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189-10 Northern Boulevard Rezoning

Environmental Assessment Statement

Address: 189-10 Northern Boulevard, Queens, New York 11358

Block 5513, Lots 10, 11, 12, 22, 27 and p/o Lot 5

CEQR Reference: 25DCP086Q

Lead Agency:
Department of City Planning
120 Broadway, 31st Floor
New York, NY 10271

Prepared for:
Ameriland Brooks, LLC

Prepared by:
GZA GeoEnvironmental Inc.



Date Submitted:
April 14, 2025

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EAS SHORT FORM

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* 189-10 Northern Blvd. Commercial Overlay

3. *Reference Numbers*

CEQR REFERENCE NUMBER (to be assigned by lead agency)	BSA REFERENCE NUMBER (if applicable)
25DCP086Q	
ULURP REFERENCE NUMBER (if applicable)	OTHER REFERENCE NUMBER(S) (if applicable) (*e.g.*, legislative intro, CAPA)

4a. *Lead Agency Information*			**4b. *Applicant Information***		
NAME OF LEAD AGENCY New York City Department of City Planning			NAME OF APPLICANT Ameriland Brook LLC		
NAME OF LEAD AGENCY CONTACT PERSON Stephanie Shellooe, AICP, Director of EARD			NAME OF APPLICANT'S REPRESENTATIVE OR CONTACT PERSON Amber Kartalyan - GZA GeoEnvironmental		
ADDRESS 120 Broadway, 31st Floor			ADDRESS 55 Lane Road		
CITY New York	STATE NY	ZIP 10271	CITY Fairfield	STATE NJ	ZIP 07004
TELEPHONE 212-720-3493	EMAIL sshellooe@planning.nyc.gov		TELEPHONE 201-757-3561	EMAIL amber.kartalyan@gza.com	

5. *Project Description*

The Applicant, Ameriland Brook LLC, is seeking the approval of a zoning map amendment that would affect Block 5513, Lots 11 (the "Development Site" or "Projected Development Site 1"), 8, 10, 12, 22, 27 and a portion of (p/o) Lot 5 (the "Affected Area") in the Murray Hill neighborhood of Queens, Community District 11. The Applicant is proposing a Zoning Map Amendment to rezone Block 5513, Lots 8, 10, 11, 12, 22, 27, and p/o of Lot 5 from an R3-2 and R3X zoning districts to an R3-2/C2-4 zoning district. The Affected Area is bound by Northern Boulevard to the north, 189th Street to the west, 192nd Street to the east, and 43rd Road to the south. The Affected Area to be rezoned measures 73,422 square feet (SF), while the Development Site measures 9,838 SF.

As indicated above, the Development Site consists solely of Lot 11 of the Affected Area. The Proposed Action would facilitate the development of Block 5513, Lot 11 with a new 3-story plus cellar, 30,190 GSF (14,863 ZSF; 1.51 FAR), mixed-use commercial and community facility building, which would include 4,459 GSF (4,459 ZSF; 0.45 FAR) of UG VI local retail space on the first floor, 5,202 GSF (5,202 ZSF; 0.53 FAR) of UG VII office space on the second floor, 5,202 GSF (5,202 ZSF; 0.53 FAR) of either a UG III(B) daycare center or a UG III(B) ambulatory diagnostic treatment center/ senior citizen center on the third floor, 1,023 GSF for building mechanicals on the roof, 2,157 GSF for commercial uses and 7,643 GSF for 20 off-street parking spaces at the cellar level, and 4,504 GSF of first floor space for 6 off-street parking spaces.

Project Location

BOROUGH Queens	COMMUNITY DISTRICT(S) 11	STREET ADDRESS 189-10 Northern Blvd.
TAX BLOCK(S) AND LOT(S) Block 5513, Lots 8, 10, 11, 12, 22, 27, p/o 5		ZIP CODE 11358
DESCRIPTION OF PROPERTY BY BOUNDING OR CROSS STREETS The Affected Area is bound by Northern Boulevard to the north, 189th Street to the west, 192nd Street to the east, and 43rd Road to the south		
EXISTING ZONING DISTRICT, INCLUDING SPECIAL ZONING DISTRICT DESIGNATION, IF ANY R3-2, R3X		ZONING SECTIONAL MAP NUMBER 10d

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

***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 ☐ Cogeneration Facility ☐ Title V Permit

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:

***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.): Approx 73,422 sf
Waterbody area (sq. ft) and type:
Roads, buildings, and other paved surfaces (sq. ft.): 73,422 sf
Other, describe (sq. ft.):

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): 30,190
NUMBER OF BUILDINGS: 1
GROSS FLOOR AREA OF EACH BUILDING (sq. ft.): 30,190
HEIGHT OF EACH BUILDING (ft.): 40'-3"
NUMBER OF STORIES OF EACH BUILDING: 3

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: 9,838
The total square feet not owned or controlled by the applicant: 63,584

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: 9,838 sq. ft. (width x length)
VOLUME OF DISTURBANCE: 118,056 cubic ft. (width x length x depth)
AREA OF PERMANENT DISTURBANCE: 9,838 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.)	0	9,661	5,202	0
Type (*e.g.,* retail, office, school)	0 units	Commercial Office and Local Retail	Medical Office	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: NUMBER OF ADDITIONAL WORKERS: 44

Provide a brief explanation of how these numbers were determined: 3 workers per 1,000 gsf of commercial and community facility floor area

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): 2028

ANTICIPATED PERIOD OF CONSTRUCTION IN MONTHS: 12

WOULD THE PROJECT BE IMPLEMENTED IN A SINGLE PHASE? ☒ YES ☐ NO IF MULTIPLE PHASES, HOW MANY?

BRIEFLY DESCRIBE PHASES AND CONSTRUCTION SCHEDULE: Assuming approval of the proposed rezoning in 2025, construction would be anticipated to start in 2027 following completion of financing, design drawings, and granting of DOB permits. The build year therefore, is 2028 for purposes of this environmental assessment.

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 Section 2.1		
(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		
○ **Early Childhood Programs:** 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)	☐	☒
○ **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)	☐	☒
○ **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)	☐	☒
○ **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 project change or eliminate existing open space?	☐	☒
(b) Would the project generate more than 200 additional residents or 500 additional employees?	☐	☒
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		

	YES	NO
(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 Section 2.2		
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 Protection Plan Project Tracking 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) Would the proposed project introduce new activities or processes using hazardous materials and increase the risk of human or environmental exposure?	☐	☒
(c) 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?	☐	☒
(d) 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 the Hazardous Materials Appendix (including nonconforming uses)?	☐	☒
(e) 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?	☐	☒
(f) 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)?	☐	☒
(g) 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?	☐	☒
(h) 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?	☐	☒
(i) Has a Phase I Environmental Site Assessment been performed for the site?	☒	☐
○ If "yes," were Recognized Environmental Conditions (RECs) identified? Briefly identify: VEC could not be ruled out	☒	☐
(j) Based on the Phase I Assessment, is a Phase II Investigation needed? See section 2.5	☒	☐
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?	☐	☐
(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?	☐	☒

	YES	NO
(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): 572		
○ 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): 3,393,815 MBtu's		
(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, bus trips, or 50 Citywide Ferry Service ferry 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), 200 subway/rail trips per station or line, or 25 or more Citywide Ferry Service ferry trips on a single route (in one direction), or 50 or more passengers at a Citywide Ferry Service landing?	☐	☐
○ 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, or Citywide Ferry Service landing?	☐	☐
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 Section 2.6	☐	☒
(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 114 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; Hazardous Materials; Noise?	☒	☐

	YES	NO
(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. The proposed project does not have the potential for significant adverse impacts in the technical areas above as noted in the attached Supplemental Analyses. In addition, the project would not result in the combination of moderate adverse impacts in the technical areas to have the potential to significantly affect public health. Therefore, an assessment of public health is not warranted.		
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. See Section 2.7		
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. See Section 2.8		

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
Amber Kartalyan	3/14/2025

SIGNATURE Amber Kartalyan

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.

