a street, the SPL drops off at a rate of 3 dBA with each doubling of the distance from the source. Sound energy is absorbed in the air as a function of temperature, humidity, and the frequency of the sound. This attenuation can be up to 2 dB over 1,000 feet. The drop-off rate also will vary with both terrain conditions and the presence of obstructions in the sound propagation path.

Noise Standards and Guidelines

In 1983, the New York City Department of Environmental Protection (NYCDEP) adopted the City Environmental Quality Review (CEQR) noise exposure guidelines for exterior noise levels. As shown in Table 19-2 below, noise standards classify noise exposure into four categories based on noise level limits and land use, for vehicular traffic, rail, and aircraft noise sources: Acceptable, Marginally Acceptable, Marginally Unacceptable and Clearly Unacceptable, Table 19-3 of the *CEQR Technical Manual* defines attenuation requirements for buildings based on exterior noise exposure levels. Recommended noise attenuation values for buildings are designed to maintain interior noise levels of 45 dBA (*L_{10} or Ldn, depending on the source*) or below.

Table 19-2: Noise Exposure Guidelines for Use in City Environmental Impact Review

Receptor Type	Time Period	Acceptable General External Exposure	Airport[3] Exposure	Marginally Acceptable General External Exposure	Airport[3] Exposure	Marginally Unacceptable General External Exposure	Airport[3] Exposure	Clearly Unacceptable General External Exposure	Airport[3] Exposure
1.Outdoor area requiring serenity and quiet[2]		$L_{10} \leq 55$ dBA	Ldn < 60 dBA		Ldn < 60 dBA		Ldn < 60 dBA		Ldn < 75 dBA
2. Hospital, Nursing Home		$L_{10} \leq 55$ dBA		$55 < L_{10} \leq 65$ dBA		$65 < L_{10} \leq 80$ dBA		$L_{10} > 80$dBA	
3. Residence, residential hotel or motel	7 am to 10 pm	$L_{10} \leq 65$dBA		$65 < L_{10} \leq 70$ dBA		$70 < L_{10} \leq 80$ dBA		$L_{10} > 80$dBA	
	10 pm to 7 am	L10≤55dBA		$55 < L_{10} \leq 70$ dBA		$70 < L_{10} \leq 80$ dBA		$L_{10} > 80$dBA	
4. School, museum, library, court house of worship, transient hotel or motel, public meeting room, auditorium, out-		Same as Residential Day (7 AM-10 PM)		Same as Residential Day (7 AM-10 PM)		Same as Residential Day (7 AM- 10 PM)		Same as Residential Day (7 AM –10 PM)	
5. Commercial or office		Same as Residential Day (7 AM-10		Same as Residential Day (7 AM-10		Same as Residential Day (7 AM –10 PM)		Same as Residential Day (7 AM-10	
6. Industrial, public areas only[4]	Note 4	Note 4		Note 4		Note 4		Note 4	

Source: New York City Department of Environmental Protection (adopted policy 1983).

Notes:

(i) In addition, any new activity shall not increase the ambient noise level by 3 dBA or more;

1 Measurements and projections of noise exposures are to be made at appropriate heights above site boundaries as given by American National Standards Institute (ANSI) Standards; all values are for the worst hour in the time period.

2 Tracts of land where serenity and quiet are extraordinarily important and serve an important public need and where the preservation of these qualities is essential for the area to serve its intended purpose. Such areas could include amphitheaters, particular parks or portions of parks or open spaces dedicated or recognized by appropriate local officials for activities requiring special qualities of serenity and quiet. Examples are grounds for ambulatory hospital patients and patients and residents of sanitariums and nursing homes.

3 One may use the FAA-approved L_{dn} contours supplied by the Port Authority, or the noise contours may be computed from the federally approved INM Computer Model using flight data supplied by the Port Authority of New York and New Jersey.

4 External Noise Exposure standards for industrial areas of sounds produced by industrial operations other than operating motor vehicles or other transportation facilities are spelled out in the New York City Zoning Resolution, Sections 42-20 and 42-21. The referenced standards apply to M1, M2, and M3 manufacturing districts and to adjoining residence districts (performance standards are octave band standards).

Table 19-3 CEQR TM: Attenuation Values to Achieve Acceptable Interior Noise Levels

	Marginally Unacceptable				Clearly Unacceptable
Noise Level with Proposed Project	$70 < L_{10} \leq 73$	$73 < L_{10} \leq 76$	$76 < L_{10} \leq 78$	$78 < L_{10} \leq 80$	$80 < L_{10}$
Attenuation[1]	(i) 28 dB(A)	(ii) 31 dB(A)	(iii) 33 dB(A)	(iv) 35 dB(A)	$36 + (L_{10} - 80)^2$ dB(A)

Source: New York City of Environmental Protection

Notes:

[1] The above composite window-wall attenuation values are for residential dwellings. Commercial office spaces and meeting rooms would be 5 dB(A) less in each category. All the above categories require a closed window situation and hence an alternate means of ventilation.

[2] Required attenuation values increase by 1 dB(A) increments for L_{10} values greater than 80 dBA.

Measurement Location and Equipment

Because the predominant noise sources in the area of the proposed project consist of vehicular traffic and rail movements, noise monitoring was conducted during peak weekday vehicular travel periods (AM, Midday, PM) on a typical midweek day. Therefore, the noise assessment is limited to an assessment of vehicular traffic and rail movement noise. Pursuant to CEQR Technical Manual Methodology, three measurements were conducted for 1-hour periods during each of the peak periods at each monitoring location at the Project Area: Location One (1) was at the frontage of Project Site along McDonald Avenue; Location Two (2) on the roof of the existing building at a height equal to the elevated rail line; and Location Three (3) was at the frontage of the Project Site along Avenue S. The noise monitoring locations are shown in **Figure 19-1** and **Photo 19-1, 19-2,** and **19-3** below.

Noise monitoring was conducted using a using Type 1 Casella CEL-633 sound level meter with wind screen. The monitor was placed on a tripod at a height of approximately four feet above the ground, away from any other noise-reflective surfaces (Location Two was elevated to the height of the rail line). The monitor was calibrated prior to and following each monitoring session. Periods of peak vehicular traffic around the Project Area constitute a worst-case condition for noise. Noise meter calibration certification and back up data are provided in Appendix D.

Photo 19-1: ***Noise Monitoring Location One (1)***
McDonald Avenue



Photo 19-2: ***Noise Monitoring Location Two (2)***
Rooftop



Photo 19-3: ***Noise Monitoring Location Three (3)***
Avenue S

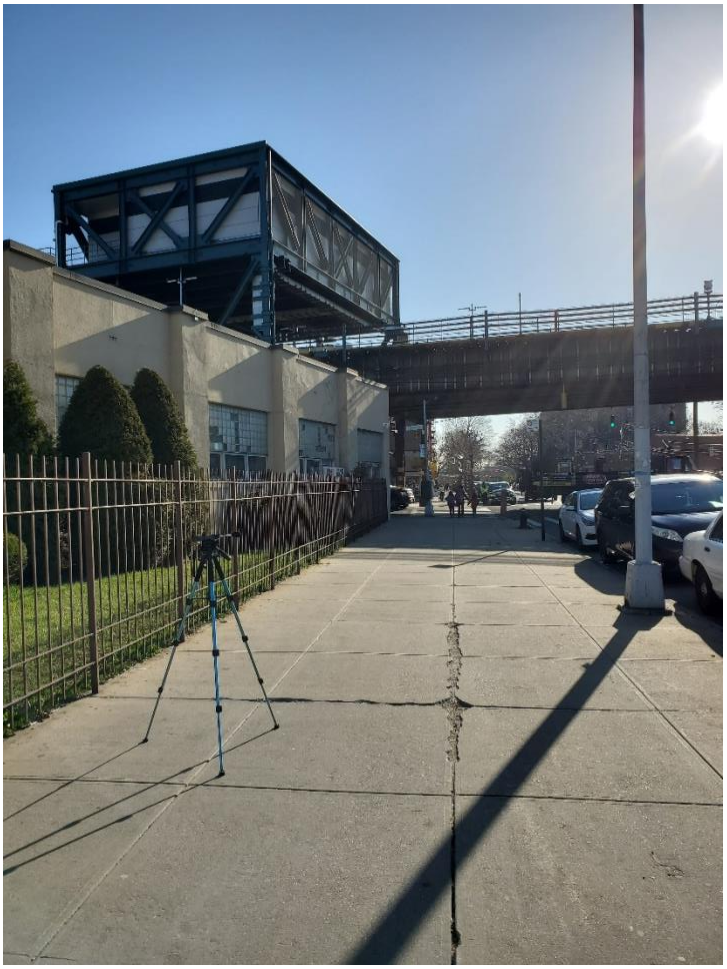


Figure 19-1: Noise Monitoring Location



Measurement Conditions
Monitoring was conducted during typical midweek conditions, on Tuesday, April 6, 2021 and Tuesday, December 9, 2021. The weather was dry and wind speeds were moderate during all monitoring periods. The sound meter was calibrated before and after each monitoring session.

Existing Conditions
Based on the noise measurements, the predominant source of noise is vehicular traffic.

