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* 42-01 28th Avenue Astoria Rezoning

3. *Reference Numbers*

CEQR REFERENCE NUMBER (to be assigned by lead agency)	BSA REFERENCE NUMBER (if applicable)
20DCP043Q	
ULURP REFERENCE NUMBER (if applicable)	OTHER REFERENCE NUMBER(S) (if applicable)
190517ZMQ, N190518ZRQ	(*e.g.*, legislative intro, CAPA) Project ID: P2018Q0324

4a. *Lead Agency Information*			**4b. *Applicant Information***		
NAME OF LEAD AGENCY NYC Department of City Planning			NAME OF APPLICANT Vlacich LLC		
NAME OF LEAD AGENCY CONTACT PERSON Olga Abinader, Director			NAME OF APPLICANT'S REPRESENTATIVE OR CONTACT PERSON John Strauss for 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 212-720-3493	EMAIL oabinad@planning.nyc.gov		TELEPHONE 718-343-0026	EMAIL jstrauss@environmentalstudiescorp.com	

5. *Project Description*

The Applicant, Vlacich LLC, seeks the following Proposed Actions on the Applicant owned Development Site (Block 701, Lots 5, 6, 8, 9 and 108) and the non-Applicant properties (Block 685, Lots 1, 3, 5, 7, and 10 and Block 701, Lots 1 and 3):
- A zoning map amendment to ZR sections 9a and 9b in the Astoria neighborhood of Queens, Community District 1, to change the existing R5 zoning district on Block 685, Lots 1, 3, 5, 7, and p/o Lot 10 to an R6A zoning district and to change the existing R5/C1-2 zoning district on Block 701, Lots 1, 3, 5, 6, 8, 108, and p/o Lot 9 to an R6A/C1-2 zoning district.
- A zoning text amendment of ZR Appendix F: Inclusionary Housing Designated Areas and Mandatory Inclusionary Housing ("MIH") Areas for Community District 1, Queens to establish an MIH Area coterminous with the Project Area (Block 685, Lots 1, 3, 5, 7, & p/o Lot 10 and Block 701, Lots 1, 3, 5, 6, 8, 108, and p/o Lot 9).

The Proposed Actions would facilitate the development of a new eight-story and cellar mixed commercial and residential building that would replace the five existing buildings on the Development Site (Block 701, Lots 5, 6, 8, 9, and 108). The development would have a total floor area of 67,356 gsf (including 51,463 zsf, for an FAR of 3.49). The development would contain 45,731 gsf (44,542 zsf) of residential space and a projected 54 dwelling units. An estimated 16 (30 percent) of the units would be permanently income-restricted housing units. (The percentage would depend on the MIH option(s) available; the estimate is based on the assumption that Option 2 would be required or at least available, in which case the units would be reserved for households earning an average of 80 percent of the Area Median Income [AMI].The final MIH Option will be chosen by the City Council through the ULURP process.) The development would also contain 6,921 gsf (6,921 zsf) of ground floor commercial space, which would be occupied by the restaurant now located at 42-01 28th Avenue. 66 accessory off-street parking spaces would be provided including 56 spaces in the cellar of the building and 10 at-grade spaces which would be accessed from a curb cut along 42nd Street. The building would have a base height of 45 feet, at which height the building would set back 10 feet along 28th Avenue and 15 feet along 42nd Street before rising to a height of 85 feet. The remainder of the Proposed Rezoning Area, comprised of the lots not controlled by the Applicant, is not proposed for development. See attached Project Description.

Project Location

BOROUGH Queens	COMMUNITY DISTRICT(S) 1	STREET ADDRESS 42-01 28th Avenue
TAX BLOCK(S) AND LOT(S) Block 685, Lots 1, 3, 5, 7, and p/o Lot 10 and Block 701, Lots 1, 3, 5, 6, 8, 108, and p/o Lot 9		ZIP CODE 11103

DESCRIPTION OF PROPERTY BY BOUNDING OR CROSS STREETS The affected portion of Block 685 is bounded by 28th Avenue between 41st and 42nd Streets and the affected portion of Block 701 is bounded by 28th Avenue between 42nd and 43rd Streets.

EXISTING ZONING DISTRICT, INCLUDING SPECIAL ZONING DISTRICT DESIGNATION, IF ANY R5, R5/C1-2	ZONING SECTIONAL MAP NUMBER 9a, 9c

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 ZR Appendix F; ZR 9a, 9c

***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	☐ FUNDING OF CONSTRUCTION, specify:
☐ RULEMAKING	☐ POLICY OR PLAN, specify:
☐ CONSTRUCTION OF PUBLIC FACILITIES	☐ FUNDING OF PROGRAMS, specify:
☐ 384(b)(4) APPROVAL	☐ PERMITS, specify:
☐ OTHER, explain:	

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: Dept. of Buildings building permit

***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.): 42,392 (rezoning area); 14,725 (proposed development site)

Waterbody area (sq. ft) and type: None

Roads, buildings, and other paved surfaces (sq. ft.): 42,392 (rezoning area); 14,725 (proposed development site)

Other, describe (sq. ft.): None

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): 67,356

NUMBER OF BUILDINGS: 1

GROSS FLOOR AREA OF EACH BUILDING (sq. ft.): 67,356

HEIGHT OF EACH BUILDING (ft.): 85'

NUMBER OF STORIES OF EACH BUILDING: 8

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: 14,725

The total square feet not owned or controlled by the applicant: 27,667

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: sq. ft. (width x length) VOLUME OF DISTURBANCE: 235,600 cubic ft. (width x length x depth)

AREA OF PERMANENT DISTURBANCE: 14,725 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.)	45,731	6,921	0	0
Type (*e.g.,* retail, office, school)	54 units	restaurant	0	0

Does the proposed project increase the population of residents and/or on-site workers? ☒ YES ☐ NO

If "yes," please specify: NUMBER OF ADDITIONAL RESIDENTS: 130 NUMBER OF ADDITIONAL WORKERS: 23

Provide a brief explanation of how these numbers were determined: Residents: Based on average household size of 2.4 residents per dwelling unit for census tracts within 1/4-mile (2010 Census & ACS data); Workers: assumes 3 workers per 1,000 sf of restaurant space and .04 workers per dwelling unit (54 units);

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): 2022

ANTICIPATED PERIOD OF CONSTRUCTION IN MONTHS: 20-23

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. See attached report.		
(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. See attached report.		
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: See attached report.	☐	☒
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): 2,214		
○ 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): 8,534,005		
(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) See attached report.	☐	☒
(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
John Strauss, Environmental Studies Corp.	August 14, 2020

SIGNATURE John Strauss

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.

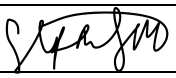
3. Check determination to be issued by the lead agency:

☐ **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
Deputy Director, Environmental Assessment and Review Division	Dept of City Planning on behalf of the City Planning Commission 120 Broadway, 31st Fl. New York, NY 10271 | 212.720.3328
NAME Stephanie Shellooe, AICP	DATE August 14, 2020
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.

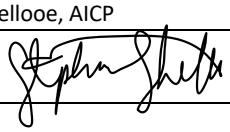
Land Use, Zoning, and Public Policy

A detailed analysis of land use, zoning, and public policy is included in the EAS and that analysis determined that no significant adverse impacts would occur. The proposed actions are a Zoning Map Amendment to rezone the project area from an R5 zoning district on Block 685, Lots 1, 3, 5, 7, and p/o Lot 10 to an R6A zoning district and from an R5/C1-2 zoning district on Block 701, Lots 1, 3, 5, 6, 8, 108, and p/o Lot 9 to an R6A/C1-2 zoning district and a Zoning Text Amendment to establish a Mandatory Inclusionary Housing area with MIH options 1 and 2 coterminous with the rezoning area in the Astoria neighborhood of Queens Community District 1. The Proposed Actions would facilitate a proposal by the Applicant to construct a new eight-story and cellar mixed commercial and residential building that would replace the five existing buildings on the Proposed Development Site/Projected Development Site 1 (Block 701, Lots 5, 6, 8, 108 and 9). The development would have a total floor area of 67,356 gross square feet (gsf) including 45,731 gsf of residential space and a projected 54 dwelling units. The proposed actions are not expected to alter the existing land use development patterns in the surrounding project study area in the future as development includes one-, two-, and multi- family residences, mixed-use buildings, commercial uses, and community facilities. The provision of affordable housing in the Project Area would be in compliance with City policies to encourage the development of new housing, especially affordable housing, in underutilized areas of the City. The proposed rezoning would also bring the existing non-complying buildings on the 7 other parcels closer to compliance with the bulk provisions of the Zoning Resolution.

Hazardous Materials, Air Quality, and Noise

An (E) designation (E-578) related to hazardous materials 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 and noise analyses conclude that with the (E) designation in place, the proposed actions would not result in significant adverse impacts related to hazardous materials and 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 Rupsha Ghosh at 212-720-3250.

TITLE	LEAD AGENCY
Deputy 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, AICP	DATE August 14, 2020
SIGNATURE 	
TITLE Chair, City Planning Commission	
NAME Marisa Lago	DATE August 17, 2020
SIGNATURE	

Project Name: 42-01 28th Avenue Rezoning
CEQR # 20DCP043Q
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	QN	Block 701, Lots 5, 6, 8, 9, 108

(E) Designation Requirements

To ensure that the proposed actions would not result in significant adverse impacts related to hazardous materials and noise an (E) designation (**E-578**) would be established as part of approval of the proposed actions on **Projected Development Site 1** as described below:

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

Hazardous Materials

The (E) designation requirements applicable to **Projected Development Site 1** 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.

Project Name: 42-01 28th Avenue Rezoning
CEQR # 20DCP043Q
SEQRA Classification: Unlisted

Noise

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

> **Projected Development Site 1:** To ensure an acceptable interior noise environment, future residential/commercial uses must provide a closed-window condition with a minimum of 28 dBA window/wall attenuation on all facades in order to maintain an interior noise level not greater than 45 dBA for residential uses or not greater than 50 dBA for commercial uses. 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, air conditioning.

42-01 28TH AVENUE ASTORIA REZONING

Project Description

INTRODUCTION

The Applicant, Vlacich LLC, seeks a zoning map amendment to ZR sections 9a and 9b in the Astoria neighborhood of Queens, Community District 1, to change the existing R5 zoning district on Block 685, Lots 1, 3, 5, 7, and p/o Lot 10 to an R6A zoning district and to change the existing R5/C1-2 zoning district on Block 701, Lots 1, 3, 5, 6, 8, 108, and p/o Lot 9 to an R6A/C1-2 zoning district. The Applicant also seeks a zoning text amendment of ZR Appendix F: Inclusionary Housing Designated Areas and Mandatory Inclusionary Housing ("MIH") Areas for Community District 1, Queens to establish an MIH Area coterminous with the Project Area. The Applicant owned Development Site is Block 701, Lots 5, 6, 8, 108 and 9. Block 685, Lots 1, 3, 5, 7, and 10 and Block 701, Lots 1 and 3 are not controlled by the Applicant. Note that while only p/o Lot 9 on Block 701 is within the Project Area to be rezoned, the entirety of Lot 9 would be included within the area proposed to be developed.

The Proposed Actions would facilitate the development of a new eight-story and cellar mixed commercial and residential building that would replace the five existing buildings on Projected Development Site 1 (Block 701, Lots 5, 6, 8, 108 and 9). The development would have a total floor area of 67,356 gross square feet (gsf) including 45,731 gsf of residential space and a projected 54 dwelling units. An estimated 16 (30 percent) of the units would be permanently income-restricted housing units for households earning an average of 80% of the Area Median Income (AMI).The final MIH Option will be chosen by the City Council through the ULURP process. Only 20% of the dwelling units (11 units) will be analyzed as affordable at 80% AMI for conservative analysis purposes in the EAS. The development would also contain 6,921 gsf of ground floor commercial space, which would be occupied by the restaurant now located at 42-01 28th Avenue. 66 accessory off-street parking spaces would be provided. The remainder of the Project Area, comprised of the lots not controlled by the Applicant, are not proposed for development.

ACTIONS NECESSARY TO FACILITATE THE PROPOSAL

The Applicant, Vlacich LLC, proposes the following actions to rezone an existing R5 zoning district to an R6A zoning district and an R5/C1-2 zoning district to an R6A/C1-2 zoning district in the Astoria neighborhood within Queens Community District 1.

I. A zoning map amendment to ZR sections 9a and 9b to change the existing R5 zoning district on Block 685, Lots 1, 3, 5, 7, and p/o Lot 10 to an R6A zoning district and to change the existing R5/C1-2 zoning district on Block 701, Lots 1, 3, 5, 6, 8, 108, and p/o Lot 9 to an R6A/C1-2 zoning district; and

II. A zoning text amendment of ZR Appendix F: Inclusionary Housing Designated Areas and Mandatory Inclusionary Housing ("MIH") Areas for Community District 1, Queens to establish an MIH Area coterminous with the Project Area. Option 2 has been chosen under the MIH Text Amendment provisions applicable to the Proposed Actions. Under this option, 30% of the residential floor area must be for affordable housing units for residents with incomes averaging 80% AMI. The final MIH Option will be chosen by the City Council through the ULURP process. Only 20% of the units will be analyzed as affordable at 80% AMI for conservative analysis purposes in the EAS.

DESCRIPTION OF THE SURROUNDING AREA

The Project Area is located in the Borough of Queens in Community District 1 within the Astoria neighborhood. The surrounding area within a 400-foot radius of the Project Area is characterized by residential use on the mid-blocks with mixed-use and commercial buildings along 28th Avenue and Steinway Street. The only community facility in the surrounding area is St. Josephs Roman Catholic Church, a house of worship and school located on 30th Avenue between 43rd Street and 44th Street. The prevailing built form in the surrounding area is generally consistent with the underlying zoning districts.

Existing land uses within the surrounding area primarily consist of one- and two-family and multi-family residences, mixed-use, and commercial buildings. Residential and mixed-use buildings range from two- to five-stories in height, and commercial buildings range from one- to two-stories. The majority of the surrounding area is located within a large R5 zoning district. There is a C1-2 overlay mapped on the north side of 28th Avenue between 42nd Street and 43rd Street to a depth of 150 feet. To the west of the Project Area, there is a 150-foot deep C2-2 commercial overlay on the north side of 28th Avenue and a 150-foot deep C1-2 overlay on the south side of 28th Avenue on the eastern side of the blocks midway between Steinway Street and 41st Street. Further to the west are contextual C4-2A (R6A equivalent), R6A, R6B, and R5B zoning districts that were established in the Astoria Rezoning.

DESCRIPTION OF THE PROPOSED PROJECT AREA

The Project Area consists of 42,392 sf of land area on the southern parts of two blocks in the Astoria neighborhood of Queens Community District 1. They are Block 685 (bounded by 28th and 29th Avenues and 41st and 42nd Streets) and Block 701 (bounded by 28th and 29th Avenues and 42nd and 43rd Streets). The Project Area includes 10 full lots and parts of two additional lots. The Project Area is located along the north side of 28th Avenue, to a depth from the avenue frontage of 100 feet on Block 685, 125 feet on the western half of Block 701, and 100 feet on the eastern half of Block 701. The area is zoned R5 and R5/C1-2. The C1-2 local commercial overlay is mapped within the R5 district on the southern part of Block 701, to a depth of 150 feet from the street line of 28th Avenue. The R5 district covers the remainder of the two blocks.

<u>Projected Development Site</u>

Projected Development Site 1 is a 14,725 sf assemblage of five adjacent lots on Block 701, with 98 feet of frontage on 28th Avenue and 150 feet of frontage on 42nd Street. The Site contains a total of 19,741 gsf of existing development (10,875 gsf commercial and 8,866 gsf residential), ten dwelling units, a restaurant, and a dental office. The FAR of the assemblage is 0.93. There are three curb cuts onto 42nd Street (on Lots 8, 108, and 9) and none onto 28th Avenue. The individual lots, which would be merged under the Proposed Actions, are described below.

- Lot 5 (42-09 28th Avenue) - 2,326 sf lot developed with a 2,718 gsf, two-story, two-family home.

- Lot 6 (42-01 28th Avenue) - 4,500 sf lot developed with a 12,875 gsf building containing a restaurant on the first floor and a dwelling unit and a dental office on the second floor.

- Lot 8 (25-89 42nd Street) - 1,500 sf lot containing a 1,070 gsf semi-detached one-story and basement two-family home.

- Lot 108 (25-87 42nd Street) - 1,500 sf lot containing a 1,758 gsf semi-detached one-story and basement two-family home.

- Lot 9 (25-85 42nd Street) - 4,899 sf lot developed with a 1,758 gsf, two-story, three-unit residential building occupying only 12% of the lot. Accessory parking for the restaurant on Lot 6 occupies the remainder of Lot 9 as well as the rear of Lot 5.

Projected Development Site 1 is not located entirely within the Project Area. The Site has 150 feet of frontage on 42nd Street, and the Project Area has 125 feet of frontage. Only the southern half of Lot 9 (a 50-foot-wide and 98-foot-deep lot) would be rezoned. Projected Development Site 1 includes 12,276 sf within the Project Area and a 2,449 sf, 25-foot-wide portion that is outside it. Projected Development Site 1 is entirely within the existing R5/C1-2 district. With the Proposed Actions, 12,276 sf of Projected Development Site 1 comprising Block 701, Lots 5, 6, 8, 109, and p/o Lot 9 would be located within the proposed R6A/C1-2 zoning district while 2,449 sf comprising the remaining portion of Lot 9 would be located within the existing R5/C1-2 district.

Other Sites

The Project Area includes seven other lots identified as Other Sites 1 through 7 which are not projected to be developed. The portion of the Project Area located on Block 685 containing Other Sites 1 through 5 is zoned R5 and measures approximately 20,000 sf, with 200 feet of frontage on 28th Avenue and 100 feet of frontage on 41st and 42nd Streets. Other Sites 6 and 7, both zoned R5/C1-2, comprise the balance of the Project Area on Block 701. Collectively, the Other Sites within the Project Area contain 122 dwelling units and 126,359 gsf of building floor area of which 118,259 gsf is residential, 7,600 gsf is commercial, and 500 gsf is garage. These Sites are described below.

Other Site 1 – Block 685, Lot 1 (25-94 42nd Street) – 5,000 sf lot developed with a 21,800 gsf, four-story and cellar, multi-family walk-up apartment building containing 23 dwelling units, 4.36 FAR.

Other Site 2 – Block 685, Lot 3 (41-11 28th Avenue) – 5,500 sf lot developed with a 21,575 gsf, four-story and cellar, multi-family walk-up apartment building containing 23 dwelling units, 3.92 FAR.

Other Site 3 – Block 685, Lot 5 (41-07 28th Avenue) – 4,750 sf lot developed with a 18,200 gsf, four-story and cellar, multi-family walk-up apartment building containing 20 dwelling units, 3.83 FAR.

Other Site 4 – Block 685, Lot 7 (25-95 41st Street) - 4,227 sf lot developed with a 18,054 gsf, four-story and cellar, multi-family walk-up apartment building containing 19 dwelling units, 4.27 FAR.

Other Site 5 – Block 685, Lot 10 (25-87 41st Street) – 2,450 sf lot developed with a 3,960 gsf, two-story walk-up apartment building containing 4 dwelling units. Only a five-foot-wide sliver, 490 sf of this Site is included in the Project Area.

Other Site 6 - Block 701, Lot 1 (25-96 25th Avenue) - 4,000 sf lot developed with a 14,030 gsf, four-story and cellar, mixed-use building and a 500 gsf, one-story accessory garage. The building contains 10 dwelling units (11,430 gsf) above a ground floor commercial unit (2,600 gsf), 3.63 FAR.

Other Site 7 – Block 701, Lot 3 (42-11 28th Avenue) - 6,150 sf lot developed with a five-story-and cellar, 32,200 gsf mixed-use building with five commercial units on the ground floor (5,000 gsf) and 27 residential units on the upper floors (27,200 gsf) 5.24 FAR.

DESCRIPTION OF THE PROPOSED DEVELOPMENT

The rezoning of Projected Development Site 1 from R5/C1-2 to R6A/C1-2 and the mapping of an MIH Area would facilitate the development of a new eight-story mixed commercial and residential building that would replace the five existing buildings on the Site. The development would have a total floor area of 67,356 gsf (51,463 zsf for an FAR of 3.49). The development would contain 45,731 gsf (44,542 zsf) of residential space and a projected 54 dwelling units. The average unit size would be approximately 847 gsf. An estimated 16 (30 percent) of the units would be permanently income-restricted housing units. (The percentage would depend on the MIH option(s) available; the estimate is based on the assumption that that Option 2 would be required or at least available, in which case the units would be reserved for households earning an average of 80 percent of the Area Median Income (AMI). The final MIH Option will be chosen by the City Council through the ULURP process.) Only 20% of the dwelling units (11 units) will be analyzed as affordable at 80% AMI for conservative analysis purposes in the EAS. The development would also contain 6,921 gsf/zsf of ground floor commercial space, which would be occupied by the restaurant now located at 42-01 28th Avenue.

A cellar garage would provide 56 attended accessory parking spaces, and there would also be 10 accessory surface parking spaces, for a total of 66 accessory off-street parking spaces. The accessory off-street parking requirement would be for 46 spaces: 23 spaces accessory to the commercial floor area (one space per 300 sf) and 23 spaces accessory to the residential units (equal to one-half the number of market rate units and one-quarter the number of Inclusionary Housing units).

The building would occupy the 28th Avenue frontage of the Site. The surface parking lot and a driveway leading to the garage ramp would occupy the northern part of the Site. The building would have a base height of 45 feet, at which height the building would set back 10 feet along 28th Avenue and 15 feet along 42nd Street before rising to a height of 85 feet. The residential entrance would be located on 28th Avenue, and the ground floor commercial space would have entrances on both street frontages. A 22-foot-wide curb cut would be located on 42nd Street, 105 feet from the intersection with 28th Avenue.

BUILD YEAR/PROJECT PHASING

The Project Build Year is assumed to be 2022 based on a 12- to 18-month environmental and land use approval process and an estimated 20- to 23-month construction period. The project would be developed in a single phase.

PURPOSE AND NEED OF THE PROPOSED ACTIONS

The five lots comprising the proposed development site (Projected Development Site 1) are underdeveloped relative to the other properties along 28th Avenue within the Area. The other six lots fronting on 28th Avenue have FARs ranging from 3.63 to 5.24, while the Project Area, if all component lots were merged into a single lot, would have a current FAR of 0.93. The Applicant proposes to redevelop Projected Development Site 1 in part to provide the 45-year-old restaurant at 42-01 28th Avenue with a larger ground floor space with a more efficient layout

and on-site parking, and in part to create additional housing on Projected Development Site 1. However, the Applicant does not believe that redevelopment of Projected Development Site 1 would be financially feasible under the existing R5/C1-2 zoning where the maximum permitted FAR for a mixed residential and commercial development is 1.25. For the 14,725 sf Projected Development Site 1, the maximum permitted development under the existing R5/C1-2 zoning would be 18,406 zsf including the proposed 6,921 sf restaurant plus 11,485 sf of residential floor area, or 14 dwelling units (assuming the proposed unit size of approximately 847 sf) rather than the 54 that would be developed under the proposed R6A/C1-2 zoning. Absent the proposed rezoning, the Applicant would not redevelop Projected Development Site 1.

The Project Area is well served by public transit. Bus service on the Q18 (Maspeth/Astoria) is available along 28th Avenue and the Q101 (Steinway/East Midtown) is available at Steinway Street one block west of the Project Area. The N/W subway runs along 31st Street with a station at 30th Avenue approximately 0.6 miles to the southwest of the Project Area. Astoria Heights Park, a 2.20-acre neighborhood park/playground located southwest of the Development Site, provides opportunities for active and passive recreation.

The Proposed Actions would enable the Applicant to develop approximately 54 new dwelling units, including 16 affordable housing units, in the Astoria area of Queens on currently underutilized land. The Proposed Development Site (Projected Development Site 1) is in an area surrounded by residential and mixed-use development, with which the proposed development would be totally consistent. The Site is located in close proximity to mass transit facilities and open space. The Proposed Actions are needed to allow the proposed floor area of the new building on the Site.

The Proposed Actions would allow the Applicant to develop a higher density residential development with accessory commercial space on Projected Development Site 1 which would not be allowed under the current zoning. The Actions would serve the needs of this area of Queens for high quality residential dwellings, affordable housing, and retail services with adequate parking, and would promote the development of the property in a fashion that would be compatible with and beneficial to adjacent and nearby residential and other uses.

The proposed building would be built pursuant to Quality Housing standards, insuring a better designed residential environment. The Applicant seeks to develop Projected Development Site 1 in part with affordable housing consistent with the standards of the Quality Housing Program as well as the Mandatory Inclusionary Housing (MIH) Program zoning regulations. The development of the building with affordable housing is consistent with the expressed desires of the City's current mayoral administration to substantially increase the amount of affordable housing.

Proposed R6A and R6A/C1-2 Districts

The proposed Zoning Map Amendment would include rezoning the Proposed Development Site from its existing R5/C1-2 district to the proposed R6A/C1-2 zoning district. The proposed R6A/C1-2 zoning district would provide a moderate increase in development potential from the existing R5/C1-2 zoning district, facilitating new mixed-use development with the provision of permanently income-restricted housing along a wide street in close proximity to mass transit. Within the proposed MIH Area, R6A zoning districts allow medium-density apartment buildings at a maximum FAR of 3.6 for developments that provide income-restricted housing units

pursuant to the MIH program requirements. The maximum building height for eligible MIH program buildings with qualifying ground floors is 85 feet after a setback from the base height of up to 65 feet. Buildings must set back above the maximum base height to a depth of 10 feet on a wide street and 15 feet on a narrow street before rising to a maximum of 8 floors. Off-street parking is required for 50 percent of the non-income restricted residential dwelling units, and 25 percent of income-restricted housing units outside of the Transit Zone. The retention of the C1-2 commercial overlay would permit the existing restaurant to remain and expand on Projected Development Site 1 as a legal conforming use.

The proposed R6A zoning district for the non-Applicant owned properties on Blocks 685 and 701 ("Other Sites") reflects the existing built character of the pre-war legal, non-complying apartment buildings within the Project Area. The proposed rezoning would bring these existing non-complying buildings closer to compliance with the bulk provisions of the Zoning Resolution. Moreover, the proposed R6A zoning district is consistent with the density mapped in the surrounding area in the Astoria Rezoning area along wide corridors similar to 28th Avenue.

The proposed rezoning is consistent with the City's policy to increase density for new housing along wide streets that can support additional development. Without the proposed rezoning, the Development Site will likely remain unchanged because the bulk permitted within the existing R5 zoning district does not yield the density required to facilitate the redevelopment of the site. The proposed rezoning would increase the overall residential density within Queens Community Board 1 and will contribute to the City's overall goal of creating more permanently income-restricted housing units through the associated MIH text amendment requested in this application.

Mandatory Inclusionary Housing Text Amendment

The proposed text amendment of ZR Appendix F is necessary to establish an MIH Area coterminous with the Project Area. The proposed zoning text amendment to designate the rezoning area as an MIH Area is consistent with the policy goals of the City's Housing New York: A Five-Borough, Ten-Year Plan. According to the U.S. Census Bureau, 40.5 percent of households in Queens Community District 1 are rent burdened, spending 35 percent or more of their income on rent.[1]

Pursuant to the MIH program, a percentage of the new dwelling units in the proposed development must be affordable units, resulting in an affordable housing set-aside for either 25 percent of the residential floor area at an average of 60 percent of AMI (Option 1) or 30 percent of the residential floor area at an average of 80 percent AMI, with no unit targeted at a level exceeding 130 percent of AMI (Option 2).

The Applicant intends to map both Options 1 and 2 on Projected Development Site 1 but is seeking to develop pursuant to Option 2 which would result in approximately 16 permanently affordable units. The MIH program would ensure that development within the Project Area would address the need for low-income housing. The final MIH Option will be chosen by the City Council through the ULURP process. Only 20% of the dwelling units (11 units) will be

[1] Based on American Community Survey 2011-15 Five Year Estimates for Public Use Microdata Area (PUMA) 4101, which approximates Queens Community District 1, available at: https://communityprofiles.planning.nyc.gov/queens/1#resources.

analyzed as affordable at 80% AMI for conservative analysis purposes in the EAS.

NO-ACTION SCENARIO

Under the No-Action Scenario for the Project Build Year of 2022, it is assumed that the Project Area's existing R5 and R5/C1-2 zoning would remain. No new development would occur on the 12 lots within the Project Area. Aside from the proposed development site, all lots within the Project Area are developed with occupied four- and five-story buildings with FARs of between 3.63 and 5.24, which exceeds the maximum FAR of 2.0 permitted under the existing R5 zoning. All properties within the Project Area are developed with active uses that have been present for decades. Absent the proposed rezoning or some other change in conditions, this stable land use pattern would continue.

WITH-ACTION SCENARIO

A zoning map amendment is proposed within the Project Area to change the existing R5 zoning district on Block 685, Lots 1, 3, 5, 7, and p/o Lot 10 to an R6A zoning district and to change the existing R5/C1-2 zoning district on Block 701, Lots 1, 3, 5, 6, 8, 108, and p/o Lot 9 to an R6A/C1-2 zoning district. In addition, a zoning text amendment is proposed to ZR Appendix F: Inclusionary Housing Designated Areas and Mandatory Inclusionary Housing ("MIH") Areas for Community District 1, Queens to establish an MIH Area coterminous with the Project Area. Option 2 has been chosen under the MIH Text Amendment provisions applicable to the Proposed Actions. Under this option, 30% of the residential floor area must be for affordable housing units for residents with incomes averaging 80% AMI with no unit targeted at a level exceeding 130% of AMI. The final MIH Option will be chosen by the City Council through the ULURP process. Only 20% of the units will be analyzed as affordable at 80% AMI for conservative analysis purposes in the EAS.

Projected Development Site 1

The proposed rezoning to the R6A/C1-2 zoning district and the mapping of an MIH Area on Projected Development Site 1 would limit the use and bulk of future development on the Site to match the proposed project. The proposed project would be a mixed-use development with a 3.5 FAR, close to the maximum of 3.60 that would be permitted under the proposed zoning, and a height of 85 feet, the maximum that would be permitted.

Therefore, the proposed development on Projected Development Site 1 described above would serve as the With-Action Scenario for the Affected Area for the Project Build Year of 2022. In summary, the Proposed Actions would facilitate the development of a new eight-story and cellar mixed commercial and residential building that would replace the five existing buildings on Projected Development Site 1. The development would have a total floor area of 67,356 gsf including 45,731 gsf of residential space and a projected 54 dwelling units. Normally, the number of dwelling units is calculated based on an average size of 1,000 gsf per unit which would result in approximately 46 dwelling units based on the proposed 45,731 gsf of residential floor area. In this case, 54 dwelling units are proposed based on an average unit size of 847 sf. Therefore, the With-Action Scenario would have 54 dwelling units.

While the project proposes that an estimated 30% of the units (16 units) would be permanently income-restricted housing units for households earning an average of 80% of AMI under MIH Option 2, it is assumed that only 20% of the dwelling units (11 units) will be analyzed as affordable at 80% AMI for conservative analysis purposes in the EAS. The final MIH Option

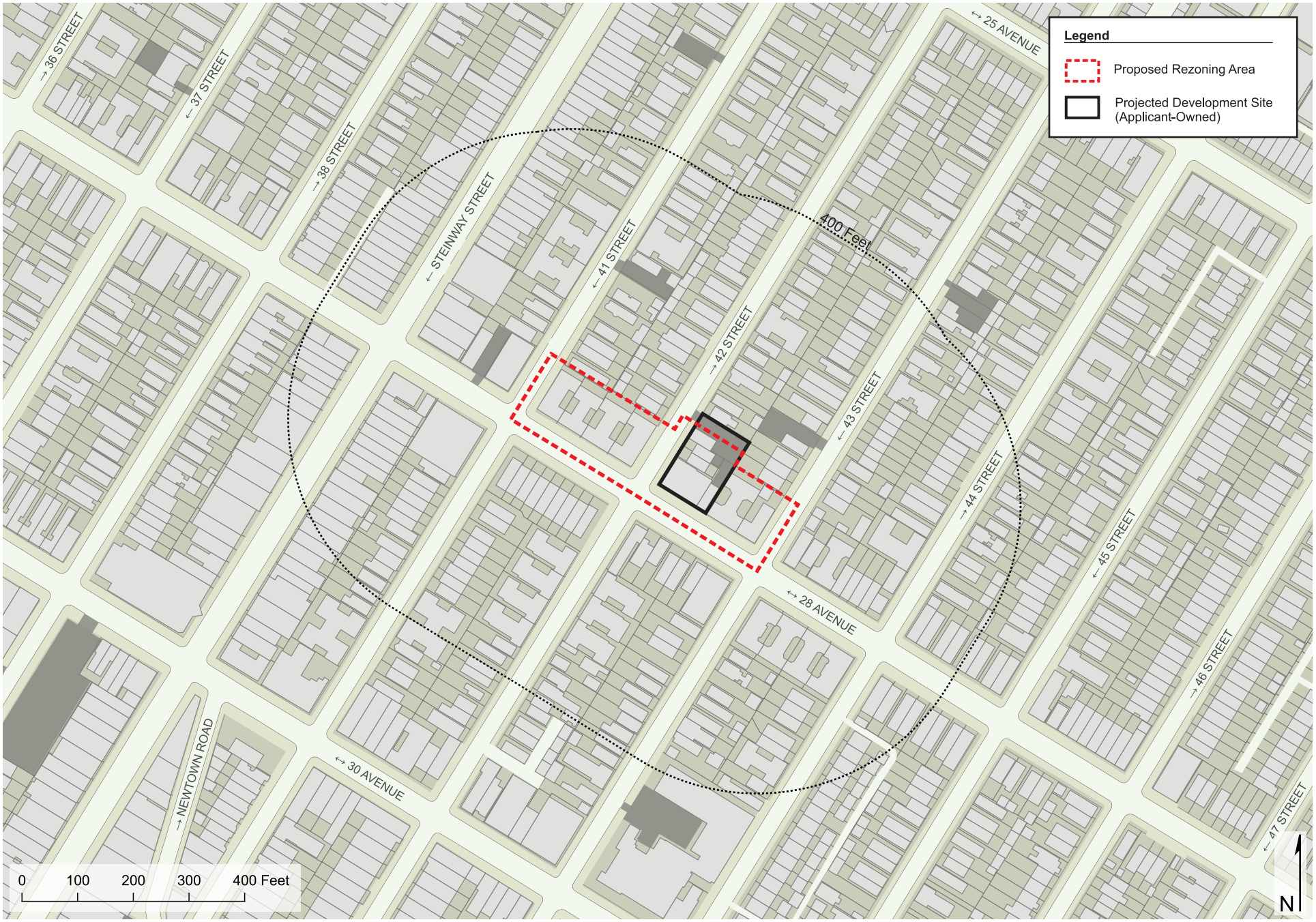
will be chosen by the City Council through the ULURP process. The development would also contain 6,921 gsf of ground floor commercial space, which would be occupied by the restaurant now located at 42-01 28th Avenue. 66 accessory off-street parking spaces would be provided.

INCREMENT

Under No-Action conditions, the Project Area would be developed with 136 dwelling units (all market rate) within 131,085 gsf of residential floor area; 17,475 gsf of restaurant, retail and personal service space; 1,000 gsf of community facility space (dental office); and 33 accessory parking spaces.

Under With-Action conditions, the Project Area would be developed with 167,950 gsf of residential space for 180 dwelling units (including 169 market rate and 11 affordable units); 14,521 gsf of restaurant, retail and personal service space; and 68 accessory parking spaces.

The increment between the No-Action and With-Action development scenarios would be 36,865 gsf of additional residential space for 44 additional dwelling units (11 of which would be affordable), a decrease of 2,954 gsf of commercial space (the existing restaurant), a decrease of 1,000 gsf of community facility space, and 35 additional accessory parking spaces. Relative to No-Action conditions, the Project Area would contain 32,911 gsf more built floor area. In order to allow for the projected development, the 10 existing dwelling units and the existing restaurant and dental office on Projected Development Site 1 would be removed. The existing restaurant would be moved to the new commercial space.


Legend
Proposed Rezoning Area
Projected Development Site (Applicant-Owned)
400 Feet
36 STREET
37 STREET
38 STREET
STEINWAY STREET
41 STREET
42 STREET
43 STREET
44 STREET
45 STREET
46 STREET
47 STREET
25 AVENUE
28 AVENUE
30 AVENUE
NEWTOWN ROAD
0
100
200
300
400 Feet
N



1. View of the Project Area facing east from the intersection of 28th Avenue and 41st Street.



2. View of 41st Street facing southwest (Project Area at left).



3. View of the Project Area facing south from 41st Street.





4. View of the Project Area facing southeast from 41st Street.



5. View of 28th Avenue facing southeast from 41st Street (Project Area at left).



6. View of 41st Street facing northeast from 28th Avenue (Project Area at right).





7. View of the Project Area facing northeast from 28th Avenue.



8. View of the Project Area facing north from 28th Avenue.



9. View of 28th Avenue facing southeast from 42nd Street (Development Site at left).





10. View of the Development Site facing northeast from the intersection of 28th Avenue and 42nd Street.



11. View of 42nd Street facing northeast from 28th Avenue (Development Site at right).



12. View of the Project Area facing northwest from the intersection of 28th Avenue and 42nd Street.





13. View of the Development Site facing northeast from 28th Avenue.



14. View of the Development Site facing north from 28th Avenue.



15. View of 28th Avenue facing northwest (Development Site at right).





16. View of the Project Area facing northeast from 28th Avenue.



17. View of 43rd Street facing northeast from 28th Avenue (Project Area at left).



18. View of the Project Area facing north from the intersection of 28th Avenue and 43rd Street.





19. View of 28th Avenue facing northwest from 43rd Street (Project Area at right).



20. View of the Project Area facing northwest from 43rd Street.



21. View of the Project Area facing west from 43rd Street.





22. View of 43rd Street facing southwest (Project Area at right).



23. View of the sidewalk along the west side of 43rd Street facing southwest (Project Area at right).



24. View of the east side of 43rd Street facing east from the Project Area.





25. View of the sidewalk along the west side of 43rd Street facing northeast from 28th Avenue (Project Area at left).



26. View of the intersection of 28th Avenue and 43rd Street facing south from the Project Area.



27. View of the sidewalk along the north side of 28th Avenue facing northeast from 43rd Street (Project Area at right).





28. View of the sidewalk along the north side of 28th Avenue facing northwest (Development Site at right).



29. View of the south side of 28th Avenue facing south from the Development Site.



30. View of the sidewalk along the north side of 28th Avenue facing southeast from 42nd Street (Development Site at left).





31. View of the intersection of 28th Avenue and 42nd Street facing west from the Development Site.



32. View of the sidewalk along the east side of 42nd Street facing northeast from 28th Avenue (Development Site at right).



33. View of the Project Area facing northwest from 42nd Street.





34. View of the Project Area facing southwest from 42nd Street.



35. View of the sidewalk along the east side of 42nd Street facing southwest (Development Site at left).



36. View of the east side of 42nd Street facing north from the Development Site.





37. View of 42nd Street facing southwest
(Development Site at left, Project Area at right).



38. View of the Development Site facing south from 42nd Street.



39. View of the sidewalk along the west side of 42nd Street
facing southwest (Project Area at right).





40. View of the Development Site facing northwest from 42nd Street.



41. View of the Development Site facing southeast from 42nd Street.



42. View of the sidewalk along the west side of 42nd Street facing northeast from 28th Avenue (Project Area at left).





43.View of the intersection of 28th Avenue and 42nd Street facing south from the Project Area.



44. View of the sidewalk along the north side of 28th Avenue facing northwest from 42nd Street (Project Area at right).



45. View of the south side of 28th Avenue facing south from the Project Area.





46. View of the south side of 28th Avenue facing southwest from the Project Area.



47. View of the sidewalk along the north side of 28th Avenue facing southeast from 41st Street (Project Area at left).



48. View of the intersection of 28th Avenue and 41st Street facing west from the Project Area.





49. View of the sidewalk along the east side of 41st Street facing northeast from 28th Avenue (Project Area at right).



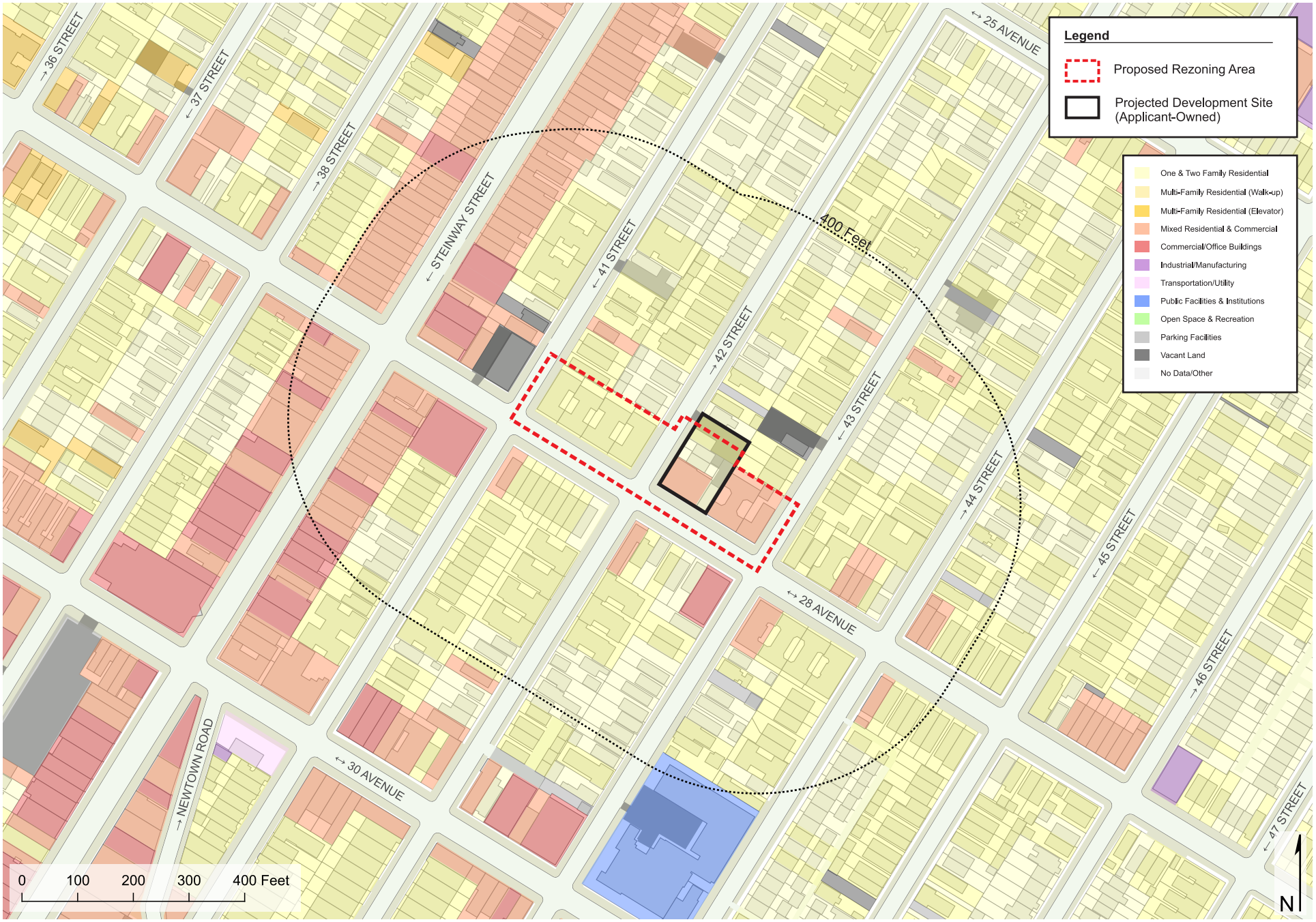
50. View of the sidewalk along the east side of 41st Street facing southwest (Project Area at left).