Figure 1: Site Location Aerial Map

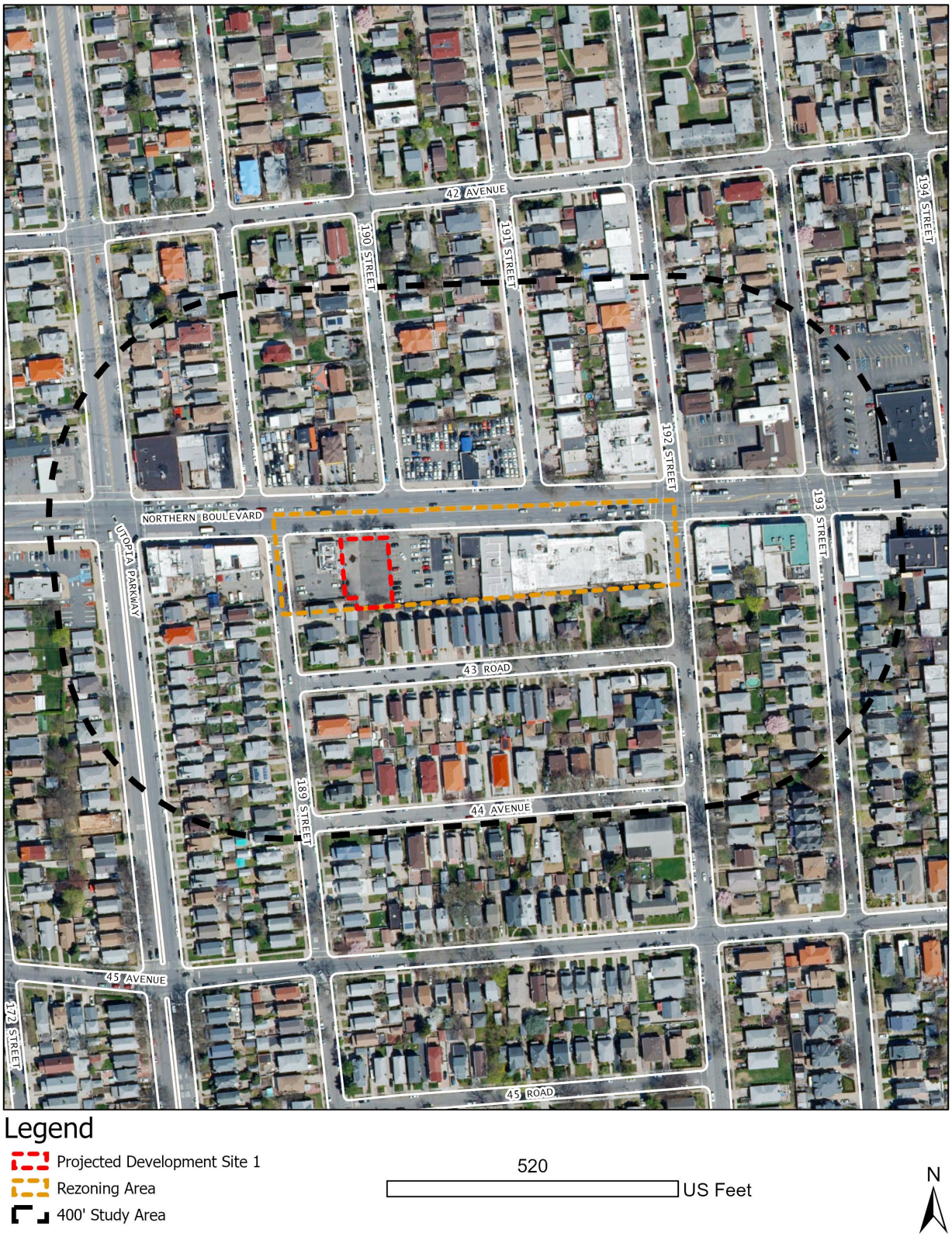


Figure 2: Existing Land Use Map



Figure 3: Existing Zoning Map

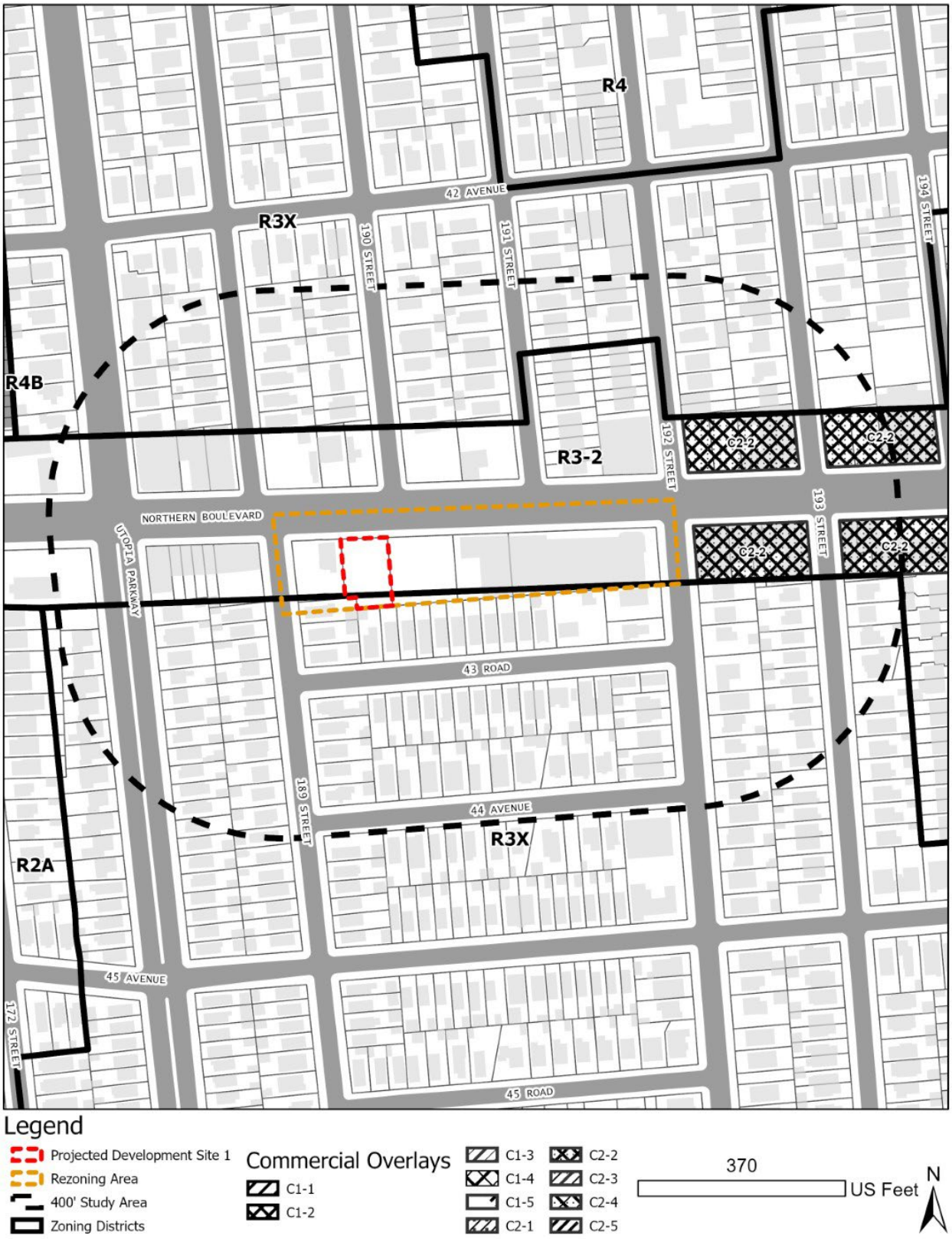


Figure 4: Tax Map





a Looking southeast toward the Applicant-owned Lot from across Northern Blvd.



b Looking east away from the Affected Area along Northern Blvd.



c Looking north away from the Affected Area along 190th St..

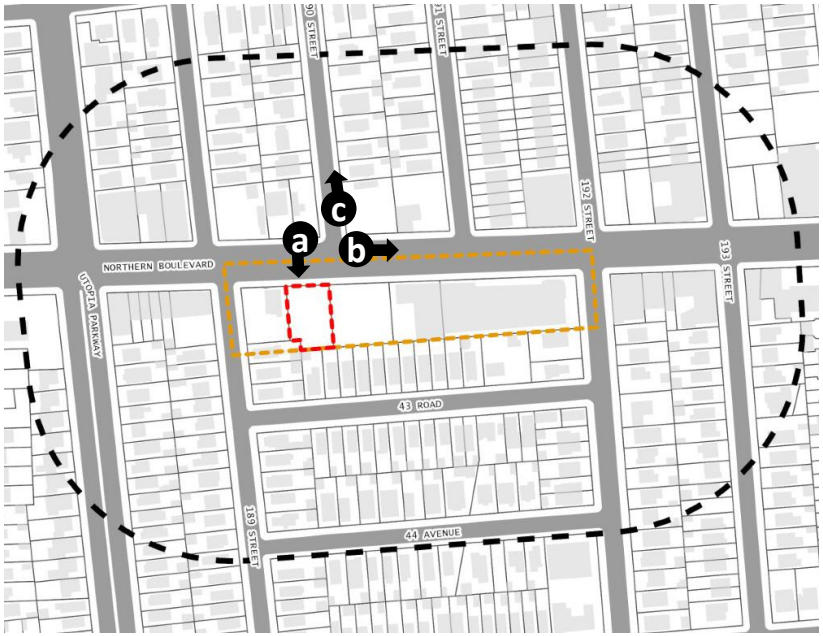


Figure 5-1: Site Photos



d Looking southeast toward the Affected Area from across Northern Blvd.



e Looking north away from the Affected Area along 191st St. from Northern Blvd.



f Looking north away from the Affected Area along 192nd St. from Northern Blvd.

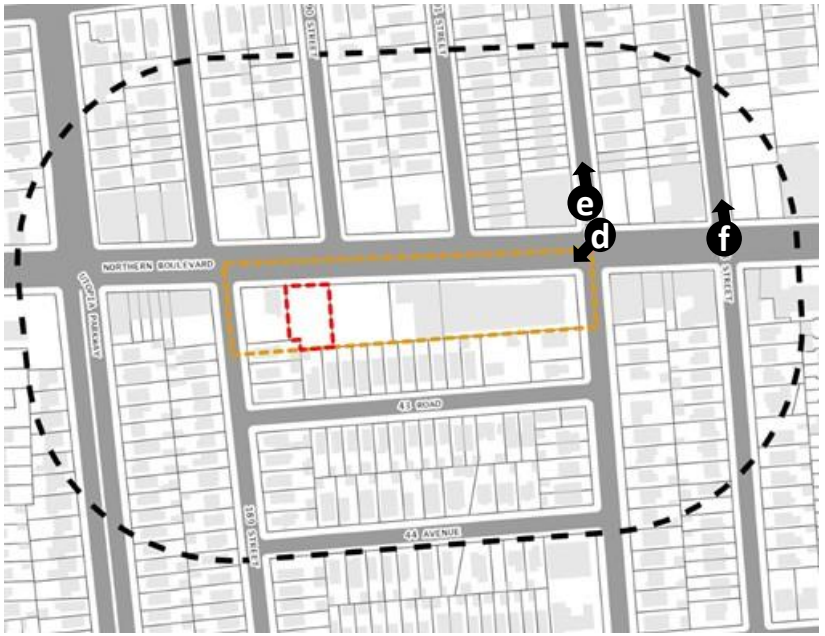


Figure 5-2: Site Photos



g Looking south away from the Affected Area along 192nd St from Northern Blvd.



h Looking south along 189th St from Northern Blvd with the Affected Area on the left.



i Looking northeast toward Lots 5, 8, and 10 of the Affected Area from across 189th St.



Figure 5-3: Site Photos



j Looking north along 189th St from Northern Blvd.



k Looking west along Northern Blvd toward Utopia Parkway from 189th St.



l Looking north along Utopia Parkway from the Northern Blvd.



Figure 5-4: Site Photos



m Looking south along Utopia Parkway from Northern Blvd.



n Looking west along Northern Blvd. from Utopia Parkway.



o Looking southeast toward the Affected Area from 189th St. and Northern Blvd.



Figure 5-5: Site Photos

1.0 Project Description

1.1 Introduction

The Applicant, Ameriland Brook LLC, is seeking the approval of a zoning map amendment that would affect Block 5513, Lots 11 (the "Development Site" or "Projected Development Site 1"), 10 (formerly Lots 8 and 10), 12, 22, 27 and a portion of (p/o) Lot 5 (the "Affected Area") in the Murray Hill neighborhood of Queens, Community District 11. The proposed zoning map amendment ("The Proposed Action") would rezone the Affected Area from R3-2 and R3X zoning districts to an R3-2/C2-4 zoning district. The Affected Area is bound by Northern Boulevard to the north, 189th Street to the west, 192nd Street to the east, and 43rd Road to the south. The Affected Area to be rezoned measures 73,422 square feet (SF), while the Development Site measures 9,838 SF.

As indicated above, the Development Site consists solely of Lot 11 of the Affected Area. The Proposed Action would facilitate the development of Block 5513, Lot 11 with a new 3-story plus cellar, 30,190 GSF (14,863 ZSF; 1.51 FAR), mixed-use commercial and community facility building, which would include 4,459 GSF (4,459 ZSF; 0.45 FAR) of UG VI local retail space on the first floor, 5,202 GSF (5,202 ZSF; 0.53 FAR) of UG VII office space on the second floor, 5,202 GSF (5,202 ZSF; 0.53 FAR) of either a UG III(B) daycare center or a UG III(B) ambulatory diagnostic treatment center/senior citizen center on the third floor, 1,023 GSF for building mechanicals on the roof, 2,157 GSF for commercial uses and 7,643 GSF for 20 off-street parking spaces at the cellar level, and 4,504 GSF of first floor space for 6 off-street parking spaces.

The Proposed Action is discretionary and subject to environmental review. The New York City (NYC) Department of City Planning (DCP) is the lead agency on behalf of the NYC City Planning Commission (CPC) for environmental review under CEQR.

1.2 Background

As discussed below, the Affected Area has been mapped with R3-2/R3X and R3X zoning districts since 2010. According to NYC Department of Building (DOB) records, the Project Site was never developed. Prior to 2010, the Affected Area had been mapped with an R3-2 zoning district since 1961.

In July 1971, the New York City Board of Standards and Appeals (BSA), under Calendar No. 252-71-BZ, granted a variance permitting the construction of a building at Block 5513, Lot 22. Approved uses included the sales and installation of automobile seat covers and convertible tops (UG 7D, now UG VI), automobile repairs (Use Group 16B, now UG VI), and furniture sales (Use Group 6C, now UG VI). The most recent BSA approval for this variance was granted in December 2011 for a term of 10 years, with an expiration date of July 2021.

In March 1984, the BSA, under Calendar No. 982-83-BZ, granted a special permit allowing the conversion of an existing one-story Use Group 16 (now UG VI) automobile sales and service

establishment into Use Group 6 (now UG VI) retail stores and offices at Block 5513, Lot 27. As part of this approval, 50 accessory off-street parking spaces were required to be provided on Block 5513, Lot 12. Lot 12 is currently used as a surface parking lot serving the customers of the tenants occupying the commercial building on Lot 27. The most recent BSA approval for this special permit was granted in August 2019, for a term of 10 years, set to expire in March 2029.