Table 19-4, 19-5, and 19-6 below *contains the results for the measurements taken at the Project Site:*

Table 19-4
Noise Levels (dB) at Location 1

Tuesday, April 6, 2021

Time	**7:58 am – 8:58 am**	**12:23 pm – 1:23 pm**	**4:43 pm – 5:44 pm**
L_{max}	94.2	104.2	101.5
L_{10}	**79.0**	**79.0**	**77.5**
L_{eq}	**78.2**	**77.2**	**77.6**
L_{50}	65.0	65.5	62.5
L_{90}	58.5	58.5	56.0
L_{min}	53.2	53.5	50.0

Note: **Bold** denotes L_{10} or L_{eq} noise level exceedances, according to Table 19-2 of the CEQR Technical Manual

Table 19-5
Noise Levels (dB) at Location 2

Tuesday, April 6, 202 1and Tuesday, December 9, 2021

Time	**7:51 am – 8:51 am**	**12:00 pm – 1:00 pm**	**4:30 pm – 5:30 pm**
L_{max}	93.4	106.2	90.2
L_{10}	**76.0**	**74.5**	**73.2**
L_{eq}	**75.9**	**73.36**	**72.53**
L_{50}	64.0	60.6	60.1
L_{90}	59.5	56.1	54.9

Note: **Bold** denotes L_{10} or L_{eq} noise level exceedances, according to Table 19-2 of the CEQR Technical Manual

Table 19-6 *Noise Levels (dB) at Location 3*			
Tuesday, April 6, 2021			
Time	**7:58 am – 8:58 am**	**12:26 pm – 1:26 pm**	**4:39 pm – 5:39 pm**
L_{max}	88.4	90.0	92.7
L_{10}	**71.0**	**72.0**	**70.0**
L_{eq}	69.9	68.5	68.9
L_{50}	59.0	65.0	59.0
L_{90}	55.0	57.5	53.5
L_{min}	49.6	49.9	46.0

Note: **Bold** denotes L_{10} or L_{eq} noise level exceedances, according to Table 19-2 of the CEQR Technical Manual

Table 19-7, 19-8, and 19-9 *below contains the traffic counts and vehicle classifications during each monitoring period for 20 minutes:*

Table 19-7 ***Location 1:*** *Traffic volumes and vehicle classifications*			
	7:58 am – 8:58 am	**12:23 pm – 1:23 pm**	**4:43 pm – 5:44 pm**
Car/ Taxi	193	150	230
Van/Light Truck/SUV	375	269	416
Medium Truck	29	12	6
Heavy Truck	25	15	4
Bus	11	7	5
Train	15	16	16

Table 19-8 ***Location 3:*** *Traffic volumes and vehicle classifications*			
	7:58 am – 8:58 am	**12:26 pm – 1:26 pm**	**4:39 pm – 5:39 pm**
Car/ Taxi	104	155	164
Van/Light Truck/SUV	244	298	304
Medium Truck	5	11	4
Heavy Truck	5	10	1
Bus	9	4	7
Train	15	16	16

Noise Monitoring Location 2 Methodology

Noise monitor at Location 2 was incorrectly set up to record second data, and not the hour long L_{max}, L_{10}, L_{eq}, L_{50}, L_{90}, and L_{min} data as required. An additional AM reading was collected on Tuesday December 9, 2021 to confirm the following. As the L_{max} and L_{eq} data was collected for every second during each monitoring period, the following methodology was used to calculate the, L_{10}, L_{eq}, L_{50}, and L_{90}.

L_{eq}

L_{eq} is defined as the constant noise level, which over a given time, expands the same amount of energy, as is expanded by fluctuating levels over the same time. This value could be expressed by the following formula:

$$L_{eq} = 10 * \log\left(\sum_{i=1}^{i=n} 10^{\frac{L_i}{10}}\right) * t_i$$

Where n = total number of sound samples

t_i = time duration of ith sample, expressed as fraction of total sample time

L_i = the noise level of an ith sample.

In Excel, we converted the original data in seconds to hours by the following steps:

1) Divide the LAeq values in each second by 10;
2) Anti-log the values from Step 1;
3) Add together all of the values in Step 2;
4) Divide the total number in Step 3 by the number of samples, which is 3600 in an hour;
5) Base 10 log the number derived from Step 4 and multiply it by 10.

This gives us the average noise energy over the entire 1-hour period.

L_{10}, L_{50} and L_{90}

The commonly used values of n for the n-percent exceeded level, Ln are 10, 50, and 90.

L_{10} is the level exceeded for 10% of the time. For 10% of the time, the sound or noise has a sound pressure level above L_{10}. For the rest of the time, the sound or noise has a sound pressure level at or below L_{10}. These higher sound pressure levels are probably due to sporadic or intermittent events.

L_{50} is the level exceeded for 50% of the time. It is statistically the mid-point of the noise readings. It represents the median of the fluctuating noise levels.

L_{90} is the level exceeded for 90% of the time. For 90% of the time, the noise level is above this level. It is generally considered to be representing the background or ambient level of a noise environment.

According to the definition of the Ln level, the L_{10} is calculated by using the conditional formatting in Excel, highlighting the top 10% values in red. Then the original L_{eq} data in seconds were filtered by red color and further sorted from the smallest to largest. The smallest number in red is the L_{10} noise level.

Similarly, the L_{50} and L_{90} were calculated by the same process, except that the conditional formatting rules were changed to top 50% and top 90% respectively. Backup data is provided in the Appendix.

An additional 1-hour noise reading was collected on Tuesday December 9th, 2021 at Location 2 during the AM peak travel period. The results of this reading are shown in **Table 19-5** above.

Stationary Source

It is assumed that the building mechanical systems (i.e., HVAC systems) would be designed to meet all applicable noise regulations (i.e., Subchapter 5, §24-227 of the New York City Noise Control Code, the New York City Department of Buildings Code) and to avoid producing levels that would result in any significant increase in ambient noise levels. Therefore, the Proposed Actions would not result in any significant adverse noise impacts related to building mechanical equipment.

Determination of Impacts/Building Attenuation Requirements

The 2021 *CEQR Technical Manual* Table 19-2 contains noise exposure guidelines. For a residential use such as would occur under the proposed action, an L_{10} of between 65 and 70 dB(A) is identified as marginally acceptable general external exposure. An L_{10} of between 70 and 80 dB(A) is identified as marginally unacceptable general external exposure. The highest recorded L_{10} at Location One (1) of the subject property was 79.0 dB(A) during the AM and MD monitoring period. The highest recorded L_{10} at Location Two (2) of the subject property was 76.0 dB(A) during the AM monitoring period. The highest recorded L_{10} at Location Three (3) of the subject property was 72.0 dB(A) during the MD monitoring period.

Based on the results of the noise monitoring, the eastern facade would require a 35 dB(A) window/wall attenuation facing below the rail line. The northern and southern facades would require a 35 dB(A) window/wall attenuation for 50 feet from the eastern façade below the rail line. The remainder of the northern and southern facades and the western facades would require a 31 dB(A) window/wall attenuation below the rail line. All facades above the elevate rail line would require a 31 dB(A) window/wall attenuation. See **Figure 19-2** below for the attenuation requirements.

With these levels of attenuation there would be no potential for adverse impacts related to ambient noise.

An E-Designation (E-662), will be placed on the project site assure that there is no potential for adverse impacts related to noise. The E-Designation is as follows:

Projected Development Site 1: Block 6680 / Lot 39, 42: In order to ensure an acceptable interior noise environment future residential/community facility uses must provide a closed window condition with a minimum of 35 dBA window/wall attenuation on the facades facing McDonald Avenue for floors below the rail line and the facades facing Kings Highway within 50 feet of McDonald Avenue for floors below the rail line and the facades facing Avenue S within 50 feet of McDonald Avenue for floors below the rail line and 31 dBA of attenuation on all remaining facades below and above the rail line in order to maintain an interior noise level not greater than 45 dBA for residential and community facility uses as illustrated in the EAS. In order to maintain a closed window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, central air conditioning.

Projected Development Site 2: Block 7087 / Lot 1: In order to ensure an acceptable interior noise environment, future residential/commercial office uses must provide a closed window condition with a minimum of 35 dBA window/wall attenuation on the facades facing McDonald Avenue for floors below the rail line and the facades facing Avenue S within 50 feet of McDonald Avenue for floors below the rail line and the facades facing Avenue T within 50 feet of McDonald Avenue for floors below the rail line and 31 dBA of attenuation on all remaining facades below and above the rail line in order to maintain an interior noise level not greater than 45 dBA for residential uses or not greater than 50 dBA for commercial office uses as illustrated in the EAS. In order to maintain a closed window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, central air conditioning.

Figure 19-2: Attenuation Requirements



Above attenuation requirements are for residential and community facility uses. Commercial office uses would require attenuation 5 dBA less

Appendix A

Dept. of Environmental Protection Correspondence

Vincent Sapienza, P.E.
Commissioner

Angela Licata
Deputy Commissioner of Sustainability

59-17 Junction Blvd.
Flushing, NY 11373

Tel. (718) 595-4398
Fax (718) 595-4422
alicata@dep.nyc.gov

April 1, 2021

Rachel Antelmi
Project Manager
Environmental Assessment and Review Division
New York City Department of City Planning
120 Broadway, 31st Floor
New York, NY 10271

Re: 2080 McDonald Avenue
Block 6680, Lots 39 and 42, and Block 7087, Lots 1 and 5
CEQR # 21DCP132K

Dear Ms. Antelmi:

The New York City Department of Environmental Protection, Bureau of Sustainability (DEP) has reviewed the February 2021 Remedial Action Plan (RAP) and Construction Health and Safety Plan (CHASP) prepared by Environmental Studies Corporation on behalf of 2080 McDonald LLC (applicant) for the above referenced project. It is our understanding that the applicant is seeking a zoning map amendment and a zoning text amendment from the New York City Department of City Planning (DCP) to facilitate the construction of a new mixed-use building on the applicant-controlled Block 6680, Lots 39 and 42, containing 122 dwelling units, 19,643 gross square feet (gsf) of commercial space, and 3,140 gsf of community facility space. The proposed building would include accessory parking spaces in the cellar. The applicant is proposing a zoning map amendment to the New York City Zoning Map, Section 28c, to rezone portions of two blocks with frontage on McDonald Avenue in the Gravesend Section of Brooklyn Community District 11. The proposed zoning would replace the existing R5B and M1-1 zoning districts with a C4-4L district. The Project Area is made of up four tax lots: Block 6680, Lots 39 and 42, and Block 7087, Lots 1 and 5; with the applicant controlling the affected lots on Block 6680. The applicant is also proposing a zoning text amendment to Appendix F, Inclusionary Housing Designated Area, to establish a Mandatory Inclusionary Housing (MIH) area coterminous with the Project Area. Of the 122 dwelling units, 30 percent, or 37 units, would be affordable under MIH. An additional site not controlled by the applicant, Projected Development Site 2 (Block 7087, Lot 1) is projected for redevelopment with an 80,356 gsf building, containing 63,944 gsf of residential area and 16,412 gsf of commercial area. Block 7078, Lot 5 is not anticipated to be redeveloped in the future with the proposed action.

The February 2021 RAP proposes the excavation, transportation and off-site disposal of soil in accordance with applicable laws and regulations; removal of underground storage tanks, if encountered in compliance with applicable local, State and Federal laws and regulations; if dewatering into New York City

sewer drains is anticipated during the proposed construction, a New York City Department of Environmental Protection Sewer Discharge Permit will be obtained; stockpiled soil will be covered properly anchored tarps; dust control; air monitoring; installation of a vapor barrier system consisting of 20-mil Stego Wrap below the slab throughout the full building area and outside all sub-grade foundation and elevator pit sidewalls; ventilation of the below-grade level (cellar) of the building as per the New York City Mechanical Code; and installation of 2 feet of imported certified clean soil in landscaped areas. The February 2021 CHASP addresses worker and community health and safety during construction.