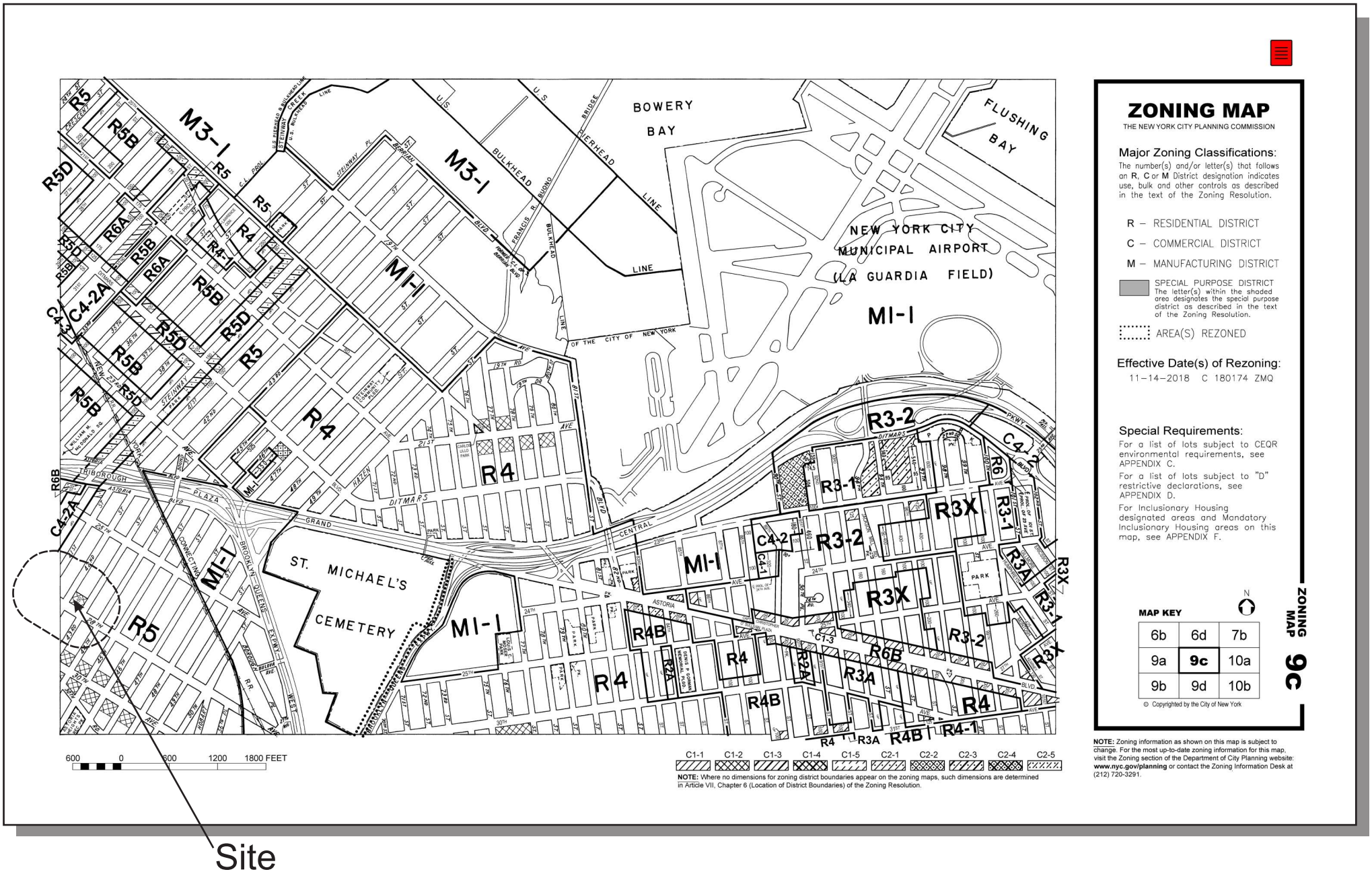


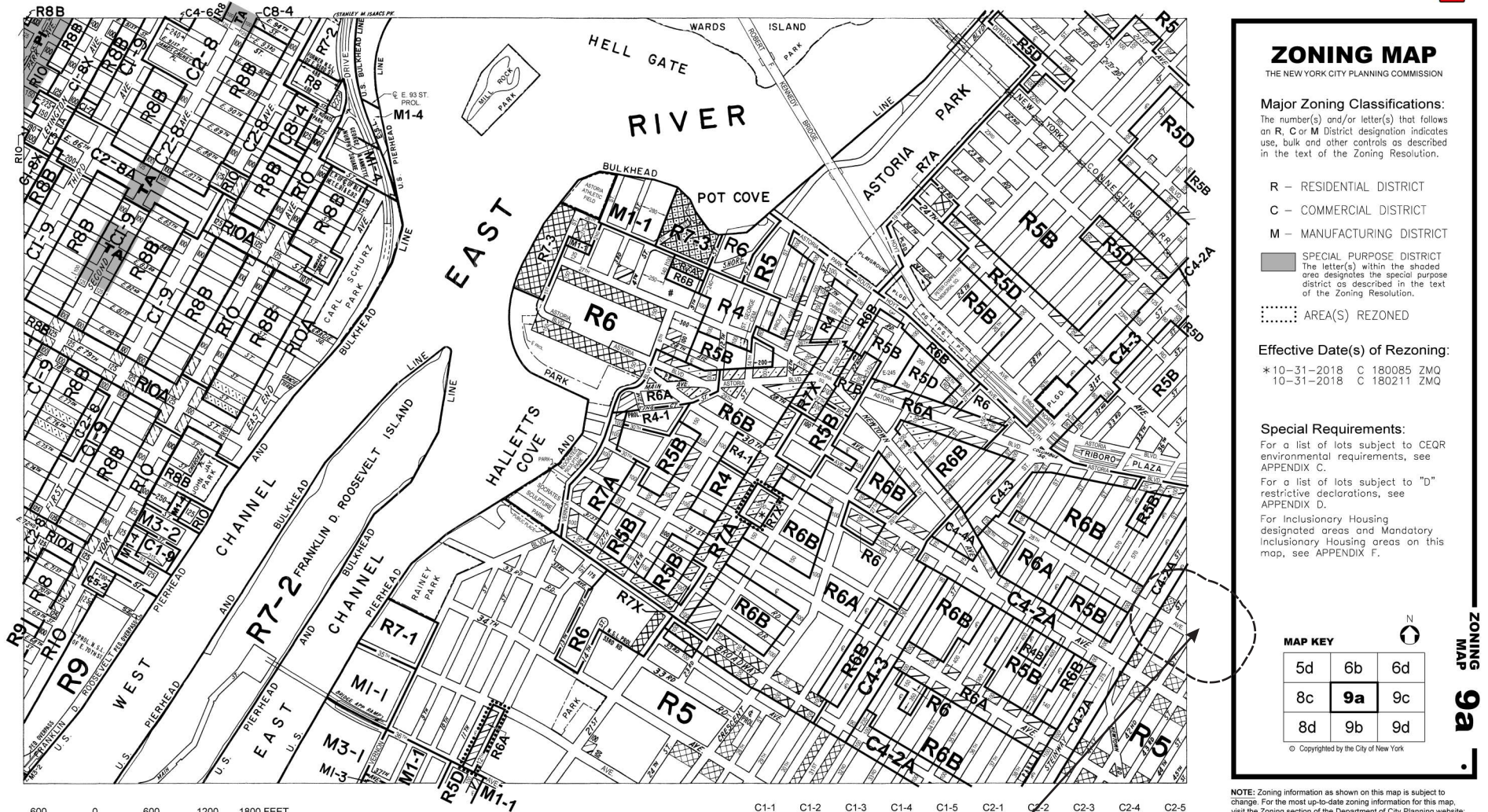
51. View of the west side of 41st Street facing northwest from the Project Area.

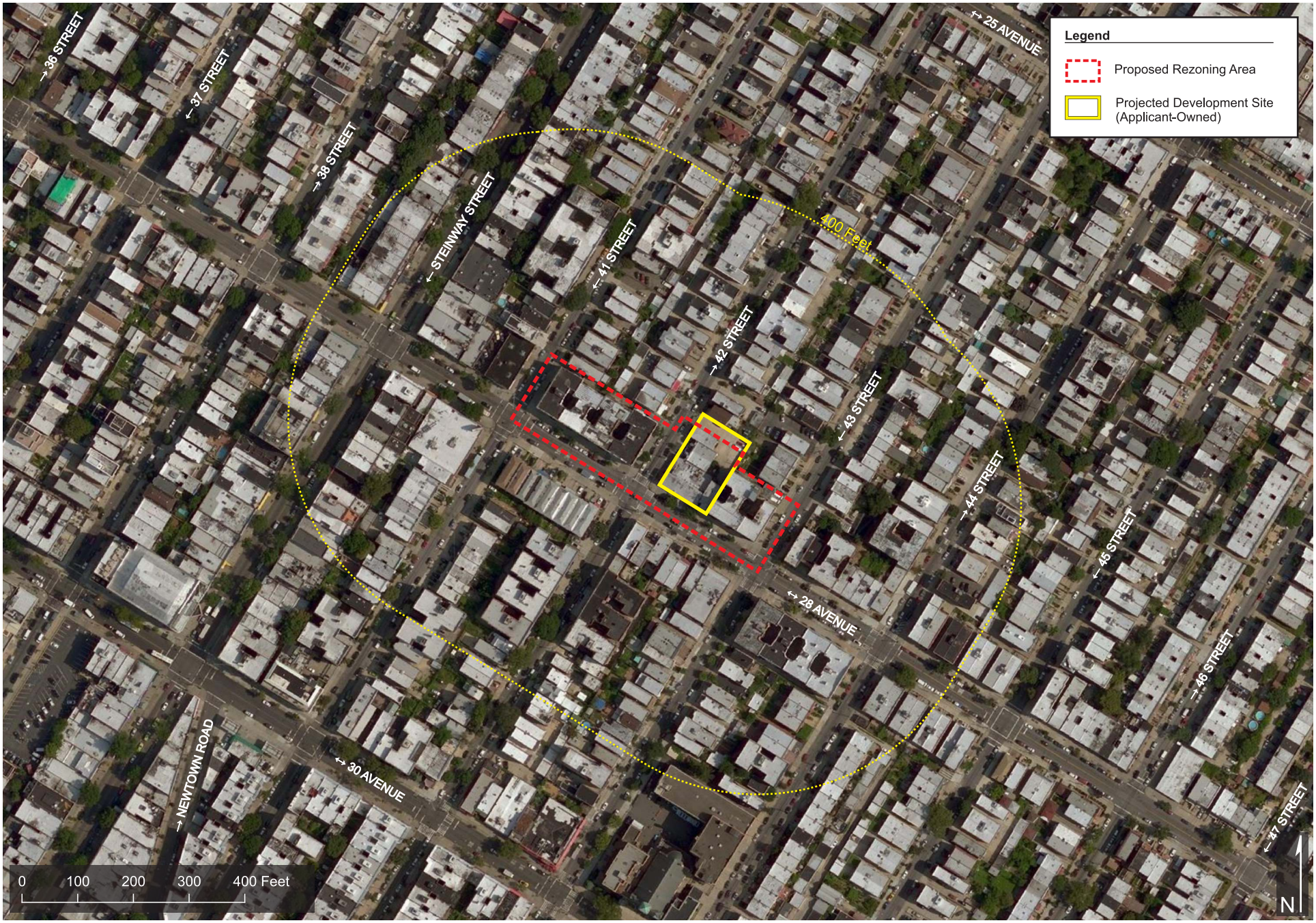



Legend
Proposed Rezoning Area
Projected Development Site
(Applicant-Owned)
Streets
Miscellaneous Text
Possession Hooks
Boundary Lines
Lot Face Possession Hooks
Regular
Underwater
Tax Lot Polygon
Condo Number
Tax Block Polygon
653
662
663
664
684
685
687
688
689
701
702
715
716
STEINWAY STREET
41 STREET
42 STREET
43 STREET
44 STREET
45 STREET
25 AVENUE
28 AVENUE
ALLEY
Easement
0
90
180
270
360 Feet
N

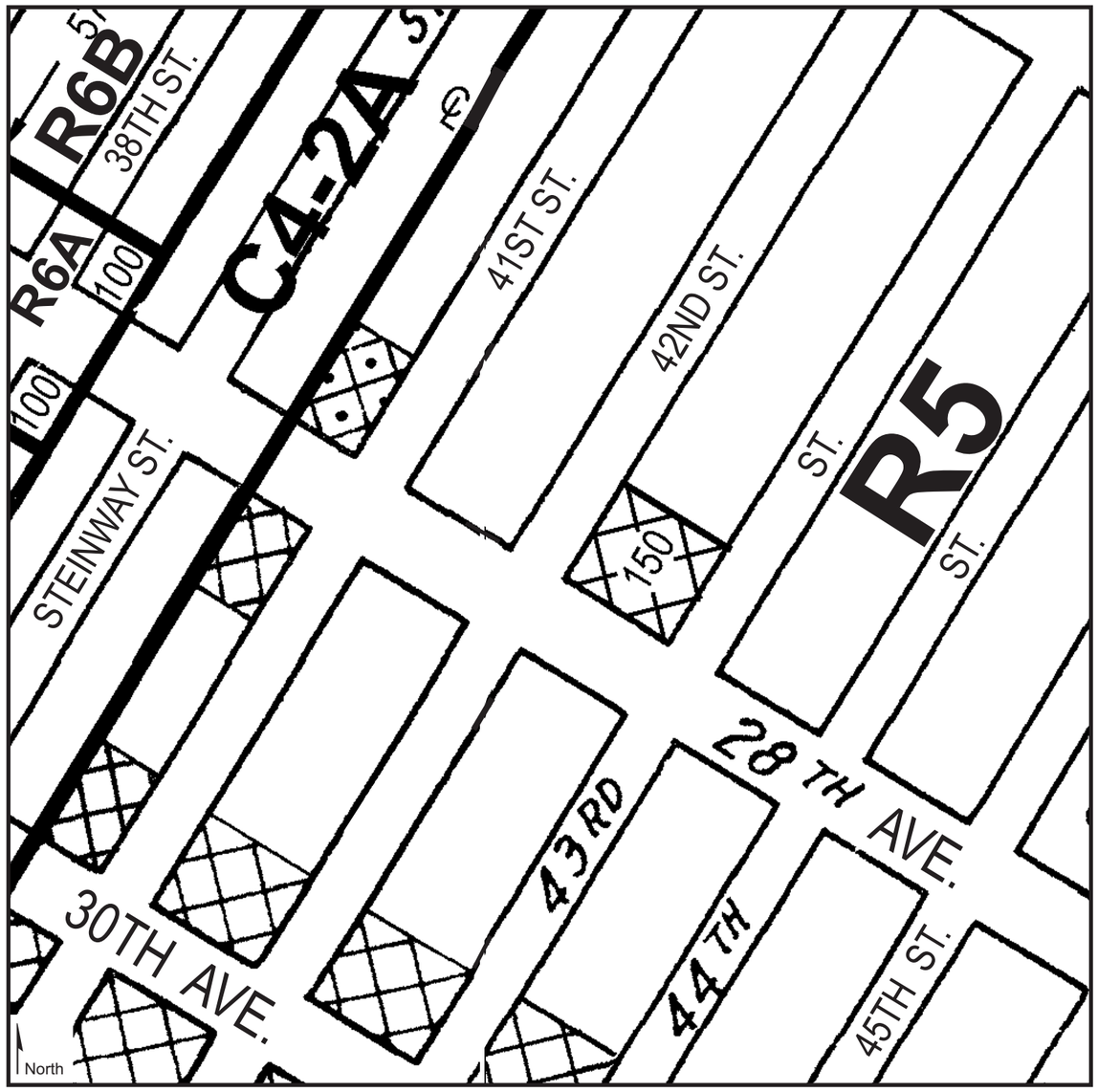

Legend
Proposed Rezoning Area
Projected Development Site (Applicant-Owned)
One & Two Family Residential
Multi-Family Residential (Walk-up)
Multi-Family Residential (Elevator)
Mixed Residential & Commercial
Commercial/Office Buildings
Industrial/Manufacturing
Transportation/Utility
Public Facilities & Institutions
Open Space & Recreation
Parking Facilities
Vacant Land
No Data/Other
400 Feet
36 STREET
37 STREET
38 STREET
STEINWAY STREET
41 STREET
42 STREET
43 STREET
44 STREET
45 STREET
46 STREET
47 STREET
25 AVENUE
28 AVENUE
30 AVENUE
NEWTOWN ROAD
0
100
200
300
400 Feet
N


ZONING MAP
THE NEW YORK CITY PLANNING COMMISSION
Major Zoning Classifications:
The number(s) and/or letter(s) that follows an R, C or M District designation indicates use, bulk and other controls as described in the text of the Zoning Resolution.
R – RESIDENTIAL DISTRICT
C – COMMERCIAL DISTRICT
M – MANUFACTURING DISTRICT
SPECIAL PURPOSE DISTRICT
The letter(s) within the shaded area designates the special purpose district as described in the text of the Zoning Resolution.
AREA(S) REZONED
Effective Date(s) of Rezoning:
11-14-2018 C 180174 ZMQ
Special Requirements:
For a list of lots subject to CEQR environmental requirements, see APPENDIX C.
For a list of lots subject to "D" restrictive declarations, see APPENDIX D.
For Inclusionary Housing designated areas and Mandatory Inclusionary Housing areas on this map, see APPENDIX F.
MAP KEY
6b 6d 7b
9a 9c 10a
9b 9d 10b
© Copyrighted by the City of New York
ZONING MAP 9c
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.
BOWERY BAY
FLUSHING BAY
NEW YORK CITY MUNICIPAL AIRPORT (LA GUARDIA FIELD)
ST. MICHAEL'S CEMETERY
M3-1
M1-1
R5
R5B
R5D
R6A
R4
R4-1
C4-2A
R6B
R3-2
R3X
R3A
R3-1
R6
C4-2
C4-1
R4B
R2A
C1-3
R6B
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 6 (Location of District Boundaries) of the Zoning Resolution.
Site

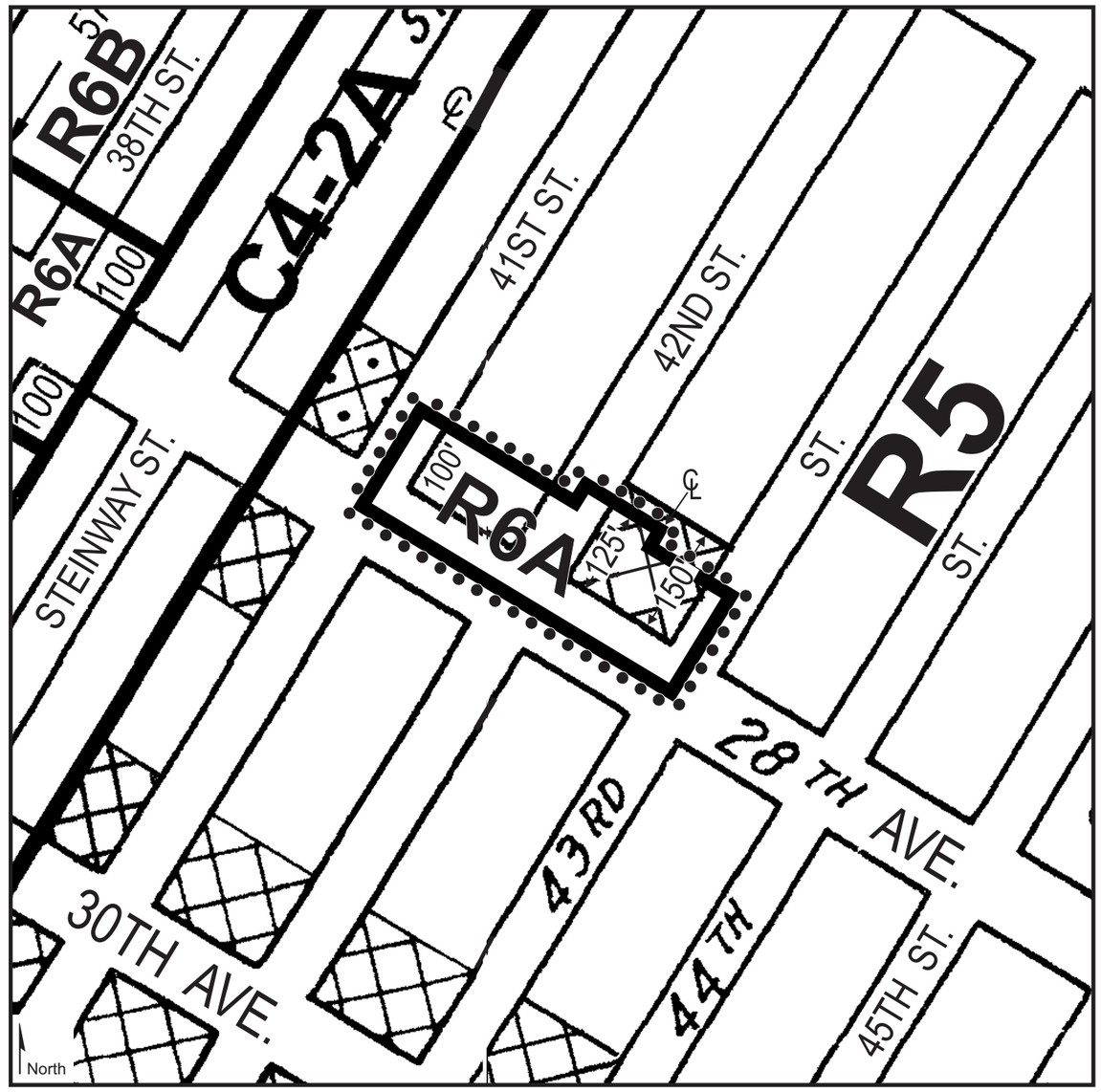

ZONING MAP
THE NEW YORK CITY PLANNING COMMISSION
Major Zoning Classifications:
The number(s) and/or letter(s) that follows an R, C or M District designation indicates use, bulk and other controls as described in the text of the Zoning Resolution.
R – RESIDENTIAL DISTRICT
C – COMMERCIAL DISTRICT
M – MANUFACTURING DISTRICT
SPECIAL PURPOSE DISTRICT
The letter(s) within the shaded area designates the special purpose district as described in the text of the Zoning Resolution.
AREA(S) REZONED
Effective Date(s) of Rezoning:
*10-31-2018 C 180085 ZMQ
10-31-2018 C 180211 ZMQ
Special Requirements:
For a list of lots subject to CEQR environmental requirements, see APPENDIX C.
For a list of lots subject to "D" restrictive declarations, see APPENDIX D.
For Inclusionary Housing designated areas and Mandatory Inclusionary Housing areas on this map, see APPENDIX F.
MAP KEY
5d 6b 6d
8c 9a 9c
8d 9b 9d
© Copyrighted by the City of New York
ZONING MAP 9a
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
NOTE: STREETS FOR THE STREET MAP CHANGE C 130384 MMQ ARE SHOWN ON THIS MAP PRIOR TO BECOMING EFFECTIVE IN ORDER TO LOCATE ZONING DISTRICT BOUNDARIES.
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 6 (Location of District Boundaries) of the Zoning Resolution.
HELL GATE
RIVER
EAST
WARDS ISLAND
ASTORIA PARK
POT COVE
HALLETTS COVE
CHANNEL
FRANKLIN D. ROOSEVELT ISLAND
WEST
EAST
CARL SCHURZ PARK
RAINEY PARK
ASTORIA
R7-2
R6
R5
R5B
R5D
R6B
R6A
R7A
R7X
R7-1
R7-3
R4
R4-1
R4A
R9
R10
R10A
R8B
R8
C4-2A
C4-3
C4-4A
C8-4
C2-8
C1-9
M1-1
M1-2
M1-4
M3-1
M3-2
Site


Legend
Proposed Rezoning Area
Projected Development Site (Applicant-Owned)
400 Feet
36 STREET
37 STREET
38 STREET
STEINWAY STREET
41 STREET
42 STREET
43 STREET
44 STREET
45 STREET
46 STREET
47 STREET
25 AVENUE
28 AVENUE
30 AVENUE
NEWTOWN ROAD
0 100 200 300 400 Feet
N

Zoning Change Map



Current Zoning Maps (9a & 9b)



Proposed Zoning Maps (9a & 9b) - Area being rezoned is outlined with dotted lines

Rezoning from R5 to R6A
Rezoning from R5/C1-2 to R6A/C1-2

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 6 (Location of District Boundaries) of the Zoning Resolution.

42-01 28th Avenue
Community District 1, Queens
6/14/18
Zoning Map 9a, 9c

Matter underlined is new, to be added;
Matter ~~struck out~~ is to be deleted;
Matter within # # is defined in Section 12-10;
* * * indicates where unchanged text appears in the Zoning Resolution

* * *

APPENDIX F
Inclusionary Housing Designated Areas and Mandatory Inclusionary Housing Areas

* * *

Queens

* * *

Queens Community District 1

* * *



Mandatory Inclusionary Housing Area *(see Section 23-154(d)(3))*

Area **2** — [date of adoption] — MIH Program Option 1 and Option 2

Portion of Community District 1, Queens

* * *

ENVIRONMENTAL ASSESSMENT STATEMENT

INTRODUCTION

Based on the analysis and the screens contained in the Environmental Assessment Statement Short Form, the analysis areas that require further explanation include land use, zoning, and public policy, shadows, historic and cultural resources, urban design, hazardous materials, air quality, and noise as further detailed below. The subject heading numbers below correlate with the relevant chapters of the *CEQR Technical Manual.*

4. LAND USE, ZONING AND PUBLIC POLICY

Introduction

Under the *City Environmental Quality Review (CEQR) Technical Manual* guidelines, a land use analysis evaluates the use and development trends in the area that may be affected by a Proposed Action and determines whether the Proposed Action is compatible with those conditions or may affect them. Similarly, the analysis considers the Proposed Actions' compliance with, and effect on, the area's zoning and other applicable public policies.

The Proposed Actions include the following on Blocks 685 and 701 in Queens Community District 1:

- A zoning map amendment to ZR sections 9a and 9b to change the existing R5 zoning district on Block 685, Lots 1, 3, 5, 7, and part of (p/o) Lot 10 to an R6A zoning district and to change the existing R5/C1-2 zoning district on Block 701, Lots 1, 3, 5, 6, 8, 108, and p/o Lot 9 to an R6A/C1-2 zoning district (the Project Area); and

- A zoning text amendment of ZR Appendix F: Inclusionary Housing Designated Areas and Mandatory Inclusionary Housing ("MIH") Areas for Community District 1, Queens to establish an MIH Area coterminous with the Project Area. Option 2 has been chosen under the MIH Text Amendment provisions applicable to the Proposed Actions. Under this option, 30% of the residential floor area must be for affordable housing units for residents with incomes averaging 80% AMI. The final MIH Option will be chosen by the City Council through the ULURP process. Only 20% of the units will be analyzed as affordable at 80% AMI for conservative analysis purposes in the EAS.

The Proposed Actions would facilitate a proposal by the Applicant to construct a new eight-story and cellar mixed commercial and residential building that would replace the five existing buildings on the Proposed Development Site/Projected Development Site 1 (Block 701, Lots 5, 6, 8, 108 and 9). The development would have a total floor area of 67,356 gross square feet (gsf) including 45,731 gsf of residential space and a projected 54 dwelling units. An estimated 16 (30 percent) of the units would be permanently income-

restricted housing units for households earning an average of 80% of the Area Median Income (AMI).The final MIH Option will be chosen by the City Council through the ULURP process. Only 20% of the dwelling units (11 units) will be analyzed as affordable at 80% AMI for conservative analysis purposes in the EAS. The development would also contain 6,921 gsf of ground floor commercial space, which would be occupied by the restaurant now located at 42-01 28th Avenue. 66 accessory off-street parking spaces would be provided. The remainder of the Project Area, comprised of the lots not controlled by the Applicant, are not proposed for development.

Based on an estimated 12- to 18-month environmental and land use approval process and an estimated 20- to 23-month construction period, the Build Year for the Applicant's controlled Projected Development Site 1 is assumed to be 2022. The Proposed Actions would not result in the creation of any additional development sites.

According to the *CEQR Technical Manual*, the appropriate study area for land use, zoning and public policy is related to the type and size of the project, as well as the location and context of the area that could be affected by the project. To assess the potential for project related impacts, the land use study area has been defined as the area located within a 400-foot radius of the proposed Project Area. The 400-foot radius study area is generally bounded on the north by an area between 28th Avenue and 25th Avenue, on the south by an area between 28th Avenue and 30th Avenue, on the east by area between 44th and 45th Streets, and on the west by an area between Steinway and 38th Streets. 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.

LAND USE

Existing Conditions

Project Area

The Project Area consists of 42,392 sf of land area on the southern parts of Blocks 685 and 701 in the Astoria neighborhood of Queens Community District 1. Block 685 is bounded by 28th and 29th Avenues and 41st and 42nd Streets, and Block 701 is bounded by 28th and 29th Avenues and 42nd and 43rd Streets. The Project Area includes 10 full lots and part of two additional lots. The Project Area is located along the north side of 28th Avenue, to a depth from the avenue frontage of 100 feet on Block 685, 125 feet on the western half of Block 701, and 100 feet on the eastern half of Block 701.

The Project Area contains 136 market rate dwelling units within 131,085 gsf of residential floor area, 17,475 gsf of restaurant, retail and personal service space, 1,000 gsf of community facility space (dental office), and 33 accessory parking spaces. The Project Area includes one Projected Development Site described below and 7 Other Sites that are not anticipated to be developed.

Projected Development Site

Projected Development Site 1 is a 14,725 sf assemblage of five adjacent lots on Block 701, with 98 feet of frontage on 28th Avenue and 150 feet of frontage on 42nd Street. The Site contains a total of 19,741 gsf of existing development (10,875 gsf commercial and 8,866 gsf residential), ten dwelling units, a restaurant, and a dental office. The FAR of the assemblage is 0.93. There are three curb cuts onto 42nd Street (on Lots 8, 108, and 9) and none onto 28th Avenue. The individual lots, which would be merged under the Proposed Actions, are described below.

- Lot 5 (42-09 28th Avenue) - 2,326 sf lot developed with a 2,718 gsf, two-story, two-family home.

- Lot 6 (42-01 28th Avenue) - 4,500 sf lot developed with a 12,875 gsf building containing a restaurant on the first floor and a dwelling unit and a dental office on the second floor.

- Lot 8 (25-89 42nd Street) - 1,500 sf lot containing a 1,070 gsf semi-detached one-story and basement two-family home.

- Lot 108 (25-87 42nd Street) - 1,500 sf lot containing a 1,758 gsf semi-detached one-story and basement two-family home.

- Lot 9 (25-85 42nd Street) - 4,899 sf lot developed with a 1,758 gsf, two-story, three-unit residential building occupying only 12% of the lot. Accessory parking for the restaurant on Lot 6 occupies the remainder of Lot 9 as well as the rear of Lot 5.

Projected Development Site 1 is not located entirely with the Project Area. The Site has 150 feet of frontage on 42nd Street, and the Project Area has 125 feet of frontage. Only the southern half of Lot 9 (a 50-foot-wide and 98-foot-deep lot) would be rezoned. Projected Development Site 1 includes 12,276 sf within the Project Area and a 2,449 sf, 25-foot-wide portion that is outside it. The Site is entirely within the existing R5/C1-2 district.

Other Sites

The Project Area includes seven other lots identified as Other Sites 1 through 7 which are not projected to be developed. The portion of the Project Area located on Block 685 containing Others Sites 1 through 5 is zoned R5 and measures approximately 20,000 sf, with 200 feet of frontage on 28th Avenue and 100 feet of frontage on 41st and 42nd Streets. Others Sites 6 and 7, both zoned R5/C1-2, comprise the balance of the Project Area on Block 701. Collectively, the Other Sites within the Project Area contain 122 dwelling units and 126,359 gsf of building floor area of which 118,259 gsf is residential, 7,600 gsf is commercial, and 500 gsf is garage. These Sites are described below.

Other Site 1 – Block 685, Lot 1 (25-94 42nd Street) – 5,000 sf lot developed with a 21,800 gsf, four-story and cellar, multi-family walk-up apartment building containing 23 dwelling units, 4.36 FAR.

Other Site 2 – Block 685, Lot 3 (41-11 28th Avenue) – 5,500 sf lot developed with a 21,575 gsf, four-story and cellar, multi-family walk-up apartment building containing 23 dwelling units, 3.92 FAR.

Other Site 3 – Block 685, Lot 5 (41-07 28th Avenue) – 4,750 sf lot developed with a 18,200 gsf, four-story and cellar, multi-family walk-up apartment building containing 20 dwelling units, 3.83 FAR.

Other Site 4 – Block 685, Lot 7 (25-95 41st Street) - 4,227 sf lot developed with a 18,054 gsf, four-story and cellar, multi-family walk-up apartment building containing 19 dwelling units, 4.27 FAR.

Other Site 5 – Block 685, Lot 10 (25-87 41st Street) – 2,450 sf lot developed with a 3,960 gsf, two-story walk-up apartment building containing 4 dwelling units. Only a five-foot-wide sliver, 490 sf of this Site is included in the Project Area.

Other Site 6 - Block 701, Lot 1 (25-96 25th Avenue) - 4,000 sf lot developed with a 14,030 gsf, four-story and cellar, mixed-use building and a 500 gsf, one-story accessory garage. The building contains 10 dwelling units (11,430 gsf) above a ground floor commercial unit (2,600 gsf), 3.63 FAR.

Other Site 7 – Block 701, Lot 3 (42-11 28th Avenue) - 6,150 sf lot developed with a five-story-and cellar, 32,200 gsf mixed-use building with five commercial units on the ground floor (5,000 gsf) and 27 residential units on the upper floors (27,200 gsf) 5.24 FAR.

400-Foot Radius Project Study Area

The Project Area is located in the Borough of Queens in Community District 1 within the Astoria neighborhood. The surrounding area within a 400-foot radius of the Project Area is characterized by residential use on the mid-blocks with mixed-use and commercial buildings along 28th Avenue and Steinway Street. The only community facility in the surrounding area is St. Josephs Roman Catholic Church, a house of worship and school located on 30th Avenue between 43rd Street and 44th Street. Existing land uses within the surrounding area primarily consist of one- and two-family and multi-family residences, mixed-use, and commercial buildings. Residential and mixed-use buildings range from two- to five-stories in height, and commercial buildings range from one- to two-stories.

Future No-Action Scenario

Project Area

Reasonable Worst-Case Development Scenario (RWCDS)

The No-Action RWCDS in the Project Area would be the same as the existing condition. No new development would occur on the 12 lots within the Project Area. Aside from the proposed development site, all lots within the Project Area are developed with occupied four- and five-story buildings that have been present for decades. Absent the

proposed rezoning or some other change in conditions, this stable land use pattern would continue.

Therefore, absent the Proposed Actions, the Project Area would contain 136 market rate dwelling units within 131,085 gsf of residential floor area, 17,475 gsf of restaurant, retail and personal service space, 1,000 gsf of community facility space (dental office), and 33 accessory parking spaces.

400-Foot Radius Project Study Area

No new development projects are identified for the 400-foot radius project study area based on a review of the NYC Department of City Planning's (DCP) ZAP Search of Zoning and Land Use Applications. No development plans are known to exist for the undeveloped parcels, parking lots, or other uses within the project study area as identified above by the project build year of 2022.

Surrounding land uses within the immediate study area are expected to remain largely unchanged by the project build year of 2022. The 400-foot area surrounding the Project Area is developed with a stable mixed-use community containing one-, two-, and multi-family residences, mixed-use buildings, commercial uses, and community facilities. Relatively few undeveloped parcels remain within the project study area and it is therefore anticipated that no significant new development would occur within the project study area by 2022.

Future With-Action Scenario

Project Area

Projected Development Site

Under the With-Action Scenario for the project build year of 2022, Projected Development Site 1 would be developed with a new eight-story and cellar mixed commercial and residential building that would replace the five existing buildings on the Site. The development would have a total floor area of 67,356 gsf including 45,731 gsf of residential space and a projected 54 dwelling units. Normally, the number of dwelling units is calculated based on an average size of 1,000 gsf per unit which would result in approximately 46 dwelling units based on the proposed 45,731 gsf of residential floor area. In this case, 54 dwelling units are proposed based on an average unit size of 847 sf. Therefore, the With-Action Scenario would have 54 dwelling units.

While the project proposes that an estimated 30% of the units (16 units) would be permanently income-restricted housing units for households earning an average of 80% of AMI under MIH Option 2, it is assumed that only 20% of the dwelling units (11 units) will be analyzed as affordable at 80% AMI for conservative analysis purposes in the EAS. The final MIH Option will be chosen by the City Council through the ULURP process.

The development would also contain 6,921 gsf of ground floor commercial space, which would be occupied by the restaurant now located at 42-01 28th Avenue. 66 accessory off-street parking spaces would be provided. The proposed project would be a mixed-use development with a 3.5 FAR, close to the maximum of 3.60 that would be permitted under the proposed zoning, and a height of 85 feet, the maximum that would be permitted.

Other Sites

Aside from the Projected Development Site 1, six properties and a small part of a seventh property, identified as Other Sites 1 through 7, are located within the Project Area. No new development is anticipated on Other Sites 1 through 7. Other Sites 1 through 4, 6, and 7 are wholly located within the Project Area and are developed with substantial buildings that were constructed before the current Zoning Resolution became effective in 1961 and exceed limits that have been in effect since 1961. The maximum permitted FAR under the proposed R6A and R6A/C1-2 zoning is 3.60, and the existing FARs on Other Sites 1 through 4, 6, and 7 range from 3.63 to 5.24 (from 100% to 146% of the maximum FAR permitted under the proposed R6A and R6A/C1-2 zoning). In addition, only 20% of the remaining property, Other Site 5, is within the Project Area, and the included portion of Other Site 5 is only five feet wide. Therefore, the proposed zoning map amendment would not result in any new development on Other Sites 1 through 7.

400-Foot Radius Project Study Area

The Proposed Actions would not result in any changes in land use within the 400-foot radius project study area.

Analysis Framework

The CEQR analysis prepared for the Proposed Actions is based on the difference between the No-Action RWCDS and the Future With-Action RWCDS.

Under No-Action conditions, the Project Area would be developed with 136 dwelling units (all market rate) within 131,085 gsf of residential floor area; 17,475 gsf of restaurant, retail and personal service space; 1,000 gsf of community facility space (dental office); and 33 accessory parking spaces.

Under With-Action conditions, the Project Area would be developed with 167,950 gsf of residential space for 180 dwelling units (including 169 market rate and 11 affordable units); 14,521 gsf of restaurant, retail and personal service space; and 68 accessory parking spaces.

The increment between the No-Action and With-Action development scenarios would be 36,865 gsf of additional residential space for 44 additional dwelling units (11 of which would be affordable), a decrease of 2,954 gsf of commercial space, a decrease of 1,000 gsf of community facility space, and 35 additional accessory parking spaces.

Relative to No-Action conditions, the Project Area would contain 32,911 gsf more built floor area. In order to allow for the projected development, the 10 existing dwelling units and the existing restaurant and dental office on Projected Development Site 1 would be removed.

Conclusion

The Applicant seeks to develop his property to provide 54 dwelling units, 16 of which would be considered affordable (11 affordable units are assumed for conservative EAS analysis purposes), together with 6,921 gsf of commercial space, and 66 accessory parking spaces to serve project residents. This would constitute a significant land use change on Projected Development Site 1 but the Applicant believes this change would be beneficial as it would fully develop this underutilized Site and would provide new housing, including affordable housing, commercial space, and accessory parking.

The projected development would replace 10 existing dwelling units and an existing restaurant and dental office. This would not be considered to be a significant land use impact as there would be a net increase in dwelling units on Projected Development Site 1, the dentist office space is currently vacant, and the space that the existing restaurant occupies would be rebuilt for re-occupancy by the restaurant. The projected development is not expected to alter existing development patterns in the surrounding project study area in the future due to the substantial levels of development already existing on most lots in this area. The provision of affordable housing in the Project Area would be in compliance with City policies to encourage the development of new housing, especially affordable housing, in underutilized areas of the City.

Based on the above analyses, it has been determined that 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

Existing Conditions

Project Area

The Project Area includes Block 685, Lots 1, 3, 5, 7, and p/o Lot 10, which are zoned R5, and Block 701, Lots 1, 3, 5, 6, 8, 108, and p/o Lot 9, zoned R5/C1-2, in the Astoria neighborhood of Queens, Community District 1. The Project Area has been zoned R5 since 1961. The 28th Avenue Rezoning (C 110398 ZMQ, effective June 12, 2013) mapped a C1-2 commercial overlay district on 28th Avenue between 42nd Street and 43rd Street to a depth of 150 feet. The C1-2 overlay was intended to reinforce the commercial character of that portion of 28th Avenue and to legalize parking on parts of Lots 5 and 9 for the then legally non-conforming restaurant on Lot 6.

The R5 zoning district allows all housing types including detached, semi-detached, attached and multi-family residences (UG 1 & 2) as well as community facility uses (UG 3 & 4). The maximum FAR for all housing types is 1.25 with a community facility FAR

of 2.0 and the maximum street wall and total building heights are 30 and 40 feet, respectively. Detached houses must have two side yards that total at least 13 feet, each with a minimum width of five feet. Semi-detached houses need one eight-foot wide side yard. Apartment houses need two side yards, each at least eight feet wide. Off-street parking is required for 85% of the dwelling units in a building.

C1 districts accommodate the retail and personal service shops needed in residential neighborhoods, and C1-2 districts are mapped as commercial overlays within residence districts, generally along major avenues. The maximum commercial FAR of the C1-2 overlay mapped in lower density residential districts is 1.0. Residential uses are permitted within these overlays with residential bulk being governed by the provisions of the surrounding residential zone. Parking requirements vary by use within the C1-2 zone with one parking space required for each 300 square feet of general retail and ambulatory diagnostic floor area. No loading spaces are required for the first 8,000 square feet of floor area, and one loading berth is required for the next 17,000 square feet of commercial retail floor area.

400-Foot Radius Project Study Area

The 400-foot radius project study area is primarily zoned R5 as described above. In addition to the C1-2 commercial overlay mapped on a portion of the Project Area described above, a C1-2 overlay is mapped along a portion of the northern frontage of the block between Steinway and 41st Streets along 28th Avenue. A C2-2 commercial overlay is mapped across the street from this area along a portion of the southern frontage of the block between Steinway and 41st Streets along 28th Avenue. The only other zoning district mapped within 400 feet of the Project Area is a C4-2A district mapped along both sides of Steinway Street.

C2 overlay districts accommodate the retail and personal service shops needed in residential neighborhoods, and are generally mapped along major avenues. C2 districts permit a slightly wider range of uses than C1 districts, such as funeral homes and repair shops. Local retail and service uses are permitted within the C2-2 commercial overlay. C2-2 overlays in R5 zoning districts allow commercial uses at a maximum FAR of 1.0. Residential uses are permitted within this overlay with residential bulk being governed by the provisions of the surrounding R5 residential zone.

C4 zoning districts are mapped in regional commercial centers that are located outside of the central business districts. In these areas, specialty and department stores, theaters, and other commercial and office uses serve a larger area and generate more traffic than neighborhood shopping areas. The C4-2 district is mapped in more densely built areas such as Steinway Street in Astoria and the C4-2A district is a contextual district that permits commercial, residential, and community facility FARs of 3.0 with a residential district equivalent of the R6A district.

Future No-Action Scenario

Project Area

In the future and absent the Proposed Actions, Block 685, Lots 1, 3, 5, 7, and p/o Lot 10 would continue to zoned R5, and Block 701, Lots 1, 3, 5, 6, 8, 108, and p/o Lot 9 would remain zoned R5/C1-2.