On October 27, 2010, the City Council approved the Auburndale-Oakland Garden-Hollis Hills Rezoning (ULURP: 100409ZMQ; CEQR: 10DCP037Q), which resulted in a zoning map amendment of approximately 2,220 acres (on 418 blocks) in the northeast Queens neighborhoods of Auburndale, Oakland Gardens and Hollis Hills in Community Districts, 7, 8 and 11. As part of this rezoning, Lot 5 and portions of former Lots 8 and 10[1], 11, 12, and 22 of the Affected Area, where rezoned from an R3-2 zoning district to the current R3-2 and R3X zoning designations. The rezoning decreased the existing R3-2 zoning district to a depth of 100 feet from Northern Boulevard. The rezoning generally aimed to preserve neighborhood character from out-of-scale development, more closely reflect one- and two-family development patterns, provide a limited density increase on primary corridors and update commercial overlays.

The 189-10 Northern Boulevard Commercial Overlay Rezoning (C220218ZMQ) sought to rezone the same Proposed Project Area from R3X and R2-3 zoning districts to an R3-2/C2-3 zoning district. This application was withdrawn.

1.3 Description of Surrounding Area

The Affected Area is mapped with R3-2 and R3X residential zoning districts. However, land uses in the 400-foot surrounding area are generally defined by the Affected Area's proximity to Northern Boulevard to the north and a mix of commercial buildings, mixed commercial/residential buildings, parking facilities, and residential uses beyond the lots along Northern Boulevard.

While generally geared towards cars, the Affected Area is still well served by public transit with bus stops on the block of the Affected Area. The closest bus stop is the Nassau County Inter-County Express (NICE) bus N20G, located on the southern side of Northern Boulevard at the intersection of 190th Street and directly in front of Lot 12. The N20G operates from the intersection of Roosevelt Avenue and Kissena Boulevard in Flushing to Great Neck Long Island Rail Road (LIRR) Station via Northern Boulevard and South Middle Neck Road. Other bus stops near the Affected Area include the Metropolitan Transit Authority's (MTA) Q12 and Q13 with a stop located on the south side of Northern Boulevard between Utopia Parkway and 189th Street, which also serves as a stop for the NICE N20G bus. The Q12 bus operates between the 7 Train Station near the corner of Main Street and Roosevelt Avenue in Flushing and Glenwood Street in Little Neck via Northern Boulevard and Sanford Avenue. The Q13 bus operates between the intersection of Union Street and 39th Avenue in Flushing and Totten Avenue in Fort Totten via

[1] Former Lots 8 and 10 have been merged and are now current Lot 10.

Northern Boulevard and Bell Boulevard. The Affected Area is also located near Auburndale LIRR Station on 192nd Street, which is approximately 1,430 feet away or a seven-minute walk.

1.4 Description of Affected Area

The Affected Area, Block 5513, Lots 10, 11, 12, 22, 27, and p/o of Lot 5 is in the Murray Hill neighborhood of Queens, Community District 11. As noted earlier, the Affected Area is bound by Northern Boulevard to the north, 189th Street to the west, 192nd Street to the west, and 43rd Road to the south. Northern Boulevard is a two-lane two-way principal arterial expressway with eastbound and westbound traffic and parking on both sides of the road. 189th Street is a single-lane, two-way northbound and southbound local road with parking on both sides of the road. 192nd Street is a single-lane, two-way northbound and southbound local road with parking on both sides of the road. 43rd Road is a single-lane, two-way, northbound and southbound local road with parking on both sides of the road.[2]

The Affected Area is comprised of five lots and a portion of one lot, all of which are located within the northern portion of Block 5513. In total, the Affected Area contains 73,422 SF, of which 9,838 SF is owned and controlled by the Applicant.

Projected Development Site 1: 189-10 Northern Boulevard (Block 5513, Lot 11)

The Projected Development Site is applicant-controlled and consists of an approximately 9,838 SF unimproved interior lot with approximately 84 feet of frontage along Northern Boulevard. The majority of the lot is zoned R3-2 to a depth of 100 feet from Northern Boulevard, with the remaining portion at the rear of the site zoned R3X.

Other Non-Applicant Controlled Lots

The other five affected sites (Lots 10, 12, 22, 27 and p/o of Lot 5) are non-applicant-owned and are each under the control of different property owners.

- 43-17 189th Street (Lot 5 p/o): This lot falls entirely within an R3X zoning district and consists of a rectangular-shaped interior parcel with approximately 40 feet of frontage along 189th Street. Lot 5 contains a lot area of 4,087 SF, approximately 2000 SF of which falls within the Affected Area and is developed with a 2.5-story 1,700 GSF (1,632 ZSF) residence with two dwelling units and a parking garage in the rear.
- 189-02 Northern Boulevard (Lot 10 – formerly Lots 8 and 10): Lot 10 falls entirely within an R3-2 zoning district and consists of an 8,942 SF corner lot with approximately 86 feet of frontage on Northern Boulevard and 107 feet of frontage on 189th Street. It is improved

[2] "Functional Classification – NYSDOT Region 11: Queens County." New York State Department of Transportation, May 2017. Web. 22 Oct. 2020. < https://www.dot.ny.gov/divisions/engineering/technical-services/hds-respository//Functional_Class_Map_Region_11_Queens_-_May_2017.pdf>.

with a 1-story (1,500 GSF) commercial building operated by a Korean restaurant (Bonchon) and accessory surface parking for this use.

- 189-14 Northern Boulevard (Lot 12): Lot 12 consists of a 13,650 SF interior lot with approximately 116 feet of frontage along Northern Boulevard. The majority of the lot is zoned R3-2 to a depth of 100 feet from Northern Boulevard, with the remaining portion at the rear of the site zoned R3X. Lot 12 is used as accessory surface parking (50 spots total) for the commercial uses on Lot 27, both permitted pursuant to the BSA approval granted in March 1984 under BSA Cal. No. 982-83-BZ.
- 190-10 Northern Boulevard (Lot 22): Lot 22 is an approximately 11,312 square foot interior lot with approximately 100 feet of frontage along Northern Boulevard. The majority of the lot is zoned R3-2 to a depth of 100 feet from Northern Boulevard, with the remaining portion at the rear of the site zoned R3X. Lot 22 is occupied by an approximately 6,600 GSF, 1-story plus mezzanine, legal non-conforming commercial and manufacturing building. Per BSA Cal. No. 252-71-BZ, the site is permitted to operate the sales and installation of automobile seat covers and convertible tops (UG 7D, now UG VI), automobile repairs (Use Group 16B, now UG VI), and furniture sales (Use Group 6C, now UG VI). Customer parking is located in the rear.
- 191-20 Northern Boulevard (Lot 27): Lot 27 is an approximately 27,680 SF corner lot with approximately 262 feet of frontage along Northern Boulevard and 100 feet of frontage along 192nd Street. The lot is located entirely within an R3-2 zoning district. Lot 27 is improved with a one-story, approximately 23,554 GSF, legal non-conforming commercial building. Per BSA Cal. No. 982-83-BZ, the site is permitted to operate UG 6 (now UG VI) commercial stores and offices and is tenanted by five establishments, including a pain management center, a cell phone provider, an urgent care center and two furniture stores. Customer parking for Lot 27 is provided on Lot 12.

1.5 Description of Proposed Development

The Proposed Action would facilitate the development of Block 5513, Lot 11 with a new 3-story plus cellar, 30,190 GSF (14,863 ZSF; 1.51 FAR), mixed-use commercial and community facility building, which would include 4,459 GSF (4,459 ZSF; 0.45 FAR) of UG VI local retail space on the first floor, 5,202 GSF (5,202 ZSF; 0.53 FAR) of UG VII office space on the second floor, 5,202 GSF (5,202 ZSF; 0.53 FAR) of either a UG III(B) daycare center or a UG III(B) ambulatory diagnostic treatment center/ senior citizen center on the third floor, 1,023 GSF for building mechanicals on the roof, 2,157 GSF for commercial uses and 7,643 GSF for 20 off-street parking spaces at the cellar level, and 4,504 GSF of first floor space for 6 off-street parking spaces.

1.6 Action(s) Necessary to Facilitate Proposed Development

One action would be necessary to facilitate the Proposed Development:

1. A Zoning Map Amendment to rezone Block 5513, Lots 10, 11, 12, 22, 27, and p/o of Lot 5 from R3-2 and R3X zoning districts to an R3-2/C2-4 zoning district.

1.7 Purpose and Need

The Proposed Development would not be possible under the existing R3-2/R3X zoning regulations governing the Applicant's lot and prohibits the proposed local retail and office uses. Additionally, the proposed C2-4 commercial overlay would bring the existing commercial establishments located within the Affected Area on Lots 10, 22 and 27 into conformance.

The proposed zoning map amendment from an R3X to an R3-2 zoning district will realign the existing R3-2 zoning boundary on the subject block to better match the rear property lines for those lots facing Northern Boulevard. This action will serve as a "map correction" for Lots 11, 12, 22 and 27. With regard to Lot 5, the only lot located entirely within the existing R3X zoning district, a small portion of the lot would be rezoned as part of the proposed district realignment. The proposed zoning map amendment to add the C2-4 commercial overlay over the Affected Area appropriately reflects the existing uses within the Affected Area and reinforces the commercial character of Northern Boulevard. The existing R3-2 zoning district is a legacy of the 1961 zoning designations, but does not reflect the existing uses on this block front.

The proposed C2-4 commercial overlay is appropriate as Northern Boulevard in this vicinity is dominated by commercial uses. The proposed commercial overlay would also better integrate and transition this commercial corridor to the existing C2-2 commercial overlays located directly to the east of 192nd Street (this C2-2 commercial overlay continues uninterrupted for nearly 2 miles towards Bayside and the Cross Island Expressway and continues east again within Douglaston). The proposed C2-4 commercial overlay would provide for more flexibility with respect to parking requirements as compared to the adjacent C2-2 overlay. While the nearby blocks are mapped with C2-2 commercial overlays, these 1961 designations reflect the higher demand for parking anticipated at that time.

1.8 Analysis Framework

The analysis framework would compare the incremental difference between the proposed and potential development under the Proposed Action (With-Action Condition) and the development, which could occur under the existing zoning (No-Action Condition). This EAS studies the potential for individual and cumulative environmental impacts related to the Proposed Action occurring in a study area of approximately 400 feet around the Affected Area. This environmental assessment considers the potential effects of the Proposed Action compared to future conditions without the approvals sought by the project sponsor. This analysis framework is described below:

<u>Reasonable Worst-Case Development Scenario</u>

Discretionary actions sometimes permit a range of project characteristics, or development scenarios, to occur even though the action may be sought to facilitate a specific development. From the range of possible scenarios that are considered reasonable and likely, the scenario with the worst environmental consequences is chosen for analysis. This is considered to be the

Reasonable Worst-Case Development Scenario (RWCDS), the use of which ensures that, regardless of which scenario actually occurs, its impacts would be no worse than those considered in the environmental review. The environmental assessment examines the incremental differences between the RWCDS of the future without the project in place (No-Action Condition) and the future with the project in operation (With-Action Condition).

Build Year

Assuming approval of the proposed rezoning in 2025, construction would be anticipated to start in 2027 following completion of financing, design drawings, and granting of DOB permits. The build year therefore, is 2028 for purposes of this environmental assessment.

The analysis which follows compares the difference between the future without the Proposed Action (No-Actions Condition) and the future with the Proposed Action (With-Action Condition) for the 2028 analysis year. This EAS studies the potential for individual and cumulative environmental impacts related to the Proposed Action.