Based upon our review of the submitted documentation, we have the following comments and recommendations to DCP:

Projected Development Site 1: Block 6680, Lots 39 and 42 (Site under the control or ownership of the applicant)

- DEP finds the February 2021 RAP and CHASP for the proposed project acceptable. DCP should instruct the applicant that at the completion of the project, a Professional Engineer (P.E.) certified Remedial Closure Report should be submitted for DEP review and approval for the proposed project. The P.E. certified Remedial Closure Report should indicate that all remedial requirements have been properly implemented (i.e., transportation/disposal manifests for removal and disposal of soil in accordance with applicable federal, state and local laws and regulations; installation of vapor barrier; installation of below-gravel level (cellar) ventilation system in conformance with the New York City Mechanical Code; two feet of DEP approved certified clean fill/top soil capping requirement in any landscaped/grass covered areas not capped with concrete/asphalt, etc.).

- DCP should instruct the applicant that as per DEP's February 12, 2021 comments, the Environmental Assessment Statement (EAS) should summarize the Phase II, RAP, and CHASP for the applicant's site. Since testing during the CEQR process has been conducted on the applicant's site, statements such as "sampling and testing cannot occur on the applicant owned sites", "no further analysis has been conducted", etc. should be revised as appropriate.

Projected Development Site 2: Block 7087, Lot 1 (Site not under the control or ownership of the applicant)

- DCP should instruct the applicant that as per DEP's February 12, 2021 comments, DEP recommends that an (E) Designation for hazardous materials should be placed on the zoning map pursuant to Section 11-15 of the New York City Zoning Resolution for the subject property. The (E) Designation will ensure that testing and mitigation will be provided as necessary before any future development and/or soil disturbance. Further hazardous materials assessments should be coordinated through the Mayor's Office of Environmental Remediation. The EAS should clarify the proposed placement of an (E) Designation for Projected Development Site 2.

Future correspondence and submittals related to this project should include the following CEQR **# 21DCP132K.** If you have any questions, you may contact Mohammad Khaja-Moinuddin at (718) 595-4445.

Sincerely,

Wei Yu
Deputy Director, Hazardous Materials

c: R. Weissbard
M. Khaja-Moinuddin
T. Estesen
M. Wimbish
R. Lucas
O. Abinader - DCP

Appendix B

Transportation Tables

Table 1 : Transportation Planning Factors

2080 McDonald Avenue, Brooklyn NY

Weekday

Land Use:	Local Retail	Medical Office	Residential	Local Retail	Day Care
	Space-sq.ft.	Space-sq.ft.	d.u.	Space-sq.ft.	Space-sq.ft.
Size/Units:	-13,280	-16,378	186	36,046	3,140
	(1)	**(2)**	**(1)**	**(1)**	**(3)**
Trip Generation:					
Weekday	205	103.4	8.075	205	33
	per 1,000 sc	per 1,000 sq.ft	per d.u.	per 1,000 sq	per 1,000 sq.ft.
Linked-Trip:	25%	0%	0%	25%	0%
Temporal Distribution:	**(1)**	**(2)**	**(1)**	**(1)**	**(3)**
AM Peak Hour	3%	10%	10%	3%	16%
MD Peak Hour	19%	13%	5%	19%	5%
PM Peak Hour	10%	9%	11%	10%	19%
	(2)	**(2)**	**(4)**	**(2)**	**(3)**
Modal Split :	All Periods	All Periods	All Periods	All Periods	All Periods
Auto	11%	24%	28%	11%	5%
Taxi	0%	6%	0%	0%	1%
Subway	3%	59%	52%	3%	3%
Bus	2%	9%	4%	2%	6%
Walk & Other	84%	1%	16%	84%	85%
Total	100%	100%	100%	100%	100%
	(3)	(2)	(3)	(3)	(3)
In/Out Splits:	In/Out	In/Out	In/Out	In/Out	In/Out
AM Peak Hour	50/50	89/11	15/85	50/50	53/47
MD Peak Hour	50/50	51/49	50/50	50/50	50/50
PM Peak Hour	50/50	48/52	70/30	50/50	47/53
Vehicle Occupancy:	(2)	(2)	**(4)**	(2)	(3)
Auto	1.5	1.5	1.13	1.5	1.65
Taxi	1.5	1.5	1.40	1.5	1.4
Truck Trip Generation:	**(1)**	**(1)**	**(1)**	**(1)**	**(1)**
Weekday	0.35	0.32	0.06	0.35	0.07
	per 1,000 s.f	per 1,000 s.f.	per d.u.	per 1,000 s.f.	per 1,000 s.f.
	(1)	**(1)**	**(1)**	**(1)**	**(1)**
AM Peak Hour	8%	10%	12%	8%	9.6%
MD Peak Hour	11%	11%	9%	11%	11%
PM Peak Hour	2%	2%	2%	2%	1%
AM/MD/PM	50/50	50/50	50/50	50/50	50/50

Sources:

(1)-2020 CEQR Technical Manual, Table 16-2.

(2)-NYCDOT

(3)-East New York FEIS.

(4)-2012-2016 American Community Survey (ACS)- Journey-to-Work (JTW) Census Tract #'s 410, 412, 414.01, 422 and 424 in Brooklyn N.Y.

Table 2 : Estimated Person Trips

2080 McDonald Avenue, Brooklyn NY

Weekday

Land Use:	Local Retail Space-sq.ft.	Medical Office Space-sq.ft.	Residential d.u.	Local Retail Space-sq.ft.	Medical Office Space-sq.ft.	Total Net Demand	subway bus walk Pedestrian volumes
Size/Units:	-13,280	-16,378	186	36,046	3,140		
Peak hour Trips							
AM Peak Hour	-61	-169	150	166	17	103	
Midday Peak Hour	-388	-220	75	1053	5	525	
PM Peak Hour	-204	-152	165	554	20	383	
Person Trips:							
AM Peak Hour							
Auto	-7	-41	42	18	1	13	
Taxi	0	-10	0	0	0	-10	
Subway	-2	-100	78	5	1	-18	-18
Bus	-1	-16	6	3	1	-7	-7
Walk & Other	-51	-2	24	140	14	125	125
Total	-61	-169	150	166	17	103	100
Midday Peak Hour							
Auto	-43	-53	21	116	1	42	
Taxi	0	-13	0	0	0	-13	
Subway	-12	-130	39	32	0	-71	-71
Bus	-8	-21	3	21	0	-5	0
Walk & Other	-326	-2	12	884	4	572	572
Total	-388	-220	75	1053	5	525	501
PM Peak Hour							
Auto	-22	-36	46	61	1	50	
Taxi	0	-9	0	0	0	-9	
Subway	-6	-90	86	17	1	8	8
Bus	-4	-14	7	11	1	1	1
Walk & Other	-172	-2	26	465	17	334	334
Total	-204	-152	165	554	20	383	343

Table 3 : Estimated Vehicular Trips

2080 McDonald Avenue, Brooklyn NY

Weekday

Use	Local Retail	Medical Office	Residential	Local Retail	Medical Office	Total Net
	Space-sq.ft.	Space-sq.ft.	d.u.	Space-sq.ft.	Space-sq.ft.	Demand
Size/Units:	-13,280	-16,378	186	36,046	3,140	
Vehicular Trips						
AM Peak Hour						
Auto (Total)	-5	-27	37	12	1/1	17
Taxi	0	-7	0	0	0	-7
Taxi (Balanced)	0	-14	0	0	0	-14
Truck	0	-1	2	1	0	2
Truck(Balanced)	0	-2	2	2	0	2
Total	-5	-43	39	14	2	7
Midday Peak Hour						
Auto (Total)	-29	-35	19	77	1/1	32
Taxi	0	-9	0	0	0	-9
Taxi (Balanced)	0	-18	0	0	0	-18
Truck	-1	-1	1	2	0	1
Truck(Balanced)	-2	-2	2	2	0	2
Total	-31	-55	21	79	2	16
PM Peak Hour						
Auto (Total)	-15	-24	41	41	1/1	43
Taxi	0	-6	0	0	0	-6
Taxi (Balanced)	0	-12	0	0	0	-12
Truck	0	0	0	0	0	0
Truck(Balanced)	0	0	0	0	0	0
Total	-15	-36	41	41	2	33

Table 4 : Transportation Planning Factors

2080 McDonald Avenue, Brooklyn NY

Saturday

Land Use:	Local Retail	Medical Office	Residential	Local Retail	Day Care
	Space-sq.ft.	Space-sq.ft.	d.u.	Space-sq.ft.	Space-sq.ft.
Size/Units:	-13,280	-16,278	186	36,046	3,140
	(1)	**(2)**	**(1)**	**(1)**	**(3)**
Trip Generation:					
Saturday	240	62.1	9.6	240	2
	per 1,000 sq.f	per 1,000 sq.f	per d.u.	per 1,000 sq.f	per 1,000 sq.ft.
Linked-Trip:	25%	0%	0%	25%	0%
Temporal Distribution	**(1)**	**(2)**	**(1)**	**(1)**	**(3)**
Sat.MD Peak Hour	10%	16%	8%	10%	12%
	(2)	**(2)**	**(4)**	**(2)**	**(3)**
Modal Split :	All Periods	All Periods	All Periods	All Periods	All Periods
Auto	11%	24%	28%	11%	5%
Taxi	0%	6%	0%	0%	1%
Subway	3%	59%	52%	3%	3%
Bus	2%	9%	4%	2%	6%
Walk & Other	84%	1%	16%	84%	85%
Total	100%	100%	100%	100%	100%
	(3)	**(2)**	**(4)**	**(2)**	**(3)**
In/Out Splits:	In/Out	In/Out	In/Out	In/Out	In/Out
Sat. MD Peak Hour	55/45	41/59	50/50	55/45	47/53
Vehicle Occupancy:	**(2)**	**(2)**	**(4)**	**(2)**	**(3)**
Auto	1.5	1.5	1.13	1.5	1.65
Taxi	1.5	1.5	1.40	1.5	1.4
Truck Trip Generation	**(1)**	**(1)**	**(1)**	**(1)**	**(1)**
Saturday	0.04	0.01	0.02	0.04	0
	per 1,000 s.f.	per 1,000 s.f.	per d.u.	per 1,000 s.f.	per 1,000 s.f.
	(1)	**(1)**	**(1)**	**(1)**	**(1)**
Sat. MD Peak Hour	11%	11%	9%	11%	0%
Sat. MD Peak Hour	50/50	50/50	50/50	50/50	50/50

Sources:

(1)-2020 CEQR Technical Manual, Table 16-2.