400-Foot Radius Project Study Area

Based on a review of DCP's ZAP Search of Zoning and Land Use Applications, no rezoning applications are proposed for the 400-foot radius project study area. No rezoning actions are presently being contemplated by the DCP, as indicated on the DCP website, for the study area by the project build year of 2022.

Future With-Action Scenario

Project Area

The Proposed Actions would change the existing R5 zoning district on Block 685, Lots 1, 3, 5, 7, and p/o Lot 10 to an R6A zoning district and change the existing R5/C1-2 zoning district on Block 701, Lots 1, 3, 5, 6, 8, 108, and p/o Lot 9 to an R6A/C1-2 zoning district. In addition, the Proposed Actions would amend ZR Appendix F to establish a MIH coterminous with the proposed Project Area. Option 2 has been chosen under the MIH Text Amendment provisions applicable to the Proposed Actions. Under this option, 30% of the residential floor area must be for affordable housing units for residents with incomes averaging 80% AMI. The final MIH Option will be chosen by the City Council through the ULURP process. Only 20% of the units will be analyzed as affordable at 80% AMI for conservative analysis purposes in the EAS.

Proposed R6A and R6A/C1-2 Districts

The proposed Zoning Map Amendment would include rezoning the Proposed Development Site from its existing R5/C1-2 district to the proposed R6A/C1-2 zoning district. The proposed R6A/C1-2 zoning district would provide a moderate increase in development potential from the existing R5/C1-2 zoning district, facilitating new mixed-use development with the provision of permanently income-restricted housing along a wide street in close proximity to mass transit. Within the proposed MIH Area, R6A zoning districts allow medium-density apartment buildings at a maximum FAR of 3.6 for developments that provide income-restricted housing units pursuant to the MIH program requirements. The maximum building height for eligible MIH program buildings with qualifying ground floors is 85 feet after a setback from the base height of up to 65 feet. Buildings must set back above the maximum base height to a depth of 10 feet on a wide street and 15 feet on a narrow street before rising to a maximum of 8 floors. Off-street parking is required for 50 percent of the non-income restricted residential dwelling units, and 25 percent of income-restricted housing units outside of the Transit Zone. The retention of the C1-2 commercial overlay would permit the existing restaurant to remain and expand on Projected Development Site 1 as a legal conforming use.

The proposed R6A zoning district for the non-Applicant owned properties on Blocks 685 and 701 ("Other Sites") reflects the existing built character of the pre-war legal, non-complying apartment buildings within the Project Area. The proposed rezoning would bring these existing non-complying buildings closer to compliance with the bulk provisions of the Zoning Resolution. Moreover, the proposed R6A zoning district is consistent with the density mapped in the surrounding area in the Astoria Rezoning area along wide corridors similar to 28th Avenue.

Proposed Mandatory Inclusionary Housing Text Amendment

The proposed text amendment of ZR Appendix F is necessary to establish an MIH Area coterminous with the Project Area. The proposed zoning text amendment to designate the rezoning area as an MIH Area is consistent with the policy goals of the City's Housing New York: A Five-Borough, Ten-Year Plan. According to the U.S. Census Bureau, 40.5 percent of households in Queens Community District 1 are rent burdened, spending 35 percent or more of their income on rent.[1]

Pursuant to the MIH program, a percentage of the new dwelling units in the proposed development must be affordable units, resulting in an affordable housing set-aside for either 25 percent of the residential floor area at an average of 60 percent of AMI (Option 1) or 30 percent of the residential floor area at an average of 80 percent AMI, with no unit targeted at a level exceeding 130 percent of AMI (Option 2).

The Applicant intends to map both Options 1 and 2 on Projected Development Site 1 but is seeking to develop pursuant to Option 2 which would result in approximately 16 permanently affordable units. The MIH program would ensure that development within the Project Area would address the need for low-income housing. The final MIH Option will be chosen by the City Council through the ULURP process. Only 20% of the dwelling units (11 units) will be analyzed as affordable at 80% AMI for conservative analysis purposes in the EAS.

400-Foot Radius Project Study Area

The Proposed Actions would not result in any changes in zoning in the 400-foot radius project study area.

Conclusion

No significant impacts to zoning patterns in the area would be expected. The proposed Zoning Map Change and Zoning Text Amendment would only apply to the Project Area and would not affect lots beyond this area. The Proposed Actions would not result in any significant impacts to zoning patterns in the area. The proposed rezoning from R5 to R6A

[1] Based on American Community Survey 2011-15 Five Year Estimates for Public Use Microdata Area (PUMA) 4101, which approximates Queens Community District 1, available at: https://communityprofiles.planning.nyc.gov/queens/1#resources.

is consistent with the City's policy to increase density for new housing along wide streets that can support additional development. Without the proposed rezoning, the proposed development site will likely remain unchanged because the bulk permitted within the existing R5 zoning district does not yield the density required to facilitate the redevelopment of the site. The proposed rezoning would increase the overall residential density within Queens Community Board 1 and will contribute to the City's overall goal of creating more permanently income-restricted housing units through the associated MIH text amendment requested in this application. The retention of the C1-2 commercial overlay would permit the existing restaurant to remain and expand on Projected Development Site 1 as a legal conforming use. The proposed rezoning would bring the existing non-complying buildings on the 7 Other Sites closer to compliance with the bulk provisions of the Zoning Resolution.

Based on the above analysis, it has been determined that no potentially significant adverse impacts related to zoning are expected to occur as a result of the Proposed Actions. Therefore, further analysis of zoning is not warranted.

PUBLIC POLICY

Existing Conditions

According to the *CEQR Technical Manual*, a project that would be located within areas governed by public policies controlling land use, or that has the potential to substantially affect land use regulation or policy controlling land use, requires an analysis of public policy. Public policies applicable to the Project Area and 400-foot radius project study area are discussed below.

Project Area

No public policies apply to the Project Area. The Project Area is not located within the City's Coastal zone boundary and is therefore not subject to the provisions of the City's Waterfront Revitalization Program (WRP). No Historic Districts or individually designated historic resources are located within the Project Area. No other public policies would apply to the Proposed Actions as the Project Area is not located within the boundaries of any 197-a Community Development Plans or Urban Renewal Area plans, and also is not within a critical environmental area, a significant coastal fish and wildlife habitat, a wildlife refuge, or a special natural waterfront area.

400-Foot Radius Project Study Area

The Food Retail Expansion to Support Health (FRESH) program is mapped over the 400-foot radius project study area south of the Project Area. The City has established the FRESH program in response to the issues raised in neighborhoods that are underserved by grocery stores. FRESH provides zoning and financial incentives to promote the establishment and retention of neighborhood grocery stores in underserved communities throughout the five boroughs. The FRESH program is open to grocery store operators renovating existing retail space or developers seeking to construct or

renovate retail space that will be leased by a full-line grocery store operator. Stores that benefit from the FRESH program must provide a minimum of 6,000 square feet of retail space for a general line of food and nonfood grocery products intended for home preparation, consumption and utilization. The relevant portion of the project study area is eligible for various tax incentives related to grocery store development and operation.

The area along both sides of Steinway Street south of 28th Avenue is located within the Steinway Street Business Improvement District (BID). The BID's vision is to make Steinway Street user friendly, while highlighting the local businesses on the street and bringing together the Astoria community in a positive way. The BID works to improve sanitation, marketing, security, holiday lighting, beautification, and Internet access along Steinway Street.

No other public policies apply to the 400-foot radius project study area. The area is not located within the City's Coastal zone boundary and the area is therefore not subject to the provisions of the City's Waterfront Revitalization Program (WRP). No Historic Districts or individually designated historic resources are located within the 400-foot radius study area. No other public policies would apply to the Proposed Actions as the 400-foot radius project study area is not located within the boundaries of any 197-a Community Development Plans or Urban Renewal Area plans, and also is not within a critical environmental area, a significant coastal fish and wildlife habitat, a wildlife refuge, or a special natural waterfront area.

Future No-Action Scenario

In the future, without the action, no new public policies are anticipated to apply to either the Project Area or the 400-foot radius project study area by the project build year of 2022. Therefore, the Project Area would not be subject to any public policies. The relevant portions of the 400-foot radius project study area would continue to be subject to the existing provisions of the FRESH program and the Steinway Street BID.

Future With-Action Scenario

Project Area

The Project Area would be subject to the provisions of the Mandatory Inclusionary Housing (MIH) program which would go into effect once mapped over the newly mapped R6A and R6A/C1-2 zoning districts (see discussion in the Future With-Action zoning section above). It is currently anticipated that 16 affordable units would be developed on Projected Development Site 1. 11 are analyzed as affordable at 80% AMI for conservative analysis purposes in the EAS.

400-Foot Radius Project Study Area

The proposed development would not have any impact on the FRESH Program areas or the Steinway Street BID located within 400 feet of the Project Area.

Conclusion

No impact to public policies would occur as a result of the Proposed Actions. The action would be an appropriate development in the Project Area and would be a positive contribution to Queens Community District 1 and to the surrounding neighborhood.

The proposed project would meet the City's public policy goals as explained above as well as similar State and national public policy goals related to the provision of affordable housing.

Based on the above analyses, it has been determined that no potentially significant adverse impacts related to public policy are expected to occur as a result of the Proposed Actions. Therefore, further analysis of public policy is not warranted.

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 *CEQR Technical Manual*, a shadows assessment is not required unless the project would include a structure or an addition to a structure at least 50 feet in height or if it would contain shorter structures that might cast substantial new shadows on an adjacent park, historic resource, or an important natural resource.

Preliminary Screening Assessment

Tier 1 Screening Assessment

The maximum height of the projected development as specified in the RWCDS memorandum would be 85 feet. The maximum shadows radius distance of any structure is 4.3 times its height or 365.5 feet in this instance. No parks, historic resources, or important natural resources are located within the maximum shadows radius of the Projected Development Site. This is illustrated on the attached Figure 8-1: Tier 1 Screening Assessment.

Conclusion

As no new shadows would be cast by the Proposed Actions on any parks, historic resources, or important natural resources, no further assessment of shadow impacts from the project is required.

Figure 8-1: Tier 1 Screening Assessment



9. HISTORIC AND CULTURAL RESOURCES

The 2014 *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.

By letter dated 3/20/19, the New York City Landmarks Preservation Commission (LPC) has determined that the Project Area does not have any historic or archaeological significance (see Historic and Cultural Resources Appendix).

The Project Area, Block 685, Lots 1, 3, 5, 7, and p/o Lot 10 and Block 701, Lots 1, 3, 5, 6, 8, 108, and p/o Lot 9 in the Astoria neighborhood of Queens, and the 400-foot radius project study area are not a Federal, State, or New York City designated Historic District and do not contain any individually designated historic resources. As such, a historic architectural analysis is not warranted for the Proposed Actions.

Under the Proposed Actions, new development is anticipated on Projected Development Site 1 resulting in new soils disturbance to areas that may not have previously been excavated. As this Site does not have any archaeological significance, an archaeological analysis is not warranted for the Proposed Actions.

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, including the following:

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

2. Projects that result in an increase in built floor area beyond what would be allowed 'as-of-right' or in the future without the proposed project.

The Proposed Actions involve the request for a rezoning of the Project Area from an existing R5 zoning district to an R6A zoning district and from an R5/C1-2 zoning district to an R6A/C1-2 zoning district.

The Proposed Actions would allow the development in the Project Area of a new eight-story and cellar mixed commercial and residential building that would replace the five existing one- to two-story buildings on Projected Development Site 1. The development would have a total floor area of 67,356 gsf including 45,731 gsf of residential space and a projected 54 dwelling units. The development would also contain 6,921 gsf of ground floor commercial space, which would be occupied by the restaurant now located at 42-01 28th Avenue. 66 accessory off-street parking spaces would be provided. The remainder of the Project Area, comprised of the lots not controlled by the Applicant, are not proposed or projected for development.

The Proposed Actions would also permit the modification of the existing yard, height, and setback requirements relevant to Projected Development Site 1 and would also result in an increase in built floor area beyond what would be allowed 'as-of-right' or in the future without the proposed project. A preliminary urban design assessment is therefore required.

Preliminary Assessment

Existing Conditions

The Project Area consists of 42,392 sf of land area on the southern parts of two blocks in the Astoria neighborhood of Queens. They are Block 685 (bounded by 28th and 29th Avenues and 41st and 42nd Streets) and Block 701 (bounded by 28th and 29th Avenues and 42nd and 43rd Streets). The Project Area includes 10 full lots and parts of two additional lots located along the north side of 28th Avenue, to a depth from the avenue frontage of 100 feet on Block 685, 125 feet on the western half of Block 701, and 100 feet on the eastern half of Block 701.

The Project Area is currently developed with 136 dwelling units, 17,475 gsf of restaurant, retail and personal service space, 1,000 gsf of community facility space (dental office), and 33 accessory parking spaces. The residential units are located in a combination of one- and two-story, single- and two-family homes and four- to five-story multi-family buildings. Three of the 11 buildings in the Project Area include ground floor commercial and community facility uses.

The surrounding area within a 400-foot radius of the Project Area is characterized by residential use on the mid-blocks with mixed-use and commercial buildings along 28th Avenue and Steinway Street. The only community facility in the surrounding area is St. Josephs Roman Catholic Church, a house of worship and school located on 30th Avenue between 43rd Street and 44th Street. Existing land uses within the surrounding area primarily consist of one- and two-family and multi-family residences, mixed-use, and commercial buildings. Residential and mixed-use buildings range from two- to five-stories in height, and commercial buildings range from one- to two-stories.

There are no visual resources within 400 feet of the Project Area.

An aerial photograph of the project study area and ground level photographs of the site area and the immediate context are attached which show existing conditions on Projected Development Site 1 and in the surrounding area. Zoning calculations of the existing conditions on the Site, including floor area calculations, lot coverage, and building heights, are shown in Table 10-1 below.

No-Action Scenario

Under the No-Action Scenario for the Project Build Year of 2022, it is assumed that no new development would occur on the 12 lots within the Project Area and all existing uses in the Project Area would remain. Therefore, absent the Proposed Actions, the Project Area would contain 136 dwelling units, 17,475 gsf of restaurant, retail and personal service space, 1,000 gsf of community facility space (dental office), and 33 accessory parking spaces.

The future No-Action Development Scenario would not result in any changes to the existing urban design and visual character of the Project Area.

Zoning calculations of future No-Action conditions on the site, including floor area calculations, lot coverage, and building heights, are shown in Table 10-1 below.

Future With-Action Scenario

The future With-Action Development Scenario in the Project Area would result in a denser development in the Project Area as compared to the future No-Action Development Scenario. The Applicant seeks to develop Projected Development Site 1 with a new eight-story and cellar 67,356 gsf building. The development would contain a projected 54 dwelling units and a 6,921 gsf ground floor commercial space, which

would be occupied by the restaurant now located at 42-01 28th Avenue. A cellar garage would provide 56 attended accessory parking spaces, and there would also be 10 accessory surface parking spaces, for a total of 66 accessory off-street parking spaces.

The building would occupy the 28th Avenue frontage of the Site. The surface parking lot and a driveway leading to the garage ramp would occupy the northern part of the Site. The building would have a base height of 45 feet, at which height the building would set back 10 feet along 28th Avenue and 15 feet along 42nd Street before rising to a height of 85 feet. The residential entrance would be located on 28th Avenue, and the ground floor commercial space would have entrances on both street frontages. A 22-foot-wide curb cut would be located on 42nd Street, 105 feet from the intersection with 28th Avenue. In order to allow for the projected development, the five existing one- to two-story buildings on Projected Development Site 1 would be removed.

The difference between the No-Action and With-Action Scenarios would be the development under the With-Action Scenario of 36,865 gsf of additional residential space for 44 additional dwelling units, a decrease of 2,954 gsf of commercial space, a decrease of 1,000 gsf of community facility space, and 35 additional accessory parking spaces. Relative to No-Action conditions, the Project Area would contain 32,911 gsf more built floor area.

The existing development on Projected Development Site 1 does not match the height and bulk of the structures that comprise the remainder of the Project Area. The development of Projected Development Site 1 with an 8-story, 67,356 gsf residential and commercial building would replace these smaller one- and two-story buildings with a building that would be closer in scale and bulk to the four- to five-story residential and mixed-use structures in the remainder of the Project Area.

The existing one- and two-story structures on Project Development Site 1 do not currently provide a quality pedestrian experience. Under the Proposed Actions, the removal of these structures and their replacement with a newly built 8-story mixed-use building containing ground level commercial space would improve the streetscape in the Project Area.

Zoning calculations of future With-Action conditions on the site, including floor area calculations, lot coverage, and building heights, are shown in Table 10-1 below. A three-dimensional representation of the future With-Action condition streetscape is also attached.

Table 10-1
Zoning Calculations Relevant to Urban Design Analysis

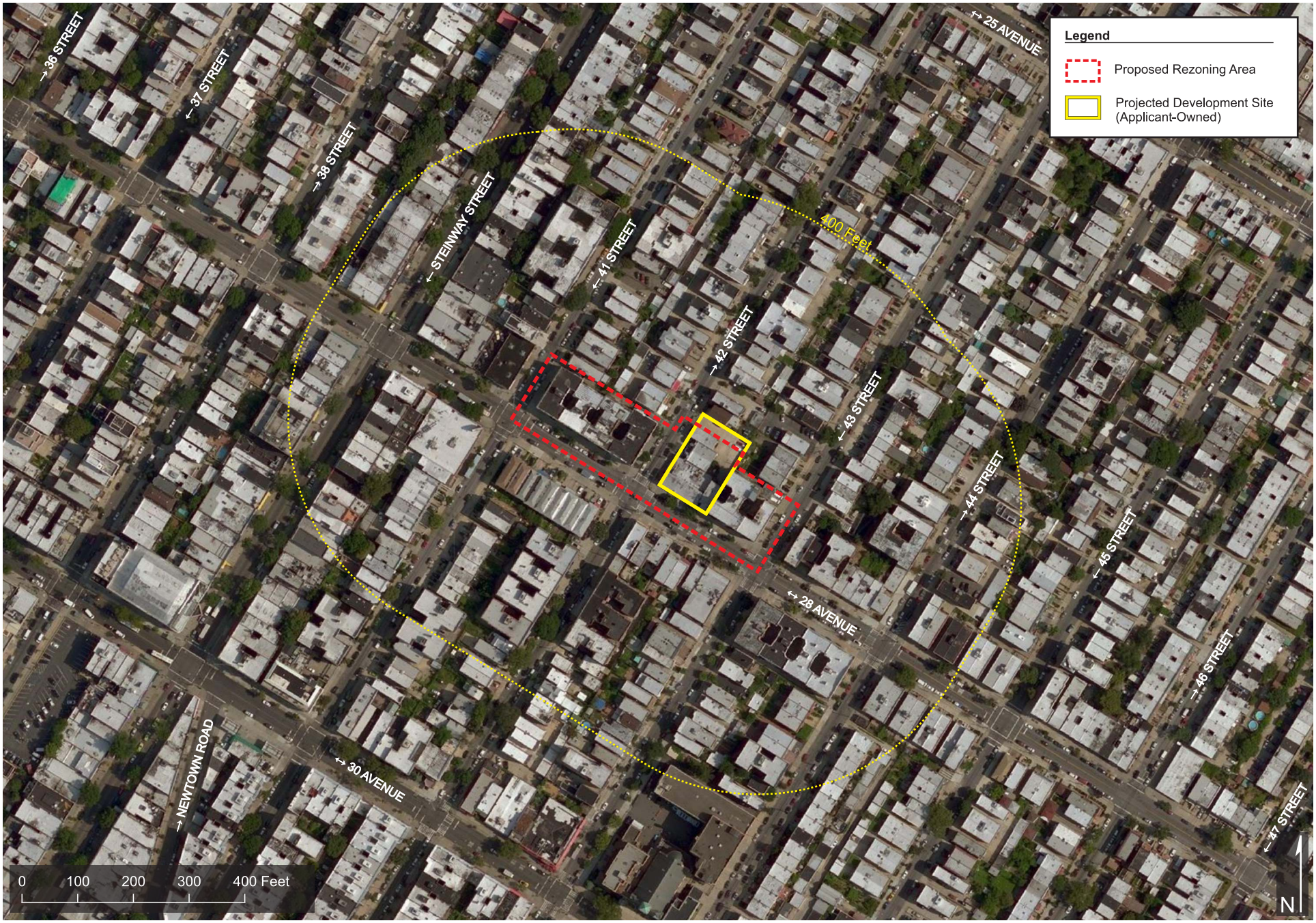
Item	Existing Conditions	No-Action Conditions	With-Action Conditions
Development Scenario	136 DUs (11 bldgs), 17,475 gsf comm'l (3 bldgs), 1,000 gsf comm facil (1 bldg), 33 parking spaces	136 DUs (11 bldgs), 17,475 gsf comm'l (3 bldgs), 1,000 gsf comm facil (1 bldg), 33 parking spaces	180 DUs in 7 bldgs; 14,521 gsf retail in 3 bldgs; 58 parking spaces
Building Floor Area	149,560 gsf	149,560 gsf	182,471 gsf
Lot Coverage	119,648 sf (80%)	119,648 sf (80%)	164,224 sf (90%)
Building Heights	2 one-story (20'), 3 two-story (24'), 5 four-story (40'), 1 five-story (50') bldgs	2 one-story (20'), 3 two-story (24'), 5 four-story (40'), 1 five-story (50') bldgs	1 eight-story (85'), 5 four-story (40'), 1 five-story (50') bldgs

Conclusion

The Proposed Actions would result in the development of residential and local retail uses on one Projected Development Site located in the Project Area which is primarily characterized by a mix of residential and commercial uses. The projected development would replace 10 dwelling units, a 9,875 gsf restaurant, and a 1,000 gsf dental office in five one- to two-story structures with 54 dwelling units and 6,921 gsf of new restaurant space in a single new 8-story building. The proposed 8-story development on Projected Development Site 1 would replace the five existing smaller one- and two-story buildings with a building that would be closer in scale and bulk to the four- to five-story residential and mixed-use structures in the remainder of the Project Area. The removal of the existing structures and their replacement with the proposed new building would improve the streetscape in the Project Area.

The With-Action Development Scenario in the Project Area would not result in any impacts to visual resources as no such resources are located in the vicinity of the Area.

The Proposed Actions would not result in any significant adverse impacts to urban design and visual resources and a detailed urban design and visual resource analysis would not be required.


Legend
Proposed Rezoning Area
Projected Development Site (Applicant-Owned)
400 Feet
36 STREET
37 STREET
38 STREET
STEINWAY STREET
41 STREET
42 STREET
43 STREET
44 STREET
45 STREET
46 STREET
47 STREET
25 AVENUE
28 AVENUE
30 AVENUE
NEWTOWN ROAD
0 100 200 300 400 Feet
N



1. View of the Project Area facing east from the intersection of 28th Avenue and 41st Street.



2. View of 41st Street facing southwest (Project Area at left).



3. View of the Project Area facing south from 41st Street.





4. View of the Project Area facing southeast from 41st Street.



5. View of 28th Avenue facing southeast from 41st Street (Project Area at left).



6. View of 41st Street facing northeast from 28th Avenue (Project Area at right).





7. View of the Project Area facing northeast from 28th Avenue.



8. View of the Project Area facing north from 28th Avenue.



9. View of 28th Avenue facing southeast from 42nd Street (Development Site at left).





10. View of the Development Site facing northeast from the intersection of 28th Avenue and 42nd Street.



11. View of 42nd Street facing northeast from 28th Avenue (Development Site at right).



12. View of the Project Area facing northwest from the intersection of 28th Avenue and 42nd Street.





13. View of the Development Site facing northeast from 28th Avenue.



14. View of the Development Site facing north from 28th Avenue.



15. View of 28th Avenue facing northwest (Development Site at right).





16. View of the Project Area facing northeast from 28th Avenue.



17. View of 43rd Street facing northeast from 28th Avenue (Project Area at left).



18. View of the Project Area facing north from the intersection of 28th Avenue and 43rd Street.





19. View of 28th Avenue facing northwest from 43rd Street (Project Area at right).



20. View of the Project Area facing northwest from 43rd Street.



21. View of the Project Area facing west from 43rd Street.





22. View of 43rd Street facing southwest (Project Area at right).



23. View of the sidewalk along the west side of 43rd Street facing southwest (Project Area at right).



24. View of the east side of 43rd Street facing east from the Project Area.





25. View of the sidewalk along the west side of 43rd Street facing northeast from 28th Avenue (Project Area at left).



26. View of the intersection of 28th Avenue and 43rd Street facing south from the Project Area.



27. View of the sidewalk along the north side of 28th Avenue facing northeast from 43rd Street (Project Area at right).





28. View of the sidewalk along the north side of 28th Avenue facing northwest (Development Site at right).



29. View of the south side of 28th Avenue facing south from the Development Site.



30. View of the sidewalk along the north side of 28th Avenue facing southeast from 42nd Street (Development Site at left).





31. View of the intersection of 28th Avenue and 42nd Street facing west from the Development Site.



32. View of the sidewalk along the east side of 42nd Street facing northeast from 28th Avenue (Development Site at right).



33. View of the Project Area facing northwest from 42nd Street.





34. View of the Project Area facing southwest from 42nd Street.



35. View of the sidewalk along the east side of 42nd Street facing southwest (Development Site at left).



36. View of the east side of 42nd Street facing north from the Development Site.





37. View of 42nd Street facing southwest
(Development Site at left, Project Area at right).



38. View of the Development Site facing south from 42nd Street.



39. View of the sidewalk along the west side of 42nd Street
facing southwest (Project Area at right).





40. View of the Development Site facing northwest from 42nd Street.



41. View of the Development Site facing southeast from 42nd Street.



42. View of the sidewalk along the west side of 42nd Street facing northeast from 28th Avenue (Project Area at left).





43.View of the intersection of 28th Avenue and 42nd Street facing south from the Project Area.



44. View of the sidewalk along the north side of 28th Avenue facing northwest from 42nd Street (Project Area at right).



45. View of the south side of 28th Avenue facing south from the Project Area.





46. View of the south side of 28th Avenue facing southwest from the Project Area.



47. View of the sidewalk along the north side of 28th Avenue facing southeast from 41st Street (Project Area at left).



48. View of the intersection of 28th Avenue and 41st Street facing west from the Project Area.





49. View of the sidewalk along the east side of 41st Street facing northeast from 28th Avenue (Project Area at right).



50. View of the sidewalk along the east side of 41st Street facing southwest (Project Area at left).



51. View of the west side of 41st Street facing northwest from the Project Area.



28th Avenue facing northwest (Site at right)



No-Action Scenario

28th Avenue facing northwest (Site at right)



With-Action Scenario

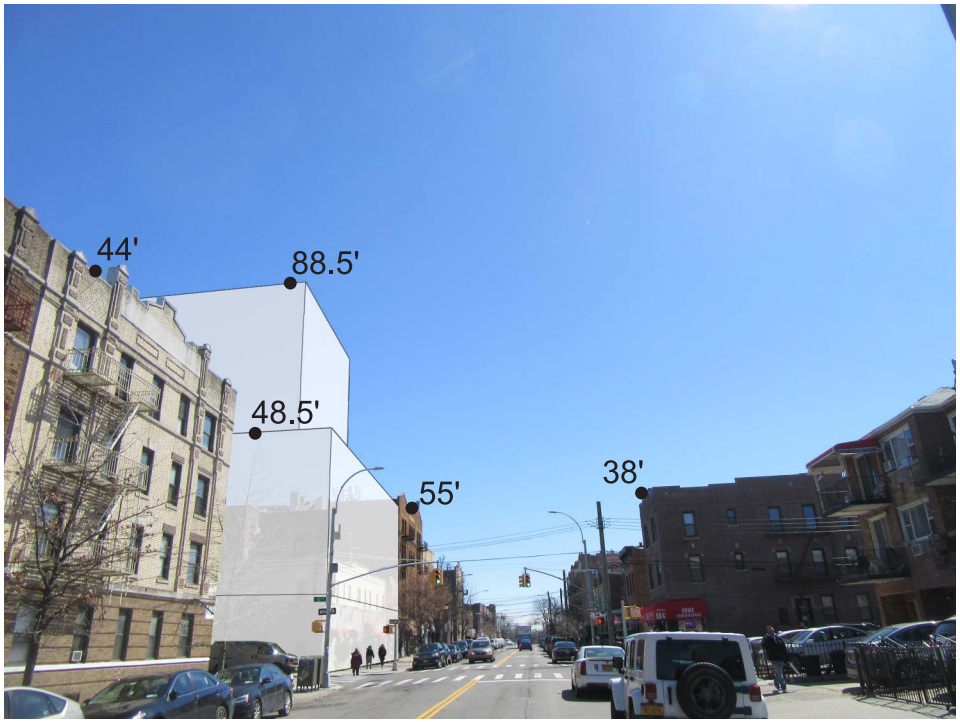
- Maximum Permitted Base Height (75')
- Proposed Base Height
- Maximum Permitted Building Height (105')
- Proposed Building Height

28th Avenue facing southeast (Site at left)



No-Action Scenario

28th Avenue facing southeast (Site at left)



With-Action Scenario

42nd Street facing northeast (Site at right)



No-Action Scenario

42nd Street facing northeast (Site at right)



With-Action Scenario

12. HAZARDOUS MATERIALS

Phase I Environmental Site Assessment (ESA)

Introduction

Environmental Studies Corp. has performed a Phase I Environmental Site Assessment (ESA) of the subject property located at 42-01 28th Avenue, in the Borough of Queens, New York City, New York. This Phase I ESA was prepared in accordance with the latest ASTM Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process (ASTM Designation E 1527-13).

The Standard Practice E 1527-13 defines good commercial and customary practice for conducting an environmental site assessment (ESA) of a parcel of commercial real estate with respect to the range of contaminants within the scope of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), and petroleum products. As such, the Practice is intended to permit a user to satisfy one of the requirements to qualify for the innocent landowner, contiguous property owner, or bona fide prospective purchaser limitations on CERCLA liability (referred to as landowner liability protections or LLPs); that is, the practice that constitutes all appropriate inquiries into the previous ownership and uses of the property consistent with good commercial and customary practice.

The goal of an ESA is to identify, to the extent feasible in accordance with ASTM E 1527-13, *Recognized Environmental Conditions (RECs)* in connection with the property. The term *Recognized Environmental Condition* means the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. *De minimis* conditions are not *Recognized Environmental Conditions*. The term *de minimis* condition means a condition that generally does not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. The presence or likely presence of hazardous substances or petroleum products at a site includes any form, such as solid or liquid at the surface or subsurface, and vapor in the subsurface.

The Practice also defines two additional *RECs*; *Controlled Recognized Environmental Conditions* and *Historical Recognized Environmental Conditions*. The term *Controlled Recognized Environmental Conditions* means a *Recognized Environmental Condition* resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority (for example, as evidenced by the issuance of a no further action letter or equivalent, or meeting risk-based criteria established by regulatory authority), with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls).

The term *Historical Recognized Environmental Condition* means a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been address to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls).

Recognized Environmental Conditions are identified through a review of pertinent records for the project site and nearby properties, a site reconnaissance and interviews. The records review includes a review of *Standard Historical Sources* of information to determine the history of the property. Such sources include historical aerial photographs, fire insurance maps such as those published by the Sanborn Map Company, reverse telephone directories, building department records such as Certificates of Occupancy, building and demolition permits, etc., property tax records, recorded land title records, previous environmental reports and others. The records review also includes regulatory agency lists and databases of documented hazardous waste sites, spill incidents, registered storage tanks and others.

The non-invasive site reconnaissance is performed to identify potential sources of contamination at the project site and in the immediate vicinity of the site. Such potential sources of contamination include operations involving the storage or use of hazardous substances or petroleum products, the presence of petroleum storage tanks, drainage structures, chemical/oil staining, dead or dying vegetation and others.

Interviews are conducted, whenever possible, with site owners, operators, tenants, local government officials, and others with knowledge of the site and information regarding potential RECs at a property. Finally, several ASTM "Non-Scope" items including asbestos-containing materials, lead-based paints, and radon are also discussed.

The following summarizes the findings, conclusions, and recommendations of the Phase I ESA.

Site Description

The subject property consists of a 4,500+/- square foot parcel which is fully occupied by a 2-story (plus basement) mixed use building (i.e., commercial and residential). The basement and first floor of the building are occupied by Piccola Venezia Ristorante. The first floor contains dining rooms, a kitchen, a bar, rest rooms and an office. The basement contains preparation areas, general storage space and walk-in refrigerators. The second floor contains two, 2-bedroom apartments. Heat and hot water for the building are provided by gas-fired systems. There were not any operations involving the storage or use of hazardous substances or petroleum products observed at the site. In addition, there were not any indications of the past storage or use of hazardous substances or petroleum products noted, such as chemical/oil-stained surfaces, discarded drums or chemical containers, dead or dying vegetations, etc.

Site History

Research into the history of the project site shows that the property was undeveloped, vacant land in 1898. Given the residential and rural nature of the area in the late 1800s, it is considered unlikely that the project site would have contained a business or operation that stored or used hazardous substances or petroleum products prior to 1898. By 1915, the property contained a 2-story dwelling which remained at the site until at least 1936, and it was demolished sometime between 1936 and 1947. The existing building was constructed in 1947. The identified uses in the building include restaurants, markets (grocery), residential apartments and dentist offices. The identified former occupants of the building are not types of businesses or operations that typically involve the storage or use of hazardous substances or petroleum products. It is possible the small quantities of hazardous substances such as x-ray photo developing chemicals may have been used in the dentist offices; however, and given that the building is connected to the municipal sewer system, any x-ray photo developing chemicals discharged would have been carried off-site via the sewer system.

Current Site Operations/Hazardous Materials

Typical lavatory drainage structures such as sinks and toilets were present in the building. In addition, floor drains were observed in the basement of the building. The drainage destination of these structures is not known; however, it is likely that they discharge to the municipal sewer system. No staining or other indications of past spills, releases or discharges of hazardous substances or petroleum products were observed around any of the drainage structures at the project site.

No aboveground storage tanks, or visible indications of the presence of underground storage tanks, such as tank fillports or tank vent lines, associated mechanical equipment, etc., were observed during the site visit. The property does not appear in the New York State Department of Environmental Conservation (NYSDEC) Petroleum Bulk Storage (PBS) database, which lists all registered facilities with a total combined petroleum storage capacity in excess of 1,100 gallons. In addition, there are not any Oil Burner Applications on file in the New York City Department of Buildings records reviewed for the project site.

Given the age of the subject building (constructed circa 1947), it is possible that it contains asbestos building materials and lead-based paints. Potential asbestos-containing materials observed in the building include roofing materials, ceiling tiles, surfacing materials, floor tiles, and castable pipe elbow insulation. All these materials were observed to be in good condition with no significant damage noted. Painted surfaces in the building were observed to be in good condition, with no large areas of chipped or peeling paint noted.

Regulatory Agency Database Information

The property does not appear in any of the Federal or State environmental databases reviewed, including the USEPA's Superfund, CERCLIS or ERNS databases, the RCRA Hazardous Waste Treatment/Storage/Disposal Facilities list, or the NYSDEC's, Spill Logs database, Solid Waste Facilities database, Petroleum Bulk Storage database, Brownfield site database, Voluntary Cleanup Program list or the Registry of Inactive Hazardous Waste Disposal Sites.

Off-Site Findings

There were not any potential off-site sources of contamination which are considered likely to have impacted the project site identified in the area surrounding the property.

Conclusions

The Phase I ESA has revealed no evidence of *Recognized Environmental Conditions, Historical Recognized Environmental Conditions* or *Controlled Recognized Environmental Conditions* in connection with the property.

Therefore, there is no potential for the Proposed Actions to result in significant adverse impacts related to hazardous materials, and no further analysis is warranted.

NYC Department of Environmental Protection (NYCDEP) Review

The NYCDEP has reviewed the September 2019 EAS and the April 2019 Phase I ESA report prepared for Projected Development Site 1. By letter dated December 5, 2019 (see Hazardous Materials Appendix), NYCDEP provides the following conclusions and recommendations.

> Based upon our review of the submitted documentation, we have the following comments and recommendations to DCP:
>
> - DCP should inform the applicant that based on the historical on-site and/or surrounding area land uses, a Phase II Environmental Site Assessment is necessary to adequately identify/characterize the surface and subsurface soils of the subject property. A Phase II Investigative Protocol/Work Plan summarizing the proposed drilling, soil, groundwater, and soil vapor sampling activities should be developed in accordance with the *City Environmental Quality Review Technical Manual* and submitted to DEP for review and approval. The Work Plan should include blueprints and/or site plans displaying the current surface grade and sub- grade elevations and a site map depicting the proposed soil, groundwater, and soil vapor sampling locations. Soil and groundwater samples should be collected and analyzed by a New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP) certified laboratory for the presence of volatile organic compounds (VOCs) by United States Environmental

Protection Agency (EPA) Method 8260, semi-volatile organic compounds by EPA Method 8270, pesticides by EPA Method 8081, polychlorinated biphenyls by EPA Method 8082, and Target Analyte List metals (filtered and unfiltered for groundwater samples). The soil vapor sampling should be conducted in accordance with the NYSDOH October 2006 Guidance for Evaluating Soil Vapor Intrusion in the State of New York. The soil vapor samples should be collected and analyzed by a NYSDOH ELAP certified laboratory for the presence of VOCs by EPA Method TO-15. An Investigative Health and Safety Plan (HASP) should also be submitted to DEP for review and approval.

- DCP should also instruct the applicant that the Phase II Work Plan and HASP should be submitted to DEP for review and approval prior to the start of any fieldwork.

Conclusion

As detailed above, DEP is requesting that a Phase II Environmental Site Assessment be prepared for Projected Development Site 1. However, it is not feasible to conduct subsurface testing at the present time as the Site is currently occupied by several active uses including several residences and a restaurant. It is therefore recommended that an (E) designation be placed on the property to ensure that testing for and mitigation and/or remediation of any hazardous materials contamination of the property be completed prior to, or as part of, future development of the site.

To avoid any potential impacts associated with hazardous materials, the Proposed Actions will place an (E) designation (E-?) for hazardous materials on the following property:

Block 701, Lots 5, 6, 8, 108 and 9

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

Due to the possible presence of hazardous materials on the aforementioned designated site, there is potential for contamination of the soil and groundwater. To determine if contamination exists and perform the appropriate remediation, the following tasks must be undertaken by the fee owners of the lot restricted by this (E) designation prior to any demolition or disturbance of soil on the lot.

Task 1

The fee owners of the lot restricted by this (E) designation will be required to prepare a scope of work for any soil, gas, or groundwater sampling and testing needed to determine if contamination exists, the extent of the contamination, and to what extent remediation may be required. The scope of work will include all relevant supporting documentation, including site plans and sampling locations. This scope of work will be submitted to the

Mayor's Office of Environmental Remediation (OER) for review and approval prior to implementation. It will be reviewed to ensure that an adequate number of samples will be collected and that appropriate parameters are selected for laboratory analysis.

No sampling program may begin until written approval of a work plan and sampling protocol is received from the OER. The number and location of sample sites should be selected to adequately characterize the type and extent of the contamination, and the condition of the remainder of the site. The characterization should be complete enough to determine what remediation strategy (if any) is necessary after review of the sampling data. Guidelines and criteria for choosing sampling sites and performing sampling will be provided by OER upon request.

Task 2

A written report with findings and a summary of the data must be presented to OER after completion of the testing phase and laboratory analysis for review and approval. After receiving such test results, a determination will be provided 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 necessary according to test results, a proposed remediation plan must be submitted to OER for review and approval. The fee owners of the lot restricted by this (E) designation must perform such remediation as determined necessary by OER. After completing the remediation, the fee owners of the lot restricted by this (E) designation should provide proof that the work has been satisfactorily completed.

An OER-approved construction-related health and safety plan would be implemented during excavation and construction 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 the implementation of the above (E) designation, no significant adverse impacts related to hazardous materials would occur.

Therefore, there is no potential for the Proposed Actions to result in significant adverse impacts related to hazardous materials.

17. AIR QUALITY

Introduction

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 framework, as mandated by the State Environmental Review Act, followed the *New York City Environmental Quality Review 2014 Technical Manual*.

Project Description

The Affected Area is located in the Astoria neighborhood of Queens Community District 1. The Affected Area includes ten full lots and parts of two others on two separate blocks. They are Block 685 (bounded by 28th and 29th Avenues and 41st and 42nd Streets) and Block 701 (bounded by 28th and 29th Avenues and 42nd and 43rd Streets).

The proposed zoning map amendment is sought to permit the development of a new eight-story mixed residential and commercial building at Block 701, Lots 5, 6, 8, 9, and 108 ("Projected Development Site 1"). The proposed new eight-story building would rise to a height of 85 feet above grade, the Reasonable Worst-Case Development Scenario (RWCDS) height. The building would contain a total of 67,356 gross square feet (gsf) of floor area, of which 45,731 gsf are residential and 6,921 gsf are commercial. A cellar garage would provide 56 attended accessory parking spaces, and there would also be 10 accessory surface parking spaces, for a total of 66 accessory off-street parking spaces.

The Affected Area includes two other lots on Block 701 and four lots on Block 685. The existing buildings on Block 685, Lots 1, 3, 5, 7, and 10 and Block 701, Lots 1 and 3 (identified as Other Sites 1 through 7) are anticipated to remain in the future with the Proposed Actions, and therefore, not included in the Air Quality chapter of the EAS.

Mobile Source Analysis

Introduction

Projects may result in significant mobile source impacts when they create mobile sources of pollutants, change traffic pattern, or add new uses near mobile sources of pollutants. Per CEQR guidelines, a detailed analysis is conducted to predict whether the Proposed Actions could potentially have a significant adverse air quality impact if certain threshold criteria are met or exceeded, while proposed projects that do not meet or exceed the threshold criteria (screen out) are not expected to have a mobile source impact. Projects that require a detailed analysis model the CO and PM concentrations—the mobile source pollutants of concern—in the ambient air.

Mobile Source Screen

Project-Generated Traffic

Per the *CEQR Technical Manual*, localized increases in CO and $PM_{2.5}$ levels may result from increased vehicular traffic volumes and changed to traffic patterns in the study area as a consequence of the proposed project. For this area of the City the threshold volume requiring a detailed analysis of CO concentration, using MOVES2014 and CAL3QHC or AERMOD, is an increment of 170 vehicles. $PM_{2.5}$ threshold criterion is an increment of applies heavy-duty diesel vehicles (HDDVs) screen.

According to the transportation screening analysis for this project, the Proposed Actions would not exceed the *CEQR Technical Manual Table 16-1* thresholds criterions. As such, the maximum trip generation would not exceed the 170 net vehicles trips at any given hour at any intersection during any peak hour.

The project-generate peak hour HDDVs traffic or its equivalent in vehicular emission that would require a detailed $PM_{2.5}$ analysis depends on the type of road. The thresholds incremental traffic per road type ranges from 12 to 23 HDDVs. Per the NYS Department of Transportation (NYSDOT) Functional Class Viewer map application[2], both 28th Avenue and 42nd Street are classified as local streets (Functional Class 19), which is paved road with average daily traffic fewer than 5,000 vehicles (see Figure 1 - 28th Avenue at 42nd Street, Queens - NYSDOT Functional Class and Figure 2 - 42nd Street at 28th Avenue, Queens - NYSDOT Functional Class in the Air Quality Appendix). The thresholds incremental traffic of paved roadways is 12 HDDVs.

The NYC DCP online CEQR App was used to predict the project-generated traffic, where the CEQR App output is based on the *CEQR Technical Manual* planning factors. The proposed project increment between the No-Action and With-Action development scenarios would be 44 additional dwelling units (11 of which would be affordable), a decrease of 2,954 gsf of commercial space, a decrease of 1,000 gsf of community facility space, and 35 additional accessory parking spaces. These resulted, using the CEQR App, in a maximum peak hour increment of 8 autos and no (0) trucks during the AM and PM peak hour periods (see Figure 3 - CEQR App – Project-generated traffic in the Air Quality Appendix).