No-Action Condition

The No-Action Scenario is the same as the existing conditions for the Projected Development Site and non-Applicant owned sites in the Affected Area. No alternative sites have been filed with the DOB as no commercial development is possible without a commercial overlay and residential development with frontage along Northern Boulevard is unlikely.

With-Action Condition

Under the With-Action Scenario for this analysis, Projected Development Site (Lot 11) would be developed following the Applicant's Proposed Development that includes a new 3-story plus cellar, 30,190 GSF (14,863 ZSF; 1.51 FAR), mixed-use commercial and community facility building, which would include 4,459 GSF (4,459 ZSF; 0.45 FAR) of UG VI local retail space on the first floor, 5,202 GSF (5,202 ZSF; 0.53 FAR) of UG VII office space on the second floor, 5,202 GSF (5,202 ZSF; 0.53 FAR) of either a UG III(B) daycare center or a UG III(B) ambulatory diagnostic treatment center/ senior citizen center on the third floor, 1,023 GSF for building mechanicals on the roof, 2,157 GSF for commercial uses and 7,643 GSF for 20 off-street parking spaces at the cellar level, and 4,504 GSF of first floor space for 6 off-street parking spaces. It should be noted that although only 15 parking spaces are required (1 parking space per 1,000 sf of use), the RWCDS would assume 26 parking spaces per the Applicant's Proposed Development, which is beyond the minimum parking requirement.

Per the Applicant's Proposed Development, the building would provide an optional front open area with a depth of 10 feet along Northern Boulevard (a wide street with a width of approximately 100 feet). Accordingly, the proposed mixed commercial and community facility building would be compliant with the bulk regulations in ZR 33-441 (Alternate Front Setbacks). ZR 33-441 requires that any commercial or community facility buildings within C2 districts with

bulk governed by R3 residential zoning districts would be subject to a sky exposure plane beginning at a maximum street wall height of 30 feet above the street line level with a vertical to horizontal ratio of 1.4 to 1 when an optional front open area with a depth of at least 10 feet is provided on wide streets. Meanwhile, per ZR 32-42 (Location Within Buildings), no commercial building or portion thereof occupied by non-residential uses listed under Use Groups VI through X shall exceed in height 30 feet or two stories, whichever is less. As a result, the first and second floors (commercial uses) of the proposed building would rise to 29'-9", which is close to the maximum permitted height of 30 feet, while the third floor would not setback and would continue to rise by 10'-6", reaching a total building height of 40'-3" without penetrating the required sky exposure plane.

No other sites within the Affected Area are anticipated to be redeveloped as a result of the Proposed Action. The other five lots are not projected to be either developed or redeveloped by the build year for the following reasons:

- Lot 5 is a 4,087 SF site that is currently zoned R3X and is occupied by a two-family home. Approximately 2,000 sf of the lot would be rezoned as part of the Proposed Action, but because of the lot's location away from Queens Boulevard and its current use as a two-family home, redevelopment to introduce commercial uses is not considered likely.
- Lot 10 is a 8,942 SF site that is currently occupied by a 1,500 GSF restaurant that was renovated in 2019 according to DOB records. Because of the significant recent investment and the appropriateness of a drive-thru fast food restaurant along a busy, wide corridor, redevelopment of this lot is not expected.
- Lot 12 is a 13,650 SF site that is currently being used as a surface parking lot that services the one-story plus mezzanine commercial building on Lot 27 that is tenanted by five retailers. A variance was originally issued on June 27, 1967 by the Board of Standards and Appeals (BSA) that included a provision for allowing the use of the site "or the "parking of cars awaiting service or that have been serviced and for the sale of used cars..." Following six approvals granted to the property owner for work on Lot 27, the BSA granted an approval for a change of use on March 6, 1984 related to the existing one-story plus mezzanine building that included a provision for "50 parking spaces [to] be provided on tax lot 12 and signs on tax lot 12 and [that] the subject site clearly indicate the availability of parking in that location; all signs on the premises comply with C1 district regulations; a certificate of occupancy be obtained for tax lot 12 as an accessory parking lot...". Use of Lot 12 as a parking lot for customers of the tenants occupying the commercial building on Lot 27 has been routinely approved by the BSA on condition that the property owner meets the terms of the certificate of occupancy, which has been required to be amended for the five subsequent approvals following the change of use approval on March 6, 1984. The most recent approval on August 13, 2019, provided "a ten (10) year extension of term, to expire on March 6, 2029, and one (1) year extension of time to obtain a certificate of occupancy, to expire on August 13, 2020..."

- Lot 22 is an 11,312 SF site that is currently occupied by a 6,600 GSF commercial/office building. The lot was granted a special permit by the BSA (Cal# 252-71-BZ, expired July 13, 2021) to allow for the operation of the sales and installation of automobile seat covers and convertible tops (UG 7D, now UG VI), automobile repairs (Use Group 16B, now UG VI), and furniture sales (Use Group 6C, now UG VI). The Proposed Action would bring the existing commercial use into conformance and would not be expected to induce development as the lot is already developed with commercial uses and represents more than half of the currently permitted FAR.
- Lot 27 is an 27,680 SF site that is currently occupied by a 23,554 GSF commercial/office building that is already occupied by multiple retailers and represents more than eighty percent of the currently permitted FAR.

Table 1.8-1: RWCDS Analysis Framework – Existing, No-Action and With-Action Calculations

Table 1.8-1: Existing/No-Action and With-Action Conditions										
Site Info				Existing/No-Action Condition		With-Action Condition				
Site ID	Block	Lot	Lot Area (sf)	Zoning	Building gsf	Zoning	CF (gsf)	Com. (gsf)	Parking (gsf)	Parking Spaces
Projected Development Site 1	5513	11	9,838	R3-2	-	R3-2/C2-4	5,202	12,841	12,147	26
Total			**9,838**		**-**		**5,202**	**12,841**	**12,147**	**26**

gsf = gross square feet
Com. = Commercial
CF = Community Facility

2.0 Environmental Review

2.1 Land Use, Zoning, and Public Policy

The *CEQR Technical Manual* recommends procedures for analysis of land use, zoning, and public policy to ascertain the impacts of a project on the Surrounding Area. Land use, zoning, and public policy are described in detail below. This section considers existing conditions, development trends, zoning, and other public policies in relation to the Projected Development Site and the Surrounding Area as well as the larger area in which the Proposed Action may have an effect. Because the Proposed Action would permit the development of a mixed-use building with a larger bulk and a wider range of uses than what is permitted under the existing zoning regulations, a preliminary assessment of Land Use, Zoning, and Public Policy is provided.

Methodology

Existing land uses were determined by reference to the New York City Zoning and Land Use (ZoLA) database and PLUTOTM 24v1 shapefiles. These uses were then confirmed through site visits. The evaluation of lots within the 400-foot Study Area was performed with reference to New York City Zoning Maps and the Zoning Resolution of the City of New York and served as the basis for the zoning evaluation of the Future No Action and Future With-Action Conditions. Public Policy research was performed through an evaluation of the New York City Department of City Planning (NYCDCP) and other city agencies programs and documentation.

2.1.1 Land Use

The *CEQR Technical Manual* suggests that a land use, zoning, and public policy study area should generally extend 400 feet from the site of the Proposed Action. Existing land use patterns of city blocks within approximately 400 feet of the Affected Area are presented in **Figures 1-2** and **2.1-1**. The proposed zoning map amendment would affect Block 5513; Lots 10, 11, 12, 22, 27; and p/o of Lot 5, identified as the Affected Area.

Figure 2.1-1: Area to be Rezoned Overlaid with Existing Land Use Map



Existing Conditions

Land Use Study Area

As shown in **Figure 2.1-1** and stated in **Section 1.3**, the surrounding area is a mix of commercial and residential buildings.

On the block of the Affected Area, Block 5513, there are 15 lots occupied by one or two-family buildings built between 1930 and 1955, ranging in height from 2- to 2.5-stories.

Block 5514 to the south is entirely occupied by low-density residential buildings that include 31 lots with one or two-family homes that range in height from 2- to 2.5-stories tall. These homes were all built between 1920 and 2010 with the majority built in 1920. There are also three lots occupied by multifamily walkup buildings that are all 2-stories, built between 1925 and 1950.

West of Block 5513, across 189th Street, is Block 5512 that is largely within the 400-ft Study Area. The portion of Block 5512 that is within the study area comprised of 22 lots occupied by single and two-family homes that range in height from 1- to 2.5 stories and were constructed between 1930 and 1935. The northern portion of Block 5512 with frontage along Northern Boulevard is occupied by three lots with 2-story commercial buildings constructed between 1920 and 1930 as well as three lots occupied by three 2-story mixed commercial residential buildings with two constructed around 1920 and one constructed in 2004.

North of the Affected Area, across Northern Boulevard, there are four blocks with more than half of their areas within the 400-ft Study Area. Block 5364, between Utopia Parkway and 189th Street, includes 10 lots that are occupied by one- and two-family homes ranging from 2- to 2.5-stories in height and constructed between 1925 and 1998; two commercial or office buildings ranging between 1- and 2-stories in height that were constructed in 1950 and 1971; and one 1-story industrial/manufacturing building constructed in 1950.

Between 189th Street and 190th Street is Block 5365 that includes 12 lots with one- and two-family homes ranging in height between 1.5- and 2.5-stories tall and constructed between 1901 and 1965; one 1-story commercial building constructed in 1950; one 2.5-story tall mixed commercial and residential building constructed in 1930; and one vacant lot.

Between 190th Street and 191st Street is Block 5366 that includes 11 lots with one- and two-family homes ranging in height between 2- and 2.5-stories that were constructed between 1930 and 1960. Block 5366 and two commercial lots that include one 1-story building that was constructed in 1961.

Between 191st Street and 192nd Street is Block 5367 that includes 22 lot with one- and two-family homes ranging in height from 2- and 2.5-stories that were constructed between 1930 and 2017 with the vast majority of the homes built in 1950. Block 5367 is also occupied by one 1-story commercial building constructed in 1963.

Affected Area

As noted earlier, the Affected Area consists of Lots 10, 11, 12, 22, 27, and p/o Lot 5 on the northern side of Block 5513 with a total area of 73,422 SF. Apart from Lot 5, all lots within the Affected Area have frontage along Northern Boulevard. The land use of the Affected Area includes three lots that are occupied by one-story commercial buildings; one two-family home; and two lots serving as parking lots or that are vacant.

Analysis

Future No-Action Condition

Land Use Study Area

There is one site within the 400-foot study area with an active construction permit located at 43-45 189th Street (Block 5514, Lot 1) and would consist of a new 2-story residential building with two dwelling units.

Affected Area

Absent the Proposed Action, the lots within the Affected Area are expected to remain in their existing condition.

Future With-Action Condition

Land Use Study Area

Land use and development patterns in the land use study area are anticipated to remain unchanged in the future with the Proposed Action. Any new development in the surrounding area would be consistent with the low-density R3-2 residential zoning district that currently governs the Affected Area and the surrounding low-density R3-2 and R3X zoning districts.

Affected Area

Projected Development Site (Block 5513, Lot 11)

The Applicant's Proposed Development will be the With-Action scenario with a new 3-story plus cellar, 30,190 GSF (14,863 ZSF; 1.51 FAR), mixed-use commercial and community facility building, which would include 4,459 GSF (4,459 ZSF; 0.45 FAR) of UG VI local retail space on the first floor, 5,202 GSF (5,202 ZSF; 0.53 FAR) of UG VII office space on the second floor, 5,202 GSF (5,202 ZSF; 0.53 FAR) of either a UG III(B) daycare center or a UG III(B) ambulatory diagnostic treatment center/ senior citizen center on the third floor, 1,023 GSF for building mechanicals on the roof, 2,157 GSF for commercial uses and 7,643 GSF for 20 off-street parking spaces at the cellar level, and 4,504 GSF of first floor space for 6 off-street parking spaces. It should be noted that though

only 15 parking spaces are required (1 parking space per 1,000 sf of use), the RWCDS would assume 26 parking spaces per the Applicant's Proposed Development, which is beyond the minimum parking requirement.