(2)-NYCDOT

(3)-East New York FEIS.

(4)-2012-2016 American Community Survey (ACS)- Journey-to-Work (JTW) Census Tract #'s 410, 412, 414.01, 422 and 424 in Brooklyn N.Y.

Table 5 : Estimated Person Trips

2080 McDonald Avenue, Brooklyn NY

Saturday

Land Use:	Local Retail	Medical Office	Residential	Local Retail	Day Care	Total Net	subway
	Space-sq.ft.	Space-sq.ft.	d.u.	Space-sq.ft.	Space-sq.ft.	Demand	bus
Size/Units:	-13,280	-16,278	186	36,046	3,140		walk
Peak hour Trip							Pedestrian
Saturday MD Peak Hou	-239	-162	143	649	1	392	
Person Trips:							
Saturday MD Peak Hour							
Auto	-26	-39	40	71	0	46	
Taxi	0	-10	0	0	0	-10	
Subway	-7	-96	74	20	0	-9	-9
Bus	-5	-15	6	13	0	-1	-1
Walk & Other	-201	-2	23	545	1	366	366
Total	-239	-162	143	649	1	392	356

Table 6 : Estimated Vehicular Trips

2080 McDonald Avenue, Brooklyn NY

Saturday

Use	Local Retail	Medical Office	Residential	Local Retail	Day Care	Total Net
	Space-sq.ft.	Space-sq.ft.	d.u.	Space-sq.ft.	Space-sq.ft.	Demand
Size/Units:	-13,280	-16,278	214	43,256	3,140	
Vehicular Trips						
PM Peak Hour						
Auto (Total)	-17	-26	35	47	0	39
Taxi	0	-6	0	0	0	-6
Taxi (Balanced)	0	-12	0	0	0	-12
Truck	0	0	0	0	0	0
Truck(Balanced)	0	0	0	0	0	0
Total	-17	-38	35	47	0	27

Exhibit A

Modal Split Information

2013-2017 ACS 5-YEAR Journey-to-Work (JTW) for tract numbers 410, 412, 414.01, 422 and 424 in Brooklyn

2080 McDonald Avenue, Brooklyn NY

2013-2017 ACS 5-Year, Journey-to-Work:

Census Tract	Total Workers	Car or Van Drive-Alone	Car Pool	Bus	Street Car	Subway	R.R.	Ferry	Taxi	Motor cycle	Bi cycle	Walk	Other Means	Worked @ Home	Total
410	**662**	**179**	**18**	**33**	**0**	**245**	**7**	**0**	**0**	**0**	**0**	**103**	**7**	**70**	662
412	**1462**	**169**	**140**	**25**	**0**	**834**	**12**	**0**	**0**	**22**	**55**	**61**	**0**	**144**	1,462
414.01	**635**	**253**	**30**	**13**	**0**	**277**	**22**	**0**	**0**	**0**	**0**	**40**	**0**	**0**	635
422	**1520**	**377**	**42**	**96**	**0**	**647**	**19**	**0**	**0**	**0**	**8**	**219**	**0**	**112**	1,520
424	**1885**	**403**	**104**	**83**	**0**	**1147**	**0**	**0**	**0**	**0**	**27**	**83**	**0**	**38**	1,885
Total	6,164	1,381	334	250	0	3,150	60	0	0	22	90	506	7	364	6,164
		0.224	***###***	***###***	***0.00***	***0.511***	***###***	***0.00***	***0.00***	***0.00***	***0.01***	***###***	***0.00***	***0.059***	***1.00***

Modal Split summary

Auto	**0.28**
Taxi	**0.00**
Bus	**0.04**
Subway	**0.52**
Walk	**0.08**
Other	**0.08**
Total	**1.00**

Exhibit B

Vehicle Occupancy Information

2013-2017 ACS 5-YEAR Journey-to-Work (JTW) for tract numbers 410, 412, 414.01, 422 and 424 in Brooklyn

2013-2017 ACS-5 Year, Vehicle Occupancy Rate:

Census Tract	Total	Drove alone	Total	2person carpool	3 Person carpool	4 Person carpool	5 or 6 Person carpool	7 or more Person carpool	Total
410	197	179	18	13	5	0	0	0	18
412	309	169	140	90	31	19	0	0	140
414.01	283	253	30	13	6	11	0	0	30
422	419	377	42	0	34	0	0	8	42
424	507	403	104	80	0	15	9	0	104
	1,715	1,381	334	196	76	45	9	8	334
		1,381		98	25	11	2	1	1,519

Vehicle Occupancy = **1.13**

APPENDIX C

LPC Correspondence

Landmarks Preservation Commission

1 Centre Street
9th Floor North
New York, NY 10007

Voice (212)-669-7700
Fax (212)-669-7960
http://nyc.gov/landmarks

ENVIRONMENTAL REVIEW

Project number: DEPARTMENT OF CITY PLANNING / 77DCP487K
Project: 2080_MCDONALD
Date Received: 1/13/2021

Properties with no Architectural or Archaeological significance:

1) 2074 MCDONALD AVENUE, BBL: 3066800039
2) 2080 MCDONALD AVENUE, BBL: 3066800042
3) 121 LAKE STREET, BBL: 3070870001
4) LAKE STREET, BBL: 3070870005

Comments:

LPC DESIGNATED AND S/NR LISTED HUBBARD HOUSE, 2138 MCDONALD AVENUE WITHIN RADIUS

Gina Santucci 1/20/2021

SIGNATURE DATE
Gina Santucci, Environmental Review Coordinator

File Name: 35387_FSO_DNP_01202021.docx

Appendix D

Noise Appendix

Noise Job Field Sheet

Name of Project: 2080 McDonald Avenue 2021020

Project Address: 2080 McDonald Avenue Brooklyn, NY

Date(s) of Field Work: 4/6/21

Personnel: Amber Kartalyan & Nigel Grembowski

Project Specific Scope of Work:

2 x 1-hour locations AM, Midday, PM ground level
1 x 1-hour location AM, Midday, PM Rooftop
Rooftop location needs to be supported on the ladder at and equal height of the rail line
Pack rope/bungee cords to secure meter to ladder

Site Contact – Steve Dweck 212-575-2442 x205

I. Start of Noise Monitoring Day

Arrival Time: 7 am

Weather Conditions (temp, wind speed, precipitation): 47 to 66 degrees. Mild wind. No precipitation.

Meter Type: Casella CEL. Meter Serial #: 5086866 Meter Location: 1
Meter Type: Casella CEL. Meter Serial #: 2670911 Meter Location: 2
Meter Type: Casella CEL. Meter Serial #: 1274486 Meter Location: 3
*If more locations are needed for a project use a second Field Sheet

Calibrator Serial #: 4478708 Meters used on: 2670911
Calibrator Serial #: 357424 Meters used on: 5086866
Calibrator Serial #: 2383985 Meters used on: 1274486
Were Photos Taken of Each Location? Yes

**On a separate sheet of paper (field book) make a sketch of the noise meter locations and the distances to nearest wall, fence, building, or other solid surfaces.*

II. Morning Session 7:30 AM – 9:00 AM

Before Measurement:

Meter Serial #: 2670911 Time: 7:38 am Calibration Passed at 114 dB? Y
Meter Serial #: 5086866 Time: 7:55 am Calibration Passed at 114 dB? Y
Meter Serial #: 1274486 Time: 7:57 am. Calibration Passed at 114 dB? Y

After Measurement:

Meter Serial #: 5086866. Time: 9:12 am Calibration Passed at 114 dB? Y
Meter Serial #: 1274486 Time: 9:10 am Calibration Passed at 114 dB? Y

Location #	Start Time	End Time
1	7:59 AM	9:00 AM
2	7:46 AM	
3	7:58 AM	8:58 AM

Location #	Car	SUV	Medium Truck	Heavy Truck	Bus	Train
1	193	375	29	25	11	15
3	104	244	5	5	9	15

Noise Source: please note any loud noises here and time (sirens, garbage truck, etc):

**Please place noise meters in their respective cases between sessions to avoid damage.*

III. Midday Session 12:00 PM – 1:30 PM

Before Measurement:

Meter Serial #: 1274486 Time: 12:26 pm Calibration Passed at 114 dB? Y
Meter Serial #: 5086866 Time: 12:22 pm Calibration Passed at 114 dB? Y

After Measurement:

Meter Serial #: 5086866 Time: 1:27 pm Calibration Passed at 114 dB? Y
Meter Serial #: 1274486 Time: 1:30 pm Calibration Passed at 114 dB? Y

Location #	Start Time	End Time
1	12:24 pm	1:24 pm
3	12:26 pm	1:26 pm

Location #	Car	SUV	Medium Truck	Heavy Truck	Bus	Train
1	150	269	12	15	7	16
3	155	298	11	10	4	16

Noise Source: please note any loud noises here and time (sirens, garbage truck, etc):

**Please place noise meters in their respective cases between sessions to avoid damage.*

IV. Evening Session 4:30 PM – 6:00 PM

Before Measurement:

Meter Serial #: 5086866 Time: 4:41 pm Calibration Passed at 114 dB? Y
Meter Serial #: 1274486 Time: 4:37 pm Calibration Passed at 114 dB? Y

After Measurement:

Meter Serial #: 5086866 Time: 5:56 pm Calibration Passed at 114 dB? Y
Meter Serial #: 1274486 Time: 5:39 pm Calibration Passed at 114 dB? Y
Meter Serial #: 2670911 Time: 6:02 pm Calibration Passed at 114 dB? Y

Location #	Start Time	End Time
1	4:44 pm	5:54 pm
2		5:46 pm
3	4:39 pm	5:39 pm

Location #	Car	SUV	Medium Truck	Heavy Truck	Bus	Train
1	230	416	6	4	5	16
3	164	304	4	1	7	16

Noise Source: please note any loud noises here and time (sirens, garbage truck, etc):

**Please place noise meters in their respective cases between sessions to avoid damage.*

V. End of Noise Monitoring Day

- Please return all noise meters to their cases.
- Do not return dead batteries to the cases, throw them out.
- Did you take photos? Y
- Did you complete the site sketch? Y / N
- If a meter(s) was rented, please scan in calibration documents.