The HDDVs screen assumed that all autos are LDGT1 class vehicles. The worst-case (the most vehicles) HDDVs or its equivalent in vehicular emissions, during the AM or PM peak hour time periods, would be 4 equivalent trucks (see Figure 4 - *CEQR Technical Manual* Equivalent Truck Calculation in the Air Quality Appendix). As such, the Proposed Actions pass the $PM_{2.5}$ HDDVs screening analysis and no detailed analysis was required.

[2] https://gis3.dot.ny.gov/html5viewer/?viewer=FC

Parking Garage

Based on CEQR guidelines, the maximum capacity of a parking facility is evaluated against a threshold capacity to determine whether a detailed analysis is required. The threshold capacity, per CEQR guidelines, is 80 new off-street parking spaces (Zone 3 threshold). If the threshold is met or exceeded, a detailed analysis is warranted.

The proposed project would result in a 35 additional accessory parking spaces. Therefore, no detailed air quality analysis is required, and no significant adverse mobile source air quality impacts are expected from vehicular emission generated at the proposed project's off-street parking space.

Project HVAC System Analysis

Introduction

Per *CEQR Technical manual*, the HVAC analysis considers the potential for emissions from the HVAC systems of proposed developments to significantly impact existing land uses (project-on-existing), and the potential of the proposed developments to significantly impact each other (project-on-project). As the proposed project would result in a single development, the project-on-existing scenario was analyzed, and project-on-project analysis was not required.

Buildings' HVAC systems are defined as stationary sources. Accordingly, and based on CEQR guidelines, a preliminary screening analysis is to be conducted as a first step to predict whether the heat and hot water system boiler emissions would result in a significant adverse 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

As outlined in the *CEQR Technical Manual,* the potential for stationary source emissions from heat and hot water systems to have a significant adverse impact on nearby receptors depends on the type of fuel that would be used, the building's residential or non-residential use, the square footage of the development that would be served by the system, the height of the building served by the HVAC system and the distance to the nearest building whose height is at least as great as the building served by the HVAC system. The *CEQR Technical Manual* provides a screening analysis based on these factors, which was utilized to determine the potential for significant impacts from the projected building's HVAC system(s).

If the actual distance between a stack and the affected building is greater than the threshold distance for a building size, then that building passes the screening analysis (and no significant impact is predicted). However, if the actual distance is less than the threshold distance for a building, then there is a potential for a significant impact and a detailed analysis would be required.

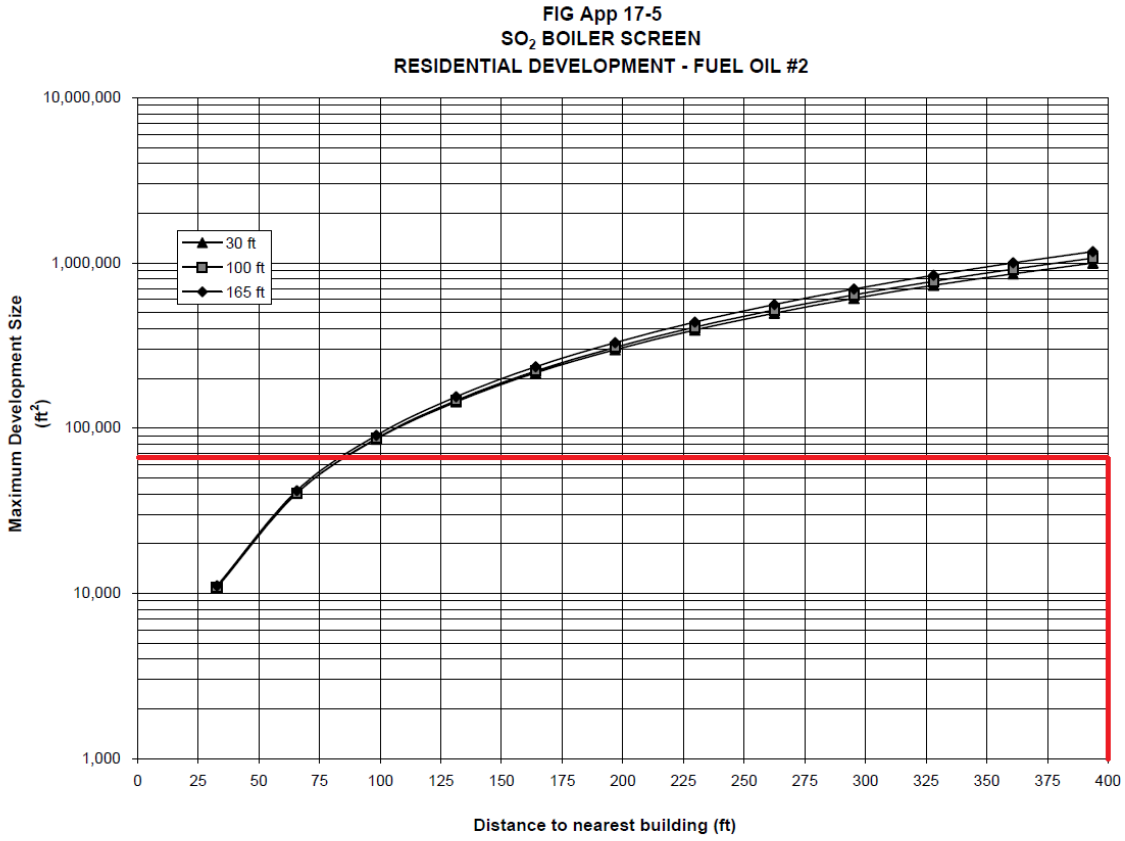
The proposed project is a single development, Projected Development Site 1. The Projected Development Site 1, a mixed-use residential and commercial, 85 feet tall building, would contain a total of 67,356 gsf of floor area. According to geo metadata, obtained from the NYC Open Data Building Footprints shapefile[3], there is no existing building 85 feet or higher within 400 feet of the Projected Development Site 1.

Per the *CEQR Technical Manual*, the CEQR nomograph, depicted on Figure 17-5 of the *CEQR Technical Manual Appendices*, for a 30-foot high stack was used. This stationary source screen is a generic screen that considers the type of fuel used and the residential or nonresidential use of the building. According to 15 RCNY 2-15, no new boiler or burner installations may use No. 6 or No. 4 fuel oils. Therefore, the highest-emitting fuel that could be used is a No. 2 fuel oil. The CEQR nomograph depict the size of the development versus distance below which the potential impact can occur and provides a conservative estimate of the threshold distance. Figures 17-1 (using Figure 17-5 of the *CEQR Technical Manual Appendices)* shows the screening analysis nomograph of the Projected Development Site 1.

The screening analysis Figure 17-1 nomograph show that no impact would be predicted to existing land uses located at a distance equal or greater than 400 feet from the Projected Development Site 1. As there no existing 85 feet high buildings within 400 feet of the Projected Development Site 1, the Proposed Actions pass the HVAC screening analysis.

[3] https://data.cityofnewyork.us/Housing-Development/Building-Footprints/nqwf-w8eh/data.

Figure 17-2. Projected Development Site 1 - HVAC Screen Nomograph



Existing Stationary Sources

Industrial Source

Per 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 Projected Development Site 1. Industrial sources are identified as commercial, industrial, or processing facilities that are likely to have New York City Department of Environmental Protection (DEP) processing type permits. However, some facilities operate with no DEP permit.

One facility in the study area has a processing type permit for an engine/generator. The generator is located at 42-11 28 Avenue (Block 701, Lot 3), which is Other Site 7. The DEP permit PR021518 is for an emergency generator, operating a maximum of 1-hour per day, 26-hour per year. Emergency generators are exempt; therefore, no analysis was required.

In addition, the land survey study identified no likely manufacturing processing facility, such as an auto body facility or woodworking facility, in the study area. Therefore, the proposed project would not be affected by industrial source emissions and no further analysis for air toxics is warranted.

Major and Large Source

Per the *CEQR Technical Manual*, projects that would introduce new uses near major sources, large sources, or 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 Affected Area. Major emission sources are identified as those sources located at Title V facilities; large emission sources are identified as sources located at facilities which require an Air State Facility permit. Solid waste or medical waste incinerators, asphalt and concrete plants, power generating plants, large boilers of large public facilities for example, 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.

The NYSDEC online database[4] was reviewed on May 2019 to identify Title V or Air State Facilities in the study area (both issued and draft permits). 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 in the 1,000 feet study area. As such, no analysis was warranted.

[4] http://www.dec.ny.gov/chemical/32249.html

19. NOISE

Introduction

Noise monitoring was conducted on Wednesday, June 12, 2019 in support of a Zoning Map Amendment that would establish an R6A district within an area currently zoned R5 and an R6A/C1-2 district within an area currently zoned R5/C1-2. The Project Area consists of 42,392 sf of lot area on the southern parts of two blocks: Block 685 (bounded by 28th and 29th Avenues and 41st and 42nd Streets) and Block 701(bounded by 28th and 29th Avenues and 42nd and 43rd Streets). The Project Area includes 10 full lots and parts of two additional lots. Projected Development Site 1 within the Project Area includes an assemblage of five adjacent lots on Block 701 with frontage on 28th Avenue and 42nd Street.

Projected Development Site 1 is identified as Block 701, Lots 5, 6, 8, 9, and 108. The Site is situated at the northwest corner of the intersection of 42nd Street and 28th Avenue. 42nd Street is a one-way southbound street with one moving lane and curbside parking. 28th Avenue is a two-way east-west street with one moving lane in each direction and curbside parking. Local intersections are controlled by traffic signals and stop signs.

The Proposed Actions would allow noise-sensitive residential uses and commercial development at a greater density than permitted under existing zoning. Because the Proposed Actions would allow for increased development of a noise-sensitive land use, an assessment of the potential for adverse effects on project occupants from ambient noise is warranted. The proposed 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 Projected Development Site is vehicular traffic on surrounding streets.

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: 2014 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	Airport[3] Exposure	Marginally Acceptable General External	Airport[3] Exposure	Marginally Unacceptable General External	Airport[3] Exposure	Clearly Unacceptable General External	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		$L_{10} \leq 55$ dBA		55<L_{10}≤65 dBA		65<L_{10}≤80 dBA		L_{10}>80dBA	
3. Residence, residential hotel or	7 am to 10 pm	L_{10}≤65dBA		65<L_{10}≤70 dBA		70<L_{10}≤80 dBA		L_{10}>80dBA	
	10 pm – 7	L10≤55dBA		55<L_{10}≤70 dBA		70<L_{10}≤80 dBA		L_{10}>80dBA	
4. School, museum, library, court house of worship, transient hotel or motel, public meeting room,		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		Same as Residential Day		Same as Residential Day		Same as Residential Day	
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.

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.

Measurement Locations and Equipment

Because the predominant noise sources in the area of the proposed project consist of vehicular movements, noise monitoring was conducted during peak weekday vehicular travel periods (AM, Midday, PM) on a typical midweek day. Pursuant to *CEQR Technical Manual* methodology, measurements were conducted for a 20-minute period during each of the peak periods at each monitoring location at the Project Area: Location One (1) was at ground level at the 42nd Street frontage of the Projected Development Site; Location Two (2) was at ground level at the 28th Avenue street frontage of the Projected Development Site as shown in Figure 19-1 and Photo 19-1 and 19-2 below.

Noise monitoring was conducted using a Larson Davis PRMLxT2 sound meter with wind screen. The monitor was placed on a tripod at a height of approximately three feet above the ground, away from any other noise-reflective surfaces. 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 the Noise Appendix to this report.

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



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



Figure 19-1: Noise Monitoring Location Map



Measurement Conditions

Monitoring was conducted during typical midweek conditions, on Wednesday June 12, 2019. 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.

Tables 19-4 and 19-5 below contains the results for the measurements taken at the Projected Development Site.

Table 19-4

Noise Levels (dB) at Location 1

Wednesday, June 12, 2019

Time	**7:29 am – 7:49 am**	**11:59 am – 12:19 pm**	**4:30 pm – 4:50 pm**
L_{max}	91.3	88.5	93.4
L_{10}	**72.0**	67.7	64.8
L_{eq}	**70.3**	65.9	63.5
L_{50}	65.0	57.8	57.9
L_{90}	56.5	52.9	53.1
L_{min}	53.8	49.1	48.3

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

Wednesday, June 12, 2019

Time	**7:50 am – 8:10 am**	**12:21 pm - 12:41 pm**	**4:51 pm – 5:11 pm**
L_{max}	96.6	97.8	88.1
L_{10}	66.5	**70.5**	62.5
L_{eq}	66.2	68.6	61.5
L_{50}	61.4	60.3	58.0
L_{90}	57.1	55.1	54.6
L_{min}	52.1	51.3	50.8

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

Tables 19-6 and 19-7 below contain the traffic counts and vehicle classifications during each monitoring period for 20 minutes:

Table 19-6

Location 1: *Traffic volumes and vehicle classification at Location 1*

	7:29 am – 7:49 am	**11:59 am – 12:19 pm**	**4:30 pm – 4:50 pm**
Car/ Taxi	7	22	38
Van/Light Truck/SUV	17	36	45
Medium Truck	1	4	2
Heavy Truck	0	0	0
Bus	0	0	0
Train	0	0	0

Table 19-7

Location 1: *Traffic volumes and vehicle classification at Location 2*

	7:50 am – 8:10 am	**12:21 pm - 12:41 pm**	**4:51 pm – 5:11 pm**
Car/ Taxi	51	33	51
Van/Light Truck/SUV	96	63	53
Medium Truck	5	5	13
Heavy Truck	1	2	1
Bus	2	1	0
Train	0	0	0

Determination of Impacts/Building Attenuation Requirements and Conclusions

The 2014 *CEQR Technical Manual* Table 19-2 contains noise exposure guidelines. For a residential use such as would occur under the Proposed Actions, 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 72.0 dB(A) during the morning monitoring period. The highest recorded L_{10} at Location Two (2) of the subject property was 70.5 dB(A) during the midday monitoring period.

Based on the results of the noise monitoring, a window-wall attenuation of 28 dB(A) would be required for residential dwelling units facing all building facades.

Conclusions and Recommendations

To avoid any potential impacts associated with noise, the Proposed Actions will place an (E) designation (E-?) for noise on the following properties. The text of the E-Designation would be as follows:

> **Block 701, Lots 5, 6, 8, 9, and 108:** To ensure an acceptable interior noise environment, future residential/commercial uses must provide a closed-window condition with a minimum of 28 dBA window/wall attenuation on all facades in order to maintain an interior noise level not greater than 45 dBA for residential uses or not greater than 50 dBA for commercial uses. 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, air conditioning.

With this amount of required attenuation, there would be no potential for adverse impacts related to ambient noise. Therefore, the Proposed Actions would not result in any potentially significant adverse stationary or mobile source noise impacts, and further assessment is not warranted.

APPENDIX

Architectural Plans

Zoning Analysis

Site Data		List of Required Actions
Block(s)	701	1. Zoning Map Amendment
Lot(s)	5, 6, 8, 108, 9	
Street Address(es)	42-01 28th Avenue	
Zoning District	C1-2 / R6A	
Community District	401	
Zoning Section Map No.	9c	
Zoning Lot Area	14,725.15 sf	

Item	Zoning Section	Permitted/Required	Proposed	Compliance/Notes
Uses Permitted	22-00 & 33-00	1 - 6, 8 - 10 & 12	2, 4-6, 8-10 & 12	yes
Max. F.A.R.				
Commercial	33-121	2.00	0.47	yes
Community Facility		3.00	0.00	yes
Residential (QH)	23-154 & 35-65	3.60	3.00	yes
Total F.A.R.		3.60	3.50	yes
Max. Floor Area				
Commercial	save	29,450.3 sf	6,920.6 sf	yes
Community Facility		44,175.45 sf	0	
Residential	23-154 & 35-22	53,010.54 sf	44,542 sf	yes
Total Floor Area		53,010.54 sf	51,462.65 sf	yes
Max. Lot Coverage				
Percentage	23-153	65%	54%	yes
Square feet		9,571.35 sf	7,896.43 sf	yes
Yards				
Front	35-51	none	0	yes
Side	35-52	0 or 8'-0" min.	0 & 50'-0"	yes
Rear	33-26 & 35-53	30' (Res.) & 20' Comm.	30'-0"	yes
Req'd. yard along district boundary	35-54	8'-0"	50'-0"	
Density				
Max. No. of D.U's	23-22 & 35-40	65	54	yes
Max. Height & Setback				
Min. Base Height	23-662(b) & 35-652	40'-0"	45'-0"	
Max. Base Height	23-662(b) & 35-652	65'-0"		yes
Max. Building Height	23-662(b) & 35-652	85'-0"- 8 stories	85'-0" or 8 stories	yes
Setback Narrow Street	35-652	15'-0"	15'-0"	yes
Setback Wide Street	35-652	10'-0"	10'-0"	yes
Special Provisions applying adjacent to R1-R6B zones	23-693	45' max. height w/in. 25'-0' of R5 boundary	0	yes
Req'd. Parking				
General Retail uses	36-21	1 per 300 sf= 23	27	yes
Ambulatory Diagnostic Ctr.				yes
Residential affordable	36-33 & 25-251	25% x 16 = 4 spaces	8	yes
Residential market rate	36-33 & 25-23	50% x 31 = 19 spaces	31	yes
Req'd. Bicycle Parking				
General Retail Uses	36-70	1 per 10,000 sf= 1	1	yes
Ambulatory Diagnostic Ctr.				
Residential		1 per 2 D.U's = 27	36	yes
Req'd. Loading				
Retail or Service uses	36-62	First 8,000 = 0	0	yes
Offices		First 25,000 = 0	0	yes

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020241
STATE OF NEW YORK

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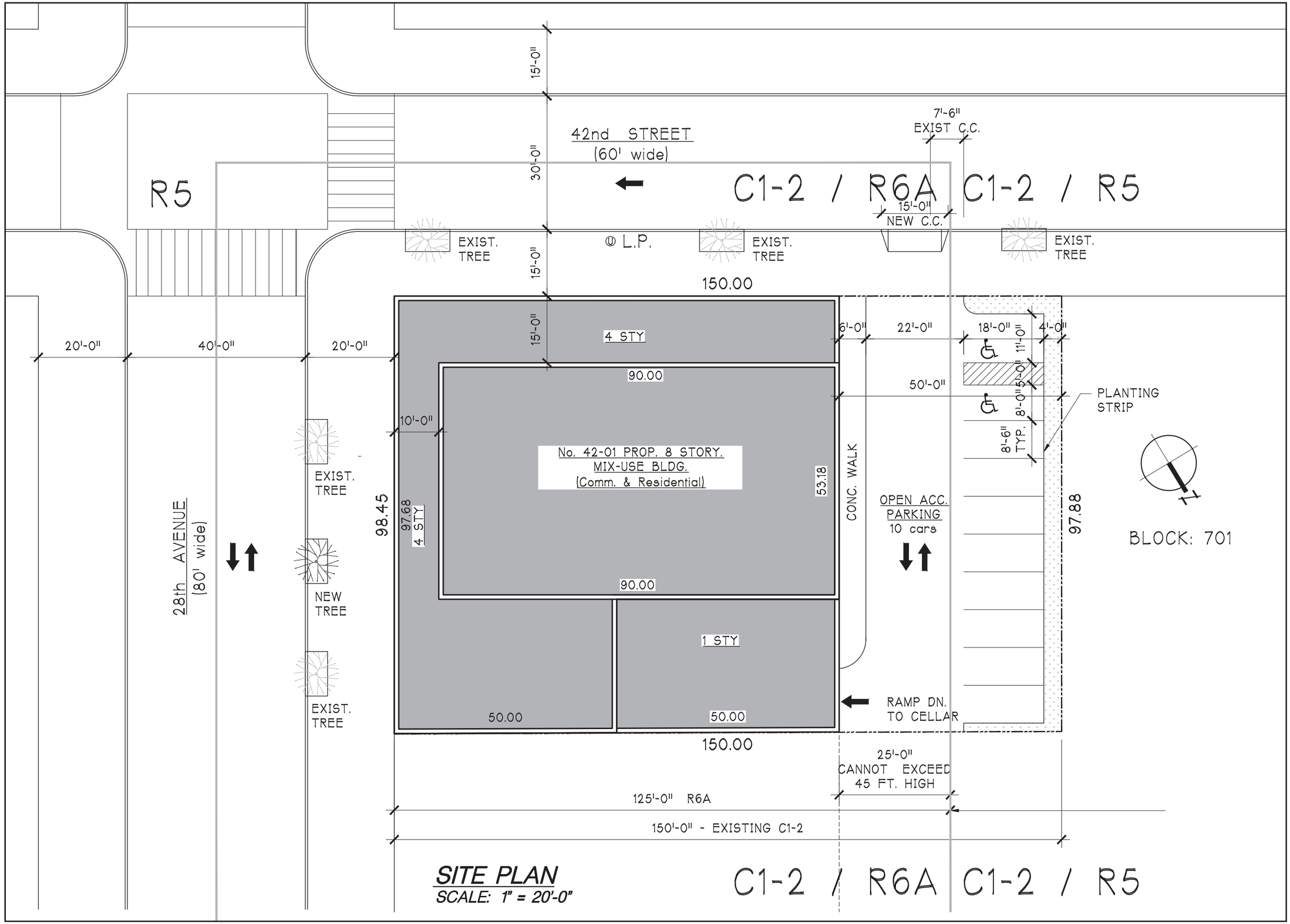

SITE PLAN
SCALE: 1" = 20'-0"

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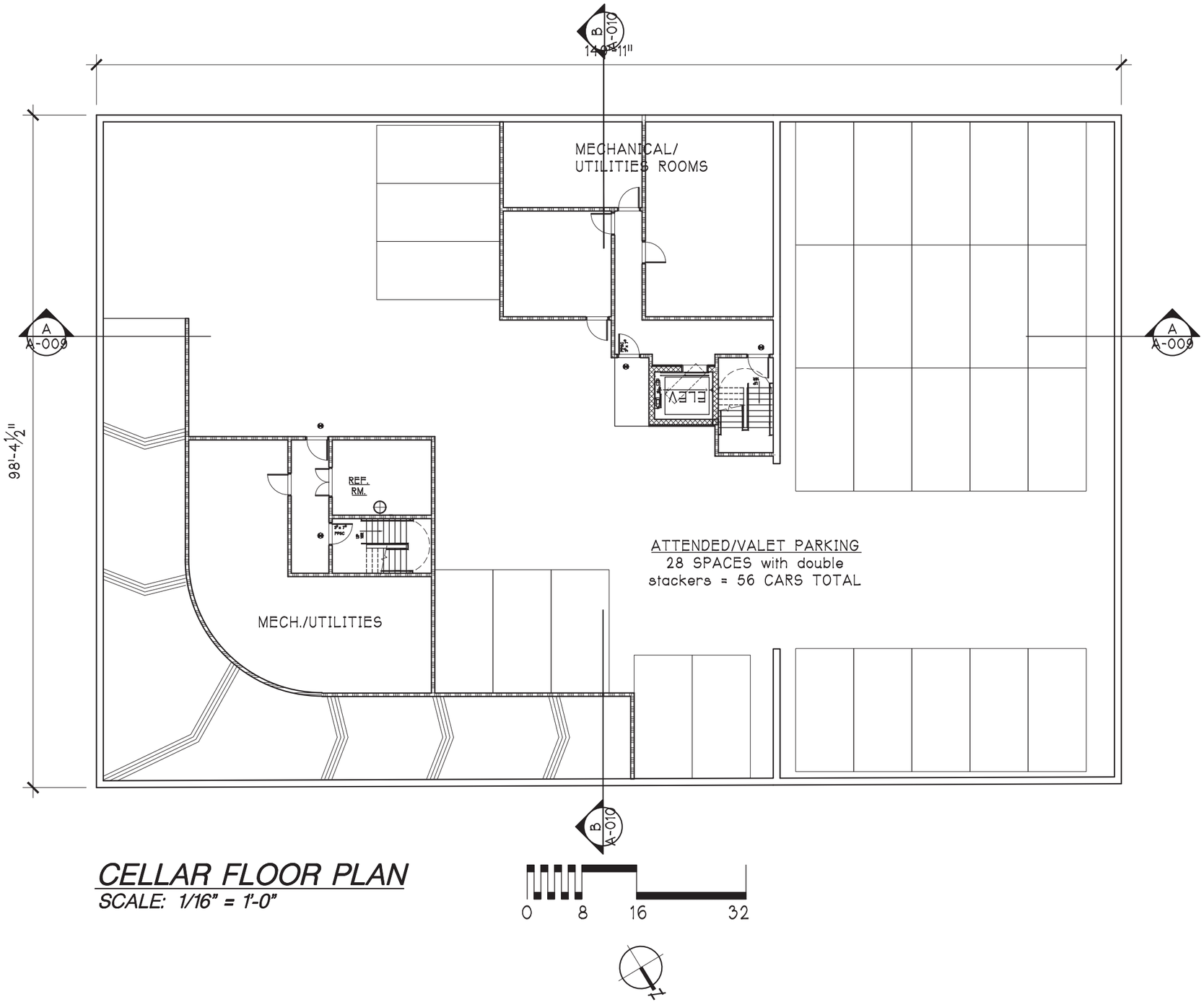

CELLAR FLOOR PLAN

SCALE: 1/16" = 1'-0"

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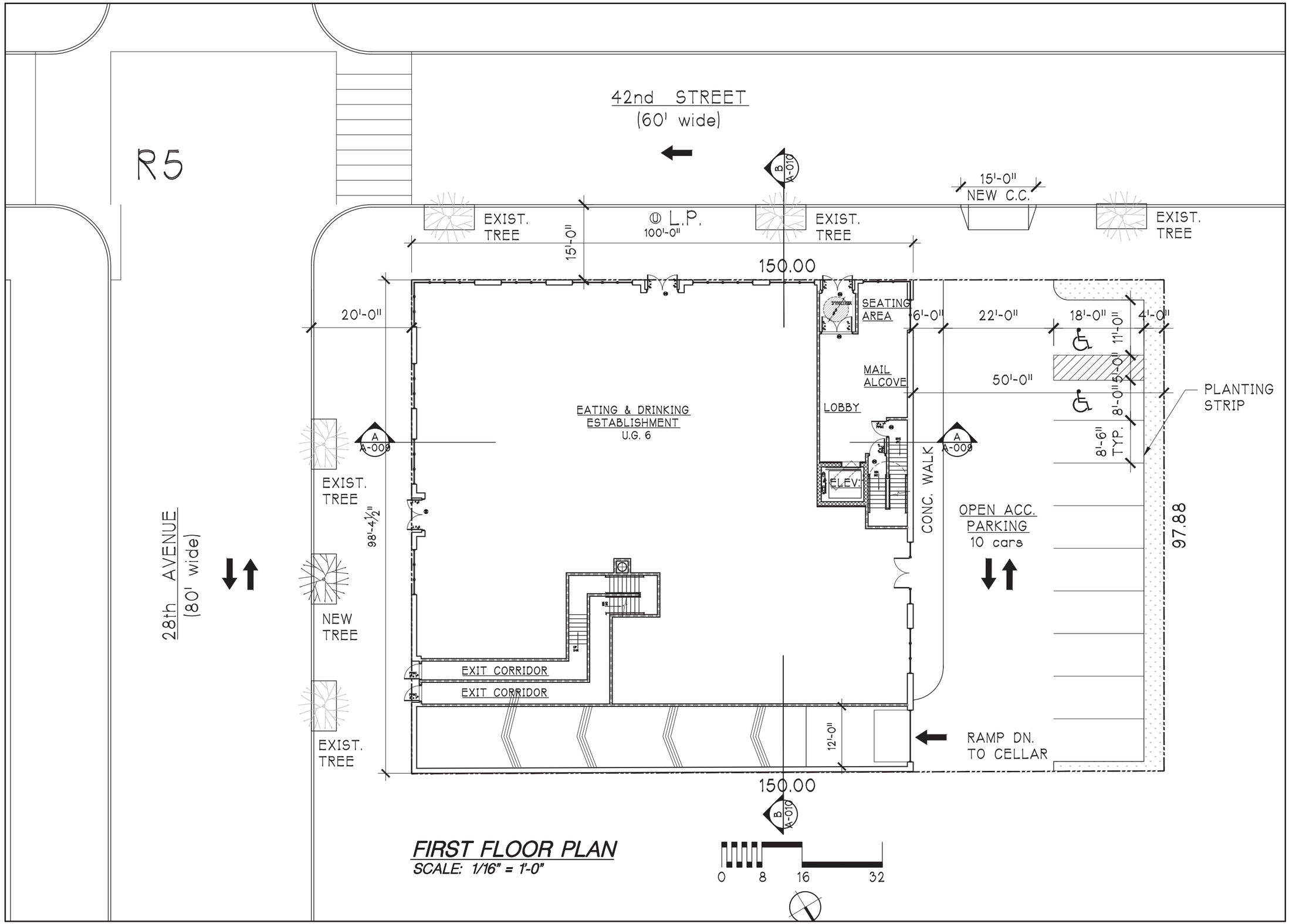

FIRST FLOOR PLAN

SCALE: 1/16" = 1'-0"

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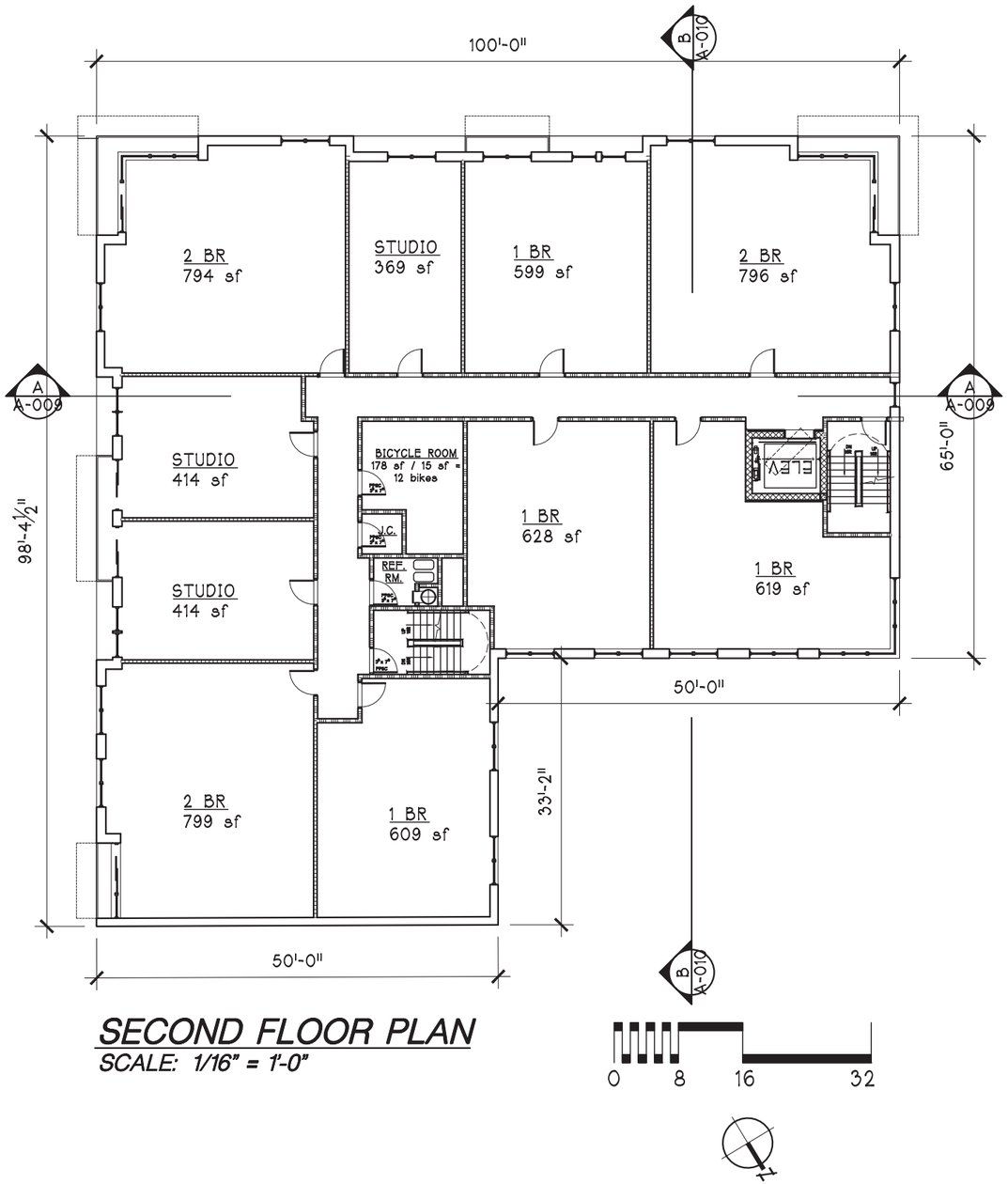

SECOND FLOOR PLAN

SCALE: 1/16" = 1'-0"

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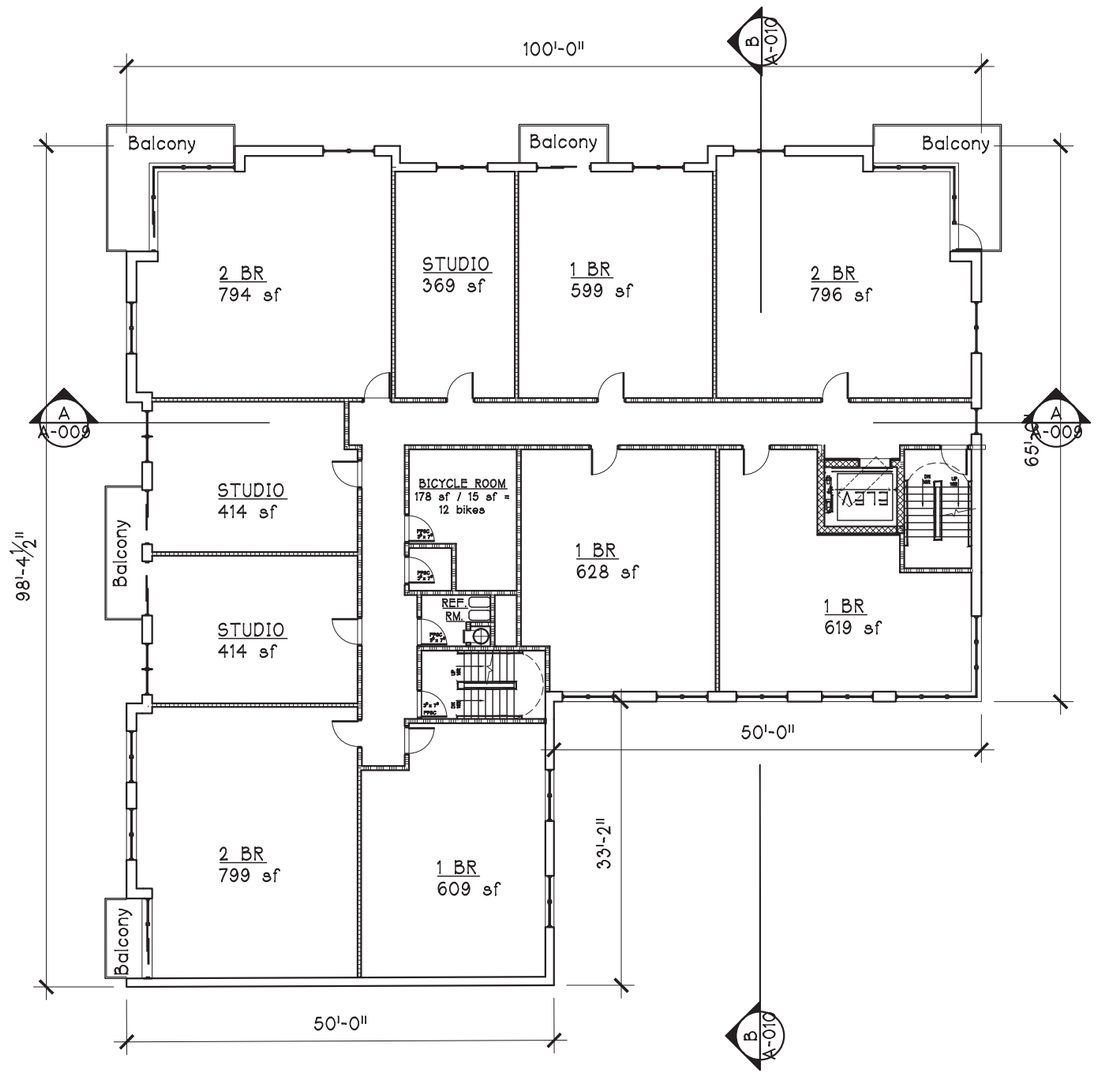

THIRD & FOURTH FLOOR PLAN

SCALE: 1/16" = 1'-0"

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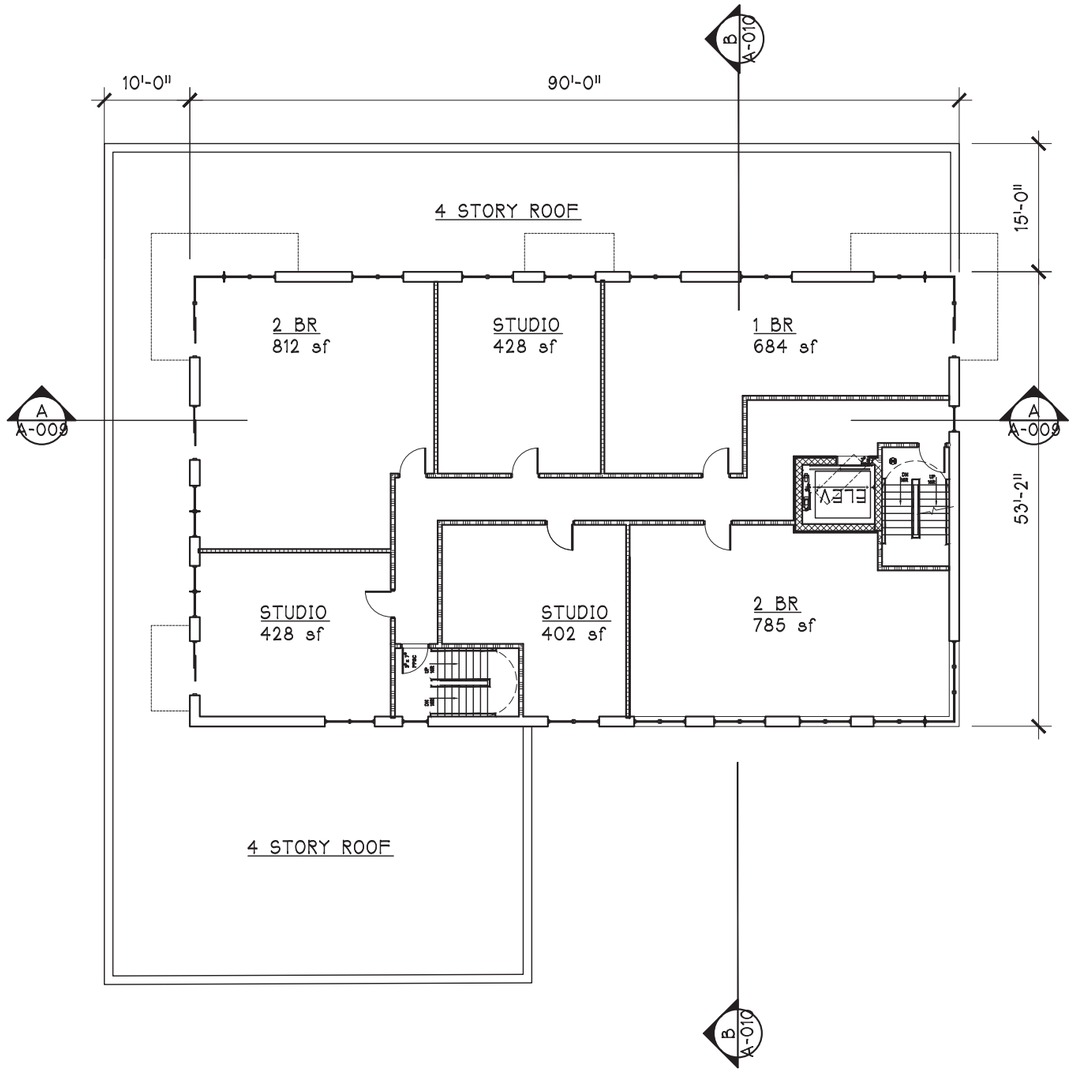

FIFTH FLOOR PLAN

SCALE: 1/16" = 1'-0"

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DRAWING TITLE: FIFTH FLOOR PLAN FOR ILLUSTRATIVE PURPOSES ONLY

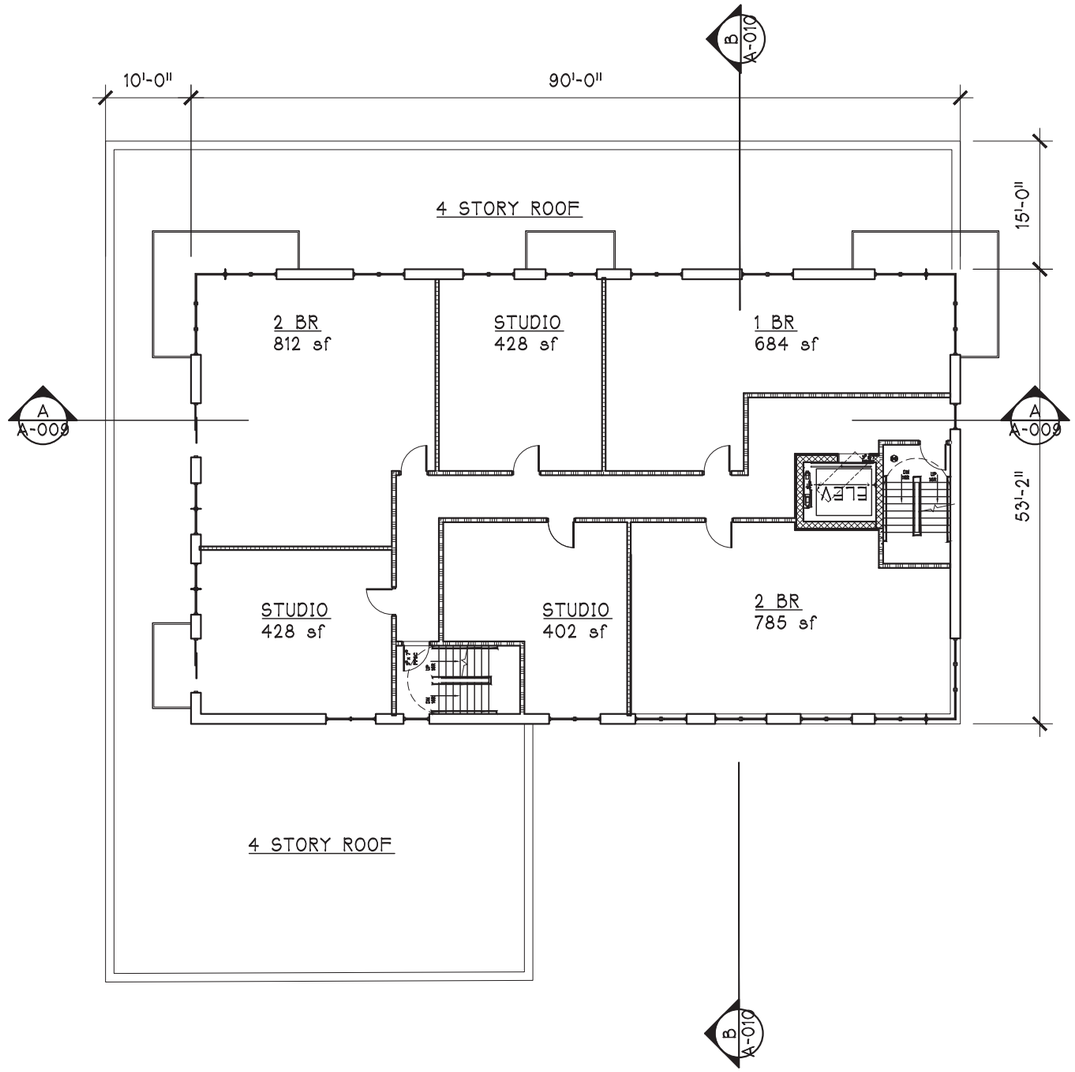
PREMISES: 42-01 28th AVENUE ASTORIA, NY

DRAWN BY:	N.M.H.
CHECKED BY:	GJC
JOB No:	18033
SCALE:	AS NOTED
DATE:	REV 9-20-18

SEAL: REGISTERED ARCHITECT GERALD J. CALIENDO 020241 STATE OF NEW YORK

DRAWING No: 7 OF 14

A-006.00



SIXTH THRU EIGHTH FLOOR PLAN

SCALE: 1/16" = 1'-0"

0 8 16 32

THE ARCHITECT SHALL NOT HAVE CONTROL OR CHARGE OF AND SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, DEVIATIONS, TECHNIQUES, SEQUENCES OR PROCEDURES, OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTIONS WITH THE WORK, FOR THE ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTORS OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK, OR FOR THE FAILURE OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. ALWAYS USE DIMENSIONS AS SHOWN. DRAWINGS ARE NOT TO BE SCALED. GERALD J. CALIENDO ARCHITECT, P.C. AND ITS PRINCIPAL/EMPLOYEES WERE NOT RETAINED FOR ANY CONSTRUCTION SUPERVISION.