All the non-Applicant owned lots within the Affected Area would remain in their existing condition.

Conclusion

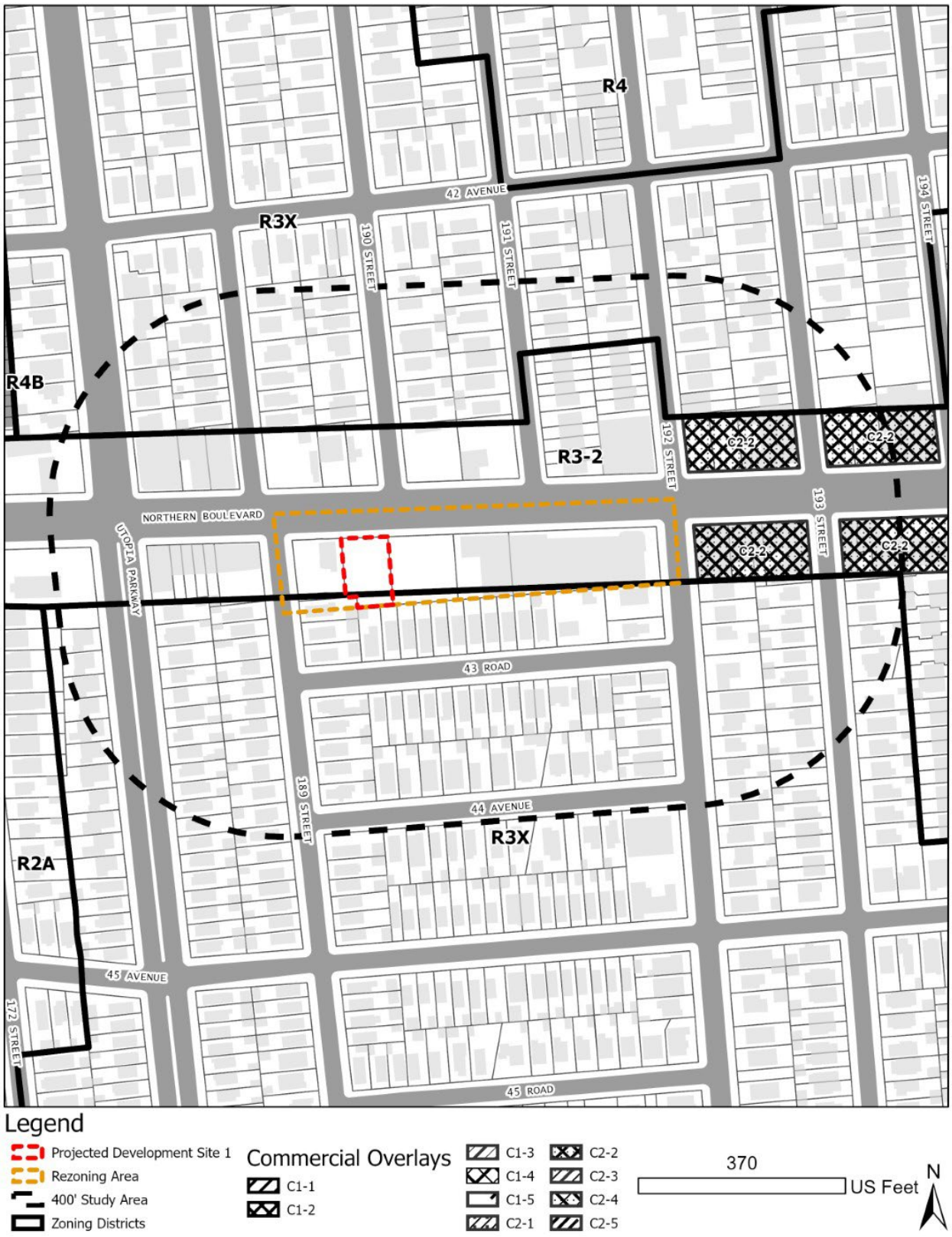
The Proposed Action would permit the development of a new mixed-use building consisting of commercial and community facility space. The proposed development would increase the utility on the currently vacant Development Site and increase the range of permitted uses on the site. The expanded number of uses would be permitted by mapping the proposed C2-4 overlay would also legalize the existing commercial uses on Lots 10, 22, and 27.

Based on the analysis above, the Applicant believes that the proposed rezoning would allow for the productive redevelopment of the Affected Area with land uses that are similar to the surrounding area. Therefore, the Proposed Action would not generate a land use that would be incompatible with surrounding uses. Furthermore, the Proposed Action would bring existing commercial space into conformance. There would be no significant adverse impacts to Land Use as a result of the Proposed Action, and further analysis is not required.

2.1.2 Zoning

The *CEQR Technical Manual* suggests that a zoning study area should extend 400 feet from the Affected Area. Existing zoning districts within 400 feet of the Affected Area are presented above in **Figure 1.3**. The proposed zoning map amendment would affect the following lots within the Affected Area: Block 5513, Lots 10, 11 (the Projected Development Site), 12, 22, 27, and p/o of Lot 5 from R3-2 and R3X to R3-2/C2-4.

Figure 2.1-2: Zoning of the Affected Area



Existing Conditions

Zoning Study Area

The zoning districts within 400 feet of the Affected Area are R3-2, R3X, and C2-2 zoning districts.

Table 2.1-1: Summary of Existing Zoning Regulations

Zoning District	Type and Use Group (UG)	Floor Area Ratio (FAR)	Parking (Required Spaces)
R3-2	**General Non-Contextual Residential District** UGs I, II, III(A), III(B), IV(B), IV(C)	0.75 – Residential Standard 1.00 – Residential Qualifying 1.00 – Community Facility	Inner TZ: 1 per standard DU within multiple dwellings Outer TZ: 35% of standard DU Beyond Greater TZ: 50% of standard DU; 50% of affordable DU; 10% of qualifying senior units In the Outer TZ/Beyond the Greater TZ: Qualifying residential sites: Parking waived for developments with 75 units or fewer Small lots (25 feet or less in width): No parking required for lots existing as of December 5, 2024 Non-residential varies by use, size of establishment, and TZ designation
R3X	**Detached Contextual Residential District** UGs I, II, III(A), III(B), IV(B), IV(C)	0.75 – Residential Standard 1.00 – Residential Qualifying 1.00 – Community Facility	Inner TZ: 1 per standard DU within multiple dwellings Outer TZ: 50% of standard DU Beyond Greater TZ: 1 per standard DU; 50% of affordable DU; 10% of qualifying senior units In the Outer TZ/Beyond the Greater TZ: Qualifying residential sites: Parking waived for developments with 75 units or fewer Small lots (25 feet or less in width): No parking required for lots existing as of December 5, 2024 Non-residential varies by use and size of establishment, and TZ designation
C2-2 (Mapped over R3-2)	**Local Non-Contextual Commercial District** UGs I, II, III(A), III(B), IV(A), IV(B), IV(C), V, VI, VII, VIII, IX(A), IX(C), X	1.60 – Commercial and/or Community Facility	Varies by use and size of establishment

Source: NYC Zoning Resolution

Auburndale-Oakland Gardens-Hollis Hills Rezoning (ULURP: 100409ZMQ; CEQR: 10DCP037Q)

A portion of the 2010 Auburndale-Oakland Gardens-Hollis Hills Rezoning is captured on the north and south side of the 400-foot study area. The Auburndale-Oakland Gardens-Hollis Hills Rezoning encompassed 2,220 acres (across 418 blocks). DCP sought to rezone areas of the Auburndale, Oakland Gardens, and Hollis Hills neighborhoods for the purpose of protecting and reinforcing the Affected Area's predominantly lower-density, one- and two-family character and ensure the future residential development reflects the context of surrounding neighborhood portions. The area north and south of Northern Boulevard was originally mapped with an R3-2 zoning district before being mapped to its current R3X zoning district.

Existing zoning districts in the Surrounding Area include:

R3-2

R3-2 districts are low-density non-contextual residential districts designed to provide for all types of residential buildings. R3-2 districts permit a variety of housing types, including detached, semi-detached, and attached one- and two-family homes, as well as low-rise multifamily buildings. These districts also include community facilities and open uses which serve the residents of these districts or benefit from a residential environment. R3-2 districts permit the following Use Groups: UGs I, II, III(A), III(B), IV(B), IV(C).

R3-2 districts require a minimum lot area of 2,850 square feet, and a minimum lot width of 30 feet. The amount of required open space on residential lots in R3-2 districts is governed by yard requirements. New single or two family detached homes must have two side yards totaling at least five feet, but there is no minimum width requirement for either one. R3-2 districts also permit semi-detached and zero lot line buildings which are set along a side lot line, and require one side yard at least five feet wide, subject to certain modifications per ZR Section 23-33. For all other residences, no side yards are required subject to certain modifications per ZR Section 23-33. The front yard of a new home must be at least 15 feet deep. For qualifying residential sites with a lot width of at least 150 feet, and for corner lots the front yard depth may be reduced by five feet, except that a front yard shall be no shallower than 5 feet. The minimum required rear yard depth is 20-30 feet, subject to modifications pursuant to ZR Section 23-343.

The maximum FAR is 0.75[3] for standard zoning lots or 1.0 for qualifying residential sites[4]. The maximum community facility FAR is 1.0. The maximum height of a residential building is governed by either a pitched roof or a flat roof envelope. For the pitched roof envelope, the height of a building is governed by a perimeter wall height of 25 feet before additional height must conform to the sky exposure plane. Above the 25-foot perimeter wall height, sloping planes control the maximum height of the building or other structure requiring either a setback or a pitched roof. These planes start at the maximum permitted height of the perimeter walls and meet at a ridge line of 35 feet above the base plane. For a flat roof envelope, the maximum permitted height is 35 feet. For qualifying residential sites and qualifying senior housing, the maximum building and base height is 35 feet.

Parking requirements vary depending on the use and transit zone designation. In the Inner Transit Zone, one off-street parking space is required for each standard market dwelling unit within multiple dwellings, while no parking is required for affordable dwelling units and qualifying senior units. In the Outer Transit Zone, parking is required for 35% of all standard market dwelling units, while no parking is required for affordable dwelling units and qualifying senior units, and can be waived if 5 spaces or fewer are required. Beyond the Greater Transit Zone, parking is required for 50% of market rate and affordable dwelling units, and 10% of qualifying senior units; here, parking can be waived if fewer than 1 space is required. In the Outer Transit Zone and beyond the Greater Transit Zone the following applies: For qualifying residential sites parking is waived where the number of dwelling units is 75 or less. For zoning lots existing on December 5, 2024 where the lot width is 25 feet or less, no parking shall be required.

R3X

R3X contextual districts, mapped extensively in lower-density neighborhoods, permit only one- and two-family detached residences on zoning lots as narrow as 30 feet in width and 2,850 square feet in lot area. These districts also include community facilities and open uses that serve the residents of these districts or benefit from a residential environment. Forest Hills in Queens and Prince's Bay and Westerleigh in Staten Island are typical R3X neighborhoods. R3X districts permit the following Use Groups: UGs I, II, III(A), III(B), IV(B), IV(C).

The amount of required open space on residential lots in R3X districts is governed by yard requirements. New single- or two-family detached homes must have two side yards with

[3] For standard zoning lots with a lot area that exceeds 4,000 square feet, the maximum residential floor area associated with any single dwelling unit shall not exceed an equivalent FAR of 0.60.