Anything of note/concern for the day: _____

Departure time: 6:40 pm

Noise Job Field Sheet

Name of Project: 2080 McDonald Avenue 2021020

Project Address: 2080 McDonald Avenue Brooklyn, NY

Date(s) of Field Work: ~~3/24/21~~ 12/8/21

Personnel: ~~Amber Kartalyan & Nigel Grembowski~~ IU, VM

Project Specific Scope of Work:

2 x 1-hour locations AM, Midday, PM ground level
1 x 1-hour location AM, Midday, PM Rooftop
Rooftop location needs to be supported on the ladder at and equal height of the rail line
Pack rope/bungee cords to secure meter to ladder

Site Contact – Steve Dweck 212-575-2442 x205

I. Start of Noise Monitoring Day

Departure Time: 5:30 Arrival Time: 7:30

Weather Conditions (temp, wind speed, precipitation): _____

Meter Type: Cesella Meter Serial #: 508866 Meter Location: 2 (rooftop)
Meter Type: _____ Meter Serial #: _____ Meter Location: _____
Meter Type: _____ Meter Serial #: _____ Meter Location: _____
*If more locations are needed for a project use a second Field Sheet

Calibrator Serial #: 2383985 Meters used on: 508866
Calibrator Serial #: _____ Meters used on: _____
Calibrator Serial #: _____ Meters used on: _____
Were Photos Taken of Each Location? (Y) N *Discuss specific photo instructions w/ Project Manager

**On a separate sheet of paper (field book) make a sketch of the noise meter locations and the distances to nearest wall, fence, building, or other solid surfaces.*

II. Morning Session 7:30 AM – 9:00 AM

Before Measurement:

Meter Serial #: 5086866 Time: 7:36 Calibration Passed at 114 dB? (Y) / N
Meter Serial #: _____ Time: _____ Calibration Passed at 114 dB? Y / N
Meter Serial #: _____ Time: _____ Calibration Passed at 114 dB? Y / N

After Measurement:

Meter Serial #: 5086866 Time: 9:08 Calibration Passed at 114 dB? (Y) / N
Meter Serial #: _____ Time: _____ Calibration Passed at 114 dB? Y / N
Meter Serial #: _____ Time: _____ Calibration Passed at 114 dB? Y / N

*If more locations are needed for a project use a second Field Sheet

Location #	Start Time	End Time
2 (rooftop)	7:56	8:56

*If more locations are needed for a project use a second Field Sheet

Location #	Car	SUV	Medium Truck	Heavy Truck	Bus	Train
2 (rooftop)	—	—	—	—	—	14

*If more locations are needed for a project use a second Field Sheet

Noise Source: please note any loud noises here and time (sirens, garbage truck, etc):

_____

_____

_____

**Please place noise meters in their respective cases between sessions to avoid damage.*

III. Midday Session 12:00 PM – 1:30 PM N/A

Before Measurement:

Meter Serial #: _____ Time: _____ Calibration Passed at 114 dB? Y / N
Meter Serial #: _____ Time: _____ Calibration Passed at 114 dB? Y / N
Meter Serial #: _____ Time: _____ Calibration Passed at 114 dB? Y / N

After Measurement:

Meter Serial #: _____ Time: _____ Calibration Passed at 114 dB? Y / N
Meter Serial #: _____ Time: _____ Calibration Passed at 114 dB? Y / N
Meter Serial #: _____ Time: _____ Calibration Passed at 114 dB? Y / N
*If more locations are needed for a project use a second Field Sheet

Location #	Start Time	End Time

*If more locations are needed for a project use a second Field Sheet

Location #	Car	SUV	Medium Truck	Heavy Truck	Bus	Train

*If more locations are needed for a project use a second Field Sheet

Noise Source: please note any loud noises here and time (sirens, garbage truck, etc):

_____

_____

_____

**Please place noise meters in their respective cases between sessions to avoid damage.*

IV. Evening Session 4:30 PM – 6:00 PM

N/A

Before Measurement:

Meter Serial #: _____ Time: _____ Calibration Passed at 114 dB? Y / N
Meter Serial #: _____ Time: _____ Calibration Passed at 114 dB? Y / N
Meter Serial #: _____ Time: _____ Calibration Passed at 114 dB? Y / N

After Measurement:

Meter Serial #: _____ Time: _____ Calibration Passed at 114 dB? Y / N
Meter Serial #: _____ Time: _____ Calibration Passed at 114 dB? Y / N
Meter Serial #: _____ Time: _____ Calibration Passed at 114 dB? Y / N
*If more locations are needed for a project use a second Field Sheet

Location #	Start Time	End Time

*If more locations are needed for a project use a second Field Sheet

Location #	Car	SUV	Medium Truck	Heavy Truck	Bus	Train

*If more locations are needed for a project use a second Field Sheet

Noise Source: please note any loud noises here and time (sirens, garbage truck, etc):

_____

_____

_____

**Please place noise meters in their respective cases between sessions to avoid damage.*

V. End of Noise Monitoring Day

- Please return all noise meters to their cases.
- Do not return dead batteries to the cases, throw them out.
- Did you take photos? Y / N
- Did you complete the site sketch? Y / N
- If a meter(s) was rented, please scan in calibration documents.

Anything of note/concern for the day: _____

_____

_____

Departure Time: 9:30 Arrival Time: 11:30

Total Time to Be Billed: 6

Certificate of Conformity and Calibration



Instrument Model:-	**CEL-633C**		
Serial Number	1274486		
Firmware revision	V006-03		
Microphone Type:-	**CEL-251**	**Preamplifier Type:-**	**CEL-495**
Serial Number	4372	Serial Number	005389
Instrument Class/Type:-	1		

Applicable standards:-

IEC 61672: 2002 / EN 60651 (Electroacoustics - Sound Level Meters)
IEC 60651 1979 (Sound Level Meters), ANSI S1.4: 1983 (Specifications For Sound Level Meters)

Note:- The test sequences performed in this report are in accordance with the current Sound level meter *Standard - IEC61672. The combination of tests performed are considered to confirm the products electro-acoustic performance to all applicable standards including superceeded Sound Level Meter Standards - IEC60651 and IEC60804.*

Test Conditions:-	22.8 °C	**Test Engineer:-**	Stephen Adams
	51 %RH	**Date of Issue:-**	September 22, 2020
	1001.4 mBar		

Declaration of conformity:-

This test certificate confirms that the instrument specified above has been successfully tested to comply with the manufacturer's published specifications. Tests are performed using equipment traceable to national standards in accordance with Casella's ISO 9001:2008 quality procedures. This product is certified as being compliant to the requirements of the CE Directive.

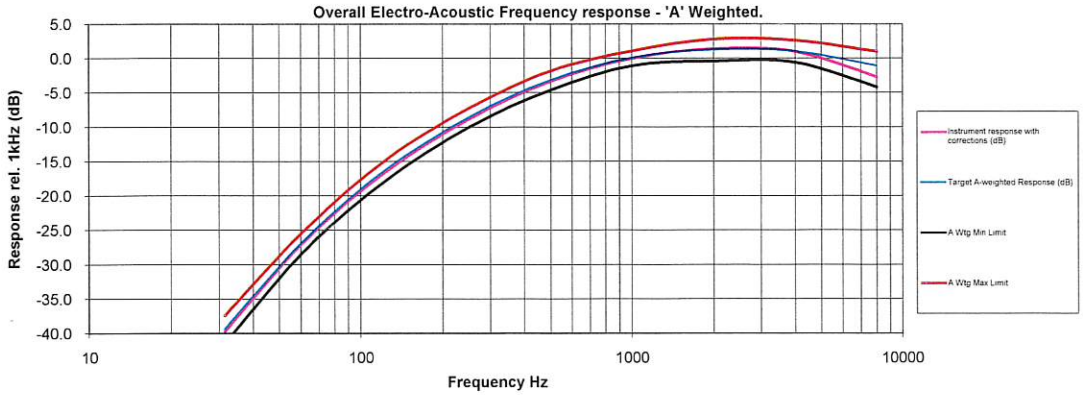
Test Summary:-

Self Generated Noise Test	**All Tests Pass**
Electrical Signal Test Of Frequency Weightings	**All Tests Pass**
Frequency & Time Weightings At 1 kHz	**All Tests Pass**
Level Linearity On The Reference Level Range	**All Tests Pass**
Toneburst Response Test	**All Tests Pass**
C-peak Sound Levels	**All Tests Pass**
Overload Indication	**All Tests Pass**
Acoustic Tests	**All Tests Pass**

Combined Electro-Acoustic Frequency Response - A Weighted

Combined Electro-Acoustic Frequency Response - A Weighted (IEC 61672-3:2006)

The following A-Weighted frequency response graph shows this instruments overall frequency response based upon the application of multi-frequency pressure field calibrations. The microphones Pressure to Free field correction coefficients are applied to pressure response. Reference level taken at 1kHz.



Casella UK
Regent House, Wolseley Road, Kempston, Bedford MK42 7JY United Kingdom
Tel: +44 (0) 1234 844100
Fax: +44(0) 1234 841490
E-mail: info@casellasolutions.com

Casella USA
415 Lawrence Bell Drive, Unit 4 Buffalo, NY 14221. USA
Toll Free (800) 366-2966
Tel: +1 (716) 276 3040
E-mail: info@casellausa.com

Casella India
Ideal Industries India Pvt.Ltd.
229-230, Spazedge, Tower -B Sohna Road, Sector-47, Gurgaon-122001, Haryana , India.
Tel: +91 124 4495100
E-mail: casella.sales@ideal-industries.in

Casella China
Ideal Industries China
Room 305, Building 1, No.1279, Chuanqiao Rd, Pudong New District, Shanghai, China
Tel: +86-21-31263188
Fax: +86-21-61605906
Email: info@casellasolutions.cn

Casella Australia
Ideal Industries (Aust) PTY. LTD
Unit 17, 35 Dunlop Rd, Mulgrave. Vic. 3170, Australia.
Email: australia@casellasolutions.com

Tested to CEL-63X test sheet TP444 revision 01-00

Certificate of Conformity and Calibration



Instrument Model:- CEL-633C

Serial Number 4278006
Firmware revision V006-03

Microphone Type:- CEL-251
Serial Number 3796

Preamplifier Type:- CEL-495
Serial Number 004208

Instrument Class/Type:- 1

Applicable standards:-

IEC 61672: 2002 / EN 60651 (Electroacoustics - Sound Level Meters)
IEC 60651 1979 (Sound Level Meters), ANSI S1.4: 1983 (Specifications For Sound Level Meters)

Note:- The test sequences performed in this report are in accordance with the current Sound level meter *Standard - IEC61672. The combination of tests performed are considered to confirm the products electro-acoustic performance to all applicable standards including superceeded Sound Level Meter Standards - IEC60651 and IEC60804.*

Test Conditions:- 22.7 °C, 51.3 %RH, 1000.9 mBar

Test Engineer:- Stephen Adams
Date of Issue:- September 22, 2020

Declaration of conformity:-

This test certificate confirms that the instrument specified above has been successfully tested to comply with the manufacturer's published specifications. Tests are performed using equipment traceable to national standards in accordance with Casella's ISO 9001:2008 quality procedures. This product is certified as being compliant to the requirements of the CE Directive.