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DRAWING TITLE: SIXTH thru EIGHTH FLOOR PLAN FOR ILLUSTRATIVE PURPOSES ONLY

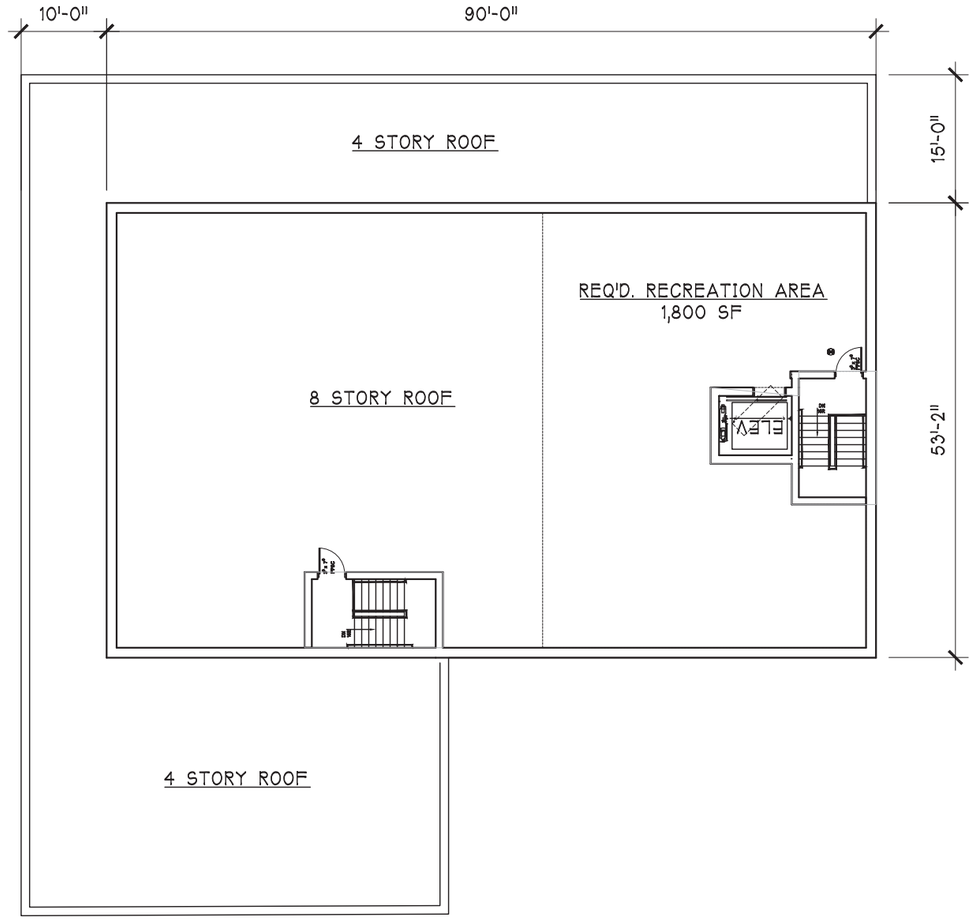
PREMISES: 42-01 28th AVENUE ASTORIA, NY

DRAWN BY:	N.M.H.
CHECKED BY:	GJC
JOB No:	18033
SCALE:	AS NOTED
DATE:	REV 9-20-18

SEAL: REGISTERED ARCHITECT GERALD J. CALIENDO 020241 STATE OF NEW YORK

DRAWING No: 8 OF 14

A-007.00



ROOF PLAN
SCALE: 1/16" = 1'-0"

0 8 16 32

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DRAWING TITLE: ROOF PLAN FOR ILLUSTRATIVE PURPOSES ONLY

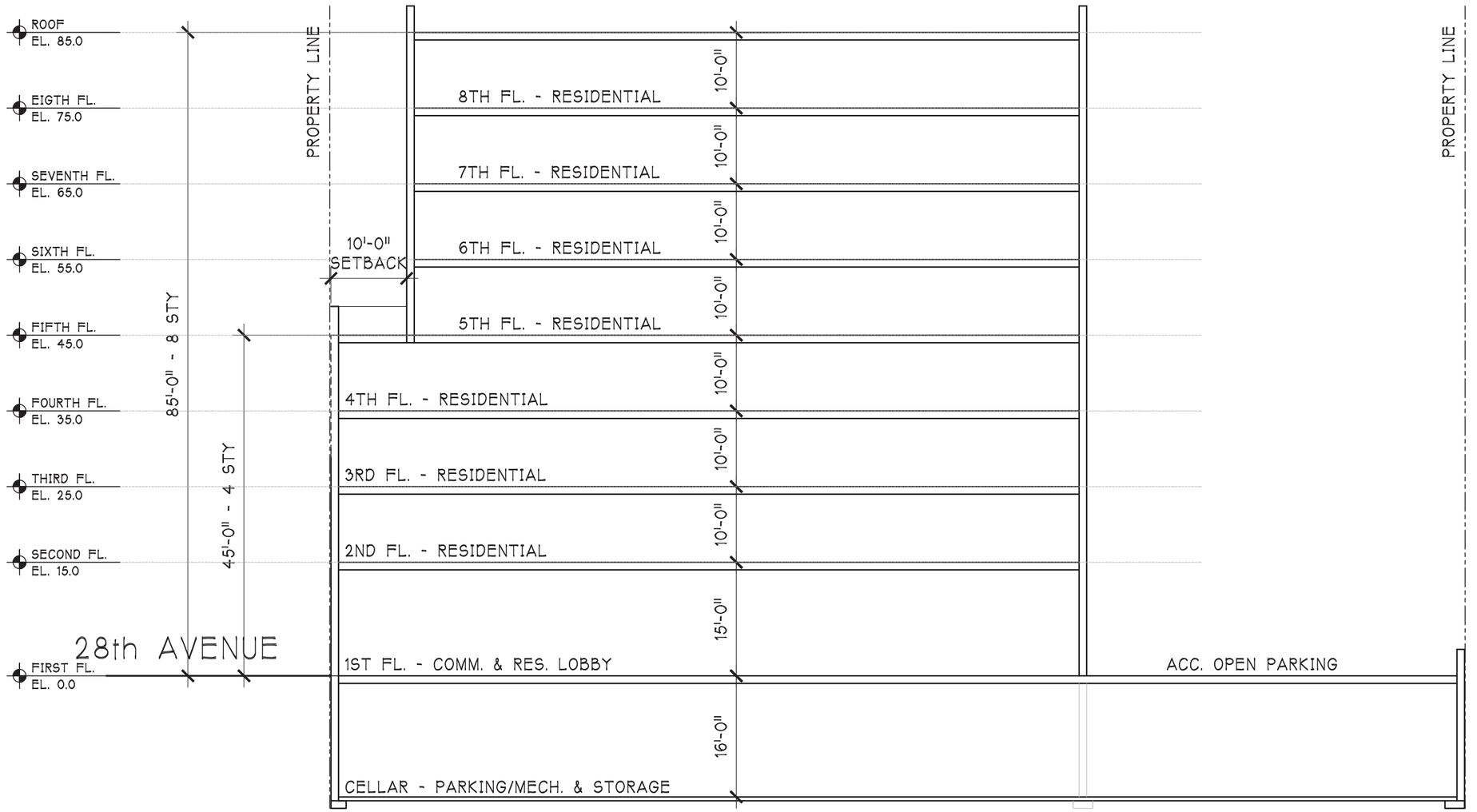
PREMISES: 42-01 28th AVENUE ASTORIA, NY

DRAWN BY:	N.M.H.	JOB No:	18033	SCALE: AS NOTED
CHECKED BY:	GJC			DATE: REV 9-20-18

SEAL: REGISTERED ARCHITECT GERALD J. CALIENDO 020241 STATE OF NEW YORK

DRAWING No: 9 OF 14

A-008.00



SCHEMATIC SECTION A-A

SCALE: 1" = 30'-0"

THE ARCHITECT SHALL NOT HAVE CONTROL OR CHARGE OF AND SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, DEVIATIONS, TECHNIQUES, SEQUENCES OR PROCEDURES, OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTIONS WITH THE WORK, FOR THE ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTORS OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK, OR FOR THE FAILURE OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. ALWAYS USE DIMENSIONS AS SHOWN. DRAWINGS ARE NOT TO BE SCALED. GERALD J. CALIENDO ARCHITECT, P.C. AND ITS PRINCIPAL/EMPLOYEES WERE NOT RETAINED FOR ANY CONSTRUCTION SUPERVISION.

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DRAWING TITLE: SECTION A-A FOR ILLUSTRATIVE PURPOSES ONLY

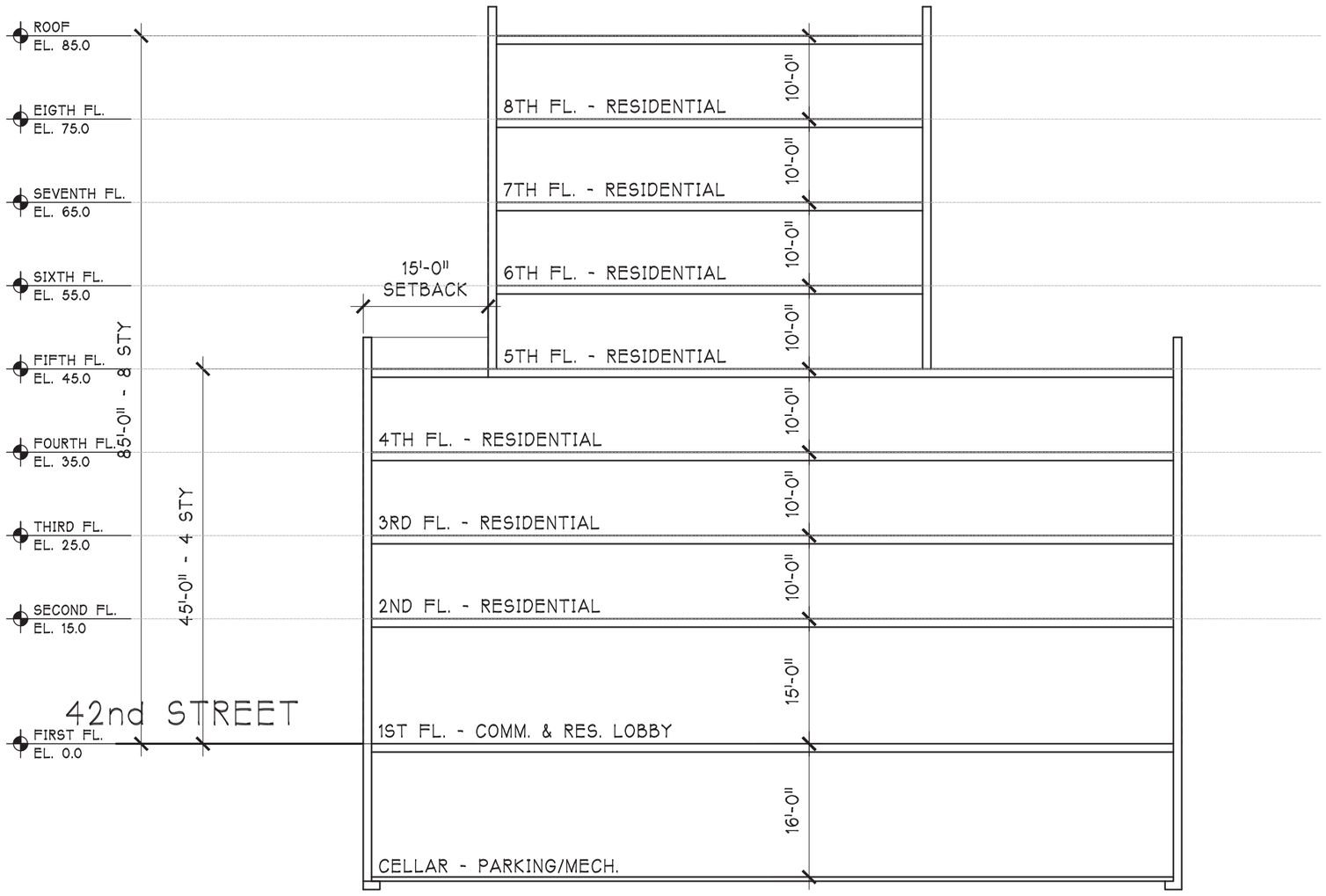
PREMISES: 42-01 28th AVENUE ASTORIA, NY

DRAWN BY:	N.M.H.
CHECKED BY:	GJC
JOB No:	18033
SCALE:	AS NOTED
DATE:	REV 9-20-18

SEAL: REGISTERED ARCHITECT GERALD J. CALIENDO 020241 STATE OF NEW YORK

DRAWING No: 10 OF 14

A-009.00



SCHEMATIC SECTION B-B

SCALE: 1" = 30'-0"

THE ARCHITECT SHALL NOT HAVE CONTROL OR CHARGE OF AND SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, DEVIATIONS, TECHNIQUES, SEQUENCES OR PROCEDURES, OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTIONS WITH THE WORK, FOR THE ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTORS OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK, OR FOR THE FAILURE OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. ALWAYS USE DIMENSIONS AS SHOWN. DRAWINGS ARE NOT TO BE SCALED. GERALD J. CALIENDO ARCHITECT, P.C. AND ITS PRINCIPAL/EMPLOYEES WERE NOT RETAINED FOR ANY CONSTRUCTION SUPERVISION.

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DRAWING TITLE: SECTION B-B FOR ILLUSTRATIVE PURPOSES ONLY

PREMISES: 42-01 28th AVENUE ASTORIA, NY

DRAWN BY:	N.M.H.	JOB No:	18033
CHECKED BY:	GJC	SCALE:	AS NOTED
		DATE:	REV 9-20-18

SEAL: REGISTERED ARCHITECT GERALD J. CALIENDO 020241 STATE OF NEW YORK

DRAWING No.: 11 OF 14

A-010.00



SOUTH (42nd Street) ELEVATION

SCALE: 1/16" = 1'-0"

THE ARCHITECT SHALL NOT HAVE CONTROL OR CHARGE OF AND SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, DEVIATIONS, TECHNIQUES, SEQUENCES OR PROCEDURES, OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTIONS WITH THE WORK, FOR THE ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTORS OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK, OR FOR THE FAILURE OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. ALWAYS USE DIMENSIONS AS SHOWN. DRAWINGS ARE NOT TO BE SCALED. GERALD J. CALIENDO ARCHITECT, P.C. AND ITS PRINCIPAL/EMPLOYEES WERE NOT RETAINED FOR ANY CONSTRUCTION SUPERVISION.

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DRAWING TITLE: SOUTH ELEVATION
FOR ILLUSTRATIVE PURPOSES ONLY

PREMISES: 42-01 28th AVENUE
ASTORIA, NY

DRAWN BY:	N.M.H.	SCALE:	AS NOTED
CHECKED BY:	GJC	DATE:	REV 9-20-18
JOB No:	18033		

SEAL: REGISTERED ARCHITECT GERALD J. CALIENDO 020241 STATE OF NEW YORK

DRAWING No: 12 OF 14

A-011.00



EAST (28th Avenue) ELEVATION

SCALE: 1/16" = 1'-0"

THE ARCHITECT SHALL NOT HAVE CONTROL OR CHARGE OF AND SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, DEVIATIONS, TECHNIQUES, SEQUENCES OR PROCEDURES, OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTIONS WITH THE WORK, FOR THE ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTORS OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK, OR FOR THE FAILURE OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. ALWAYS USE DIMENSIONS AS SHOWN. DRAWINGS ARE NOT TO BE SCALED. GERALD J. CALIENDO ARCHITECT, P.C. AND ITS PRINCIPAL/EMPLOYEES WERE NOT RETAINED FOR ANY CONSTRUCTION SUPERVISION.

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DRAWING TITLE: EAST ELEVATION FOR ILLUSTRATIVE PURPOSES ONLY

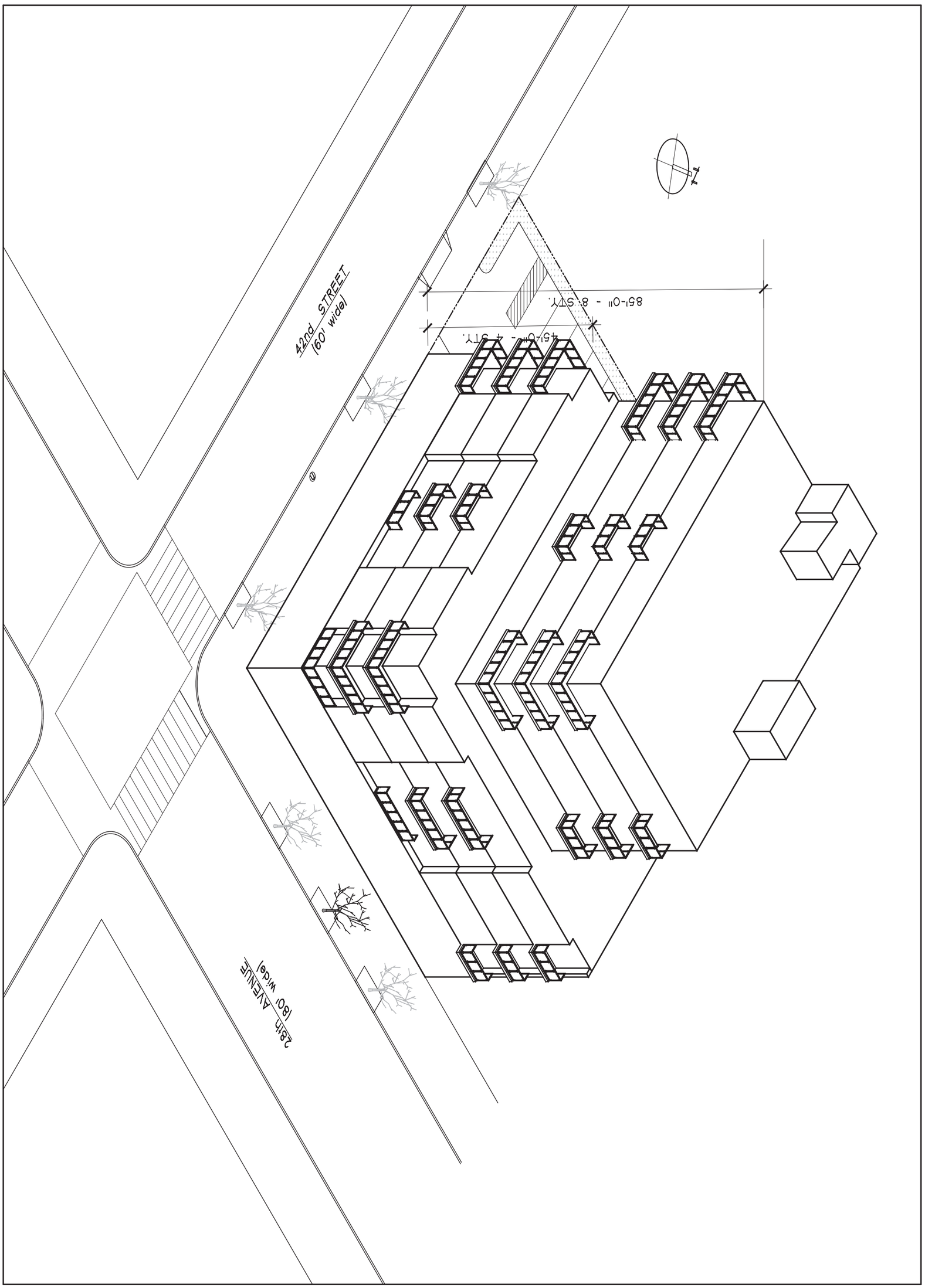
PREMISES: 42-01 28th AVENUE ASTORIA, NY

DRAWN BY:	N.M.H.	JOB No:	18033
CHECKED BY:	GJC	SCALE:	AS NOTED
		DATE:	REV 9-20-18

SEAL: REGISTERED ARCHITECT GERALD J. CALIENDO 020241 STATE OF NEW YORK

DRAWING No: 13 OF 14

A-012.00



THE ARCHITECT SHALL NOT HAVE CONTROL OR CHARGE OF AND SHALL NOT BE RESPONSIBLE FOR CONSTRIUCTION MEANS, METHODS, DEVIATIONS, TECHNIQUES, SEQUENCES OR PROCEDURES, OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTIONS WITH THE WORK, FOR THE ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTORS OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK, OR FOR THE FAILURE OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. ALWAYS USE DIMENSIONS AS SHOWN. DRAWINGS ARE NOT TO BE SCALED. GERALD J. CALIENDO ARCHITECT, P.C. AND ITS PRINCIPAL/EMPLOYEES WERE NOT RETAINED FOR ANY CONSTRUCTION SUPERVISION.

A-013.00

DRAWING No: 14 OF 14

SEAL: REGISTERED ARCHITECT GERALD J. CALIENDO 020241 STATE OF NEW YORK

DRAWN BY:	N.M.H.
CHECKED BY:	GJC
JOB No:	18033
SCALE:	AS NOTED
DATE:	REV 5-1-18

DRAWING TITLE: MASS DIAGRAM - C1-2 / R6A
FOR ILLUSTRATIVE PURPOSES ONLY

PREMISES:

42-01 28th AVENUE
ASTORIA, NY

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HISTORIC AND CULTURAL RESOURCES APPENDIX

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 / LA-CEQR-X
Project: 42-01 28 AVENUE
Date received: 3/18/2019

Properties with no Architectural or Archaeological significance:

1) ADDRESS: 25-94 28 AVE, BBL: 4006850001
2) ADDRESS: 41-11 28 AVE, BBL: 4006850003
3) ADDRESS: 41-07 28 AVE, BBL: 4006850005
4) ADDRESS: 25-95 41 ST, BBL: 4006850007
5) ADDRESS: 25-85 41 ST, BBL: 4006850011
6) ADDRESS: 25-96 28 AVE, BBL: 4007010001
7) ADDRESS: 42-11 28 AVE, BBL: 4007010003
8) ADDRESS: 42-09 28 AVE, BBL: 4007010005
9) ADDRESS: 42-01 28 AVE, BBL: 4007010006
10) ADDRESS: 25-89 42 ST, BBL: 4007010008
11) ADDRESS: 25-85 42 ST, BBL: 4007010009
12) ADDRESS: 25-87 42 ST, BBL: 4007010108



3/20/2019

SIGNATURE DATE
Gina Santucci, Environmental Review Coordinator

File Name: 34049_FSO_DNP_03202019.doc

HAZARDOUS MATERIALS APPENDIX

NYC Environmental Protection

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

December 5, 2019

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

Re: 42-01 28th Avenue Rezoning
Block 685, Lots 1, 3, 5, 7 and p/o 10
Block 701, Lots 1, 3, 5, 6, 8, 108 and p/o 9
CEQR # 20DCP043Q

Dear Ms. Ghosh:

The New York City Department of Environmental Protection, Bureau of Sustainability (DEP) has reviewed the September 2019 Environmental Assessment Statement and the April 2019 Phase I Environmental Site Assessment (Phase I) prepared by Environmental Studies Corporation, on behalf of Vlacich LLC., (applicant), for the above referenced project located between 41st Street and 43rd Street in the Astoria neighborhood of Queens Community District 1. It is our understanding that the applicant is seeking:

1. A zoning map amendment from the New York City Department of City Planning (DCP) to rezone Block 685 Lots 1, 3, 5, 7 and p/o 10 from a R5 zoning district to a R6A zoning district, as well as to rezone Block 701, Lots 1, 3, 5, 6, 8, 108 and p/o 9 from a R5/C1-2 zoning district to a R6A/C1-2 zoning district.
2. A zoning text amendment to Appendix F of the New York City Zoning Resolution to designate the project area as a Mandatory Inclusionary Housing Area.

The proposed actions would facilitate the redevelopment of five existing buildings located on Block 701, Lot 5, 6, 8, 108 and p/o 9 (Projected Development Site 1) with a new eight-story with cellar mixed-use building containing 45,731 gross square feet (gsf) of residential space, 6,921 gsf of ground floor commercial space and 66 accessory off-street parking spaces. Projected Development Site 1 is applicant-owned. The remainder of the project area, comprised of the lots not controlled by the applicant (Block 701, Lots 1 and 3 and Block 685, Lots 1, 3, 5, 7 and 10), is not proposed for development.

Block 701, Lot 6

The April 2019 Phase I report revealed that historical on-site and surrounding area land uses consists of residential and commercial uses including a gasoline filling station, an auto repair shop, a machine shop, iron works, paints, dry cleaners, a restaurant, dental offices, a grocery market, 28th St. Plumbing Heating & Cooling, M & Y Cleaners, a hair salon, a clothing store, Astoria Printing, a shoe repair store, as well as several residential buildings. Regulatory databases such as the New York

State Department of Environmental Conservation SPILLS, Leaking Underground Storage Tank, Leaking Storage Tanks (LTANKS), Resource Conservation and Recovery Act Generators, and Petroleum Bulk Storage (PBS) Underground Storage Tanks (USTs) and PBS Aboveground Storage Tanks (ASTs) identified several sites in close proximity to the project site. The SPILLS database reported eight SPILLS within a 1/8-mile radius of the project site and the LTANKS database reported 30 LTANKS within a 1/2-mile radius of the project site. The PBS USTs and the PBS ASTs databases reported nine USTs and 65 ASTs within a 1/4-mile radius of the project site. The Phase I also reported one Historical Cleaner within a 1/8-mile radius of the project site. Based on the age of the building that currently occupies the project site, asbestos containing materials and lead based paint could be present in the structure.

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

Projected Development Site 1: Block 701, Lots 5, 6, 8, 108 and p/o 9 (Site under the control or ownership of the applicant)

- DCP should inform the applicant that based on the historical on-site and/or surrounding area land uses, a Phase II Environmental Site Assessment is necessary to adequately identify/characterize the surface and subsurface soils of the subject property. A Phase II Investigative Protocol/Work Plan summarizing the proposed drilling, soil, groundwater, and soil vapor sampling activities should be developed in accordance with the *City Environmental Quality Review Technical Manual* and submitted to DEP for review and approval. The Work Plan should include blueprints and/or site plans displaying the current surface grade and sub-grade elevations and a site map depicting the proposed soil, groundwater, and soil vapor sampling locations. Soil and groundwater samples should be collected and analyzed by a New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP) certified laboratory for the presence of volatile organic compounds (VOCs) by United States Environmental Protection Agency (EPA) Method 8260, semi-volatile organic compounds by EPA Method 8270, pesticides by EPA Method 8081, polychlorinated biphenyls by EPA Method 8082, and Target Analyte List metals (filtered and unfiltered for groundwater samples). The soil vapor sampling should be conducted in accordance with the NYSDOH October 2006 Guidance for Evaluating Soil Vapor Intrusion in the State of New York. The soil vapor samples should be collected and analyzed by a NYSDOH ELAP certified laboratory for the presence of VOCs by EPA Method TO-15. An Investigative Health and Safety Plan (HASP) should also be submitted to DEP for review and approval.

- DCP should also instruct the applicant that the Phase II Work Plan and HASP should be submitted to DEP for review and approval prior to the start of any fieldwork.

Future correspondence and submittals related to this project should include the following CEQR # **20DCP043Q**. If you have any questions, you may contact Ms. Cassandra Scantlebury at (718) 595-6756.

Sincerely,

Wei Yu
Deputy Director, Hazardous Materials

cc: R. Weissbard; T. Estesen; C. Scantlebury; M. Wimbish; R. Lucas; O. Abinader – DCP

AIR QUALITY APPENDIX

Appendix - Air Quality

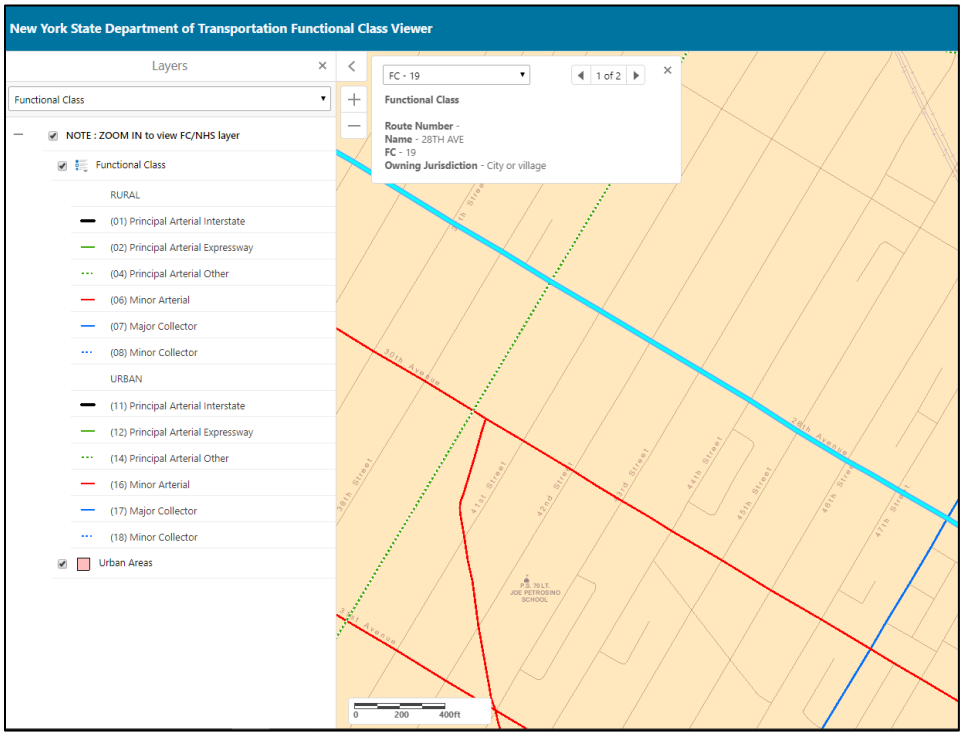

Figure 1. 28th Avenue at 42nd Street, Queens - NYSDOT Functional Class

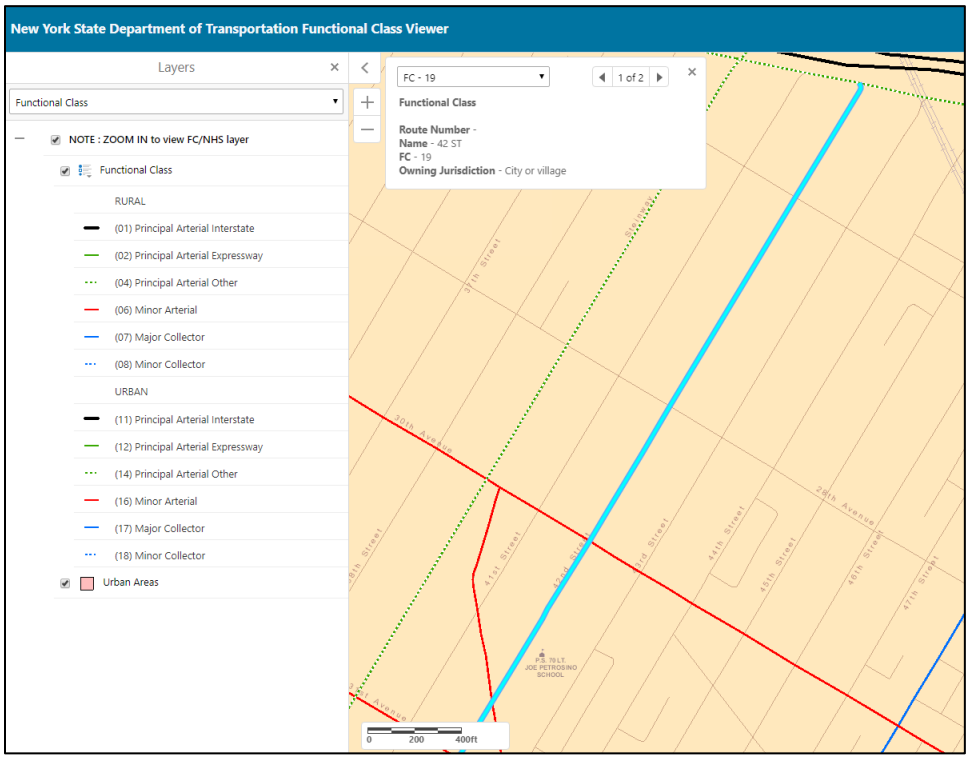

Figure 2. 42nd Street at 28th Avenue, Queens - NYSDOT Functional Class

Vehicle Trips - AM

Mode	In	Out	Total
Truck (delivery)	0	0	0
Auto (Car, Truck, Van)	4	4	8
Taxicab Balanced	0	0	0
TOTAL	4	4	8

Vehicle Trips - Midday

Mode	In	Out	Total
Truck (delivery)	0	0	0
Auto (Car, Truck, Van)	2	2	4
Taxicab Balanced	0	0	0
TOTAL	2	2	4

Vehicle Trips - PM

Mode	In	Out	Total
Truck (delivery)	0	0	0
Auto (Car, Truck, Van)	4	4	8
Taxicab Balanced	0	0	0
TOTAL	4	4	8

Vehicle Trips - Saturday

Mode	In	Out	Total
Truck (delivery)	0	0	0
Auto (Car, Truck, Van)	3	3	6
Taxicab Balanced	0	0	0
TOTAL	3	3	6

Figure 3. CEQR App – Project-generated traffic

Equivalent Truck Calculation

Instructions:
1. Input the hourly vehicles trips in the 2nd column (yellow column) in Table 1.
2. The equavalent to heavy duty trucks are shown in Table 2

Table 1: Vehicle trips

Vehcile types	Hourly vehicles
LDGT1	8
LDGT2	
LDGT3	
LDGT4	
LDDT12	
LDDT34	
HDGV2B	
HDGV3	
HDGV4	
HDGV5	
HDGV6	
HDGV7	
HDGV8A	
HDGV8B	
HDDV2B	
HDDV3	
HDDV4	
HDDV5	
HDDV6	
HDDV7	
HDDV8A	0
HDDV8B	
Total	8

Table 2: Equivalent Truck Calculation

Road Types	Equ. truck	Screen value	PM2.5 Screen
Paved road < 5000 veh/day	4	13	Pass Screen
Collector roads	2	20	Pass Screen
Principal and minor arterials	0	23	Pass Screen
Expressways and limited access roads	0	23	Pass Screen

Figure 4. *CEQR Technical Manual* Equivalent Truck Calculation

NOISE
APPENDIX

Appendix A: Noise Backup Data and Calibration Certificate

Summary

Filename	LxT_Data.065
Serial Number	2230
Model	SoundTrack LxT®
Firmware Version	2.302
User	
Location	
Job Description	
Note	
Measurement Description	
Start	2019/06/12 7:29:11
Stop	2019/06/12 7:49:13
Duration	0:20:02.0
Run Time	0:20:02.0
Pause	0:00:00.0
Pre Calibration	2019/06/12 7:14:10
Post Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting
Peak Weight	A Weighting
Detector	Fast
Preamp	PRMLxT2
Microphone Correction	Off
Integration Method	Linear
OBA Range	Low
OBA Bandwidth	1/1 Octave
OBA Freq. Weighting	Z Weighting
OBA Max Spectrum	Bin Max
Overload	148.1 dB

	A	C	Z
Under Range Peak	**104.4**	101.4	106.4 dB
Under Range Limit	**53.4**	51.4	59.4 dB
Noise Floor	40.2	40.9	48.5 dB

Results

LAeq	70.3	dB
LAE	101.1	dB
EA	1.422	mPa²h
EA8	34.079	mPa²h
EA40	170.393	mPa²h
LApeak (max)	2019/06/12 7:46:57	106.9 dB
LAFmax	2019/06/12 7:46:38	91.3 dB
LAFmin	2019/06/12 7:36:40	53.8 dB
SEA	-99.9	dB

LAF > 85.0 dB (Exceedence Counts / Duration)	5	3.3 s
LAF > 115.0 dB (Exceedence Counts / Duration)	0	0.0 s
LApeak > 135.0 dB (Exceedence Counts / Duration)	0	0.0 s
LApeak > 137.0 dB (Exceedence Counts / Duration)	0	0.0 s
LApeak > 140.0 dB (Exceedence Counts / Duration)	0	0.0 s

Community Noise	**Ldn**	**LDay 07:00-22:00**	**LNight 22:00-07:00**	**Lden**	**LDay 07:00-19:00**	**LEvening 19:00-22:00**	**LNight 22:00-07:00**
	70.3	70.3	-99.9	70.3	70.3	-99.9	-99.9

LCeq	69.5	dB
LAeq	70.3	dB
LCeq - LAeq	-0.8	dB
LAleq	73.1	dB
LAeq	70.3	dB
LAleq - LAeq	2.8	dB
# Overloads	0	
Overload Duration	0.0	s
# OBA Overloads	0	
OBA Overload Duration	0.0	s

Dose Settings

Dose Name	OSHA-1	OSHA-2
Exch. Rate	5	5 dB
Threshold	90	80 dB
Criterion Level	90	90 dB
Criterion Duration	8	8 h

Results

Dose	0.00	0.02 %
Projected Dose	0.02	0.59 %
TWA (Projected)	27.9	52.9 dB
TWA (t)	4.9	30.0 dB
Lep (t)	56.5	56.5 dB

Statistics

LAF5.00	78.3	dB
LAF10.00	72.0	dB
LAF33.30	66.7	dB
LAF50.00	65.0	dB
LAF66.60	63.2	dB
LAF90.00	56.5	dB

Calibration History

Preamp	**Date**	**dB re. 1V/Pa**	**6.3**	**8.0**	**10.0**	**12.5**	**16.0**	**20.0**	**25.0**	**31.5**	**40.0**	**50.0**	**63.0**	**80.0**	**100**	**125**	**160**	**200**	**250**	**315**	**400**	**500**	**630**	**800**	**1000**	**1250**	**1600**	**2000**	**2500**	**3150**	**4000**	**5000**	**6300**	**8000**	**10000**	**12500**	**16000**	**20000**
PRMLxT2	2019/06/12 7:13:57	-54.4	74.5	80.9	64.0	50.7	56.4	48.2	51.1	50.2	43.7	61.8	62.2	58.3	63.9	59.8	53.9	48.1	45.8	45.4	43.1	39.7	38.2	38.4	114.2	49.5	35.5	68.0	35.1	66.6	38.7	39.3	39.2	39.7	41.1	42.5	43.2
PRMLxT2	2019/06/11 13:57:46	-54.6	44.0	39.4	68.2	83.2	77.2	50.9	40.4	34.0	30.0	34.4	32.6	29.3	31.8	38.4	34.7	37.4	33.2	37.5	35.5	42.9	41.1	34.3	114.3	49.4	33.7	68.6	35.3	67.9	38.8	38.1	39.2	40.7	41.5	42.7	43.9
PRMLxT2	2019/06/05 16:13:42	-54.9	56.0	56.7	56.0	48.2	43.2	42.9	47.2	49.8	46.7	41.2	44.1	57.3	55.6	54.0	55.0	50.3	56.1	59.8	60.7	58.2	54.7	41.4	113.8	48.9	36.6	68.9	36.0	67.8	37.1	38.4	39.1	40.1	41.7	42.8	43.7
PRMLxT2	2019/06/05 11:38:55	-54.7	51.7	49.3	46.4	47.7	47.5	47.8	43.5	39.9	42.6	39.8	36.6	42.4	40.6	34.0	29.5	33.6	32.8	32.3	33.3	32.9	29.8	32.3	114.2	49.3	33.6	69.6	35.6	68.5	37.8	37.9	39.1	40.3	41.4	42.9	43.9
PRMLxT2	2019/06/05 8:37:17	-54.9	64.9	70.5	69.2	65.2	79.2	105.5	96.0	81.8	74.0	59.4	60.9	55.8	44.7	41.4	39.9	42.6	45.4	42.3	44.3	44.0	38.8	34.4	113.9	49.2	34.7	69.7	35.9	67.7	37.9	39.1	38.9	40.2	41.5	42.5	43.6
PRMLxT2	2019/06/05 6:44:54	-54.8	80.2	70.4	56.8	55.1	66.6	56.1	48.0	47.7	47.9	51.8	47.1	40.9	36.0	35.4	32.1	31.6	35.0	34.0	37.2	34.0	32.7	32.8	113.8	49.0	33.1	67.7	35.0	67.9	40.1	38.8	39.2	40.5	41.2	42.3	43.6
PRMLxT2	2019/05/30 16:53:50	-54.6	59.6	70.9	64.7	67.3	65.6	48.8	57.0	42.8	44.8	38.7	37.7	37.1	38.3	38.5	40.1	44.0	39.8	38.2	40.9	41.7	35.5	33.7	114.0	49.1	34.3	68.3	35.7	68.9	42.2	39.9	40.1	40.0	41.2	42.6	43.5
PRMLxT2	2019/05/30 16:53:15	-54.6	71.3	63.6	72.5	65.6	64.4	53.4	51.9	54.5	49.9	50.6	50.5	39.0	40.0	44.9	38.3	42.4	43.8	39.6	46.5	45.3	39.3	37.7	114.0	49.8	35.9	68.3	35.2	68.7	41.8	39.4	39.3	40.2	41.5	42.5	43.3
PRMLxT2	2019/05/30 11:55:27	-54.6	71.0	70.9	59.3	62.0	69.1	57.0	55.1	56.7	53.0	49.7	47.7	39.7	35.6	37.6	33.7	38.6	37.0	38.6	38.1	36.8	35.5	38.2	114.0	49.8	38.8	68.5	35.3	68.3	45.8	41.0	40.2	40.6	41.2	42.5	43.4
PRMLxT2	2019/05/30 7:27:19	-54.6	79.3	71.9	58.8	67.3	68.3	55.7	53.9	57.6	49.6	58.8	50.9	53.0	43.0	43.0	46.4	42.1	44.9	42.3	43.1	40.9	36.9	37.7	114.2	50.4	37.4	68.9	35.0	68.0	39.5	39.8	39.4	40.2	41.4	42.6	43.6
PRMLxT2	2019/05/29 16:24:41	-54.8	69.4	52.2	59.1	58.0	53.5	40.4	47.5	45.2	52.2	49.5	51.3	46.6	38.7	40.5	42.4	43.7	43.6	44.3	45.9	45.3	39.4	36.2	113.8	49.1	33.0	68.5	35.1	67.4	39.8	41.6	40.7	41.0	41.4	42.3	43.7