[4] Qualifying residential sites generally consist of (a) lots in the Greater Transit Zone that are 5,000 SF or greater on a wide street or the short end of a block, (b) lots in the Greater Transit Zone that include a building with community facility space as of December 5, 2024, (c) lots located outside of the Greater Transit Zone that have a minimum lot area of at least 5,000 square feet and include a building with community facility space as of December 5, 2024, or (d) lots located in an R3-2, R4, R5 or R5B District containing qualifying senior housing.

a minimum width of five feet each. R3X districts also permit semi-detached and zero lot line buildings which are set along a side lot line, and require one side yard at least five feet wide, subject to certain modifications per ZR Section 23-33. The front yard of a new home must be at least 10 feet deep. For qualifying residential sites with a lot width of at least 150 feet and for corner lots, the front yard depth may be reduced by five feet, except that a front yard shall be no shallower than 5 feet. The minimum required rear yard depth is 20-30 feet, subject to modifications pursuant to ZR Section 23-343.

The maximum FAR is 0.75[5] for standard zoning lots or 1.00 for qualifying residential sites[6]. The maximum community facility FAR is 1.00. The maximum height of a residential building is governed by a perimeter wall height of 25 feet before additional height must conform to the sky exposure plane. Above the 25-foot perimeter wall height, sloping planes control the maximum height of the building or other structure requiring either a setback or a pitched roof. These planes start at the maximum permitted height of the perimeter walls and meet at a ridge line of 35 feet above the base plane. For qualifying residential sites and qualifying senior housing, the maximum building and base height is 35 feet.

Parking requirements vary depending on the use and transit zone designation. In the Inner Transit Zone, one off-street parking space is required for each standard market dwelling unit within multiple dwellings, while no parking is required for affordable dwelling units and qualifying senior units. In the Outer Transit Zone, parking is required for 50% of all standard market dwelling units, while no parking is required for affordable dwelling units and qualifying senior units. Beyond the Greater Transit Zone, parking is required for 100% of market rate dwelling units, 50% of affordable dwelling units, and 10% of qualifying senior units. In the Outer Transit Zone and beyond the Greater Transit Zone the following applies: For qualifying residential sites parking is waived where the number of dwelling units is 75 or less. Further, no parking is required for zoning lots existing on December 5, 2024, where the lot width is 25 feet or less.

C2-2 Commercial Overlay

C2 districts are commercial overlays mapped within residential districts. Mapped along streets that serve local retail needs, they are found extensively throughout the city's lower- and medium-density areas and occasionally in higher-density districts. Typical retail uses include neighborhood grocery stores, restaurants, and beauty parlors. Unless otherwise indicated on the zoning maps, the depth of overlay districts ranges from 100 to 200 feet.

[5] For standard zoning lots with a lot area that exceeds 4,000 square feet, the maximum residential floor area associated with any single dwelling unit shall not exceed an equivalent FAR of 0.60.

[6] See note 3.

Overlay districts differ from other commercial districts in that residential bulk is governed by the residence district within which the overlay is mapped. All other commercial districts that permit residential use are assigned a specific residential district equivalent.

The maximum commercial or community facility floor area ratio (FAR) is also determined by the residence district, per Section 33-121 of the NYC Zoning Resolution. For this location, the C2-2 overlay is mapped over an R3-2 zoning district, where:

- The maximum FAR for a zoning lot containing only commercial use, only community facility use, or both commercial and community facility uses is 1.60 FAR.

- The maximum height of a front wall and the required front setback of a building or other structure shall be determined by the Residence District within which such Commercial District is mapped with the following exceptions:

    - In accordance with the provisions of Section 32-42 (Location Within Buildings), no commercial building or portion thereof occupied by non-residential uses listed under Use Groups VI through X shall exceed in height 30 feet or two stories, whichever is less.

    - For community facility buildings or buildings used for both community facility use and commercial use, the maximum height of a front wall shall be 30 feet or two stories, whichever is less, and the height above street line shall be 30 feet.

- The residential bulk remains subject to the R3-2 zoning regulations, which govern setbacks, yard requirements, and other dimensional controls.

- On qualifying residential sites located on any zoning lot or portion of a zoning lot in any commercial district in which such building is permitted and subject to the individual maximum floor area ratios for commercial, community facility, and residential uses, the maximum permitted floor area for a zoning lot with buildings containing residential and non-residential uses is 2.50 FAR within the Greater Transit Zone, and 1.60 FAR outside of the Greater Transit Zone.

Parking for commercial and community facility use varies depending on the use, size, and transit zone designation.

Affected Area

The Affected Area is zoned R3-2 and R3X zoning districts, which permits low-density residential uses at a maximum standard FAR of 0.75, which could be increased to 1.00 if providing qualifying affordable unit or qualifying senior units, and community facility uses at 1.00 FAR.

Future No-Action Condition

Zoning Study Area
No changes to zoning are anticipated in the future without the Proposed Action in the Surrounding Area. Existing zoning patterns would remain.

Affected Area
No changes to zoning are anticipated in the future without the Proposed Action within the Affected Area. The Affected Area would continue to be subject to R3-2 and R3X zoning districts.

Future With-Action Condition

Zoning Study Area
Except the Affected Area, no changes to zoning are anticipated in the future with the Proposed Action in the Surrounding Area. Existing zoning patterns would remain.

Affected Area
The Affected Area would be rezoned to the proposed R3-2/C2-4 zoning district. An underlying R3-2 zoning district covers the majority of the Affected Area, which would be extended to cover the entirety of the Affected Area. When mapped within an R3-2 zoning district, the C2-4 commercial overlay would permit a maximum 1.60 FAR for a zoning lot containing only commercial use, only community facility use, or both commercial and community facility uses. The maximum height of a front wall and the required front setback of a building or other structure shall be determined by the Residence District within which such Commercial District is mapped with the following exceptions:

- In accordance with the provisions of Section 32-42 (Location Within Buildings), no commercial building or portion thereof occupied by non-residential uses listed under Use Groups VI through X shall exceed 30 feet or two stories in height, whichever is less.
- In accordance with the provisions of Section 33-431 (Maximum Height of Walls and Required Setbacks), for community facility buildings or buildings used for both community facility use and commercial use, the maximum height of a front wall shall be 30 feet or two stories, whichever is less, within the initial setback distance (20 feet on narrow streets and 15 feet on wide streets) and a sky exposure plane shall begin at 30 feet in height above the street line level with a vertical to horizontal ratio of 1 to 1.
- In accordance with the provisions of Section 33-441 (Alternate Front Setbacks), when an optional open area is provided along the full length of the front lot line with a minimum depth of 15 feet on narrow streets or 10 feet on wide streets in C2-4 commercial overlays governed by R3-2 residential zoning districts, an alternate sky exposure plane shall begin at 30 feet in height above the street line level with a vertical to horizontal ratio of 1.4 to 1.

Conclusion

The Proposed Action would introduce a mixed-use district that would permit residential, community facility, and commercial uses. The Proposed Action would not result in a substantial increase in bulk as the proposed C2-4 zoning district would permit 1.60 FAR of commercial space, but would permit a wider range of uses that includes additional use groups IV(A), V, VI, VII, VIII, IX(A), IX(C), and X. The new development would be consistent with residential land uses and commercial land uses in the Study Area. No impacts are expected, and no further analysis is required.

2.1.3 Public Policy

The Affected Area is not part of, or subject to, an Urban Renewal Plan (URP), adopted community 197-a Plan, or a Solid Waste Management Plan. The Proposed Action is also not a large publicly sponsored project, and as such, consistency with the City's PlaNYC 2030 for sustainability is not warranted. The Affected Area is not in a FRESH Program zone, where additional floor area is granted when a qualifying fresh food grocer is provided on the ground floor.

According to the *2021 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. A preliminary assessment of public policy should identify and describe any public policies, including formal plans or published reports, which pertain to the Study Area. If the Proposed Actions could potentially alter or conflict with identified policies, a detailed assessment should be conducted; otherwise, no further analysis of public policy is necessary.

Conclusion

While the Proposed Action would facilitate the development of a mixed-use building that would expand the permitted bulk and range of uses on the Development Site, the Applicant's Proposed Development is not located in either a Transit Zone or FRESH Program zone. Further, no other applicable public policies are within the Affected Area; thus the Proposed Action would not affect or impact public policy. Accordingly, further analysis of public policy is not required.

2.2 Historic and Cultural Resources

An assessment of historic and cultural resources is usually necessary for projects that are located in close proximity to historic or landmark structures or districts, or for projects that require in-ground disturbance, unless such disturbance occurs in an area that has been formerly excavated, according to the *CEQR Technical Manual*.

The term "historic resources" defines districts, buildings, structures, sites, and objects of historical, aesthetic, cultural, architectural, and archaeological importance. In assessing both historic and cultural resources, the findings of the appropriate city, state, and federal agencies are consulted. Historic resources include: the New York City Landmarks Preservation Commission (LPC) designated landmarks, interior landmarks, scenic landmarks, and historic districts; locations being considered for landmark status by the LPC; properties/districts listed on, or formally determined eligible for, inclusion on the State and/or National Register (S/NR) of Historic Places; locations recommended by the New York State Board for Listings on the State and/or National Register of Historic Places and National Historic Landmarks.

2.2.1 Architectural Resources

Per *CEQR Technical Manual* guidelines, impacts on historic resources are considered on those sites affected by the Proposed Action and in the area surrounding identified development sites. The historic resources study area is therefore defined as the project site plus an approximately 400-foot radius around the Affected Area.

To determine whether the Proposed Development has the potential to affect nearby off-site historic or architectural resources, the study area is screened for historic and architectural resources. No architectural resources were found in the project area that are considered historic or significant.

The LPC was contacted for their initial review of the project's potential to impact nearby historic and cultural resources, and by letter dated October 28, 2020 indicated that the study area does not contain any buildings of known architectural significance (see **Appendix B**). Therefore, significant adverse impacts to architectural resources are not expected because of the Proposed Action, and further analysis is not warranted.

2.2.2 Cultural and Archaeological Resources

Unlike the architectural evaluation of a Study Area that extends beyond the footprint of a project's block and lot lines, the analysis of potential and/or projected impacts to archaeological resources is controlled by the actual footprint of the limits of soil disturbance. Archeological resources are physical remains, usually subsurface, of the prehistoric and historic periods such as burials, foundations, artifacts, wells, and privies.

The *CEQR Technical Manual* requires a detailed evaluation of a project's potential effect on the

archeological resources if it would potentially result in an in-ground disturbance to an area not previously excavated.

The Proposed Action would result in new in-ground construction on the Projected Development Site. As noted, the LPC was contacted for their initial review of the project's potential to impact nearby historic and cultural resources, and a response was received on October 28, 2020 (see **Appendix B)** indicating that none of the site in the study area are considered archaeologically significant.

Analysis

Future No-Action Condition

Absent the Proposed Action, the Projected Development Site would remain in its existing condition. No Alternatives plans have been prepared or filed with the NYC DOB.