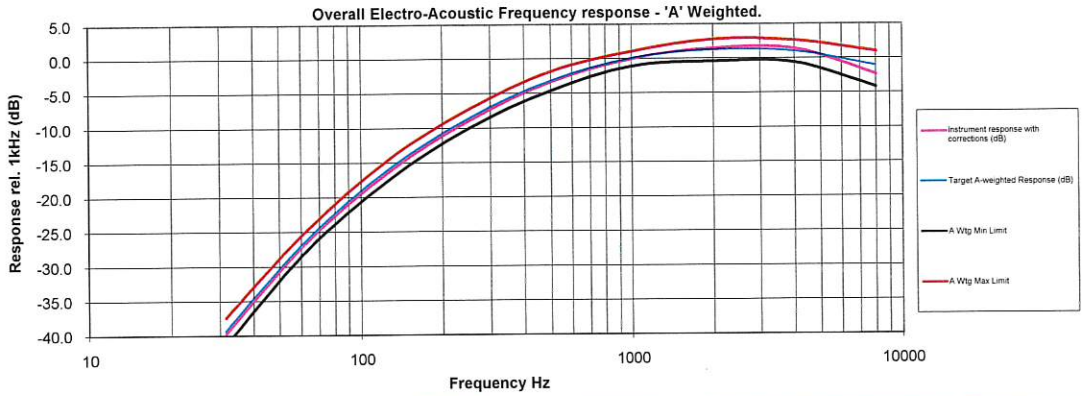
Test Summary:-

Self Generated Noise Test	**All Tests Pass**
Electrical Signal Test Of Frequency Weightings	**All Tests Pass**
Frequency & Time Weightings At 1 kHz	**All Tests Pass**
Level Linearity On The Reference Level Range	**All Tests Pass**
Toneburst Response Test	**All Tests Pass**
C-peak Sound Levels	**All Tests Pass**
Overload Indication	**All Tests Pass**
Acoustic Tests	**All Tests Pass**

Combined Electro-Acoustic Frequency Response - A Weighted

Combined Electro-Acoustic Frequency Response - A Weighted (IEC 61672-3:2006)

The following A-Weighted frequency response graph shows this instruments overall frequency response based upon the application of multi-frequency pressure field calibrations. The microphones Pressure to Free field correction coefficients are applied to pressure response. Reference level taken at 1kHz.



Casella UK
Regent House, Wolseley Road, Kempston, Bedford MK42 7JY United Kingdom
Tel: +44 (0) 1234 844100
Fax: +44(0) 1234 841490
E-mail: info@casellasolutions.com

Casella USA
415 Lawrence Bell Drive, Unit 4 Buffalo, NY 14221, USA
Toll Free (800) 366-2966
Tel: +1 (716) 276 3040
E-mail: info@casellausa.com

Casella India
Ideal Industries India Pvt.Ltd. 229-230, Spazedge, Tower -B Sohna Road, Sector-47, Gurgaon-122001, Haryana , India.
Tel. +91 124 4495100
E-mail: casella.sales@ideal-industries.in

Casella China
Ideal Industries China Room 305, Building 1, No.1279, Chuanqiao Rd, Pudong New District, Shanghai, China
Tel: +86-21-31263188
Fax: +86-21-61605906
Email: info@casellasolutions.cn

Casella Australia
Ideal Industries (Aust) PTY. LTD Unit 17, 35 Dunlop Rd, Mulgrave. Vic. 3170, Australia.
Email: australia@casellasolutions.com

Tested to CEL-63X test sheet TP444 revision 01-00

Certificate of Conformity and Calibration



Instrument Model:-	**CEL-633C**		
Serial Number	5086866		
Firmware revision	V006-03		
Microphone Type:-	**CEL-251**	**Preamplifier Type:-**	**CEL-495**
Serial Number	3700	Serial Number	003409
Instrument Class/Type:-	**1**		

Applicable standards:-

IEC 61672: 2002 / EN 60651 (Electroacoustics - Sound Level Meters)
IEC 60651 1979 (Sound Level Meters), ANSI S1.4: 1983 (Specifications For Sound Level Meters)

Note:- The test sequences performed in this report are in accordance with the current Sound level meter *Standard - IEC61672. The combination of tests performed are considered to confirm the products electro-acoustic performance to all applicable standards including superceeded Sound Level Meter Standards - IEC60651 and IEC60804.*

Test Conditions:-	22.7 °C	**Test Engineer:-**	Stephen Adams
	51.4 %RH	**Date of Issue:-**	September 22, 2020
	1000.7 mBar		

Declaration of conformity:-

This test certificate confirms that the instrument specified above has been successfully tested to comply with the manufacturer's published specifications. Tests are performed using equipment traceable to national standards in accordance with Casella's ISO 9001:2008 quality procedures. This product is certified as being compliant to the requirements of the CE Directive.

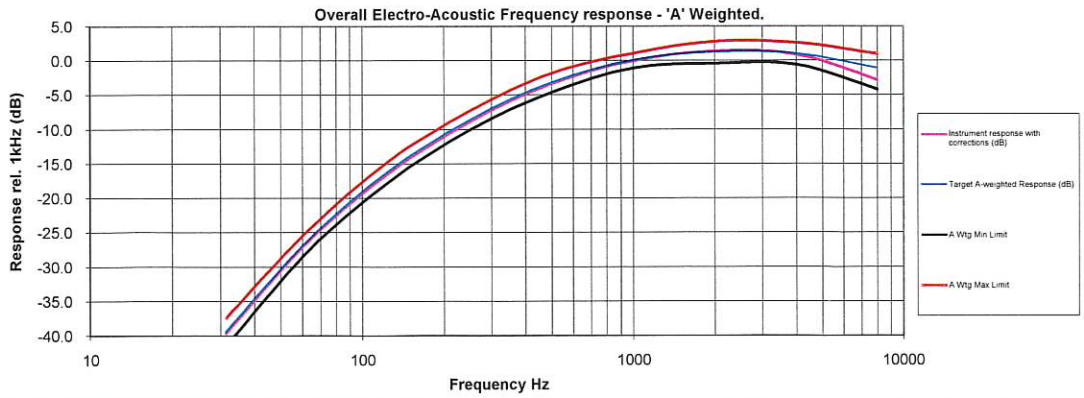
Test Summary:-

Self Generated Noise Test	**All Tests Pass**
Electrical Signal Test Of Frequency Weightings	**All Tests Pass**
Frequency & Time Weightings At 1 kHz	**All Tests Pass**
Level Linearity On The Reference Level Range	**All Tests Pass**
Toneburst Response Test	**All Tests Pass**
C-peak Sound Levels	**All Tests Pass**
Overload Indication	**All Tests Pass**
Acoustic Tests	**All Tests Pass**

Combined Electro-Acoustic Frequency Response - A Weighted

Combined Electro-Acoustic Frequency Response - A Weighted (IEC 61672-3:2006)

The following A-Weighted frequency response graph shows this instruments overall frequency response based upon the application of multi-frequency pressure field calibrations. The microphones Pressure to Free field correction coefficients are applied to pressure response. Reference level taken at 1kHz.