Summary

Filename	LxT_Data.067
Serial Number	2230
Model	SoundTrack LxT®
Firmware Version	2.302
User	
Location	
Job Description	
Note	
Measurement Description	
Start	2019/06/12 11:59:20
Stop	2019/06/12 12:19:27
Duration	0:20:06.4
Run Time	0:20:06.4
Pause	0:00:00.0
Pre Calibration	2019/06/12 11:54:38
Post Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting
Peak Weight	A Weighting
Detector	Fast
Preamp	PRMLxT2
Microphone Correction	Off
Integration Method	Linear
OBA Range	Low
OBA Bandwidth	1/1 Octave
OBA Freq. Weighting	Z Weighting
OBA Max Spectrum	Bin Max
Overload	148.2 dB

	A	C	Z	
Under Range Peak	**104.5**	101.5	106.5	dB
Under Range Limit	**53.5**	51.5	59.5	dB
Noise Floor	40.3	41.0	48.6	dB

Results

LAeq	65.9	dB	
LAE	96.7	dB	
EA	516.944	μPa²h	
EA8	12.341	mPa²h	
EA40	61.704	mPa²h	
LApeak (max)	2019/06/12 12:17:02	106.0	dB
LAFmax	2019/06/12 12:16:59	88.5	dB
LAFmin	2019/06/12 12:14:45	49.1	dB
SEA	-99.9	dB	

LAF > 85.0 dB (Exceedence Counts / Duration)	2	0.6	s
LAF > 115.0 dB (Exceedence Counts / Duration)	0	0.0	s
LApeak > 135.0 dB (Exceedence Counts / Duration)	0	0.0	s
LApeak > 137.0 dB (Exceedence Counts / Duration)	0	0.0	s
LApeak > 140.0 dB (Exceedence Counts / Duration)	0	0.0	s

Community Noise	**Ldn**	**LDay 07:00-22:00**	**LNight 22:00-07:00**	**Lden**	**LDay 07:00-19:00**	**LEvening 19:00-22:00**	**LNight 22:00-07:00**
	65.9	65.9	-99.9	65.9	65.9	-99.9	-99.9

LCeq	65.4	dB
LAeq	65.9	dB
LCeq - LAeq	-0.5	dB
LAleq	69.9	dB
LAeq	65.9	dB
LAleq - LAeq	4.1	dB
# Overloads	0	
Overload Duration	0.0	s
# OBA Overloads	0	
OBA Overload Duration	0.0	s

Dose Settings

Dose Name	OSHA-1	OSHA-2	
Exch. Rate	5	5	dB
Threshold	90	80	dB
Criterion Level	90	90	dB
Criterion Duration	8	8	h

Results

Dose	-99.9	0.00	%
Projected Dose	-99.9	0.08	%
TWA (Projected)	-99.9	38.4	dB
TWA (t)	-99.9	15.5	dB
Lep (t)	52.1	52.1	dB

Statistics

LAF5.00	73.6	dB
LAF10.00	67.7	dB
LAF33.30	60.3	dB
LAF50.00	57.8	dB
LAF66.60	56.0	dB
LAF90.00	52.9	dB

Calibration History

Preamp	**Date**	**dB re. 1V/Pa**	**6.3**	**8.0**	**10.0**	**12.5**	**16.0**	**20.0**	**25.0**	**31.5**	**40.0**	**50.0**	**63.0**	**80.0**	**100**	**125**	**160**	**200**	**250**	**315**	**400**	**500**	**630**	**800**	**1000**	**1250**	**1600**	**2000**	**2500**	**3150**	**4000**	**5000**	**6300**	**8000**	**10000**	**12500**	**16000**	**20000**
PRMLxT2	2019/06/12 11:54:26	-54.5	106.3	104.7	97.0	86.7	100.7	92.4	92.3	90.2	83.4	71.7	68.0	64.1	60.4	53.0	49.0	46.4	45.3	44.4	41.8	38.0	35.3	36.1	113.8	48.9	33.9	68.4	34.8	66.4	37.2	39.0	39.0	39.7	41.0	42.6	43.4
PRMLxT2	2019/06/12 7:13:57	-54.4	74.5	80.9	64.0	50.7	56.4	48.2	51.1	50.2	43.7	61.8	62.2	58.3	63.9	59.8	53.9	48.1	45.8	45.4	43.1	39.7	38.2	38.4	114.2	49.5	35.5	68.0	35.1	66.6	38.7	39.3	39.2	39.7	41.1	42.5	43.2
PRMLxT2	2019/06/11 13:57:46	-54.6	44.0	39.4	68.2	83.2	77.2	50.9	40.4	34.0	30.0	34.4	32.6	29.3	31.8	38.4	34.7	37.4	33.2	37.5	35.5	42.9	41.1	34.3	114.3	49.4	33.7	68.6	35.3	67.9	38.8	38.1	39.2	40.7	41.5	42.7	43.9
PRMLxT2	2019/06/05 16:13:42	-54.9	56.0	56.7	56.0	48.2	43.2	42.9	47.2	49.8	46.7	41.2	44.1	57.3	55.6	54.0	55.0	50.3	56.1	59.8	60.7	58.2	54.7	41.4	113.8	48.9	36.6	68.9	36.0	67.8	37.1	38.4	39.1	40.1	41.7	42.8	43.7
PRMLxT2	2019/06/05 11:38:55	-54.7	51.7	49.3	46.4	47.7	47.5	47.8	43.5	39.9	42.6	39.8	36.6	42.4	40.6	34.0	29.5	33.6	32.8	32.3	33.3	32.9	29.8	32.3	114.2	49.3	33.6	69.6	35.6	68.5	37.8	37.9	39.1	40.3	41.4	42.9	43.9
PRMLxT2	2019/06/05 8:37:17	-54.9	64.9	70.5	69.2	65.2	79.2	105.5	96.0	81.8	74.0	59.4	60.9	55.8	44.7	41.4	39.9	42.6	45.4	42.3	44.3	44.0	38.8	34.4	113.9	49.2	34.7	69.7	35.9	67.7	37.9	39.1	38.9	40.2	41.5	42.5	43.6
PRMLxT2	2019/06/05 6:44:54	-54.8	80.2	70.4	56.8	55.1	66.6	56.1	48.0	47.7	47.9	51.8	47.1	40.9	36.0	35.4	32.1	31.6	35.0	34.0	37.2	34.0	32.7	32.8	113.8	49.0	33.1	67.7	35.0	67.9	40.1	38.8	39.2	40.5	41.2	42.3	43.6
PRMLxT2	2019/05/30 16:53:50	-54.6	59.6	70.9	64.7	67.3	65.6	48.8	57.0	42.8	44.8	38.7	37.7	37.1	38.3	38.5	40.1	44.0	39.8	38.2	40.9	41.7	35.5	33.7	114.0	49.1	34.3	68.3	35.7	68.9	42.2	39.9	40.1	40.0	41.2	42.6	43.5
PRMLxT2	2019/05/30 16:53:15	-54.6	71.3	63.6	72.5	65.6	64.4	53.4	51.9	54.5	49.9	50.6	50.5	39.0	40.0	44.9	38.3	42.4	43.8	39.6	46.5	45.3	39.3	37.7	114.0	49.8	35.9	68.3	35.2	68.7	41.8	39.4	39.3	40.2	41.5	42.5	43.3
PRMLxT2	2019/05/30 11:55:27	-54.6	71.0	70.9	59.3	62.0	69.1	57.0	55.1	56.7	53.0	49.7	47.7	39.7	35.6	37.6	33.7	38.6	37.0	38.6	38.1	36.8	35.5	38.2	114.0	49.8	38.8	68.5	35.3	68.3	45.8	41.0	40.2	40.6	41.2	42.5	43.4
PRMLxT2	2019/05/30 7:27:19	-54.6	79.3	71.9	58.8	67.3	68.3	55.7	53.9	57.6	49.6	58.8	50.9	53.0	43.0	43.0	46.4	42.1	44.9	42.3	43.1	40.9	36.9	37.7	114.2	50.4	37.4	68.9	35.0	68.0	39.5	39.8	39.4	40.2	41.4	42.6	43.6

Summary

Filename	LxT_Data.069
Serial Number	2230
Model	SoundTrack LxT®
Firmware Version	2.302
User	
Location	
Job Description	
Note	
Measurement Description	
Start	2019/06/12 16:30:18
Stop	2019/06/12 16:50:33
Duration	0:20:14.7
Run Time	0:20:14.7
Pause	0:00:00.0
Pre Calibration	2019/06/12 16:25:16
Post Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting
Peak Weight	A Weighting
Detector	Fast
Preamp	PRMLxT2
Microphone Correction	Off
Integration Method	Linear
OBA Range	Low
OBA Bandwidth	1/1 Octave
OBA Freq. Weighting	Z Weighting
OBA Max Spectrum	Bin Max
Overload	148.3 dB

	A	C	Z
Under Range Peak	**104.6**	101.6	106.6 dB
Under Range Limit	**53.6**	51.6	59.6 dB
Noise Floor	40.4	41.1	48.7 dB

Results

LAeq	63.5 dB		
LAE	94.3 dB		
EA	300.319 μPa^2h		
EA8	7.120 mPa^2h		
EA40	35.602 mPa^2h		
LApeak (max)	2019/06/12 16:42:38	106.8 dB	
LAFmax	2019/06/12 16:42:38	93.4 dB	
LAFmin	2019/06/12 16:38:16	48.3 dB	
SEA	-99.9 dB		

LAF > 85.0 dB (Exceedence Counts / Duration)	3	1.4 s
LAF > 115.0 dB (Exceedence Counts / Duration)	0	0.0 s
LApeak > 135.0 dB (Exceedence Counts / Duration)	0	0.0 s
LApeak > 137.0 dB (Exceedence Counts / Duration)	0	0.0 s
LApeak > 140.0 dB (Exceedence Counts / Duration)	0	0.0 s

Community Noise	**Ldn**	**LDay 07:00-22:00**	**LNight 22:00-07:00**	**Lden**	**LDay 07:00-19:00**	**LEvening 19:00-22:00**	**LNight 22:00-07:00**
	63.5	63.5	-99.9	63.5	63.5	-99.9	-99.9

LCeq	63.2 dB	
LAeq	63.5 dB	
LCeq - LAeq	-0.3 dB	
LALeq	71.5 dB	
LAeq	63.5 dB	
LALeq - LAeq	8.1 dB	
# Overloads	0	
Overload Duration	0.0 s	
# OBA Overloads	0	
OBA Overload Duration	0.0 s	

Dose Settings

Dose Name	OSHA-1	OSHA-2
Exch. Rate	5	5 dB
Threshold	90	80 dB
Criterion Level	90	90 dB
Criterion Duration	8	8 h

Results

Dose	0.00	0.00 %
Projected Dose	0.03	0.10 %
TWA (Projected)	31.5	40.0 dB
TWA (t)	8.7	17.2 dB
Lep (t)	49.7	49.7 dB

Statistics

LAF5.00	67.1 dB
LAF10.00	64.8 dB
LAF33.30	59.9 dB
LAF50.00	57.9 dB
LAF66.60	56.0 dB
LAF90.00	53.1 dB

Calibration History

Preamp	**Date**	**dB re. 1V/Pa**	**6.3**	**8.0**	**10.0**	**12.5**	**16.0**	**20.0**	**25.0**	**31.5**	**40.0**	**50.0**	**63.0**	**80.0**	**100**	**125**	**160**	**200**	**250**	**315**	**400**	**500**	**630**	**800**	**1000**	**1250**	**1600**	**2000**	**2500**	**3150**	**4000**	**5000**	**6300**	**8000**	**10000**	**12500**	**16000**	**20000**
PRMLxT2	2019/06/12 16:24:33	-54.6	81.9	75.8	91.2	93.3	85.5	76.9	70.5	63.3	59.1	55.1	55.5	55.8	61.8	57.7	52.0	46.5	46.6	44.3	43.5	41.8	38.6	36.0	113.8	48.8	34.6	67.9	35.8	67.1	39.7	39.6	39.9	40.5	41.8	42.5	43.7
PRMLxT2	2019/06/12 12:42:54	-54.4	64.6	69.8	105.0	112.8	84.3	104.1	103.5	87.7	75.0	61.9	54.0	62.9	44.6	47.4	41.2	42.6	39.3	48.2	40.0	39.8	33.8	81.5	113.6	48.5	32.7	68.8	35.0	66.7	38.4	42.4	38.2	39.5	40.8	47.4	43.0
PRMLxT2	2019/06/12 12:20:38	-54.1	101.4	108.9	109.7	100.4	99.6	100.5	106.1	100.8	90.7	82.6	75.4	66.7	63.5	57.6	52.4	41.5	40.2	40.2	40.6	40.5	36.2	52.2	113.1	71.5	43.9	67.2	34.0	65.7	35.9	38.2	38.0	38.8	55.3	54.6	42.8
PRMLxT2	2019/06/12 12:20:31	-53.2	62.4	80.2	116.0	102.2	82.3	113.0	128.3	124.6	117.1	66.5	60.0	52.5	49.9	45.5	43.3	51.2	49.9	63.5	66.5	58.9	56.3	54.6	113.8	56.5	40.3	69.0	46.2	67.1	50.8	40.6	40.6	41.3	42.7	43.9	45.3
PRMLxT2	2019/06/12 11:54:26	-54.5	106.3	104.7	97.0	86.7	100.7	92.4	92.3	90.2	83.4	71.7	68.0	64.1	60.4	53.0	49.0	46.4	45.3	44.4	41.8	38.0	35.3	36.1	113.8	48.9	33.9	68.4	34.8	66.4	37.2	39.0	39.0	39.7	41.0	42.6	43.4
PRMLxT2	2019/06/12 7:13:57	-54.4	74.5	80.9	64.0	50.7	56.4	48.2	51.1	50.2	43.7	61.8	62.2	58.3	63.9	59.8	53.9	48.1	45.8	45.4	43.1	39.7	38.2	38.4	114.2	49.5	35.5	68.0	35.1	66.6	38.7	39.3	39.2	39.7	41.1	42.5	43.2
PRMLxT2	2019/06/11 13:57:46	-54.6	44.0	39.4	68.2	83.2	77.2	50.9	40.4	34.0	30.0	34.4	32.6	29.3	31.8	38.4	34.7	37.4	33.2	37.5	35.5	42.9	41.1	34.3	114.3	49.4	33.7	68.6	35.3	67.9	38.8	38.1	39.2	40.7	41.5	42.7	43.9
PRMLxT2	2019/06/05 16:13:42	-54.9	56.0	56.7	56.0	48.2	43.2	42.9	47.2	49.8	46.7	41.2	44.1	57.3	55.6	54.0	55.0	50.3	56.1	59.8	60.7	58.2	54.7	41.4	113.8	48.9	36.6	68.9	36.0	67.8	37.1	38.4	39.1	40.1	41.7	42.8	43.7
PRMLxT2	2019/06/05 11:38:55	-54.7	51.7	49.3	46.4	47.7	47.5	47.8	43.5	39.9	42.6	39.8	36.6	42.4	40.6	34.0	29.5	33.6	32.8	32.3	33.3	32.9	29.8	32.3	114.2	49.3	33.6	69.6	35.6	68.5	37.8	37.9	39.1	40.3	41.4	42.9	43.9
PRMLxT2	2019/06/05 8:37:17	-54.9	64.9	70.5	69.2	65.2	79.2	105.5	96.0	81.8	74.0	59.4	60.9	55.8	44.7	41.4	39.9	42.6	45.4	42.3	44.3	44.0	38.8	34.4	113.9	49.2	34.7	69.7	35.9	67.7	37.9	39.1	38.9	40.2	41.5	42.5	43.6
PRMLxT2	2019/06/05 6:44:54	-54.8	80.2	70.4	56.8	55.1	66.6	56.1	48.0	47.7	47.9	51.8	47.1	40.9	36.0	35.4	32.1	31.6	35.0	34.0	37.2	34.0	32.7	32.8	113.8	49.0	33.1	67.7	35.0	67.9	40.1	38.8	39.2	40.5	41.2	42.3	43.6

Summary	
Filename	LxT_Data.066
Serial Number	2230
Model	SoundTrack LxT®
Firmware Version	2.302
User	
Location	
Job Description	
Note	
Measurement Description	
Start	2019/06/12 7:50:34
Stop	2019/06/12 8:10:39
Duration	0:20:05.1
Run Time	0:20:05.1
Pause	0:00:00.0
Pre Calibration	2019/06/12 7:13:57
Post Calibration	None
Calibration Deviation	---

Overall Settings	
RMS Weight	A Weighting
Peak Weight	A Weighting
Detector	Fast
Preamp	PRMLxT2
Microphone Correction	Off
Integration Method	Linear
OBA Range	Low
OBA Bandwidth	1/1 Octave
OBA Freq. Weighting	Z Weighting
OBA Max Spectrum	Bin Max
Overload	148.1 dB

	A	C	Z
Under Range Peak	**104.4**	101.4	106.4 dB
Under Range Limit	**53.4**	51.4	59.4 dB
Noise Floor	40.2	40.9	48.5 dB

Results		
LAeq	66.2	dB
LAE	97.0	dB
EA	562.900	µPa²h
EA8	13.452	mPa²h
EA40	67.262	mPa²h
LApeak (max)	2019/06/12 8:09:02	106.6 dB
LAFmax	2019/06/12 8:09:02	96.6 dB
LAFmin	2019/06/12 8:01:16	52.1 dB
SEA	-99.9	dB

LAF > 85.0 dB (Exceedence Counts / Duration)	3	2.4 s
LAF > 115.0 dB (Exceedence Counts / Duration)	0	0.0 s
LApeak > 135.0 dB (Exceedence Counts / Duration)	0	0.0 s
LApeak > 137.0 dB (Exceedence Counts / Duration)	0	0.0 s
LApeak > 140.0 dB (Exceedence Counts / Duration)	0	0.0 s

Community Noise	Ldn	LDay 07:00-22:00	LNight 22:00-07:00	Lden	LDay 07:00-19:00	LEvening 19:00-22:00	LNight 22:00-07:00
	66.2	66.2	-99.9	66.2	66.2	-99.9	-99.9
LCeq	65.8 dB						
LAeq	66.2 dB						
LCeq - LAeq	-0.5 dB						
LAleq	73.0 dB						
LAeq	66.2 dB						
LAleq - LAeq	6.8 dB						
# Overloads	0						
Overload Duration	0.0 s						
# OBA Overloads	0						
OBA Overload Duration	0.0 s						

Dose Settings		
Dose Name	OSHA-1	OSHA-2
Exch. Rate	5	5 dB
Threshold	90	80 dB
Criterion Level	90	90 dB
Criterion Duration	8	8 h

Results		
Dose	0.00	0.01 %
Projected Dose	0.08	0.19 %
TWA (Projected)	38.2	44.7 dB
TWA (t)	15.3	21.8 dB
Lep (t)	52.5	52.5 dB

Statistics	
LAF5.00	68.5 dB
LAF10.00	66.5 dB
LAF33.30	62.9 dB
LAF50.00	61.4 dB
LAF66.60	60.0 dB
LAF90.00	57.1 dB

Calibration History

Preamp	Date	dB re. 1V/Pa	6.3	8.0	10.0	12.5	16.0	20.0	25.0	31.5	40.0	50.0	63.0	80.0	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000	6300	8000	10000	12500	16000	20000
PRMLxT2	2019/06/12 7:13:57	-54.4	74.5	80.9	64.0	50.7	56.4	48.2	51.1	50.2	43.7	61.8	62.2	58.3	63.9	59.8	53.9	48.1	45.8	45.4	43.1	39.7	38.2	38.4	114.2	49.5	35.5	68.0	35.1	66.6	38.7	39.3	39.2	39.7	41.1	42.5	43.2	
PRMLxT2	2019/06/11 13:57:46	-54.6	44.0	39.4	68.2	83.2	77.2	50.9	40.4	34.0	30.0	34.4	32.6	29.3	31.8	38.4	34.7	37.4	33.2	37.5	35.5	42.9	41.1	34.3	114.3	49.4	33.7	68.6	35.3	67.9	38.8	38.1	39.2	40.7	41.5	42.7	43.9	
PRMLxT2	2019/06/05 16:13:42	-54.9	56.0	56.7	56.0	48.2	43.2	42.9	47.2	49.8	46.7	41.2	44.1	57.3	55.6	54.0	55.0	50.3	56.1	59.8	60.7	58.2	54.7	41.4	113.8	48.9	36.6	68.9	36.0	67.8	37.1	38.4	39.1	40.1	41.7	42.8	43.7	
PRMLxT2	2019/06/05 11:38:55	-54.7	51.7	49.3	46.4	47.7	47.5	47.8	43.5	39.9	42.6	39.8	36.6	42.4	40.6	34.0	29.5	33.6	32.8	32.3	33.3	32.9	29.8	32.3	114.2	49.3	33.6	69.6	35.6	68.5	37.8	37.9	39.1	40.3	41.4	42.9	43.9	
PRMLxT2	2019/06/05 8:37:17	-54.9	64.9	70.5	69.2	65.2	79.2	105.5	96.0	81.8	74.0	59.4	60.9	55.8	44.7	41.4	39.9	42.6	45.4	42.3	44.3	44.0	38.8	34.4	113.9	49.2	34.7	69.7	35.9	67.7	37.9	39.1	38.9	40.2	41.5	42.5	43.6	
PRMLxT2	2019/06/05 6:44:54	-54.8	80.2	70.4	56.8	55.1	66.6	56.1	48.0	47.7	47.9	51.8	47.1	40.9	36.0	35.4	32.1	31.6	35.0	34.0	37.2	34.0	32.7	32.8	113.8	49.0	33.1	67.7	35.0	67.9	40.1	38.8	39.2	40.5	41.2	42.3	43.6	
PRMLxT2	2019/05/30 16:53:50	-54.6	59.6	70.9	64.7	67.3	65.6	48.8	57.0	42.8	44.8	38.7	37.7	37.1	38.3	38.5	40.1	44.0	39.8	38.2	40.9	41.7	35.5	33.7	114.0	49.1	34.3	68.3	35.7	68.9	42.2	39.9	40.1	40.0	41.2	42.6	43.5	
PRMLxT2	2019/05/30 16:53:15	-54.6	71.3	63.6	72.5	65.6	64.4	53.4	51.9	54.5	49.9	50.6	50.5	39.0	40.0	44.9	38.3	42.4	43.8	39.6	46.5	45.3	39.3	37.7	114.0	49.8	35.9	68.3	35.2	68.7	41.8	39.4	39.3	40.2	41.5	42.5	43.3	
PRMLxT2	2019/05/30 11:55:27	-54.6	71.0	70.9	59.3	62.0	69.1	57.0	55.1	56.7	53.0	49.7	47.7	39.7	35.6	37.6	33.7	38.6	37.0	38.6	38.1	36.8	35.5	38.2	114.0	49.8	38.8	68.5	35.3	68.3	45.8	41.0	40.2	40.6	41.2	42.5	43.4	
PRMLxT2	2019/05/30 7:27:19	-54.6	79.3	71.9	58.8	67.3	68.3	55.7	53.9	57.6	49.6	58.8	50.9	53.0	43.0	43.0	46.4	42.1	44.9	42.3	43.1	40.9	36.9	37.7	114.2	50.4	37.4	68.9	35.0	68.0	39.5	39.8	39.4	40.2	41.4	42.6	43.6	
PRMLxT2	2019/05/29 16:24:41	-54.8	69.4	52.2	59.1	58.0	53.5	40.4	47.5	45.2	52.2	49.5	51.3	46.6	38.7	40.5	42.4	43.7	43.6	44.3	45.9	45.3	39.4	36.2	113.8	49.1	33.0	68.5	35.1	67.4	39.8	41.6	40.7	41.0	41.4	42.3	43.7	

Summary

Filename	LxT_Data.068
Serial Number	2230
Model	SoundTrack LxT®
Firmware Version	2.302
User	
Location	
Job Description	
Note	
Measurement Description	
Start	2019/06/12 12:21:35
Stop	2019/06/12 12:41:39
Duration	0:20:04.0
Run Time	0:20:04.0
Pause	0:00:00.0
Pre Calibration	2019/06/12 12:20:38
Post Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting
Peak Weight	A Weighting
Detector	Fast
Preamp	PRMLxT2
Microphone Correction	Off
Integration Method	Linear
OBA Range	Low
OBA Bandwidth	1/1 Octave
OBA Freq. Weighting	Z Weighting
OBA Max Spectrum	Bin Max
Overload	147.8 dB

	A	C	Z
Under Range Peak	**104.1**	101.1	106.1 dB
Under Range Limit	**53.1**	51.1	59.1 dB
Noise Floor	39.9	40.5	48.2 dB

Results

LAeq	68.6	dB
LAE	99.4	dB
EA	975.548	µPa²h
EA8	23.335	mPa²h
EA40	116.677	mPa²h
LApeak (max)	2019/06/12 12:40:47	111.6 dB
LAFmax	2019/06/12 12:40:47	97.8 dB
LAFmin	2019/06/12 12:35:23	51.3 dB
SEA	-99.9	dB

LAF > 85.0 dB (Exceedence Counts / Duration)	4	2.0 s
LAF > 115.0 dB (Exceedence Counts / Duration)	0	0.0 s
LApeak > 135.0 dB (Exceedence Counts / Duration)	0	0.0 s
LApeak > 137.0 dB (Exceedence Counts / Duration)	0	0.0 s
LApeak > 140.0 dB (Exceedence Counts / Duration)	0	0.0 s

Community Noise	**Ldn**	**LDay 07:00-22:00**	**LNight 22:00-07:00**	**Lden**	**LDay 07:00-19:00**	**LEvening 19:00-22:00**	**LNight 22:00-07:00**
	68.6	68.6	-99.9	68.6	68.6	-99.9	-99.9

LCeq	67.8	dB
LAeq	68.6	dB
LCeq - LAeq	-0.8	dB
LAleq	74.6	dB
LAeq	68.6	dB
LAleq - LAeq	5.9	dB
# Overloads	0	
Overload Duration	0.0	s
# OBA Overloads	0	
OBA Overload Duration	0.0	s

Dose Settings

Dose Name	OSHA-1	OSHA-2	
Exch. Rate	5	5	dB
Threshold	90	80	dB
Criterion Level	90	90	dB
Criterion Duration	8	8	h

Results

Dose	0.00	0.02	%
Projected Dose	0.09	0.53	%
TWA (Projected)	39.7	52.1	dB
TWA (t)	16.8	29.2	dB
Lep (t)	54.8	54.8	dB

Statistics

LAF5.00	72.9	dB
LAF10.00	70.5	dB
LAF33.30	62.4	dB
LAF50.00	60.3	dB
LAF66.60	58.4	dB
LAF90.00	55.1	dB

Calibration History

Preamp	**Date**	**dB re. 1V/Pa**	**6.3**	**8.0**	**10.0**	**12.5**	**16.0**	**20.0**	**25.0**	**31.5**	**40.0**	**50.0**	**63.0**	**80.0**	**100**	**125**	**160**	**200**	**250**	**315**	**400**	**500**	**630**	**800**	**1000**	**1250**	**1600**	**2000**	**2500**	**3150**	**4000**	**5000**	**6300**	**8000**	**10000**	**12500**	**16000**	**20000**
PRMLxT2	2019/06/12 12:20:38	-54.1	101.4	108.9	109.7	100.4	99.6	100.5	106.1	100.8	90.7	82.6	75.4	66.7	63.5	57.6	52.4	41.5	40.2	40.2	40.6	40.5	36.2	52.2	113.1	71.5	43.9	67.2	34.0	65.7	35.9	38.2	38.0	38.8	55.3	54.6	42.8	
PRMLxT2	2019/06/12 12:20:31	-53.2	62.4	80.2	116.0	102.2	82.3	113.0	128.3	124.6	117.1	66.5	60.0	52.5	49.9	45.5	43.3	51.2	49.9	63.5	66.5	58.9	56.3	54.6	113.8	56.5	40.3	69.0	46.2	67.1	50.8	40.6	40.6	41.3	42.7	43.9	45.3	
PRMLxT2	2019/06/12 11:54:26	-54.5	106.3	104.7	97.0	86.7	100.7	92.4	92.3	90.2	83.4	71.7	68.0	64.1	60.4	53.0	49.0	46.4	45.3	44.4	41.8	38.0	35.3	36.1	113.8	48.9	33.9	68.4	34.8	66.4	37.2	39.0	39.0	39.7	41.0	42.6	43.4	
PRMLxT2	2019/06/12 7:13:57	-54.4	74.5	80.9	64.0	50.7	56.4	48.2	51.1	50.2	43.7	61.8	62.2	58.3	63.9	59.8	53.9	48.1	45.8	45.4	43.1	39.7	38.2	38.4	114.2	49.5	35.5	68.0	35.1	66.6	38.7	39.3	39.2	39.7	41.1	42.5	43.2	
PRMLxT2	2019/06/11 13:57:46	-54.6	44.0	39.4	68.2	83.2	77.2	50.9	40.4	34.0	30.0	34.4	32.6	29.3	31.8	38.4	34.7	37.4	33.2	37.5	35.5	42.9	41.1	34.3	114.3	49.4	33.7	68.6	35.3	67.9	38.8	38.1	39.2	40.7	41.5	42.7	43.9	
PRMLxT2	2019/06/05 16:13:42	-54.9	56.0	56.7	56.0	48.2	43.2	42.9	47.2	49.8	46.7	41.2	44.1	57.3	55.6	54.0	55.0	50.3	56.1	59.8	60.7	58.2	54.7	41.4	113.8	48.9	36.6	68.9	36.0	67.8	37.1	38.4	39.1	40.1	41.7	42.8	43.7	
PRMLxT2	2019/06/05 11:38:55	-54.7	51.7	49.3	46.4	47.7	47.5	47.8	43.5	39.9	42.6	39.8	36.6	42.4	40.6	34.0	29.5	33.6	32.8	32.3	33.3	32.9	29.8	32.3	114.2	49.3	33.6	69.6	35.6	68.5	37.8	37.9	39.1	40.3	41.4	42.9	43.9	
PRMLxT2	2019/06/05 8:37:17	-54.9	64.9	70.5	69.2	65.2	79.2	105.5	96.0	81.8	74.0	59.4	60.9	55.8	44.7	41.4	39.9	42.6	45.4	42.3	44.3	44.0	38.8	34.4	113.9	49.2	34.7	69.7	35.9	67.7	37.9	39.1	38.9	40.2	41.5	42.5	43.6	
PRMLxT2	2019/06/05 6:44:54	-54.8	80.2	70.4	56.8	55.1	66.6	56.1	48.0	47.7	47.9	51.8	47.1	40.9	36.0	35.4	32.1	31.6	35.0	34.0	37.2	34.0	32.7	32.8	113.8	49.0	33.1	67.7	35.0	67.9	40.1	38.8	39.2	40.5	41.2	42.3	43.6	
PRMLxT2	2019/05/30 16:53:50	-54.6	59.6	70.9	64.7	67.3	65.6	48.8	57.0	42.8	44.8	38.7	37.7	37.1	38.3	38.5	40.1	44.0	39.8	38.2	40.9	41.7	35.5	33.7	114.0	49.1	34.3	68.3	35.7	68.9	42.2	39.9	40.1	40.0	41.2	42.6	43.5	
PRMLxT2	2019/05/30 16:53:15	-54.6	71.3	63.6	72.5	65.6	64.4	53.4	51.9	54.5	49.9	50.6	50.5	39.0	40.0	44.9	38.3	42.4	43.8	39.6	46.5	45.3	39.3	37.7	114.0	49.8	35.9	68.3	35.2	68.7	41.8	39.4	39.3	40.2	41.5	42.5	43.3	

Summary

Filename	LxT_Data.070
Serial Number	2230
Model	SoundTrack LxT®
Firmware Version	2.302
User	
Location	
Job Description	
Note	
Measurement Description	
Start	2019/06/12 16:51:27
Stop	2019/06/12 17:11:32
Duration	0:20:05.9
Run Time	0:20:05.9
Pause	0:00:00.0
Pre Calibration	2019/06/12 16:51:16
Post Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting
Peak Weight	A Weighting
Detector	Fast
Preamp	PRMLxT2
Microphone Correction	Off
Integration Method	Linear
OBA Range	Low
OBA Bandwidth	1/1 Octave
OBA Freq. Weighting	Z Weighting
OBA Max Spectrum	Bin Max
Overload	148.1 dB

	A	C	Z	
Under Range Peak	**104.4**	101.4	106.4	dB
Under Range Limit	**53.4**	51.4	59.4	dB
Noise Floor	40.2	40.9	48.5	dB

Results

LAeq	61.5	dB	
LAE	92.3	dB	
EA	190.575	μPa^2h	
EA8	4.551	mPa^2h	
EA40	22.757	mPa^2h	
LApeak (max)	2019/06/12 16:52:38	105.6	dB
LAFmax	2019/06/12 17:06:32	88.1	dB
LAFmin	2019/06/12 16:56:16	50.8	dB
SEA	-99.9	dB	

LAF > 85.0 dB (Exceedence Counts / Duration)	1	0.4 s
LAF > 115.0 dB (Exceedence Counts / Duration)	0	0.0 s
LApeak > 135.0 dB (Exceedence Counts / Duration)	0	0.0 s
LApeak > 137.0 dB (Exceedence Counts / Duration)	0	0.0 s
LApeak > 140.0 dB (Exceedence Counts / Duration)	0	0.0 s

Community Noise	**Ldn**	**LDay 07:00-22:00**	**LNight 22:00-07:00**	**Lden**	**LDay 07:00-19:00**	**LEvening 19:00-22:00**	**LNight 22:00-07:00**
	61.5	61.5	-99.9	61.5	61.5	-99.9	-99.9

LCeq	65.0	dB
LAeq	61.5	dB
LCeq - LAeq	3.4	dB
LAleq	67.6	dB
LAeq	61.5	dB
LAleq - LAeq	6.1	dB
# Overloads	0	
Overload Duration	0.0	s
# OBA Overloads	0	
OBA Overload Duration	0.0	s

Dose Settings

Dose Name	OSHA-1	OSHA-2	
Exch. Rate	5	5	dB
Threshold	90	80	dB
Criterion Level	90	90	dB
Criterion Duration	8	8	h

Results

Dose	-99.9	0.00	%
Projected Dose	-99.9	0.06	%
TWA (Projected)	-99.9	37.0	dB
TWA (t)	-99.9	14.1	dB
Lep (t)	47.7	47.7	dB

Statistics

LAF5.00	64.3	dB
LAF10.00	62.5	dB
LAF33.30	59.5	dB
LAF50.00	58.0	dB
LAF66.60	56.8	dB
LAF90.00	54.6	dB

Calibration History

Preamp	**Date**	**dB re. 1V/Pa**	**6.3**	**8.0**	**10.0**	**12.5**	**16.0**	**20.0**	**25.0**	**31.5**	**40.0**	**50.0**	**63.0**	**80.0**	**100**	**125**	**160**	**200**	**250**	**315**	**400**	**500**	**630**	**800**	**1000**	**1250**	**1600**	**2000**	**2500**	**3150**	**4000**	**5000**	**6300**	**8000**	**10000**	**12500**	**16000**	**20000**
PRMLxT2	2019/06/12 16:51:03	-54.4	99.1	101.3	90.6	97.6	89.5	88.6	79.2	70.5	67.1	55.1	50.1	44.6	44.5	35.5	37.0	40.5	41.2	37.5	36.7	35.6	34.0	37.5	114.2	49.3	34.6	68.4	36.6	69.1	45.3	42.3	43.4	42.4	42.3	42.9	43.8
PRMLxT2	2019/06/12 16:24:33	-54.6	81.9	75.8	91.2	93.3	85.5	76.9	70.5	63.3	59.1	55.1	55.5	55.8	61.8	57.7	52.0	46.5	46.6	44.3	43.5	41.8	38.6	36.0	113.8	48.8	34.6	67.9	35.8	67.1	39.7	39.6	39.9	40.5	41.8	42.5	43.7
PRMLxT2	2019/06/12 12:42:54	-54.4	64.6	69.8	105.0	112.8	84.3	104.1	103.5	87.7	75.0	61.9	54.0	62.9	44.6	47.4	41.2	42.6	39.3	48.2	40.0	39.8	33.8	81.5	113.6	48.5	32.7	68.8	35.0	66.7	38.4	42.4	38.2	39.5	40.8	47.4	43.0
PRMLxT2	2019/06/12 12:20:38	-54.1	101.4	108.9	109.7	100.4	99.6	100.5	106.1	100.8	90.7	82.6	75.4	66.7	63.5	57.6	52.4	41.5	40.2	40.2	40.6	40.5	36.2	52.2	113.1	71.5	43.9	67.2	34.0	65.7	35.9	38.2	38.0	38.8	55.3	54.6	42.8
PRMLxT2	2019/06/12 12:20:31	-53.2	62.4	80.2	116.0	102.2	82.3	113.0	128.3	124.6	117.1	66.5	60.0	52.5	49.9	45.5	43.3	51.2	49.9	63.5	66.5	58.9	56.3	54.6	113.8	56.5	40.3	69.0	46.2	67.1	50.8	40.6	40.6	41.3	42.7	43.9	45.3
PRMLxT2	2019/06/12 11:54:26	-54.5	106.3	104.7	97.0	86.7	100.7	92.4	92.3	90.2	83.4	71.7	68.0	64.1	60.4	53.0	49.0	46.4	45.3	44.4	41.8	38.0	35.3	36.1	113.8	48.9	33.9	68.4	34.8	66.4	37.2	39.0	39.0	39.7	41.0	42.6	43.4
PRMLxT2	2019/06/12 7:13:57	-54.4	74.5	80.9	64.0	50.7	56.4	48.2	51.1	50.2	43.7	61.8	62.2	58.3	63.9	59.8	53.9	48.1	45.8	45.4	43.1	39.7	38.2	38.4	114.2	49.5	35.5	68.0	35.1	66.6	38.7	39.3	39.2	39.7	41.1	42.5	43.2
PRMLxT2	2019/06/11 13:57:46	-54.6	44.0	39.4	68.2	83.2	77.2	50.9	40.4	34.0	30.0	34.4	32.6	29.3	31.8	38.4	34.7	37.4	33.2	37.5	35.5	42.9	41.1	34.3	114.3	49.4	33.7	68.6	35.3	67.9	38.8	38.1	39.2	40.7	41.5	42.7	43.9
PRMLxT2	2019/06/05 16:13:42	-54.9	56.0	56.7	56.0	48.2	43.2	42.9	47.2	49.8	46.7	41.2	44.1	57.3	55.6	54.0	55.0	50.3	56.1	59.8	60.7	58.2	54.7	41.4	113.8	48.9	36.6	68.9	36.0	67.8	37.1	38.4	39.1	40.1	41.7	42.8	43.7
PRMLxT2	2019/06/05 11:38:55	-54.7	51.7	49.3	46.4	47.7	47.5	47.8	43.5	39.9	42.6	39.8	36.6	42.4	40.6	34.0	29.5	33.6	32.8	32.3	33.3	32.9	29.8	32.3	114.2	49.3	33.6	69.6	35.6	68.5	37.8	37.9	39.1	40.3	41.4	42.9	43.9
PRMLxT2	2019/06/05 8:37:17	-54.9	64.9	70.5	69.2	65.2	79.2	105.5	96.0	81.8	74.0	59.4	60.9	55.8	44.7	41.4	39.9	42.6	45.4	42.3	44.3	44.0	38.8	34.4	113.9	49.2	34.7	69.7	35.9	67.7	37.9	39.1	38.9	40.2	41.5	42.5	43.6

Calibration Certificate

Certificate Number 2018007854
Customer:
Equity Environmental Eng
500 International Drive
Mount Olive, NJ 07828, United States

Model Number	PRMLxT2	***Procedure Number***	D0001.8383	
Serial Number	013562	***Technician***	Ron Harris	
Test Results	**Pass**	***Calibration Date***	3 Aug 2018	
Initial Condition	AS RECEIVED same as shipped	***Calibration Due***	3 Aug 2019	
Description	Larson Davis 1/2" Preamplifier for LxT Class 2 -15 dB	***Temperature***	23.29 °C	± 0.01 °C
		Humidity	49.6 %RH	± 0.5 %RH
		Static Pressure	86.47 kPa	± 0.03 kPa

Evaluation Method Tested electrically using an 18.0 pF capacitor to simulate microphone capacitance. Data reported in dB re 20 µPa assuming a microphone sensitivity of 50.0 mV/Pa.

Compliance Standards Compliant to Manufacturer Specifications

Issuing lab certifies that the instrument described above meets or exceeds all specifications as stated in the referenced procedure (unless otherwise noted). It has been calibrated using measurement standards traceable to the SI through the National Institute of Standards and Technology (NIST), or other national measurement institutes, and meets the requirements of ISO/IEC 17025:2005.
Test points marked with a ‡ in the uncertainties column do not fall within this laboratory's scope of accreditation.

The quality system is registered to ISO 9001:2008.

This calibration is a direct comparison of the unit under test to the listed reference standards and did not involve any sampling plans to complete. No allowance has been made for the instability of the test device due to use, time, etc. Such allowances would be made by the customer as needed.

The uncertainties were computed in accordance with the ISO Guide to the Expression of Uncertainty in Measurement (GUM). A coverage factor of approximately 2 sigma (k=2) has been applied to the standard uncertainty to express the expanded uncertainty at approximately 95% confidence level.