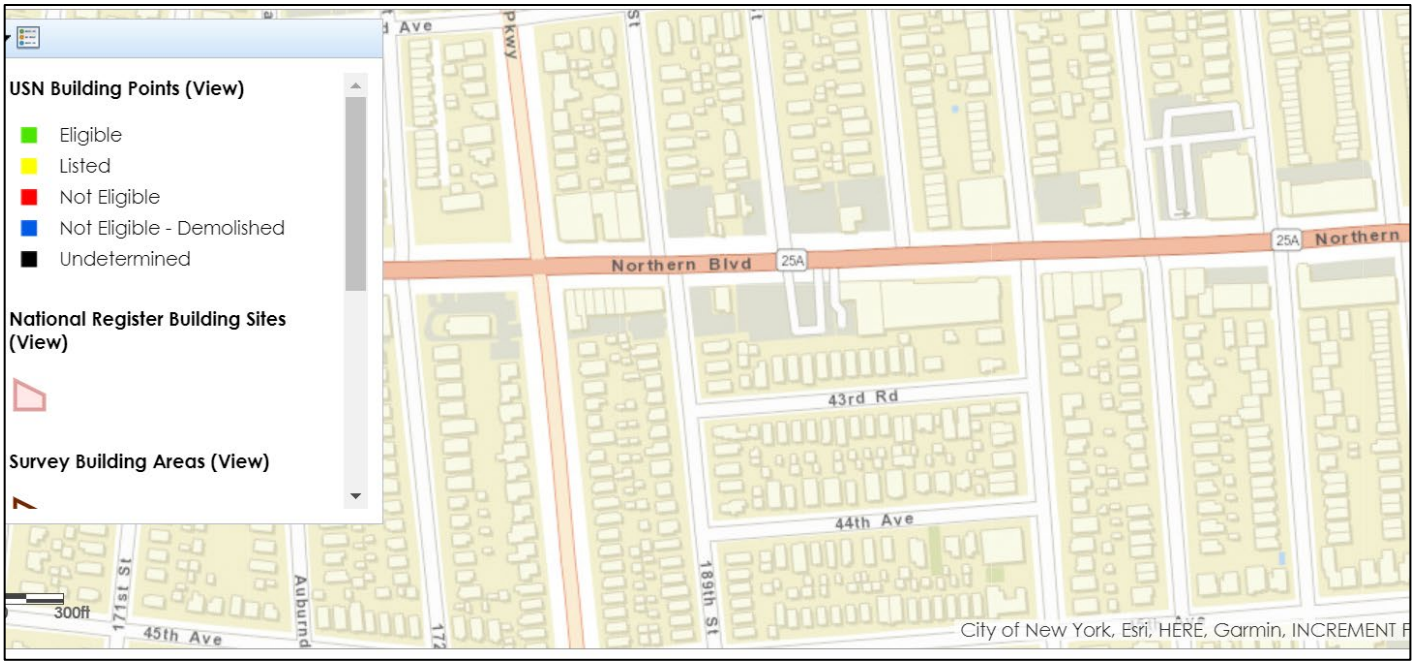
Future With-Action Condition

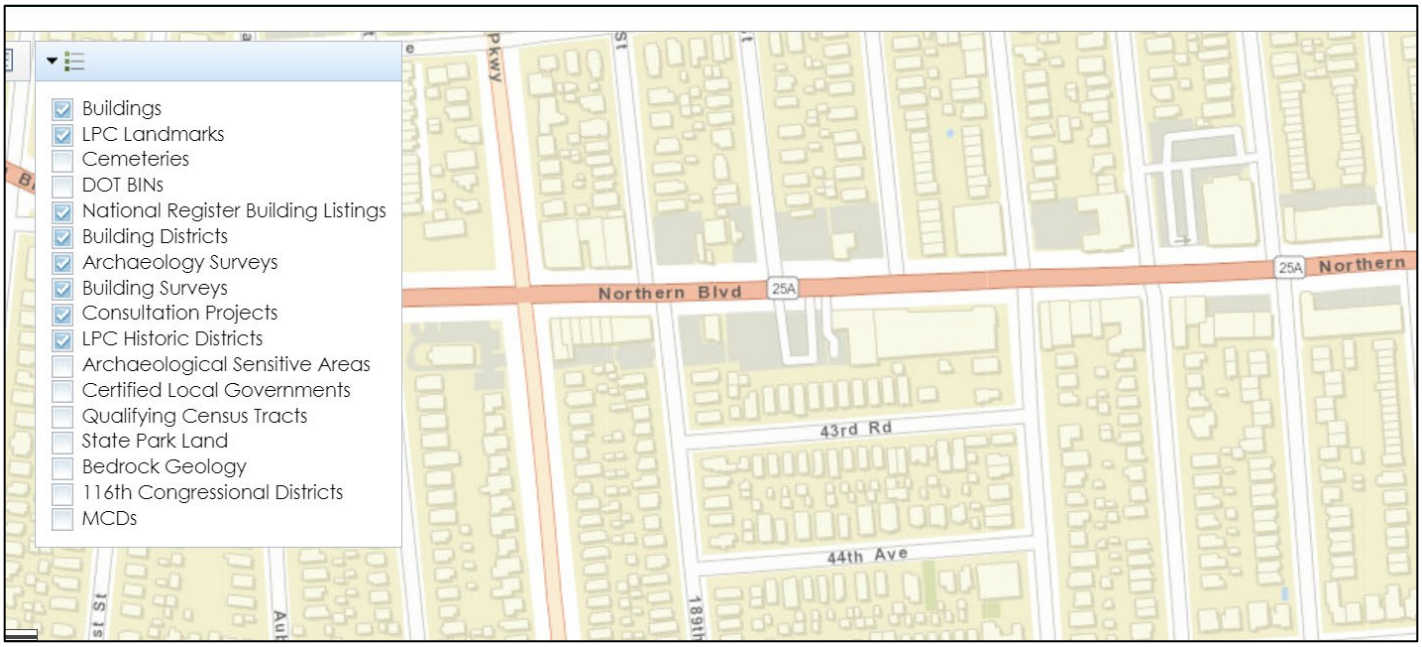
The Projected Development Site totals 9,838 SF that would be developed with a new 3-story plus cellar, 30,190 GSF (14,863 ZSF; 1.51 FAR), mixed-use commercial and community facility building, which would include 4,459 GSF (4,459 ZSF; 0.45 FAR) of UG VI local retail space on the first floor, 5,202 GSF (5,202 ZSF; 0.53 FAR) of UG VII office space on the second floor, 5,202 GSF (5,202 ZSF; 0.53 FAR) of either a UG III(B) daycare center or a UG III(B) ambulatory diagnostic treatment center/ senior citizen center on the third floor, 1,023 GSF for building mechanicals on the roof, 2,157 GSF for commercial uses and 7,643 GSF for 20 off-street parking spaces at the cellar level, and 4,504 GSF of first floor space for 6 off-street parking spaces. It should be noted that though only 15 parking spaces are required (1 parking space per 1,000 sf of use), the RWCDS would assume 26 parking spaces per the Applicant's Proposed Development, which is beyond the minimum parking requirement.

Conclusion

The project would result in in-ground disturbance to develop the proposed mixed-use building with cellar space for parking. LPC was contacted for their initial review of the Proposed Development's potential to impact historic and cultural resources on or near the Affected Area. In a letter dated October 28, 2020, LPC indicated that the Study Area does not contain any sites or buildings of known architectural or archaeological significance (see **Appendix B**). Furthermore, a survey was conducted of sites or resources that have been designated as either listed or eligible for listing in the State and National Register (S/NR) of historic places. As shown in **Figure 2.2-1** above, no site or resources were found within 400 feet of the Affected Area. Thus, the Proposed Development is not anticipated to result in significant adverse impacts to sensitive architectural or archaeological resources.

Figure 2.2-1: New York State CRIS Survey of Potential S/NR Resources





2.3 Urban Design and Visual Resources

According to the *CEQR Technical Manual*, urban design is the totality of components that may affect a pedestrian's experience of public space. Elements that play an important role in the pedestrian's experience include streets, buildings, visual resources, open space, and natural features, as well as wind as it relates to channelization and downwash pressure from tall buildings. Pursuant to the *2021 CEQR Technical Manual*, an assessment of Urban Design may be warranted when a Proposed Action may affect one or more of the elements that contribute to the pedestrian experience of an area, specifically the arrangement, appearance, and functionality of the built environment.

Methodology

Pursuant to the *CEQR Technical Manual*, an assessment of urban design is appropriate when a project may affect one or more of the elements that contribute to the pedestrian experience of the public realm. This assessment of Urban Design and Visual Resources focuses on those elements of the Proposed Action that may have the potential to impact the use, arrangement, appearance, and functionality of the built environment. The *CEQR Technical Manual* states that a preliminary urban design analysis is appropriate when there is potential for a pedestrian to observe a material alteration beyond what is allowed by existing zoning. This preliminary analysis provides an assessment of the Proposed Action; to determine when comparing existing and future conditions with and without the Proposed Action whether the project may result in a significant adverse environmental impact.

The following analysis examines each of those elements that play an important role in the pedestrian experience, including street hierarchy and streetscape (including the arrangement and orientation of streets); building scale as defined by their height and bulk in relation to adjusting built form and arrangement; as well as natural features, open space, and topography. These components are further considered in relation to changes in use and density or use, in so far as it impacts the experience of the pedestrian.

The following preliminary analysis also considers the effects of the Proposed Action on an area's visual resources, or those important public view corridors, vistas, natural or built features. Visual resources can include waterfront views, public parks, landmark structures or districts, or natural features, such as rivers or geological formations. Based on *CEQR Technical Manual* guidelines, the study area for urban design is the area where the project may influence land use patterns and the built environment. The urban design study area consists of both a primary study area (where urban design defects of the Proposed Action are direct) and a secondary study area. For the purpose of this assessment, the primary study area is the Affected Area.

As with the analysis of land use, zoning, and public policy, the second study area for the urban design assessment is defined as the area within approximately 400 feet of the Affected Area (see **Figure 2.3-1**) The analysis is based on field visits, aerial views, computerized massing studies and montages, photographs, geographic information systems analysis and other graphic images of

the Affected Area and surrounding study area. Zoning calculations, including floor area calculations, building heights, and lot coverage information are also provided. A photo key is provided identifying locations of primary and secondary study area photos used to document existing conditions is provided in **Figure 2.3-2**.

The proposed rezoning of the Affected Area from R3-2 and R3X to R3-2/C2-4 would alter the permitted bulk and height within the Affected Area. Therefore, further analysis is warranted. The differences between existing and proposed zoning, with regards to those aspects of zoning affecting urban design, are presented in the following **Table 2.3-1**.