Casella UK
Regent House, Wolseley Road, Kempston, Bedford MK42 7JY United Kingdom
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Tel: +1 (716) 276 3040
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Ideal Industries India Pvt.Ltd. 229-230, Spazedge, Tower -B Sohna Road, Sector-47, Gurgaon-122001, Haryana , India.
Tel: +91 124 4495100
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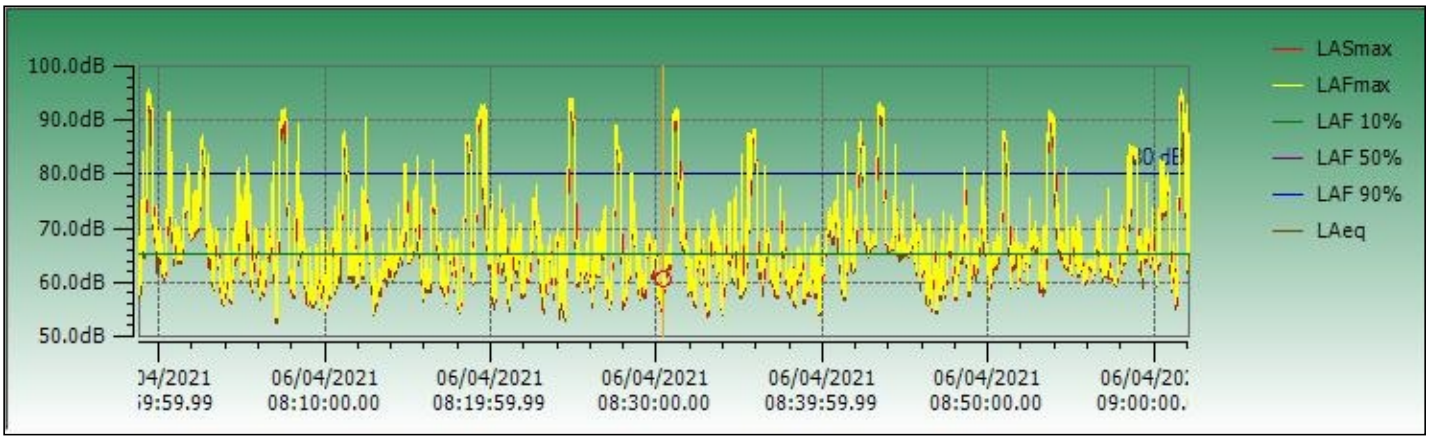
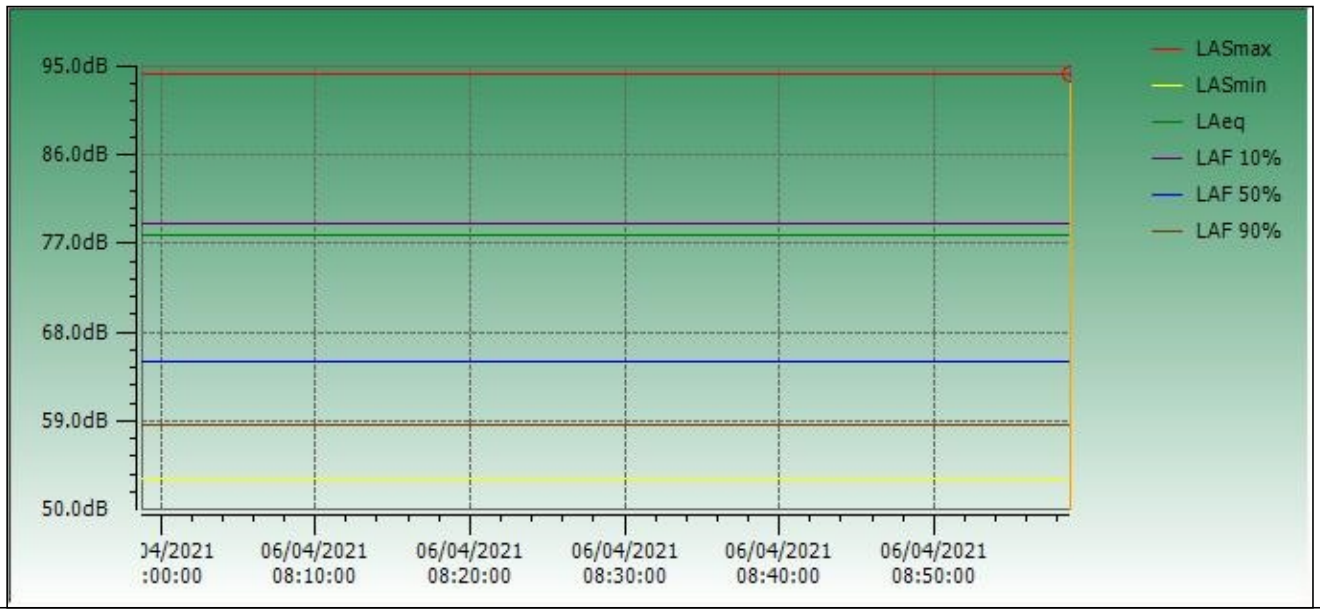
Casella China
Ideal Industries China Room 305, Building 1, No.1279, Chuanqiao Rd, Pudong New District, Shanghai, China
Tel: +86-21-31263188
Fax: +86-21-61605906
Email: info@casellasolutions.cn

Casella Australia
Ideal Industries (Aust) PTY. LTD Unit 17, 35 Dunlop Rd, Mulgrave. Vic. 3170, Australia.
Email: australia@casellasolutions.com

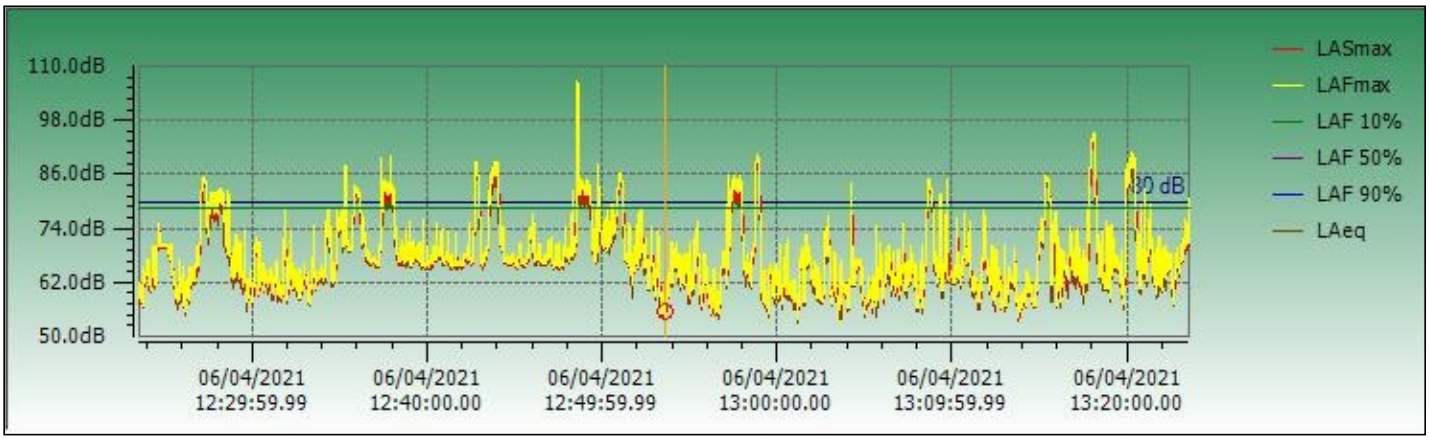
Tested to CEL-63X test sheet TP444 revision 01-00

Instrument Model	CEL-633C			
Serial Number	5086866	LAS 10%	N/A	Result
LASmax	94.2 dB	LAS 50%	N/A	
LASmin	53.2 dB	LAS 90%	N/A	
Start Date & Time	4/6/2021 7:58:49 AM	Calibration (Before) Date	4/6/2021 7:55:13 AM	
Duration	01:03:18 HH:MM:SS	Calibration (After) Date	4/6/2021 9:12:05 AM	
LAeq	78.2 dB	Calibration Drift	-0.1 dB	
End Date & Time	4/6/2021 9:02:07 AM	Battery Low	No	
Notes				

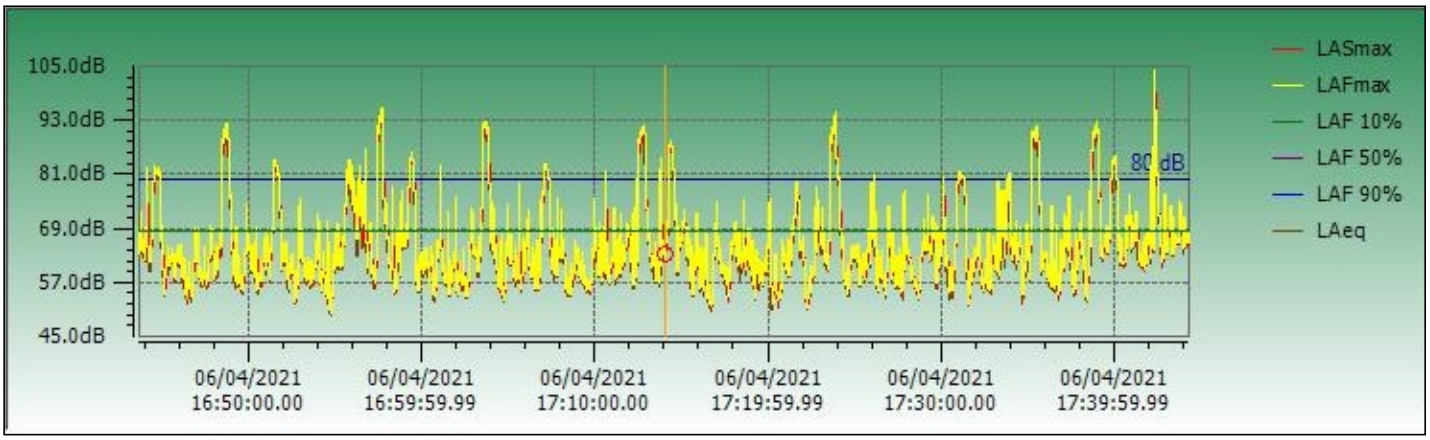




Instrument Model	**CEL-633C**			
Serial Number	5086866	LAS 10%	79 dB	Result
LASmax	104.2 dB	LAS 50%	65.5 dB	
LASmin	53.5 dB	LAS 90%	58.5 dB	
Start Date & Time	4/6/2021 12:23:32 PM	Calibration (Before) Date	4/6/2021 12:21:31 PM	
Duration	01:00:01 HH:MM:SS	Calibration (After) Date	4/6/2021 1:25:39 PM	
LAeq	77.2 dB	Calibration Drift	0.2 dB	
End Date & Time	4/6/2021 1:23:33 PM	Battery Low	No	
Notes				



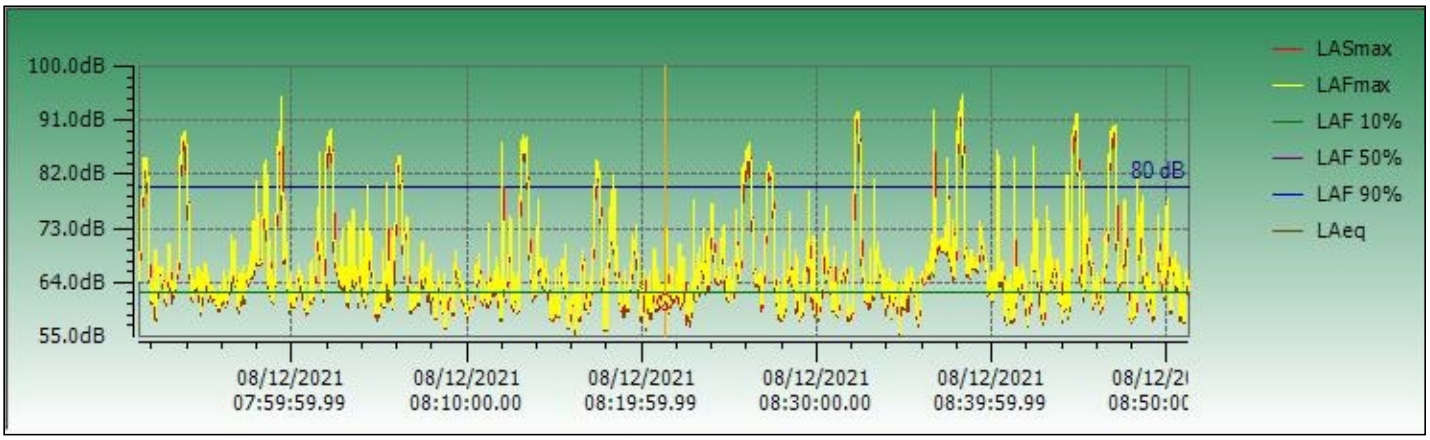
Instrument Model	CEL-633C			
Serial Number	5086866	LAS 10%	77.5 dB	Result
LASmax	101.5 dB	LAS 50%	62.5 dB	
LASmin	50 dB	LAS 90%	56 dB	
Start Date & Time	4/6/2021 4:43:43 PM	Calibration (Before) Date	4/6/2021 4:41:14 PM	
Duration	01:00:35 HH:MM:SS	Calibration (After) Date	4/6/2021 5:46:08 PM	
LAeq	77.6 dB	Calibration Drift	0.0 dB	
End Date & Time	4/6/2021 5:44:18 PM	Battery Low	No	
Notes				