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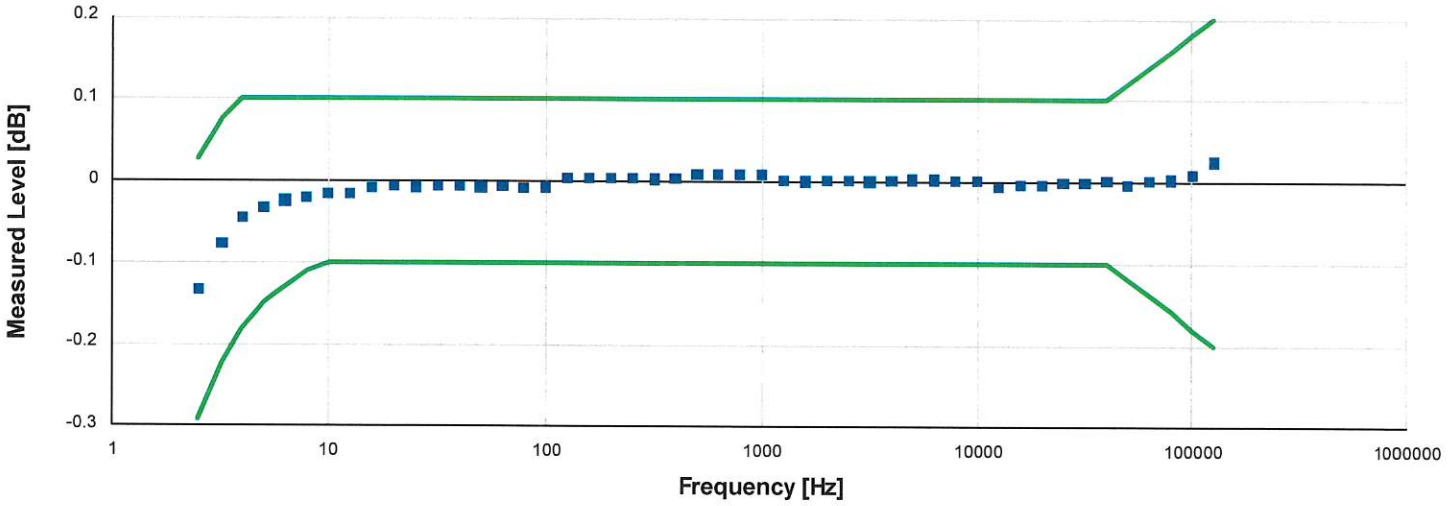
Standards Used

Description	Cal Date	Cal Due	Cal Standard
Larson Davis Model 2900 Real Time Analyzer	03/07/2018	03/07/2019	003003
Hart Scientific 2626-H Temperature Probe	02/02/2018	02/02/2019	006767
Agilent 34401A DMM	06/29/2018	06/29/2019	007165
SRS DS360 Ultra Low Distortion Generator	10/05/2017	10/05/2018	007167

Frequency Response



Frequency response electrically tested at 120.0 dB re 1 µV

Frequency [Hz]	Test Result [dB re 1 kHz]	Lower limit [dB]	Upper limit [dB]	Expanded Uncertainty [dB]	Result
2.50	-0.13	-0.29	0.03	0.09	Pass
3.20	-0.08	-0.22	0.08	0.09	Pass
4.00	-0.05	-0.18	0.10	0.09	Pass
5.00	-0.03	-0.15	0.10	0.09	Pass
6.30	-0.02	-0.13	0.10	0.09	Pass
7.90	-0.02	-0.11	0.10	0.09	Pass
10.00	-0.02	-0.10	0.10	0.09	Pass
12.60	-0.01	-0.10	0.10	0.09	Pass
15.80	-0.01	-0.10	0.10	0.09	Pass
20.00	0.00	-0.10	0.10	0.09	Pass
25.10	-0.01	-0.10	0.10	0.09	Pass
31.60	-0.01	-0.10	0.10	0.09	Pass
39.80	-0.01	-0.10	0.10	0.09	Pass
50.10	-0.01	-0.10	0.10	0.09	Pass
63.10	0.00	-0.10	0.10	0.09	Pass
79.40	-0.01	-0.10	0.10	0.09	Pass
100.00	-0.01	-0.10	0.10	0.09	Pass
125.90	0.00	-0.10	0.10	0.09	Pass
158.50	0.00	-0.10	0.10	0.09	Pass
199.50	0.00	-0.10	0.10	0.09	Pass
251.20	0.00	-0.10	0.10	0.09	Pass
316.20	0.00	-0.10	0.10	0.09	Pass
398.10	0.00	-0.10	0.10	0.09	Pass
501.20	0.01	-0.10	0.10	0.09	Pass
631.00	0.01	-0.10	0.10	0.09	Pass
794.30	0.01	-0.10	0.10	0.09	Pass
1,000.00	0.01	-0.10	0.10	0.09	Pass
1,258.90	0.00	-0.10	0.10	0.09	Pass
1,584.90	0.00	-0.10	0.10	0.09	Pass
1,995.30	0.00	-0.10	0.10	0.09	Pass
2,511.90	0.00	-0.10	0.10	0.09	Pass
3,162.30	0.00	-0.10	0.10	0.09	Pass

Frequency [Hz]	Test Result [dB re 1 kHz]	Lower limit [dB]	Upper limit [dB]	Expanded Uncertainty [dB]	Result
3,981.10	0.00	-0.10	0.10	0.09	Pass
5,011.90	0.00	-0.10	0.10	0.09	Pass
6,309.60	0.00	-0.10	0.10	0.09	Pass
7,943.30	0.00	-0.10	0.10	0.09	Pass
10,000.00	0.00	-0.10	0.10	0.09	Pass
12,589.30	0.00	-0.10	0.10	0.09	Pass
15,848.90	0.00	-0.10	0.10	0.09	Pass
19,952.60	0.00	-0.10	0.10	0.09	Pass
25,118.90	0.00	-0.10	0.10	0.09	Pass
31,622.80	0.00	-0.10	0.10	0.09	Pass
39,810.70	0.00	-0.10	0.10	0.09	Pass
50,118.70	0.00	-0.12	0.12	0.09	Pass
63,095.70	0.00	-0.14	0.14	0.09	Pass
79,432.80	0.00	-0.16	0.16	0.09	Pass
100,000.00	0.01	-0.18	0.18	0.09	Pass
125,892.50	0.03	-0.20	0.20	0.11	Pass

Gain Measurement

Measurement	Test Result [dB]	Lower limit [dB]	Upper limit [dB]	Expanded Uncertainty [dB]	Result
Output Gain @ 1 kHz	-14.21	-15.40	-13.80	0.15	Pass

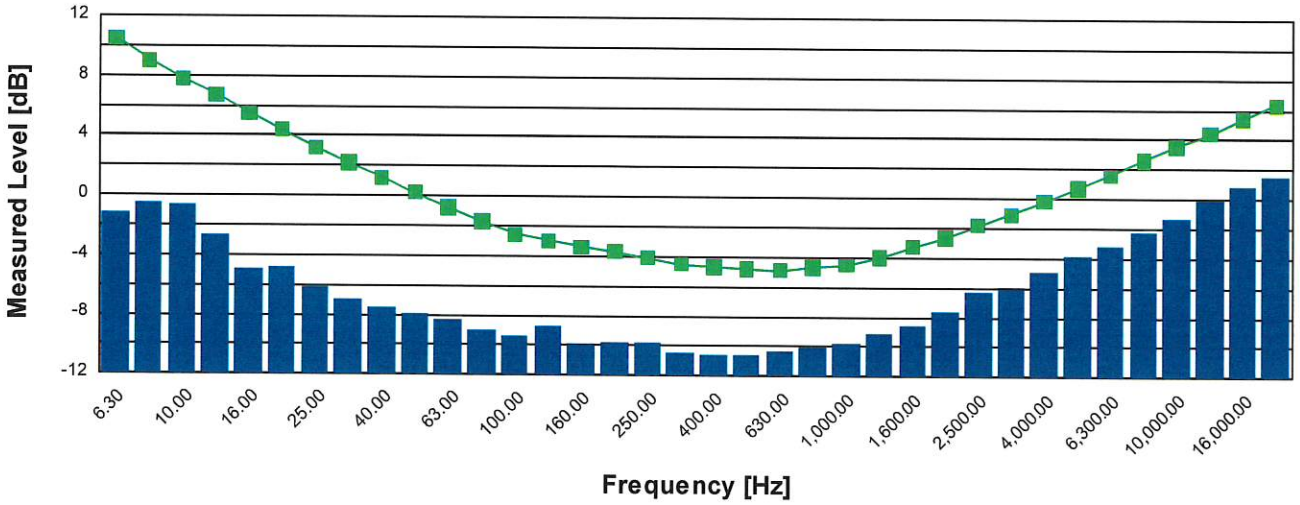
-- End of measurement results--

DC Bias Measurement

Measurement	Test Result [V]	Lower limit [V]	Upper limit [V]	Expanded Uncertainty [V]	Result
DC Voltage	3.54	2.90	3.80	0.02	Pass

-- End of measurement results--

1/3-Octave Self-Generated Noise



Frequency [Hz]	Test Result [dB re 1 µV]	Upper limit [dB re 1 µV]	Result
6.30	-1.18	10.50	Pass
8.00	-0.48	9.00	Pass
10.00	-0.68	7.80	Pass
12.50	-2.68	6.70	Pass
16.00	-4.98	5.50	Pass
20.00	-4.88	4.40	Pass
25.00	-6.18	3.20	Pass
31.50	-6.98	2.20	Pass
40.00	-7.58	1.20	Pass
50.00	-7.98	0.20	Pass
63.00	-8.28	-0.80	Pass
80.00	-8.98	-1.70	Pass
100.00	-9.38	-2.60	Pass
125.00	-8.78	-3.00	Pass
160.00	-9.98	-3.40	Pass
200.00	-9.78	-3.70	Pass
250.00	-9.78	-4.10	Pass
315.00	-10.48	-4.50	Pass
400.00	-10.58	-4.70	Pass
500.00	-10.68	-4.80	Pass
630.00	-10.38	-4.90	Pass
800.00	-10.08	-4.70	Pass
1,000.00	-9.78	-4.50	Pass
1,250.00	-9.18	-4.00	Pass
1,600.00	-8.58	-3.30	Pass
2,000.00	-7.68	-2.70	Pass
2,500.00	-6.28	-1.80	Pass
3,150.00	-5.98	-1.10	Pass
4,000.00	-4.98	-0.20	Pass
5,000.00	-3.88	0.70	Pass
6,300.00	-3.18	1.60	Pass
8,000.00	-2.28	2.60	Pass
10,000.00	-1.28	3.50	Pass
12,500.00	-0.18	4.40	Pass
16,000.00	0.82	5.40	Pass
20,000.00	1.52	6.30	Pass

-- End of measurement results--

Self-generated Noise

Bandwidth	Test Result [µV]	Test Result [dB re 1 µV]	Upper limit [dB re 1 µV]	Result
A-weighted (1 Hz - 20 kHz)	2.12	6.52	9.50	Pass
Broadband (1 Hz - 20 kHz)	3.03	9.62	13.50	Pass

-- End of measurement results--

Signatory: *Ron Harris*

Larson Davis, a division of PCB Piezotronics, Inc
1681 West 820 North
Provo, UT 84601, United States
716-684-0001

ACCREDITED Cert. #3622.01

LARSON DAVIS
A PCB PIEZOTRONICS DIV.

Calibration Certificate

Certificate Number 2018007874

Customer:

Equity Environmental Eng
500 International Drive
Mount Olive, NJ 07828, United States

Model Number	LxT2		***Procedure Number***	D0001.8384	
Serial Number	0002230		***Technician***	Ron Harris	
Test Results	**Pass**		***Calibration Date***	3 Aug 2018	
Initial Condition	AS RECEIVED same as shipped		***Calibration Due***	3 Aug 2019	
Description	SoundTrack LxT Class 2 Class 2 Sound Level Meter Firmware Revision: 2.302		***Temperature***	23.55 °C	± 0.25 °C
			Humidity	48.1 %RH	± 2.0 %RH
			Static Pressure	86.44 kPa	± 0.13 kPa

Evaluation Method ***Tested with:***

Larson Davis PRMLxT2. S/N 013562
PCB 375A02. S/N 010193
Larson Davis CAL200. S/N 9079
Larson Davis CAL291. S/N 0108

Data reported in dB re 20 µPa.

Compliance Standards Compliant to Manufacturer Specifications and the following standards when combined with Calibration Certificate from procedure D0001.8378:

IEC 60651:2001 Type 2	ANSI S1.4-2014 Class 2
IEC 60804:2000 Type 2	ANSI S1.4 (R2006) Type 2
IEC 61252:2002	ANSI S1.11 (R2009) Class 2
IEC 61260:2001 Class 2	ANSI S1.25 (R2007)
IEC 61672:2013 Class 2	ANSI S1.43 (R2007) Type 2

Issuing lab certifies that the instrument described above meets or exceeds all specifications as stated in the referenced procedure (unless otherwise noted). It has been calibrated using measurement standards traceable to the International System of Units (SI) through the National Institute of Standards and Technology (NIST), or other national measurement institutes, and meets the requirements of ISO/IEC 17025:2005.
Test points marked with a ‡ in the uncertainties column do not fall within this laboratory's scope of accreditation.

The quality system is registered to ISO 9001:2008.

This calibration is a direct comparison of the unit under test to the listed reference standards and did not involve any sampling plans to complete. No allowance has been made for the instability of the test device due to use, time, etc. Such allowances would be made by the customer as needed.

The uncertainties were computed in accordance with the ISO Guide to the Expression of Uncertainty in Measurement (GUM). A coverage factor of approximately 2 sigma (k=2) has been applied to the standard uncertainty to express the expanded uncertainty at approximately 95% confidence level.

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Correction data from Larson Davis LxT Manual for SoundTrack LxT & SoundExpert Lxt, I770.01 Rev J Supporting Firmware Version 2.301, 2015-04-30

For 1/4" microphones, the Larson Davis ADP024 1/4" to 1/2" adaptor is used with the calibrators and the Larson Davis ADP043 1/4" to 1/2" adaptor is used with the preamplifier.

Calibration Check Frequency: 1000 Hz; Reference Sound Pressure Level: 114 dB re 20 µPa

Periodic tests were performed in accordance with precedures from IEC 61672-3:2013 / ANSI/ASA S1.4-2014/Part3.

No Pattern approval for IEC 61672-1:2013 / ANSI/ASA S1.4-2014/Part 1 available.

The sound level meter submitted for testing successfully completed the periodic tests of IEC 61672-3:2013 / ANSI/ASA S1.4-2014/Part 3, for the environmental conditions under which the tests were performed. However, no general statement or conclusion can be made about conformance of the sound level meter to the full specifications of IEC 61672-1:2013 / ANSI/ASA S1.4-2014/Part 1 because (a) evidence was not publicly available, from an independent testing organization responsible for pattern approvals, to demonstrate that the model of sound level meter fully conformed to the class 2 specifications in IEC 61672-1:2013 / ANSI/ASA S1.4-2014/Part 1 or correction data for acoustical test of frequency weighting were not provided in the Instruction Manual and (b) because the periodic tests of IEC 61672-3:2013 / ANSI/ASA S1.4-2014/Part 3 cover only a limited subset of the specifications in IEC 61672-1:2013 / ANSI/ASA S1.4-2014/Part 1.

Standards Used

Description	Cal Date	Cal Due	Cal Standard
Larson Davis CAL291 Residual Intensity Calibrator	2017-09-19	2018-09-19	001250
SRS DS360 Ultra Low Distortion Generator	2018-06-21	2019-06-21	006311
Hart Scientific 2626-H Temperature Probe	2018-02-02	2019-02-02	006767
Larson Davis CAL200 Acoustic Calibrator	2018-07-24	2019-07-24	007027
Larson Davis Model 831	2018-02-28	2019-02-28	007182
PCB 377A13 1/2 inch Prepolarized Pressure Microphone	2018-03-07	2019-03-07	007185

Acoustic Calibration

Measured according to IEC 61672-3:2013 10 and ANSI S1.4-2014 Part 3: 10

Measurement	Test Result [dB]	Lower Limit [dB]	Upper Limit [dB]	Expanded Uncertainty [dB]	Result
1000 Hz	114.00	113.80	114.20	0.14	Pass

As Received Level: 116.03
Adjusted Level: 114.00

-- End of measurement results--

Acoustic Signal Tests, C-weighting

Measured according to IEC 61672-3:2013 12 and ANSI S1.4-2014 Part 3: 12 using a comparison coupler with Unit Under Test (UUT) and reference SLM using slow time-weighted sound level for compliance to IEC 61672-1:2013 5.5; ANSI S1.4-2014 Part 1: 5.5

Frequency [Hz]	Test Result [dB]	Expected [dB]	Lower Limit [dB]	Upper Limit [dB]	Expanded Uncertainty [dB]	Result
125	-0.67	-0.20	-1.70	1.30	0.23	Pass
1000	0.21	0.00	-1.00	1.00	0.23	Pass
8000	-5.74	-3.00	-8.00	2.00	0.32	Pass

-- End of measurement results--

Self-generated Noise

Measured according to IEC 61672-3:2013 11.1 and ANSI S1.4-2014 Part 3: 11.1

Measurement	Test Result [dB]
A-weighted	39.99

-- End of measurement results--

-- End of Report--

Signatory: *Ron Harris*

Larson Davis, a division of PCB Piezotronics, Inc
1681 West 820 North
Provo, UT 84601, United States
716-684-0001

ACCREDITED Cert. #3622.01

LARSON DAVIS
A PCB PIEZOTRONICS DIV.

Calibration Certificate

Certificate Number 2018007860

Customer:
Equity Environmental Eng
500 International Drive
Mount Olive, NJ 07828, United States

Model Number	CAL200	***Procedure Number***	D0001.8386		
Serial Number	6755	***Technician***	Scott Montgomery		
Test Results	**Pass**	***Calibration Date***	3 Aug 2018		
Initial Condition	Adjusted	***Calibration Due***	3 Aug 2019		
		Temperature	24	°C	± 0.3 °C
Description	Larson Davis CAL200 Acoustic Calibrator	***Humidity***	40	%RH	± 3 %RH
		Static Pressure	101.3	kPa	± 1 kPa

Evaluation Method The data is aquired by the insert voltage calibration method using the reference microphone's open circuit sensitivity. Data reported in dB re 20 µPa.

Compliance Standards Compliant to Manufacturer Specifications per D0001.8190 and the following standards:
IEC 60942:2017 ANSI S1.40-2006

Issuing lab certifies that the instrument described above meets or exceeds all specifications as stated in the referenced procedure (unless otherwise noted). It has been calibrated using measurement standards traceable to the SI through the National Institute of Standards and Technology (NIST), or other national measurement institutes, and meets the requirements of ISO/IEC 17025:2005.
Test points marked with a ‡ in the uncertainties column do not fall within this laboratory's scope of accreditation.

The quality system is registered to ISO 9001:2008.

This calibration is a direct comparison of the unit under test to the listed reference standards and did not involve any sampling plans to complete. No allowance has been made for the instability of the test device due to use, time, etc. Such allowances would be made by the customer as needed.

The uncertainties were computed in accordance with the ISO Guide to the Expression of Uncertainty in Measurement (GUM). A coverage factor of approximately 2 sigma (k=2) has been applied to the standard uncertainty to express the expanded uncertainty at approximately 95% confidence level.

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Standards Used

Description	Cal Date	Cal Due	Cal Standard
Agilent 34401A DMM	09/06/2017	09/06/2018	001021
Larson Davis Model 2900 Real Time Analyzer	04/10/2018	04/10/2019	001051
Microphone Calibration System	03/07/2018	03/07/2019	005446
1/2" Preamplifier	10/05/2017	10/05/2018	006506
Larson Davis 1/2" Preamplifier 7-pin LEMO	08/08/2017	08/08/2018	006507
1/2 inch Microphone - RI - 200V	10/23/2017	10/23/2018	006511
Pressure Transducer	10/20/2017	10/20/2018	007204

Output Level

Nominal Level [dB]	Pressure [kPa]	Test Result [dB]	Lower limit [dB]	Upper limit [dB]	Expanded Uncertainty [dB]	Result
114	101.3	114.02	113.80	114.20	0.14	Pass
94	101.3	94.01	93.80	94.20	0.14	Pass

-- End of measurement results--

Frequency

Nominal Level [dB]	Pressure [kPa]	Test Result [Hz]	Lower limit [Hz]	Upper limit [Hz]	Expanded Uncertainty [Hz]	Result
114	101.3	1,000.14	990.00	1,010.00	0.20	Pass
94	101.3	1,000.16	990.00	1,010.00	0.20	Pass

-- End of measurement results--

Total Harmonic Distortion + Noise (THD+N)

Nominal Level [dB]	Pressure [kPa]	Test Result [%]	Lower limit [%]	Upper limit [%]	Expanded Uncertainty [%]	Result
114	101.3	0.39	0.00	2.00	0.25	Pass
94	101.3	0.42	0.00	2.00	0.25	Pass

-- End of measurement results--

Level Change Over Pressure

Tested at: 114 dB, 23 °C, 41 %RH

Nominal Pressure [kPa]	Pressure [kPa]	Test Result [dB]	Lower limit [dB]	Upper limit [dB]	Expanded Uncertainty [dB]	Result
108.0	108.1	-0.02	-0.30	0.30	0.04 ‡	Pass
101.3	101.5	0.00	-0.30	0.30	0.04 ‡	Pass
92.0	92.0	0.02	-0.30	0.30	0.04 ‡	Pass
83.0	83.1	0.01	-0.30	0.30	0.04 ‡	Pass
74.0	74.2	-0.02	-0.30	0.30	0.04 ‡	Pass
65.0	65.0	-0.09	-0.30	0.30	0.04 ‡	Pass

-- End of measurement results--

Frequency Change Over Pressure

Tested at: 114 dB, 23 °C, 41 %RH

Nominal Pressure [kPa]	Pressure [kPa]	Test Result [Hz]	Lower limit [Hz]	Upper limit [Hz]	Expanded Uncertainty [Hz]	Result
108.0	108.1	0.00	-10.00	10.00	0.20 ‡	Pass
101.3	101.5	0.00	-10.00	10.00	0.20 ‡	Pass
92.0	92.0	0.00	-10.00	10.00	0.20 ‡	Pass
83.0	83.1	0.00	-10.00	10.00	0.20 ‡	Pass
74.0	74.2	0.00	-10.00	10.00	0.20 ‡	Pass
65.0	65.0	-0.01	-10.00	10.00	0.20 ‡	Pass

-- End of measurement results--

Certificate Number 2018007860

Total Harmonic Distortion + Noise (THD+N) Over Pressure

Tested at: 114 dB, 23 °C, 41 %RH

Nominal Pressure [kPa]	Pressure [kPa]	Test Result [%]	Lower limit [%]	Upper limit [%]	Expanded Uncertainty [%]	Result
108.0	108.1	0.39	0.00	2.00	0.25 ‡	Pass
101.3	101.5	0.39	0.00	2.00	0.25 ‡	Pass
92.0	92.0	0.40	0.00	2.00	0.25 ‡	Pass
83.0	83.1	0.42	0.00	2.00	0.25 ‡	Pass
74.0	74.2	0.45	0.00	2.00	0.25 ‡	Pass
65.0	65.0	0.48	0.00	2.00	0.25 ‡	Pass

-- End of measurement results--

Signatory: Scott Montgomery

Larson Davis, a division of PCB Piezotronics, Inc
1681 West 820 North
Provo, UT 84601, United States
716-684-0001

ACCREDITED Cert. #3622.01

LARSON DAVIS
A PCB PIEZOTRONICS DIV.

Initial Assessment

Certificate Number 2018007859

Customer:
Equity Environmental Eng
500 International Drive
Mount Olive, NJ 07828, United States

Model Number	CAL200	***Procedure Number***	D0001.8386		
Serial Number	6755	***Technician***	Scott Montgomery		
Test Results	**Pass**	***Calibration Date***	3 Aug 2018		
Initial Condition	As Received	***Calibration Due***	3 Aug 2019		
		Temperature	23	°C	± 0.3 °C
Description	Larson Davis CAL200 Acoustic Calibrator	***Humidity***	36	%RH	± 3 %RH
		Static Pressure	101.2	kPa	± 1 kPa

Evaluation Method The data is aquired by the insert voltage calibration method using the reference microphone's open circuit sensitivity. Data reported in dB re 20 µPa.

Compliance Standards Compliant to Manufacturer Specifications per D0001.8190 and the following standards:
IEC 60942:2017 ANSI S1.40-2006

Issuing lab certifies that the instrument described above meets or exceeds all specifications as stated in the referenced procedure (unless otherwise noted). It has been calibrated using measurement standards traceable to the SI through the National Institute of Standards and Technology (NIST), or other national measurement institutes, and meets the requirements of ISO/IEC 17025:2005.
Test points marked with a ‡ in the uncertainties column do not fall within this laboratory's scope of accreditation.

The quality system is registered to ISO 9001:2008.

This calibration is a direct comparison of the unit under test to the listed reference standards and did not involve any sampling plans to complete. No allowance has been made for the instability of the test device due to use, time, etc. Such allowances would be made by the customer as needed.

The uncertainties were computed in accordance with the ISO Guide to the Expression of Uncertainty in Measurement (GUM). A coverage factor of approximately 2 sigma (k=2) has been applied to the standard uncertainty to express the expanded uncertainty at approximately 95% confidence level.

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Standards Used

Description	Cal Date	Cal Due	Cal Standard
Agilent 34401A DMM	09/06/2017	09/06/2018	001021
Larson Davis Model 2900 Real Time Analyzer	04/10/2018	04/10/2019	001051
Microphone Calibration System	03/07/2018	03/07/2019	005446
1/2" Preamplifier	10/05/2017	10/05/2018	006506
Larson Davis 1/2" Preamplifier 7-pin LEMO	08/08/2017	08/08/2018	006507
1/2 inch Microphone - RI - 200V	10/23/2017	10/23/2018	006511
Pressure Transducer	10/20/2017	10/20/2018	007204

Output Level

Nominal Level [dB]	Pressure [kPa]	Test Result [dB]	Lower limit [dB]	Upper limit [dB]	Expanded Uncertainty [dB]	Result
114	101.1	113.95	113.80	114.20	0.14	Pass
94	101.2	93.95	93.80	94.20	0.14	Pass

-- End of measurement results--

Frequency

Nominal Level [dB]	Pressure [kPa]	Test Result [Hz]	Lower limit [Hz]	Upper limit [Hz]	Expanded Uncertainty [Hz]	Result
114	101.1	1,000.15	990.00	1,010.00	0.20	Pass
94	101.2	1,000.17	990.00	1,010.00	0.20	Pass

-- End of measurement results--

Total Harmonic Distortion + Noise (THD+N)

Nominal Level [dB]	Pressure [kPa]	Test Result [%]	Lower limit [%]	Upper limit [%]	Expanded Uncertainty [%]	Result
114	101.1	0.39	0.00	2.00	0.25	Pass
94	101.2	0.43	0.00	2.00	0.25	Pass

-- End of measurement results--

Level Change Over Pressure

Tested at: 114 dB, 23 °C, 41 %RH

Nominal Pressure [kPa]	Pressure [kPa]	Test Result [dB]	Lower limit [dB]	Upper limit [dB]	Expanded Uncertainty [dB]	Result
108.0	108.1	-0.02	-0.30	0.30	0.04 ‡	Pass
101.3	101.5	0.00	-0.30	0.30	0.04 ‡	Pass
92.0	92.0	0.02	-0.30	0.30	0.04 ‡	Pass
83.0	83.1	0.01	-0.30	0.30	0.04 ‡	Pass
74.0	74.2	-0.02	-0.30	0.30	0.04 ‡	Pass
65.0	65.0	-0.09	-0.30	0.30	0.04 ‡	Pass

-- End of measurement results--

Frequency Change Over Pressure

Tested at: 114 dB, 23 °C, 41 %RH

Nominal Pressure [kPa]	Pressure [kPa]	Test Result [Hz]	Lower limit [Hz]	Upper limit [Hz]	Expanded Uncertainty [Hz]	Result
108.0	108.1	0.00	-10.00	10.00	0.20 ‡	Pass
101.3	101.5	0.00	-10.00	10.00	0.20 ‡	Pass
92.0	92.0	0.00	-10.00	10.00	0.20 ‡	Pass
83.0	83.1	0.00	-10.00	10.00	0.20 ‡	Pass
74.0	74.2	0.00	-10.00	10.00	0.20 ‡	Pass
65.0	65.0	-0.01	-10.00	10.00	0.20 ‡	Pass

-- End of measurement results--

Certificate Number 2018007859

Total Harmonic Distortion + Noise (THD+N) Over Pressure

Tested at: 114 dB, 23 °C, 41 %RH

Nominal Pressure [kPa]	Pressure [kPa]	Test Result [%]	Lower limit [%]	Upper limit [%]	Expanded Uncertainty [%]	Result
108.0	108.1	0.39	0.00	2.00	0.25 ‡	Pass
101.3	101.5	0.39	0.00	2.00	0.25 ‡	Pass
92.0	92.0	0.40	0.00	2.00	0.25 ‡	Pass
83.0	83.1	0.42	0.00	2.00	0.25 ‡	Pass
74.0	74.2	0.45	0.00	2.00	0.25 ‡	Pass
65.0	65.0	0.48	0.00	2.00	0.25 ‡	Pass

-- End of measurement results--

Signatory: Scott Montgomery

Larson Davis, a division of PCB Piezotronics, Inc
1681 West 820 North
Provo, UT 84601, United States
716-684-0001

ilac-MRA A2LA ACCREDITED Cert. #3522.01

LARSON DAVIS
A PCB PIEZOTRONICS DIV.

Calibration Certificate

Certificate Number 2018007856

Customer:

Equity Environmental Eng
500 International Drive
Mount Olive, NJ 07828, United States

Model Number	LxT2
Serial Number	0002230
Test Results	**Pass**
Initial Condition	AS RECEIVED same as shipped
Description	SoundTrack LxT Class 2 Class 2 Sound Level Meter Firmware Revision: 2.302

Procedure Number	D0001.8378		
Technician	Ron Harris		
Calibration Date	3 Aug 2018		
Calibration Due	3 Aug 2019		
Temperature	23.75	°C	± 0.25 °C
Humidity	51	%RH	± 2.0 %RH
Static Pressure	86.45	kPa	± 0.13 kPa

Evaluation Method Tested electrically using Larson Davis PRMLxT2 S/N 013562 and an 18.0 pF capacitor to simulate microphone capacitance. Data reported in dB re 20 µPa assuming a microphone sensitivity of 23.6 mV/Pa.

Compliance Standards Compliant to Manufacturer Specifications and the following standards when combined with Calibration Certificate from procedure D0001.8384:

IEC 60651:2001 Type 2	ANSI S1.4-2014 Class 2
IEC 60804:2000 Type 2	ANSI S1.4 (R2006) Type 2
IEC 61252:2002	ANSI S1.11 (R2009) Class 2
IEC 61260:2001 Class 2	ANSI S1.25 (R2007)
IEC 61672:2013 Class 2	ANSI S1.43 (R2007) Type 2

Issuing lab certifies that the instrument described above meets or exceeds all specifications as stated in the referenced procedure (unless otherwise noted). It has been calibrated using measurement standards traceable to the International System of Units (SI) through the National Institute of Standards and Technology (NIST), or other national measurement institutes, and meets the requirements of ISO/IEC 17025:2005. **Test points marked with a ‡ in the uncertainties column do not fall within this laboratory's scope of accreditation.**

The quality system is registered to ISO 9001:2008.

This calibration is a direct comparison of the unit under test to the listed reference standards and did not involve any sampling plans to complete. No allowance has been made for the instability of the test device due to use, time, etc. Such allowances would be made by the customer as needed.

The uncertainties were computed in accordance with the ISO Guide to the Expression of Uncertainty in Measurement (GUM). A coverage factor of approximately 2 sigma (k=2) has been applied to the standard uncertainty to express the expanded uncertainty at approximately 95% confidence level.

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Correction data from Larson Davis LxT Manual for SoundTrack LxT & SoundExpert Lxt, I770.01 Rev J Supporting Firmware Version 2.301, 2015-04-30

Calibration Check Frequency: 1000 Hz; Reference Sound Pressure Level: 114 dB re 20 µPa

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Periodic tests were performed in accordance with precedures from IEC 61672-3:2013 / ANSI/ASA S1.4-2014/Part3.

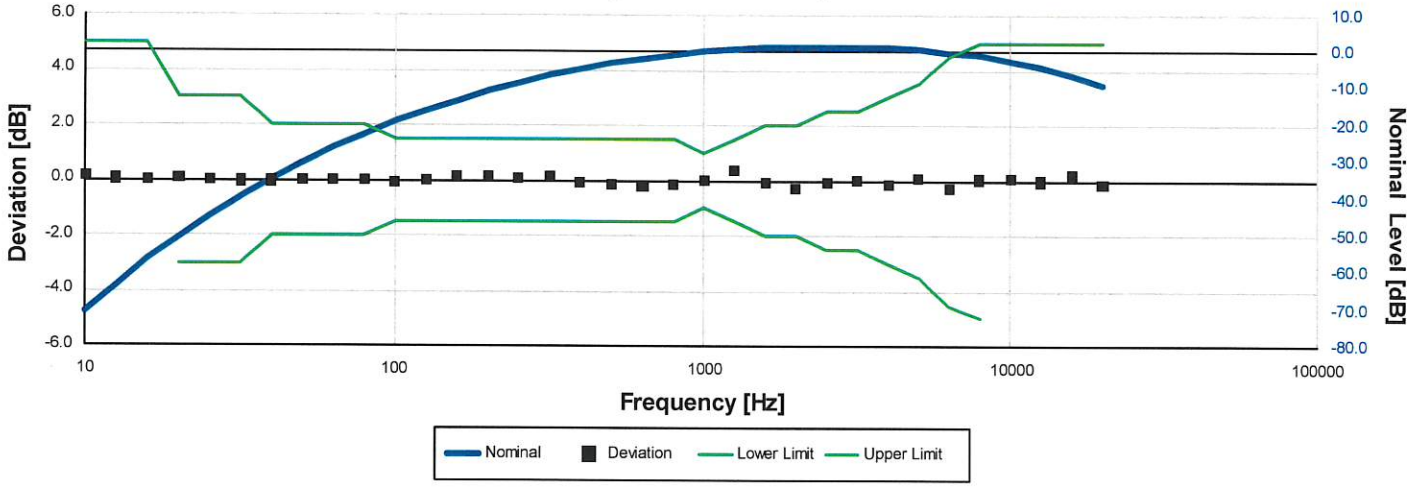
No Pattern approval for IEC 61672-1:2013 / ANSI/ASA S1.4-2014/Part 1 available.

The sound level meter submitted for testing successfully completed the periodic tests of IEC 61672-3:2013 / ANSI/ASA S1.4-2014/Part 3, for the environmental conditions under which the tests were performed. However, no general statement or conclusion can be made about conformance of the sound level meter to the full specifications of IEC 61672-1:2013 / ANSI/ASA S1.4-2014/Part 1 because (a) evidence was not publicly available, from an independent testing organization responsible for pattern approvals, to demonstrate that the model of sound level meter fully conformed to the class 2 specifications in IEC 61672-1:2013 / ANSI/ASA S1.4-2014/Part 1 or correction data for acoustical test of frequency weighting were not provided in the Instruction Manual and (b) because the periodic tests of IEC 61672-3:2013 / ANSI/ASA S1.4-2014/Part 3 cover only a limited subset of the specifications in IEC 61672-1:2013 / ANSI/ASA S1.4-2014/Part 1.

Standards Used

Description	Cal Date	Cal Due	Cal Standard
Hart Scientific 2626-H Temperature Probe	2018-02-02	2019-02-02	006767
SRS DS360 Ultra Low Distortion Generator	2018-06-28	2019-06-28	007118

A-weight Filter Response

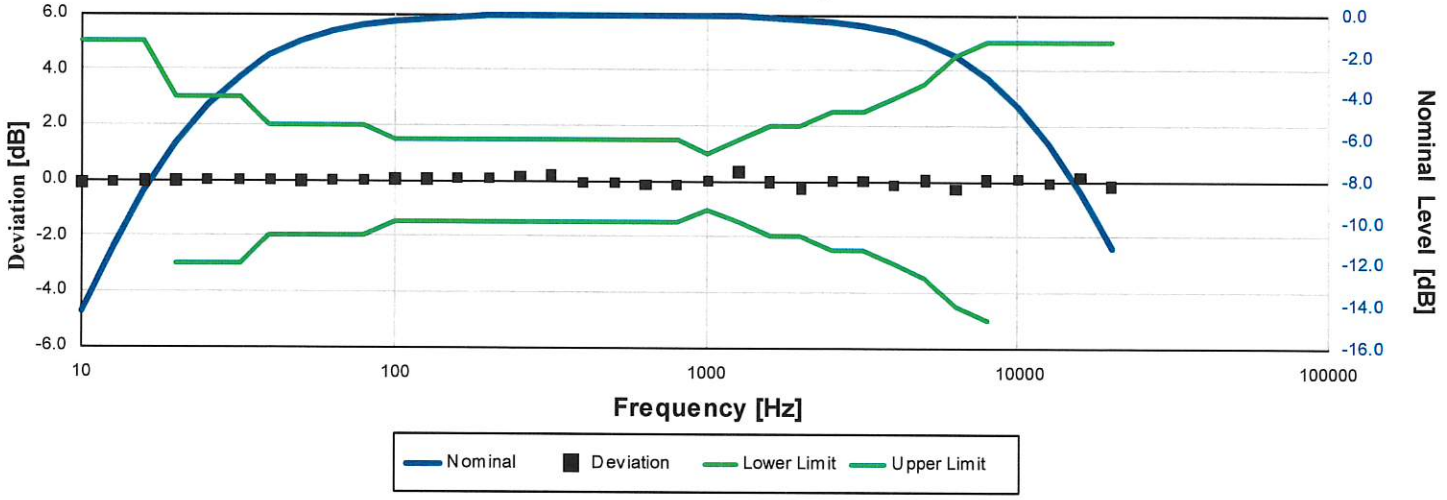


Electrical signal test of frequency weighting performed according to IEC 61672-3:2013 13 and ANSI S1.4-2014 Part 3: 13 for compliance to IEC 61672-1:2013 5.5; IEC 60651:2001 6.1 and 9.2.2; IEC 60804:2000 5; ANSI S1.4:1983 (R2006) 5.1 and 8.2.1; ANSI S1.4-2014 Part 1: 5.5

Frequency [Hz]	Test Result [dB]	Deviation [dB]	Lower limit [dB]	Upper limit [dB]	Expanded Uncertainty [dB]	Result
10.00	-70.27	0.13	-inf	5.00	0.22	Pass
12.59	-63.35	0.05	-inf	5.00	0.22	Pass
15.85	-56.68	0.02	-inf	5.00	0.22	Pass
19.95	-50.43	0.07	-3.00	3.00	0.22	Pass
25.12	-44.70	0.00	-3.00	3.00	0.22	Pass
31.62	-39.43	-0.03	-3.00	3.00	0.22	Pass
39.81	-34.63	-0.03	-2.00	2.00	0.22	Pass
50.12	-30.20	0.00	-2.00	2.00	0.22	Pass
63.10	-26.17	0.03	-2.00	2.00	0.22	Pass
79.43	-22.46	0.04	-2.00	2.00	0.22	Pass
100.00	-19.14	-0.04	-1.50	1.50	0.22	Pass
125.89	-16.08	0.02	-1.50	1.50	0.22	Pass
158.49	-13.27	0.13	-1.50	1.50	0.22	Pass
199.53	-10.76	0.14	-1.50	1.50	0.22	Pass
251.19	-8.49	0.11	-1.50	1.50	0.22	Pass
316.23	-6.43	0.17	-1.50	1.50	0.22	Pass
398.11	-4.88	-0.08	-1.50	1.50	0.22	Pass
501.19	-3.31	-0.11	-1.50	1.50	0.22	Pass
630.96	-2.08	-0.18	-1.50	1.50	0.22	Pass
794.33	-0.96	-0.16	-1.50	1.50	0.22	Pass
1,000.00	0.00	0.00	-1.00	1.00	0.22	Pass
1,258.93	0.95	0.35	-1.50	1.50	0.22	Pass
1,584.89	0.94	-0.06	-2.00	2.00	0.22	Pass
1,995.26	0.92	-0.28	-2.00	2.00	0.22	Pass
2,511.89	1.25	-0.05	-2.50	2.50	0.22	Pass
3,162.28	1.23	0.03	-2.50	2.50	0.22	Pass
3,981.07	0.83	-0.17	-3.00	3.00	0.22	Pass
5,011.87	0.59	0.09	-3.50	3.50	0.22	Pass
6,309.57	-0.41	-0.31	-4.50	4.50	0.22	Pass
7,943.28	-1.06	0.04	-5.00	5.00	0.22	Pass
10,000.00	-2.42	0.08	-inf	5.00	0.22	Pass
12,589.25	-4.33	-0.03	-inf	5.00	0.22	Pass
15,848.93	-6.41	0.19	-inf	5.00	0.22	Pass
19,952.62	-9.44	-0.14	-inf	5.00	0.22	Pass

-- End of measurement results--

C-weight Filter Response



Electrical signal test of frequency weighting performed according to IEC 61672-3:2013 13 and ANSI S1.4-2014 Part 3: 13 for compliance to IEC 61672-1:2013 5.5; IEC 60651:2001 6.1 and 9.2.2; IEC 60804:2000 5; ANSI S1.4:1983 (R2006) 5.1 and 8.2.1; ANSI S1.4-2014 Part 1: 5.5

Frequency [Hz]	Test Result [dB]	Deviation [dB]	Lower limit [dB]	Upper limit [dB]	Expanded Uncertainty [dB]	Result
10.00	-14.39	-0.09	-inf	5.00	0.22	Pass
12.59	-11.27	-0.07	-inf	5.00	0.22	Pass
15.85	-8.53	-0.03	-inf	5.00	0.22	Pass
19.95	-6.22	-0.02	-3.00	3.00	0.22	Pass
25.12	-4.40	0.00	-3.00	3.00	0.22	Pass
31.62	-3.01	-0.01	-3.00	3.00	0.22	Pass
39.81	-1.99	0.01	-2.00	2.00	0.22	Pass
50.12	-1.33	-0.03	-2.00	2.00	0.22	Pass
63.10	-0.80	0.00	-2.00	2.00	0.22	Pass
79.43	-0.46	0.04	-2.00	2.00	0.22	Pass
100.00	-0.25	0.05	-1.50	1.50	0.22	Pass
125.89	-0.15	0.05	-1.50	1.50	0.22	Pass
158.49	0.00	0.10	-1.50	1.50	0.22	Pass
199.53	0.09	0.09	-1.50	1.50	0.22	Pass
251.19	0.13	0.13	-1.50	1.50	0.22	Pass
316.23	0.20	0.20	-1.50	1.50	0.22	Pass
398.11	-0.04	-0.05	-1.50	1.50	0.22	Pass
501.19	-0.04	-0.04	-1.50	1.50	0.22	Pass
630.96	-0.15	-0.15	-1.50	1.50	0.22	Pass
794.33	-0.11	-0.11	-1.50	1.50	0.22	Pass
1,000.00	0.00	0.00	-1.00	1.00	0.22	Pass
1,258.93	0.33	0.33	-1.50	1.50	0.22	Pass
1,584.89	-0.12	-0.02	-2.00	2.00	0.22	Pass
1,995.26	-0.45	-0.25	-2.00	2.00	0.22	Pass
2,511.89	-0.31	-0.01	-2.50	2.50	0.22	Pass
3,162.28	-0.47	0.03	-2.50	2.50	0.22	Pass
3,981.07	-0.95	-0.15	-3.00	3.00	0.22	Pass
5,011.87	-1.24	0.06	-3.50	3.50	0.22	Pass
6,309.57	-2.28	-0.28	-4.50	4.50	0.22	Pass
7,943.28	-2.95	0.05	-5.00	5.00	0.22	Pass
10,000.00	-4.33	0.07	-inf	5.00	0.22	Pass
12,589.25	-6.24	-0.04	-inf	5.00	0.22	Pass
15,848.93	-8.34	0.16	-inf	5.00	0.22	Pass
19,952.62	-11.37	-0.17	-inf	5.00	0.22	Pass

-- End of measurement results--

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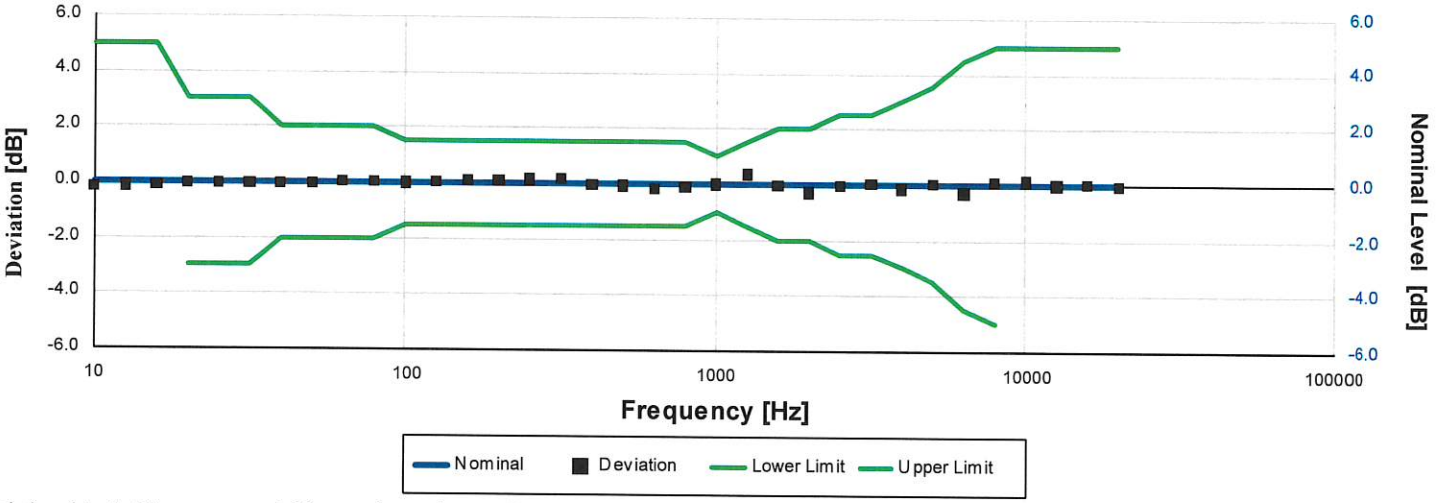
Z-weight Filter Response



Electrical signal test of frequency weighting performed according to IEC 61672-3:2013 13 and ANSI S1.4-2014 Part 3: 13 for compliance to IEC 61672-1:2013 5.5; IEC 60651:2001 6.1 and 9.2.2; IEC 60804:2000 5; ANSI S1.4:1983 (R2006) 5.1 and 8.2.1; ANSI S1.4-2014 Part 1: 5.5

Frequency [Hz]	Test Result [dB]	Deviation [dB]	Lower limit [dB]	Upper limit [dB]	Expanded Uncertainty [dB]	Result
10.00	-0.18	-0.18	-inf	5.00	0.22	Pass
12.59	-0.16	-0.16	-inf	5.00	0.22	Pass
15.85	-0.09	-0.09	-inf	5.00	0.22	Pass
19.95	-0.06	-0.06	-3.00	3.00	0.22	Pass
25.12	-0.06	-0.06	-3.00	3.00	0.22	Pass
31.62	-0.05	-0.05	-3.00	3.00	0.22	Pass
39.81	-0.03	-0.03	-2.00	2.00	0.22	Pass
50.12	-0.04	-0.04	-2.00	2.00	0.22	Pass
63.10	0.01	0.01	-2.00	2.00	0.22	Pass
79.43	0.03	0.03	-2.00	2.00	0.22	Pass
100.00	0.00	0.00	-1.50	1.50	0.22	Pass
125.89	0.01	0.01	-1.50	1.50	0.22	Pass
158.49	0.08	0.08	-1.50	1.50	0.22	Pass
199.53	0.11	0.11	-1.50	1.50	0.22	Pass
251.19	0.14	0.14	-1.50	1.50	0.22	Pass
316.23	0.18	0.18	-1.50	1.50	0.22	Pass
398.11	-0.07	-0.07	-1.50	1.50	0.22	Pass
501.19	-0.08	-0.08	-1.50	1.50	0.22	Pass
630.96	-0.18	-0.18	-1.50	1.50	0.22	Pass
794.33	-0.13	-0.13	-1.50	1.50	0.22	Pass
1,000.00	0.00	0.00	-1.00	1.00	0.22	Pass
1,258.93	0.36	0.36	-1.50	1.50	0.22	Pass
1,584.89	-0.04	-0.04	-2.00	2.00	0.22	Pass
1,995.26	-0.29	-0.29	-2.00	2.00	0.22	Pass
2,511.89	-0.03	-0.03	-2.50	2.50	0.22	Pass
3,162.28	0.02	0.02	-2.50	2.50	0.22	Pass
3,981.07	-0.15	-0.15	-3.00	3.00	0.22	Pass
5,011.87	0.03	0.03	-3.50	3.50	0.22	Pass
6,309.57	-0.29	-0.29	-4.50	4.50	0.22	Pass
7,943.28	0.08	0.08	-5.00	5.00	0.22	Pass
10,000.00	0.13	0.13	-inf	5.00	0.22	Pass
12,589.25	0.00	0.00	-inf	5.00	0.22	Pass
15,848.93	0.05	0.05	-inf	5.00	0.22	Pass
19,952.62	-0.04	-0.04	-inf	5.00	0.22	Pass

-- End of measurement results--

High Level Stability

Electrical signal test of high level stability performed according to IEC 61672-3:2013 21 and ANSI S1.4-2014 Part 3: 21 for compliance to IEC 61672-1:2013 5.15 and ANSI S1.4-2014 Part 1: 5.15

Measurement	Test Result [dB]	Lower limit [dB]	Upper limit [dB]	Expanded Uncertainty [dB]	Result
High Level Stability	0.00	-0.30	0.30	0.01	Pass

-- End of measurement results--

Long-Term Stability

Electrical signal test of long term stability performed according to IEC 61672-3:2013 15 and ANSI S1.4-2014 Part 3: 15 for compliance to ISC 61672-1:2013 5.14 and ANSI S1.4-2014 Part 1: 5.14

Test Duration [min]	Test Result [dB]	Lower limit [dB]	Upper limit [dB]	Expanded Uncertainty [dB]	Result
36	0.00	-0.30	0.30	0.07	Pass

-- End of measurement results--

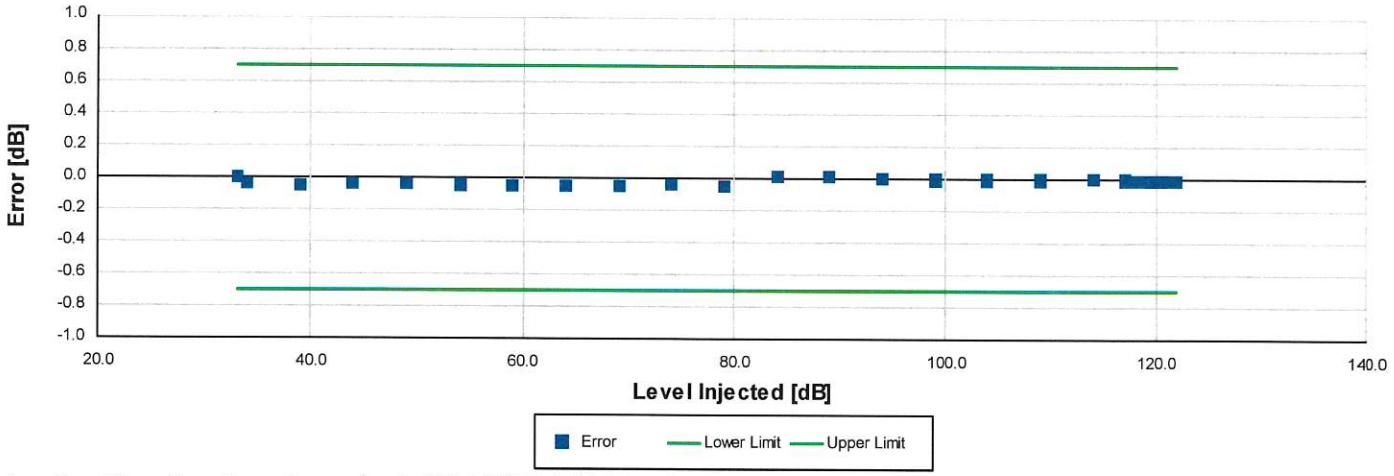
1 kHz Reference Levels

Frequency weightings and time weightings at 1 kHz (reference is A weighted Fast) performed according to IEC 61672-3:2013 14 and ANSI S1.4-2014 Part 3: 14 for compliance to IEC 61672-1:2013 5.5.9 and 5.8.3 and ANSI S1.4-2014 Part 1: 5.5.9 and 5.8.3

Measurement	Test Result [dB]	Lower limit [dB]	Upper limit [dB]	Expanded Uncertainty [dB]	Result
C weight	105.80	105.60	106.00	0.09	Pass
Z weight	105.80	105.60	106.00	0.09	Pass
Slow	105.80	105.70	105.90	0.09	Pass
Impulse	105.80	105.70	105.90	0.09	Pass

-- End of measurement results--

A-weighted Broadband Log Linearity: 8,000.00 Hz

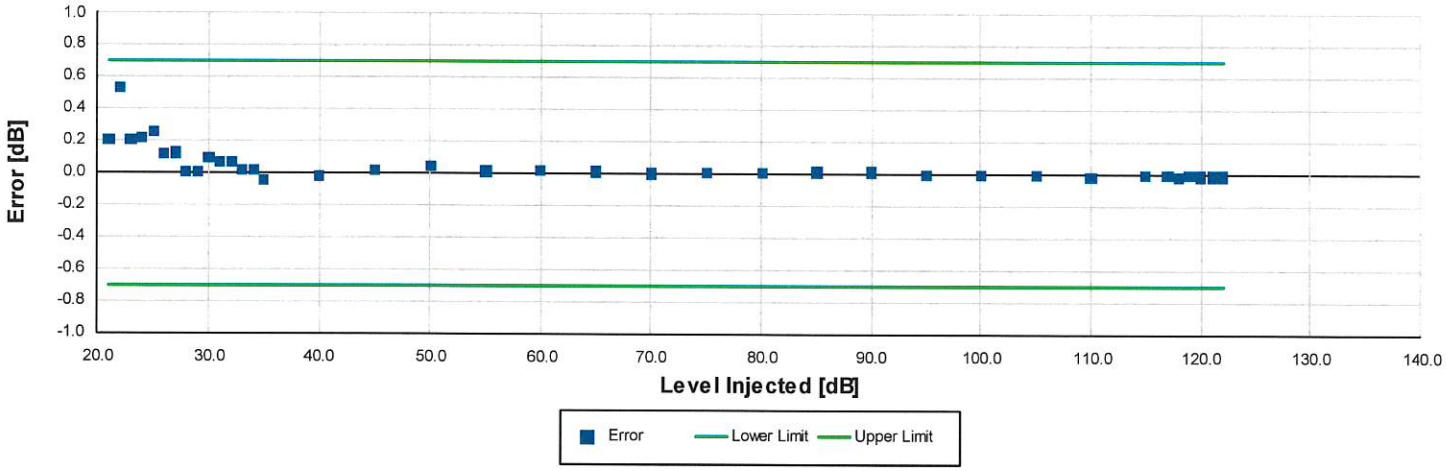


Broadband level linearity performed according to IEC 61672-3:2013 16 and ANSI S1.4-2014 Part 3: 16 for compliance to IEC 61672-1:2013 5.6, IEC 60804:2000 6.2, IEC 61252:2002 8, ANSI S1.4 (R2006) 6.9, ANSI S1.4-2014 Part 1: 5.6, ANSI S1.43 (R2007) 6.2

Level [dB]	Error [dB]	Lower limit [dB]	Upper limit [dB]	Expanded Uncertainty [dB]	Result
33.00	0.00	-0.70	0.70	0.09	Pass
34.00	-0.04	-0.70	0.70	0.09	Pass
39.00	-0.05	-0.70	0.70	0.09	Pass
44.00	-0.04	-0.70	0.70	0.09	Pass
49.00	-0.04	-0.70	0.70	0.09	Pass
54.00	-0.04	-0.70	0.70	0.09	Pass
59.00	-0.05	-0.70	0.70	0.09	Pass
64.00	-0.05	-0.70	0.70	0.09	Pass
69.00	-0.05	-0.70	0.70	0.09	Pass
74.00	-0.04	-0.70	0.70	0.09	Pass
79.00	-0.05	-0.70	0.70	0.09	Pass
84.00	0.01	-0.70	0.70	0.09	Pass
89.00	0.02	-0.70	0.70	0.09	Pass
94.00	0.00	-0.70	0.70	0.09	Pass
99.00	-0.01	-0.70	0.70	0.09	Pass
104.00	-0.01	-0.70	0.70	0.09	Pass
109.00	-0.01	-0.70	0.70	0.09	Pass
114.00	0.00	-0.70	0.70	0.09	Pass
117.00	-0.01	-0.70	0.70	0.09	Pass
118.00	-0.01	-0.70	0.70	0.09	Pass
119.00	-0.01	-0.70	0.70	0.09	Pass
120.00	-0.01	-0.70	0.70	0.09	Pass
121.00	-0.01	-0.70	0.70	0.09	Pass
122.00	-0.01	-0.70	0.70	0.09	Pass

-- End of measurement results--

1/1 Octave Log Linearity: 1,000.00 Hz



1/1 octave level linearity at normal range performed according to IEC 61260:2001 4.6, ANSI S.11 (R2009) 4.6

Level [dB]	Error [dB]	Lower limit [dB]	Upper limit [dB]	Expanded Uncertainty [dB]	Result
21.00	0.20	-0.70	0.70	0.09	Pass
22.00	0.53	-0.70	0.70	0.09	Pass
23.00	0.21	-0.70	0.70	0.09	Pass
24.00	0.22	-0.70	0.70	0.09	Pass
25.00	0.26	-0.70	0.70	0.09	Pass
26.00	0.12	-0.70	0.70	0.09	Pass
27.00	0.12	-0.70	0.70	0.09	Pass
28.00	0.00	-0.70	0.70	0.09	Pass
29.00	0.00	-0.70	0.70	0.10	Pass
30.00	0.10	-0.70	0.70	0.10	Pass
31.00	0.07	-0.70	0.70	0.09	Pass
32.00	0.07	-0.70	0.70	0.10	Pass
33.00	0.01	-0.70	0.70	0.09	Pass
34.00	0.02	-0.70	0.70	0.09	Pass
35.00	-0.04	-0.70	0.70	0.09	Pass
40.00	-0.01	-0.70	0.70	0.09	Pass
45.00	0.02	-0.70	0.70	0.09	Pass
50.00	0.05	-0.70	0.70	0.09	Pass
55.00	0.01	-0.70	0.70	0.09	Pass
60.00	0.02	-0.70	0.70	0.09	Pass
65.00	0.01	-0.70	0.70	0.09	Pass
70.00	0.00	-0.70	0.70	0.09	Pass
75.00	0.01	-0.70	0.70	0.09	Pass
80.00	0.01	-0.70	0.70	0.09	Pass
85.00	0.01	-0.70	0.70	0.09	Pass
90.00	0.01	-0.70	0.70	0.09	Pass
95.00	-0.01	-0.70	0.70	0.09	Pass
100.00	-0.01	-0.70	0.70	0.09	Pass
105.00	-0.01	-0.70	0.70	0.09	Pass
110.00	-0.02	-0.70	0.70	0.09	Pass
115.00	-0.01	-0.70	0.70	0.09	Pass
117.00	-0.01	-0.70	0.70	0.09	Pass
118.00	-0.02	-0.70	0.70	0.09	Pass
119.00	-0.01	-0.70	0.70	0.09	Pass
120.00	-0.01	-0.70	0.70	0.09	Pass
121.00	-0.01	-0.70	0.70	0.09	Pass

Level [dB]	Error [dB]	Lower limit [dB]	Upper limit [dB]	Expanded Uncertainty [dB]	Result
122.00	-0.01	-0.70	0.70	0.09	Pass

-- End of measurement results--

Slow Detector

Toneburst response performed according to IEC 61672-3:2013 18 and ANSI S1.4-2014 Part 3: 18 for compliance to IEC 61672-1:2013 5.9, IEC 60651:2001 9.4.2, ANSI S1.4:1983 (R2006) 8.4.2 and ANSI S1.4-2014 Part 1: 5.9

Amplitude [dB]	Duration [ms]	Test Result [dB]	Lower limit [dB]	Upper limit [dB]	Expanded Uncertainty [dB]	Result
136.00	200	-7.53	-8.42	-6.42	0.09	Pass
	2	-27.14	-31.99	-25.99	0.09	Pass

-- End of measurement results--

Fast Detector

Toneburst response performed according to IEC 61672-3:2013 18 and ANSI S1.4-2014 Part 3: 18 for compliance to IEC 61672-1:2013 5.9, IEC 60651:2001 9.4.2, ANSI S1.4:1983 (R2006) 8.4.2 and ANSI S1.4-2014 Part 1: 5.9

Amplitude [dB]	Duration [ms]	Test Result [dB]	Lower limit [dB]	Upper limit [dB]	Expanded Uncertainty [dB]	Result
136.00	200.00	-1.06	-1.98	0.02	0.23	Pass
	2.00	-18.44	-20.49	-16.99	0.09	Pass
	0.25	-27.22	-31.99	-25.49	0.09	Pass

-- End of measurement results--

Sound Exposure Level

Toneburst response performed according to IEC 61672-3:2013 18 and ANSI S1.4-2014 Part 3: 18 for compliance to IEC 61672-1:2013 5.9, IEC 60651:2001 9.4.2, ANSI S1.4:1983 (R2006) 8.4.2 and ANSI S1.4-2014 Part 1: 5.9

Amplitude [dB]	Duration [ms]	Test Result [dB]	Lower limit [dB]	Upper limit [dB]	Expanded Uncertainty [dB]	Result
136.00	200.00	-7.01	-7.99	-5.99	0.09	Pass
	2.00	-27.03	-29.49	-25.99	0.09	Pass
	0.25	-36.14	-41.02	-34.52	0.09	Pass

-- End of measurement results--

Peak C-weight

C-weighted peak sound level performed according to IEC 61672-3:2013 19 and ANSI S1.4-2014 Part 3: 19 for compliance to IEC 61672-1:2013 5.13 and ANSI S1.4-2014 Part 1: 5.13

Level [dB]	Frequency [Hz]	Test Result [dB]	Lower limit [dB]	Upper limit [dB]	Expanded Uncertainty [dB]	Result
134.00	31.50	137.18	133.50	139.50	0.09	Pass
134.00	500.00	137.56	135.50	139.50	0.09	Pass
134.00	8,000.00	136.73	134.40	140.40	0.10	Pass
134.00, Negative	500.00	136.18	134.40	138.40	0.09	Pass
134.00, Positive	500.00	136.18	134.40	138.40	0.09	Pass

-- End of measurement results--

Peak Z-weight

Z-weighted peak sound level performed according to IEC 60651:2001 9.4.4 and ANSI S1.4:1983 (R2006) 8.4.4

Amplitude [dB]	Duration[µs]		Test Result [dB]	Lower limit [dB]	Upper limit [dB]	Expanded Uncertainty [dB]	Result
135.20	100	Negative Pulse	127.34	125.00	129.00	0.09	Pass
	100	Positive Pulse	127.34	125.00	129.00	0.09	Pass
125.20	100	Negative Pulse	117.34	115.00	119.00	0.09	Pass
	100	Positive Pulse	117.33	115.01	119.01	0.09	Pass
115.20	100	Negative Pulse	107.33	104.99	108.99	0.09	Pass
	100	Positive Pulse	107.34	104.99	108.99	0.09	Pass
105.20	100	Negative Pulse	97.37	95.03	99.03	0.09	Pass
	100	Positive Pulse	97.36	95.04	99.04	0.09	Pass

-- End of measurement results--

Overload Detector

Overload indication performed according to IEC 61672-3:2013 20 and ANSI S1.4-2014 Part 3: 20 for compliance to IEC 61672-1:2013 5.11, IEC 60804:2000 9.3.5, IEC 61252:2002 11, ANSI S1.4 (R2006) 5.8, and ANSI S1.4-2014 Part 1: 5.11, ANSI S1.25 (R2007) 7.6, ANSI S1.43 (R2007) 7

Measurement	Test Result [dB]	Lower limit [dB]	Upper limit [dB]	Expanded Uncertainty [dB]	Result
Positive	131.30	130.80	132.80	0.09	Pass
Negative	131.20	130.80	132.80	0.09	Pass
Difference	0.10	-1.50	1.50	0.09	Pass

-- End of measurement results--

Peak Rise Time

Peak rise time performed according to IEC 60651:2001 9.4.4 and ANSI S1.4:1983 (R2006) 8.4.4

Amplitude [dB]	Duration [µs]		Test Result [dB]	Lower limit [dB]	Upper limit [dB]	Expanded Uncertainty [dB]	Result
139.00	40	Negative Pulse	130.28	128.80	130.80	0.09	Pass
		Positive Pulse	130.28	128.80	130.80	0.09	Pass
	30	Negative Pulse	129.31	128.80	130.80	0.09	Pass
		Positive Pulse	129.34	128.80	130.80	0.09	Pass

-- End of measurement results--

Positive Pulse Crest Factor

200 µs pulse tests at 2.0, 12.0, 22.0, 32.0 dB below Overload Limit

Crest Factor measured according to IEC 60651:2001 9.4.2 and ANSI S1.4:1983 (R2006) 8.4.2

Amplitude [dB]	Crest Factor	Test Result [dB]	Limits [dB]	Expanded Uncertainty [dB]	Result
137.20	3	OVLD	± 1.00	0.09	Pass
	5	OVLD	± 1.00	0.09	Pass
127.20	3	-0.12	± 1.00	0.09	Pass
	5	-0.11	± 1.00	0.11	Pass
117.20	3	-0.14	± 1.00	0.09	Pass
	5	-0.11	± 1.00	0.09	Pass
107.20	3	-0.13	± 1.00	0.09	Pass
	5	-0.12	± 1.00	0.09	Pass

-- End of measurement results--

Negative Pulse Crest Factor

200 µs pulse tests at 2.0, 12.0, 22.0, 32.0 dB below Overload Limit

Crest Factor measured according to IEC 60651:2001 9.4.2 and ANSI S1.4:1983 (R2006) 8.4.2

Amplitude [dB]	Crest Factor	Test Result [dB]	Limits [dB]	Expanded Uncertainty [dB]	Result
137.20	3	OVLD	± 1.00	0.09	Pass
	5	OVLD	± 1.00	0.09	Pass
127.20	3	-0.11	± 1.00	0.09	Pass
	5	-0.12	± 1.00	0.09	Pass
117.20	3	-0.13	± 1.00	0.09	Pass
	5	-0.11	± 1.00	0.09	Pass
107.20	3	-0.14	± 1.00	0.09	Pass
	5	-0.13	± 1.00	0.09	Pass

-- End of measurement results--

Tone Burst

2kHz tone burst tests at 2.0, 12.0, 22.0, 32.0 dB below Overload Limit

Tone burst response measured according to IEC 60651:2001 9.4.2 and ANSI S1.4:1983 (R2006) 8.4.2

Amplitude [dB]	Crest Factor	Test Result [dB]	Limits [dB]	Expanded Uncertainty [dB]	Result
137.20	3	OVLD	± 1.00	0.09	Pass
	5	OVLD	± 1.00	0.09	Pass
127.20	3	-0.05	± 1.00	0.09	Pass
	5	-0.04	± 1.00	0.09	Pass
117.20	3	-0.07	± 1.00	0.09	Pass
	5	-0.03	± 1.00	0.09	Pass
107.20	3	-0.07	± 1.00	0.09	Pass
	5	-0.02	± 1.00	0.09	Pass

-- End of measurement results--

Impulse Detector - Repeat

Impulse Detector measured according to IEC 60651:2001 9.4.3 and ANSI S1.4:1983 (R2006) 8.4.3

Amplitude [dB]	Repitition Rate [Hz]	Test Result [dB]	Lower limit [dB]	Upper limit [dB]	Expanded Uncertainty [dB]	Result
139	100.00	-2.81	-4.71	-0.71	0.09	Pass
	20.00	-7.61	-9.57	-5.57	0.16	Pass
	2.00	-8.82	-11.76	-5.76	0.09	Pass
Step	2.00	4.97	4.00	6.00	0.09	Pass

-- End of measurement results--

Impulse Detector - Single

Impulse Detector measured according to IEC 60651:2001 9.4.3 and ANSI S1.4:1983 (R2006) 8.4.3

Amplitude [dB]	Duration [ms]	Test Result [dB]	Lower limit [dB]	Upper limit [dB]	Expanded Uncertainty [dB]	Result
139	20.00	-3.72	-5.61	-1.61	0.09	Pass
	5.00	-8.92	-11.76	-5.76	0.10	Pass
Step	5.00	5.05	4.00	6.00	0.10	Pass

-- End of measurement results--

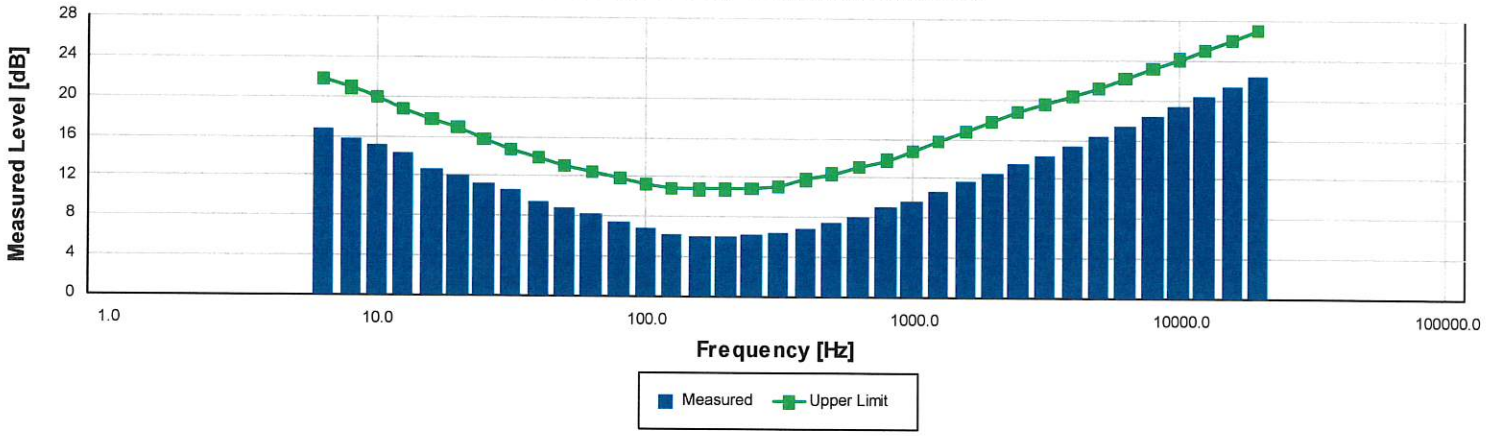
Gain

Gain measured according to IEC 61672-3:2013 17.3 and 17.4 and ANSI S1.4-2014 Part 3: 17.3 and 17.4

Measurement	Test Result [dB]	Lower limit [dB]	Upper limit [dB]	Expanded Uncertainty [dB]	Result
0 dB Gain	104.02	103.90	104.10	0.09	Pass
0 dB Gain, Linearity	41.07	40.30	41.70	0.09	Pass
OBA Low Range	104.00	103.90	104.10	0.09	Pass
OBA Normal Range	104.00	103.20	104.80	0.09	Pass

-- End of measurement results--

1/3-Octave Self-Generated Noise



The SLM is set to low range.

Frequency [Hz]	Test Result [dB]	Upper limit [dB]	Result
6.30	16.72	21.80	Pass
8.00	15.67	20.90	Pass
10.00	15.07	20.00	Pass
12.50	14.29	18.80	Pass
16.00	12.68	17.80	Pass
20.00	12.09	16.90	Pass
25.00	11.24	15.70	Pass
31.50	10.63	14.80	Pass
40.00	9.54	13.90	Pass
50.00	8.84	13.10	Pass
63.00	8.16	12.50	Pass
80.00	7.55	11.90	Pass
100.00	6.88	11.30	Pass
125.00	6.31	10.90	Pass
160.00	6.00	10.80	Pass
200.00	6.03	10.80	Pass
250.00	6.26	10.90	Pass
315.00	6.40	11.10	Pass
400.00	6.92	11.80	Pass
500.00	7.44	12.40	Pass
630.00	8.09	13.10	Pass
800.00	8.98	13.80	Pass
1,000.00	9.77	14.80	Pass
1,250.00	10.70	15.70	Pass
1,600.00	11.65	16.70	Pass
2,000.00	12.56	17.70	Pass
2,500.00	13.52	18.70	Pass
3,150.00	14.40	19.50	Pass
4,000.00	15.38	20.30	Pass
5,000.00	16.34	21.20	Pass
6,300.00	17.43	22.20	Pass
8,000.00	18.27	23.20	Pass
10,000.00	19.34	24.10	Pass
12,500.00	20.30	25.10	Pass
16,000.00	21.35	26.10	Pass
20,000.00	22.31	27.10	Pass

-- End of measurement results--

Broadband Noise Floor

Self-generated noise measured according to IEC 61672-3:2013 11.2 and ANSI S1.4-2014 Part 3: 11.2

Measurement	Test Result [dB]	Upper limit [dB]	Result
A-weight Noise Floor	26.83	36.00	Pass
C-weight Noise Floor	26.05	35.00	Pass
Z-weight Noise Floor	33.30	39.00	Pass

-- End of measurement results--

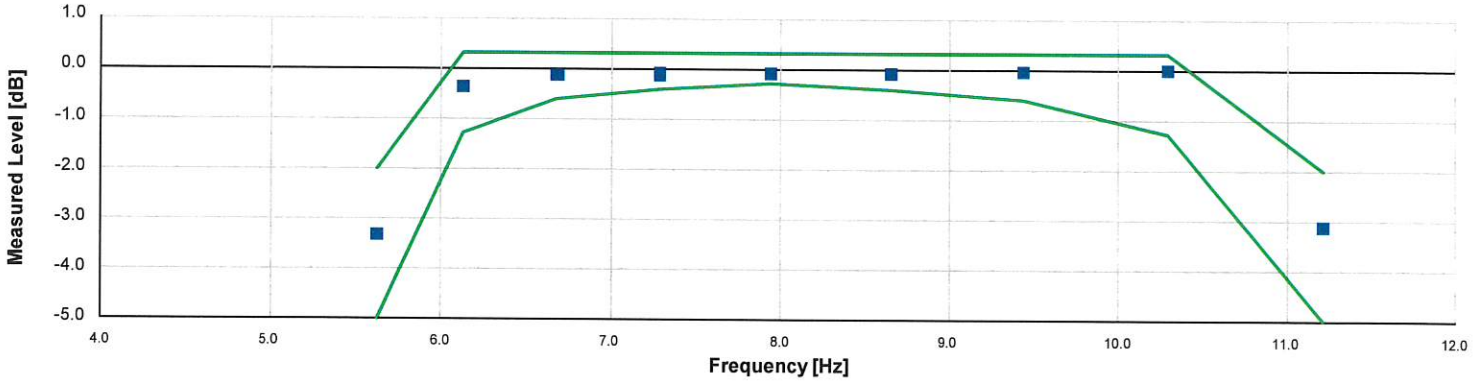
Total Harmonic Distortion

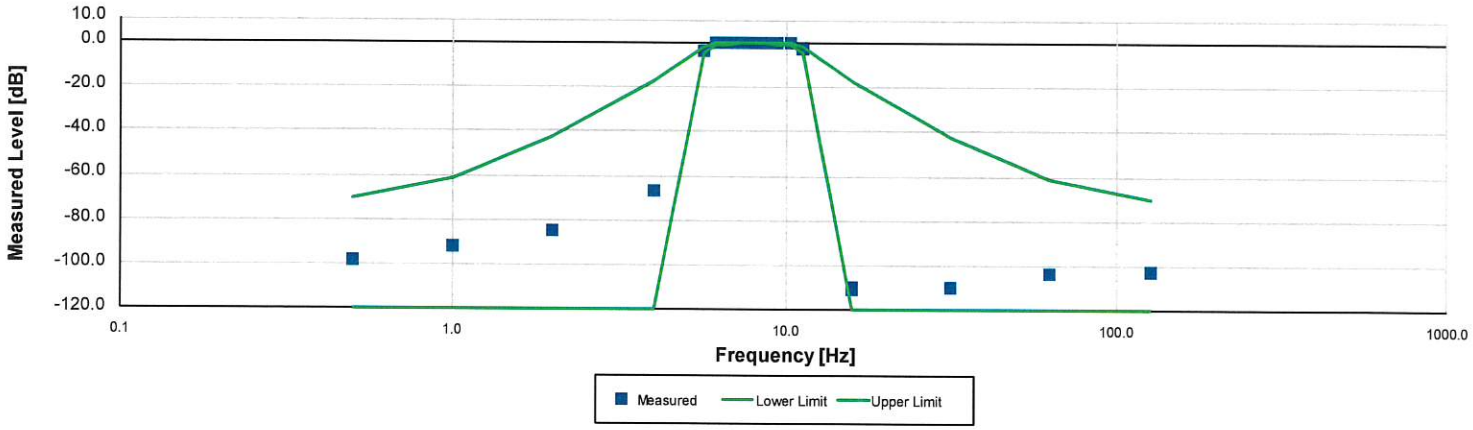
Measured using 1/3-Octave filters

Measurement	Test Result [dB]	Lower Limit [dB]	Upper Limit [dB]	Expanded Uncertainty [dB]	Result
10 Hz Signal	137.42	136.40	138.00	0.09	Pass
THD	-68.42		-58.00	0.01	Pass
THD+N	-63.87		-58.00	0.01	Pass

-- End of measurement results--

1/1 Octave Filter: 8.0 Hz



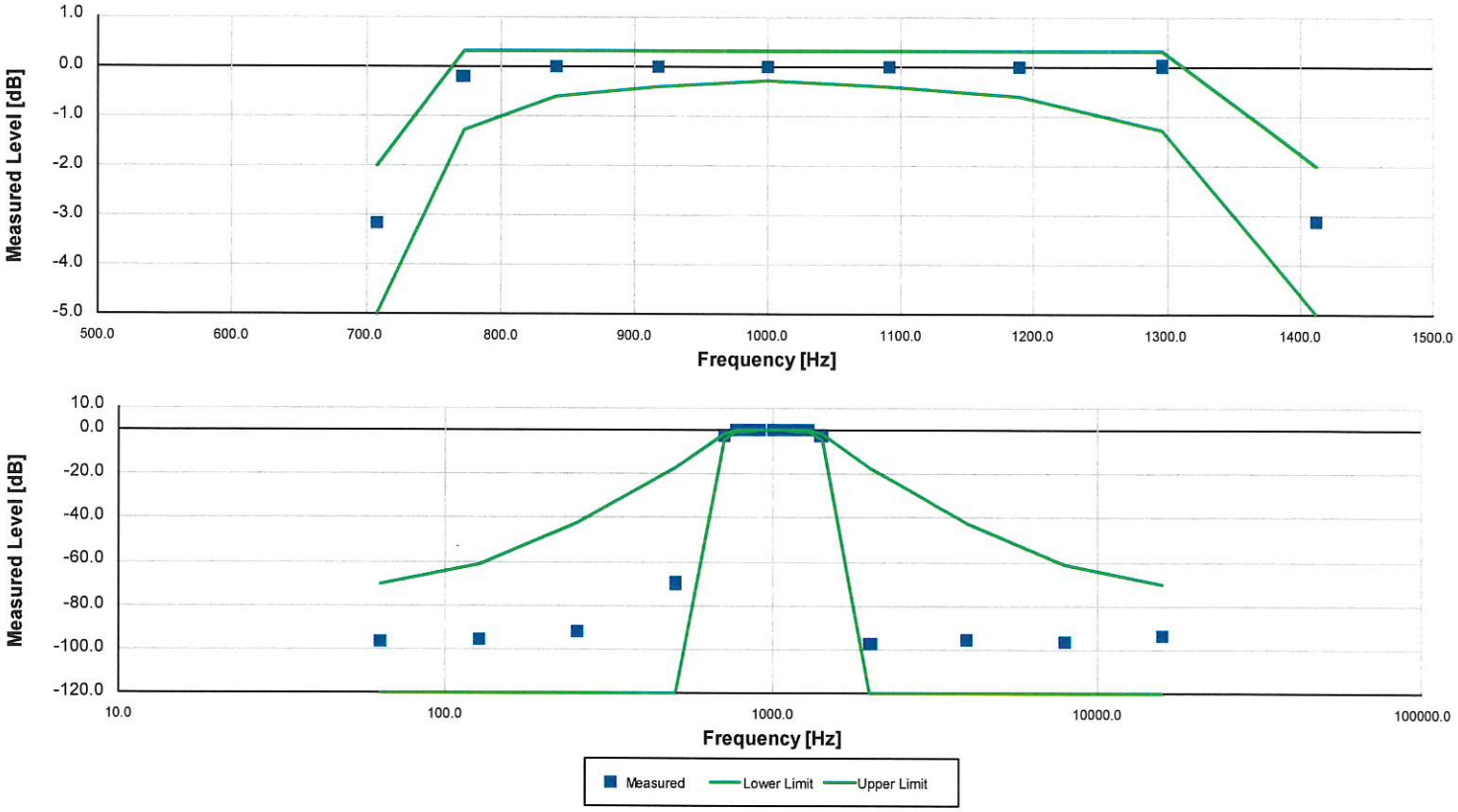


The SLM is set to normal range. Filter shape measured according to IEC 61260:2001 and ANSI S1.11:2004

Frequency [Hz]	Test Result [dB]	Lower limit [dB]	Upper limit [dB]	Expanded Uncertainty [dB]	Result
0.50	-98.36	-inf	-70.00	2.70	Pass
1.00	-91.70	-inf	-61.00	2.00	Pass
2.00	-84.24	-inf	-42.00	0.26	Pass
3.98	-66.99	-inf	-17.50	0.31	Pass
5.62	-3.32	-5.00	-2.00	0.09	Pass
6.13	-0.37	-1.30	0.30	0.09	Pass
6.68	-0.13	-0.60	0.30	0.09	Pass
7.29	-0.11	-0.40	0.30	0.09	Pass
7.94	-0.10	-0.30	0.30	0.09	Pass
8.66	-0.08	-0.40	0.30	0.09	Pass
9.44	-0.05	-0.60	0.30	0.09	Pass
10.29	-0.01	-1.30	0.30	0.09	Pass
11.22	-3.10	-5.00	-2.00	0.09	Pass
15.85	-110.26	-inf	-17.50	1.30	Pass
31.62	-109.99	-inf	-42.00	1.70	Pass
63.10	-103.64	-inf	-61.00	1.50	Pass
125.89	-102.78	-inf	-70.00	1.60	Pass

-- End of measurement results--

1/1 Octave Filter: 1 kHz

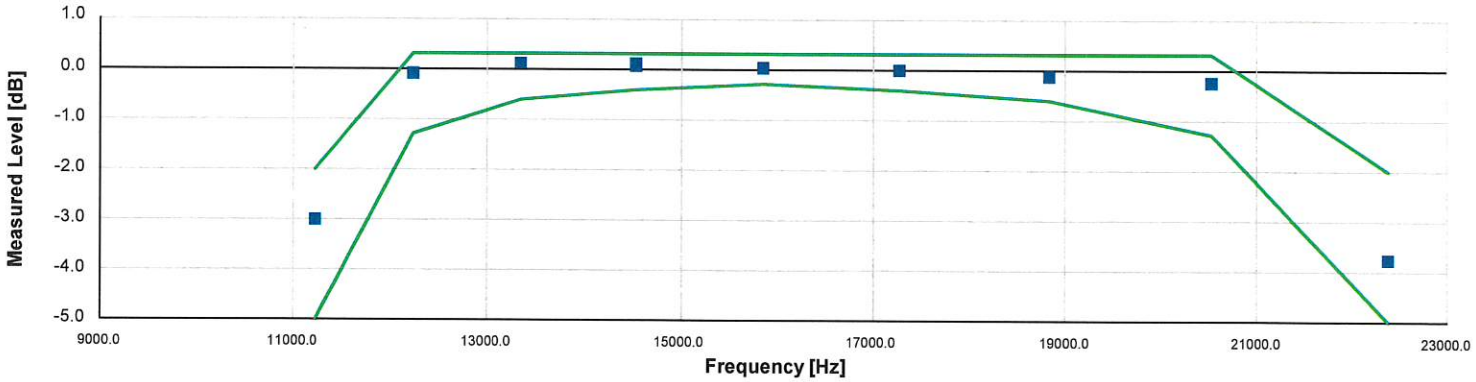


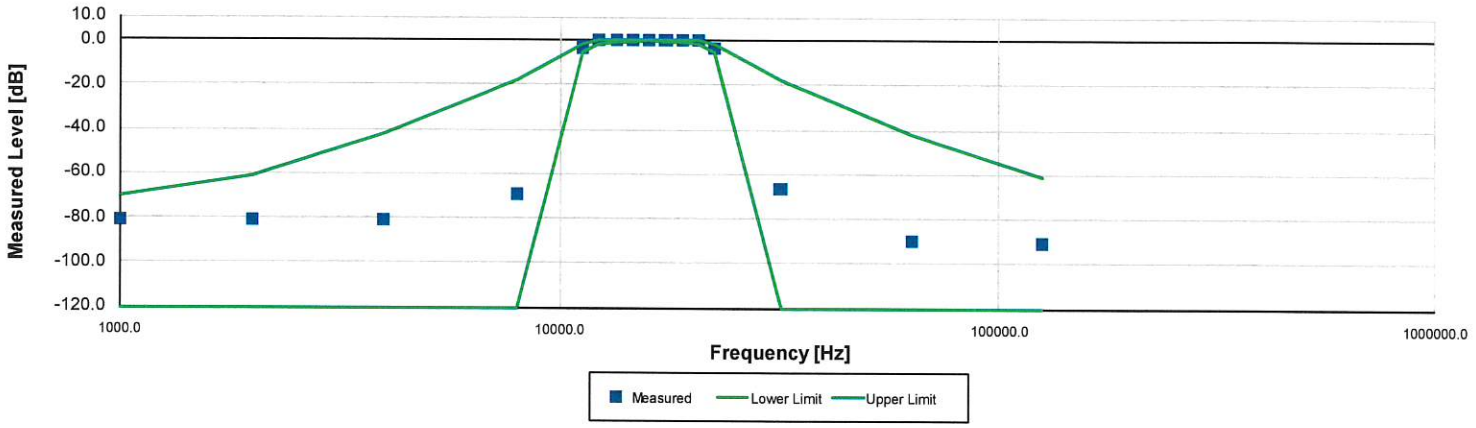
The SLM is set to normal range. Filter shape measured according to IEC 61260:2001 and ANSI S1.11:2004

Frequency [Hz]	Test Result [dB]	Lower limit [dB]	Upper limit [dB]	Expanded Uncertainty [dB]	Result
63.10	-96.28	-inf	-70.00	0.24	Pass
125.89	-95.48	-inf	-61.00	0.25	Pass
251.19	-92.08	-inf	-42.00	0.13	Pass
501.19	-69.79	-inf	-17.50	0.09	Pass
707.95	-3.15	-5.00	-2.00	0.09	Pass
771.79	-0.22	-1.30	0.30	0.09	Pass
841.40	-0.02	-0.60	0.30	0.09	Pass
917.28	-0.01	-0.40	0.30	0.09	Pass
1,000.00	0.00	-0.30	0.30	0.09	Pass
1,090.18	-0.02	-0.40	0.30	0.09	Pass
1,188.50	-0.02	-0.60	0.30	0.09	Pass
1,295.69	0.00	-1.30	0.30	0.09	Pass
1,412.54	-3.14	-5.00	-2.00	0.09	Pass
1,995.26	-96.82	-inf	-17.50	0.25	Pass
3,981.07	-95.79	-inf	-42.00	0.29	Pass
7,943.28	-96.01	-inf	-61.00	0.23	Pass
15,848.93	-93.42	-inf	-70.00	0.23	Pass

-- End of measurement results--

1/1 Octave Filter: 16 kHz





The SLM is set to normal range. Filter shape measured according to IEC 61260:2001 and ANSI S1.11:2004

Frequency [Hz]	Test Result [dB]	Lower limit [dB]	Upper limit [dB]	Expanded Uncertainty [dB]	Result
1,000.00	-80.95	-inf	-70.00	0.10	Pass
1,995.26	-80.73	-inf	-61.00	0.11	Pass
3,981.07	-80.59	-inf	-42.00	0.09	Pass
7,943.28	-69.20	-inf	-17.50	0.12	Pass
11,220.18	-3.00	-5.00	-2.00	0.09	Pass
12,232.07	-0.09	-1.30	0.30	0.09	Pass
13,335.21	0.12	-0.60	0.30	0.09	Pass
14,537.84	0.08	-0.40	0.30	0.09	Pass
15,848.93	0.04	-0.30	0.30	0.09	Pass
17,278.26	-0.02	-0.40	0.30	0.09	Pass
18,836.49	-0.13	-0.60	0.30	0.09	Pass
20,535.25	-0.26	-1.30	0.30	0.09	Pass
22,387.21	-3.76	-5.00	-2.00	0.09	Pass
31,622.78	-66.77	-inf	-17.50	0.09	Pass
63,095.73	-89.72	-inf	-42.00	0.10	Pass
125,892.54	-90.58	-inf	-61.00	0.10	Pass

-- End of measurement results--

-- End of Report--

Signatory: *Ron Harris*