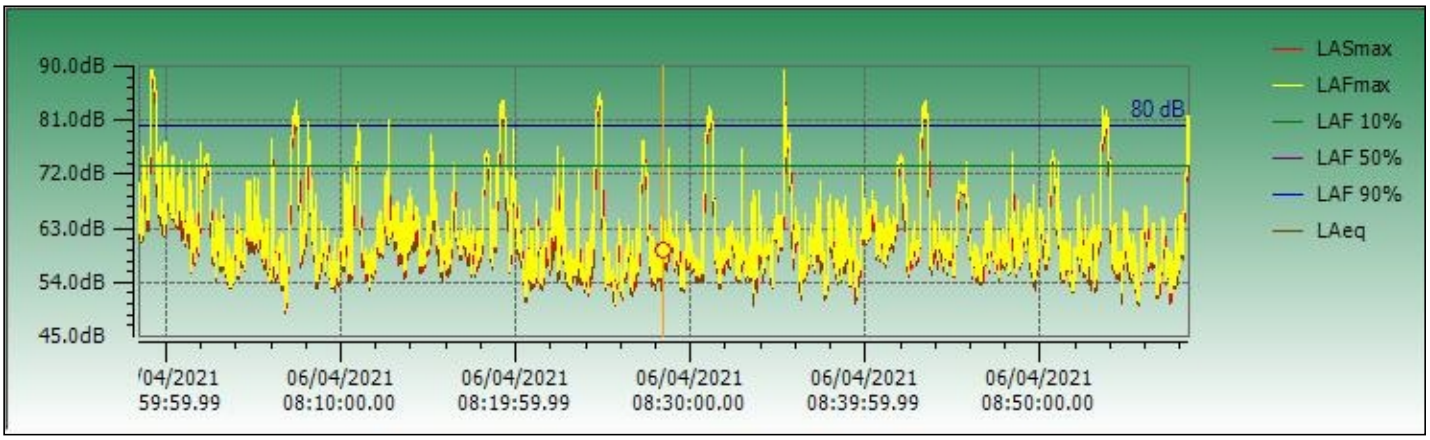
Casella CEL Ltd.

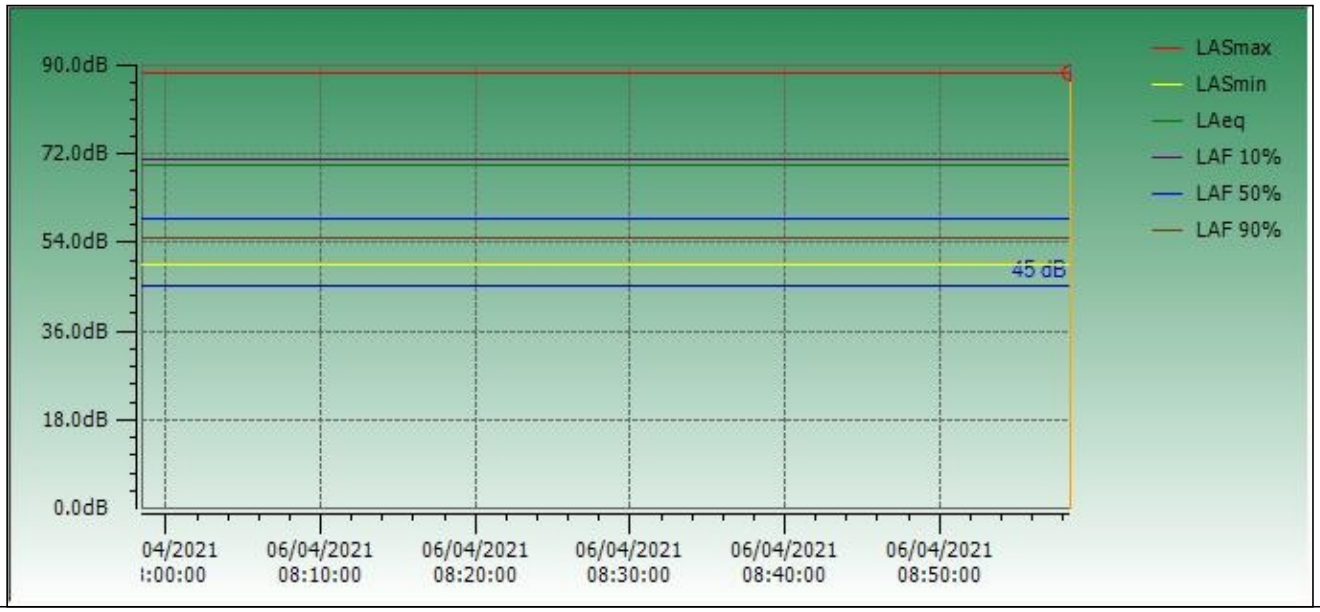
Report On CEL-63X

Instrument Model	**CEL-633C**			
Serial Number	5086866	LAS 10%	76 dB	Result
LASmax	93.4 dB	LAS 50%	64 dB	
LASmin	55.4 dB	LAS 90%	59.5 dB	
Start Date & Time	12/8/2021 7:51:18 AM	Calibration (Before) Date	12/8/2021 7:35:22 AM	
Duration	01:00:00 HH:MM:SS	Calibration (After) Date	12/8/2021 9:08:25 AM	
LAeq	75.9 dB	Calibration Drift	-0.3 dB	
End Date & Time	12/8/2021 8:51:18 AM	Battery Low	No	
Notes				

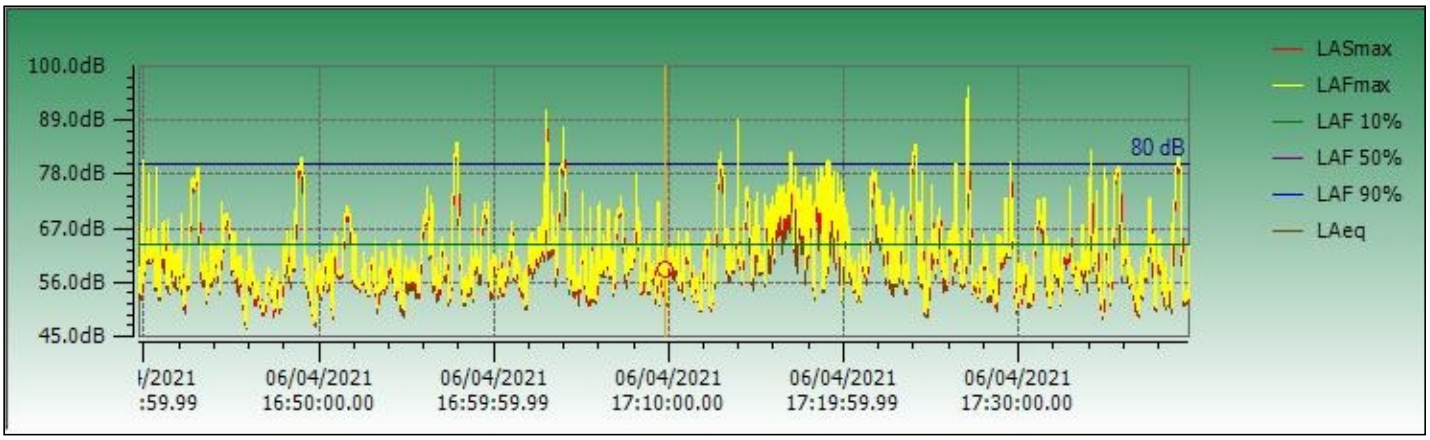


Instrument Model	CEL-633C			
Serial Number	1274486	LAS 10%	N/A	Result
LASmax	88.4 dB	LAS 50%	N/A	
LASmin	49.6 dB	LAS 90%	N/A	
Start Date & Time	4/6/2021 7:58:28 AM	Calibration (Before) Date	4/6/2021 7:57:11 AM	
Duration	01:00:02 HH:MM:SS	Calibration (After) Date	4/6/2021 9:10:41 AM	
LAeq	69.9 dB	Calibration Drift	-0.1 dB	
End Date & Time	4/6/2021 8:58:30 AM	Battery Low	No	
Notes				





Instrument Model	**CEL-633C**			
Serial Number	1274486	LAS 10%	70 dB	Result
LASmax	92.7 dB	LAS 50%	59 dB	
LASmin	46 dB	LAS 90%	53.5 dB	
Start Date & Time	4/6/2021 4:39:44 PM	Calibration (Before) Date	4/6/2021 4:37:36 PM	
Duration	01:00:01 HH:MM:SS	Calibration (After) Date	4/6/2021 5:40:00 PM	
LAeq	68.9 dB	Calibration Drift	-12.5 dB	
End Date & Time	4/6/2021 5:39:45 PM	Battery Low	No	
Notes				



Instrument Model	**CEL-633C**			
Serial Number	1274486	LAS 10%	72 dB	Result
LASmax	90 dB	LAS 50%	65 dB	
LASmin	49.9 dB	LAS 90%	57.5 dB	
Start Date & Time	4/6/2021 12:26:09 PM	Calibration (Before) Date	4/6/2021 12:25:23 PM	
Duration	01:00:07 HH:MM:SS	Calibration (After) Date	4/6/2021 1:30:26 PM	
LAeq	68.5 dB	Calibration Drift	-12.8 dB	
End Date & Time	4/6/2021 1:26:16 PM	Battery Low	No	
Notes				