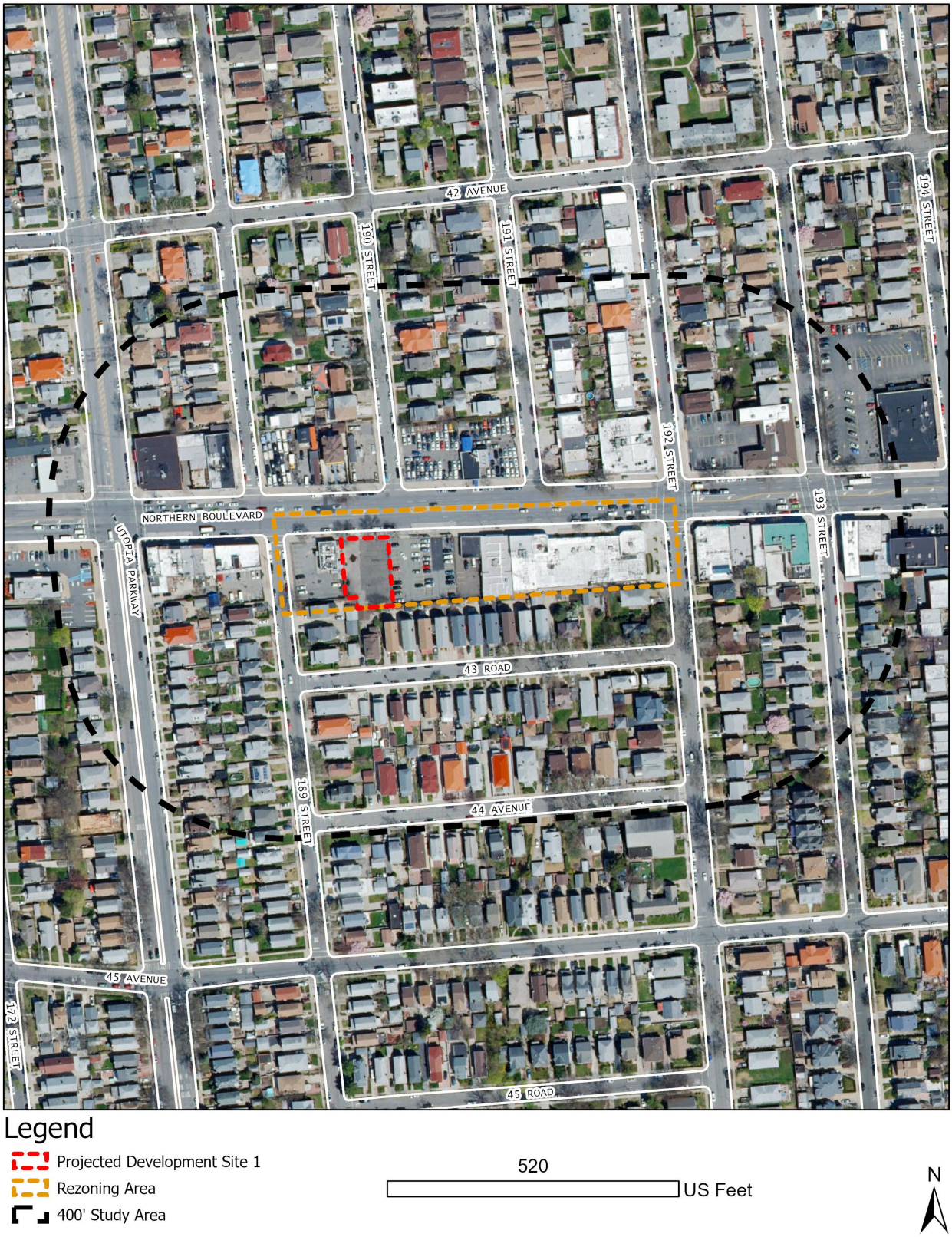
Table 2.3-1: No-Action and With-Action Zoning

<table>
<tr><th></th><th colspan="2">No-Action</th><th colspan="2">With-Action</th></tr>
<tr><td>Zoning</td><td colspan="2">R3-2 and R3X</td><td colspan="2">R3-2/C2-4</td></tr>
<tr><td>Permitted Uses</td><td colspan="2">Residential and Community Facility</td><td colspan="2">Residential, Commercial, Community Facility</td></tr>
<tr><td rowspan="3">Maximum FAR</td><td rowspan="2">R3-2</td><td rowspan="2">0.75 – Residential Standard
1.00 – Residential Qualifying
1.00 – Community Facility</td><td>Residential</td><td>0.75 (Standard)
1.00 (Qualifying)</td></tr>
<tr><td>Commercial</td><td>1.60</td></tr>
<tr><td>R3X</td><td>0.75 – Residential Standard
1.00 – Residential Qualifying
1.00 – Community Facility</td><td>Community Facility</td><td>1.00</td></tr>
<tr><td>Maximum Height</td><td colspan="2">Residential: 35 feet

Community Facility: Sky Exposure Plane
• A sky exposure plane beginning at 25’ above front yard line with a vertical to horizontal ratio of 1 to 1</td><td colspan="2">Residential: 35 feet

Commercial/Community Facility: Sky Exposure Plane on wide street (Northern Blvd – 100 feet wide)
• Standard: 15’ initial setback with a maximum street wall height of 30’ or two stories (whichever is less); a sky exposure plane beginning at 30’ above street line with a vertical to horizontal ratio of 1 to 1
• Alternate Front Setback: 10’ front open area with a maximum street wall height of 30’; a sky exposure plane beginning at 30’ above street line with a vertical to horizontal ratio of 1.4 to 1</td></tr>
<tr><td>Lot Coverage</td><td colspan="2">R3-2: 35%
R3X: n/a</td><td colspan="2">R3-2/C2-4: 35%</td></tr>
</table>

Figure 2.3-1: Primary and Secondary Study Area



Existing Conditions

Context

The Affected Area consists of one lot on Block 5513 bounded by Northern Boulevard, 189th Street, 43rd Road, and 192nd Street in the Murray Hill neighborhood of Queens, described in detail in **Sections 1.4** and **2.1**.

Rationalizing the Neighborhood

The primary study area, as well as the 400-foot secondary study area is characterized by a mix of low-density land uses that varies in height and bulk. This impression is the result of the presence of predominantly one- and two-family homes and commercial uses that largely existed prior to 1961. This section evaluates the characteristics of existing land uses, height, bulk, and density within the primary and secondary study areas as well as the sidewalks and roadways linking the built form of the neighborhood, the integrated consideration of which establishes the basis for the overall urban design character experienced by the pedestrian.

Primary Study Area

The Projected Development Site (Block 5513, Lot 11), as shown in **Figure 2.3-1,** is Applicant-owned, and located on the north end of the block. The Projected Development Site is recorded as a parking facility according to City records. Sanborn Fire Insurance Maps indicate that the Development Site has been undeveloped since 1903. Views of the site are provided in the photos provided at the end of the existing conditions section, in **Figure 2.3-2** through **Figure 2.3-6**.

Existing Condition

Secondary Study Area

As noted earlier, there is an eclectic mix of commercial and residential uses within the 400-foot secondary study area and characterizes the broader neighborhood generally. The predominant land use in the secondary study area is residential uses.

The lots and buildings housing these varying uses vary very little in terms of height with buildings generally range between 1- and 2-stories. Directly abutting the Primary Study Area to the south (see photos in **Figures 2.3-4**) are one- and two-family homes. Adjacent to the Primary Study Area on the east is a one-story commercial building occupied by five tenants.

As described in **Section 2.1.1**, the residential uses within the Secondary Study Area are generally north and south of the lots along Northern Boulevard. The vast majority of the residential uses are one- and two-family homes that range in height from 1- to 2.5-stories. Other residential building types in the surrounding area include four multifamily walkup buildings across shared across Blocks 5513 and 5514 as well as three mixed commercial and residential buildings along

Northern Boulevard that are all no more than 2.5-stories tall. The age of the residential buildings is generally older with the majority of buildings built around 1930 and 1950.

The commercial uses within the 400-ft Study Area are exclusively along Northern Boulevard. Similar to the residential uses in the surrounding area, the heights of the commercial buildings are no more than 2.5-stories tall and generally older with the majority of buildings constructed before 1963. There is one industrial/manufacturing use on Block 5364 that was built in 1950.

Access

The traffic grid around the Primary Study Area is regularly shaped. The block of the Projected Development Site is surrounded by two different road types according to the New York State Department of Transportation (NYSDOT) that includes Northern Boulevard to the north (a Principle Arterial Road), 189th Street to the west (a Local Road), 43rd Road to the south (Local Road), and 192nd Street to the east (a Local Road).

Sidewalks, ranging from 10 to 15 feet wide, are in good condition with paved surfaces and street trees on either side of Northern Boulevard. The only intersection with a traffic light and a pedestrian crossing is located at the intersection of Utopia Parkway and Northern Boulevard. Pedestrian activity is low because of the limited number of commercial uses in the 400-ft Study Area and the number of one- and two-family homes that provide private parking.

Visual Resources

There are no eligible resources in the secondary study area, thus the projected development on the Development Site would not result in an adverse effect on the streetscape.

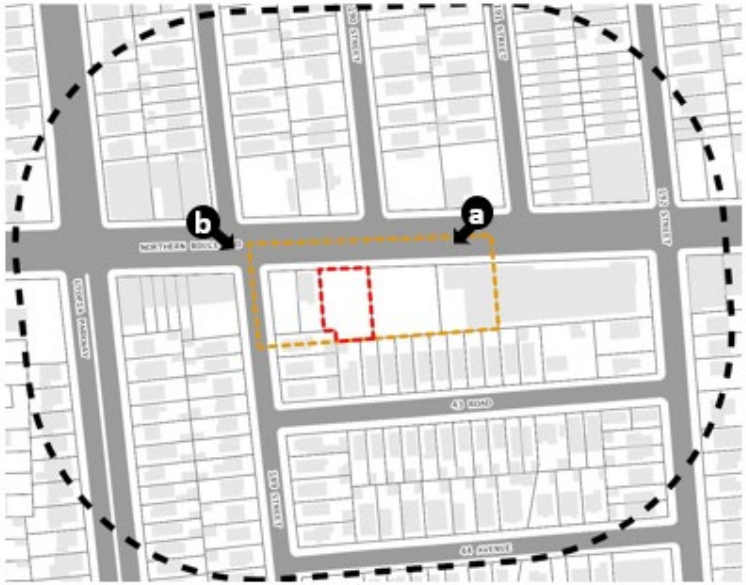
Figure 2.3-2: Pedestrian Views Along the Northern Boulevard of Project Site



a Looking southwest toward the Affected Area from across Northern Blvd.



b Looking southeast toward the Affected Area from across Northern Blvd.



Existing Views

Figure 2.3-3: No-Action View of the Development Site- View A



Figure 2.3-4: With-Action View of the Development Site- View A



Figure 2.3-5: No-Action View of the Development Site- View B



Figure 2.3-6: With-Action View of the Development Site- View B



Analysis

Future No-Action Condition

No changes to zoning are anticipated in the future without the Proposed Action within the Affected Area. The Affected Area would continue to be subject to R3-2 and R3X zoning districts.

Future With-Action Condition

The Applicant-owned Projected Development Site would be rezoned from R3-2 and R3X zoning districts to an R3-2/C2-4 zoning district. The proposed Zoning Map Amendment would permit a mixed-use commercial and community facility development on the Development Site to a maximum FAR of 1.60 under the proposed R3-2/C2-4 zoning district.

The building would be a new 3-story plus cellar, 30,190 GSF (14,863 ZSF; 1.51 FAR), mixed-use commercial and community facility building, which would include 4,459 GSF (4,459 ZSF; 0.45 FAR) of UG VI local retail space on the first floor, 5,202 GSF (5,202 ZSF; 0.53 FAR) of UG VII office space on the second floor, 5,202 GSF (5,202 ZSF; 0.53 FAR) of either a UG III(B) daycare center or a UG III(B) ambulatory diagnostic treatment center/ senior citizen center on the third floor, 1,023 GSF for building mechanicals on the roof, 2,157 GSF for commercial uses and 7,643 GSF for 20 off-street parking spaces at the cellar level, and 4,504 GSF of first floor space for 6 off-street parking spaces. It should be noted that though only 15 parking spaces are required (1 parking space per 1,000 sf of use), the RWCDS would assume 26 parking spaces per the Applicant's Proposed Development, which is beyond the minimum parking requirement.

Per the Applicant's Proposed Development, the building would provide an optional front open area with a depth of 10 feet along Northern Boulevard (a wide street with a width of approximately 100 feet). Accordingly, the proposed mixed commercial and community facility building would be compliant with the bulk regulations in ZR 33-441 (Alternate Front Setbacks). ZR 33-441 requires that any commercial or community facility buildings within C2 districts with bulk governed by R3 residential zoning districts would be subject to a sky exposure plane beginning at a maximum street wall height of 30 feet above the street line level with a vertical to horizontal ratio of 1.4 to 1 when an optional front open area with a depth of at least 10 feet is provided on wide streets. Meanwhile, per ZR 32-42 (Location Within Buildings), no commercial building or portion thereof occupied by non-residential uses listed under Use Groups VI through X shall exceed in height 30 feet or two stories, whichever is less. As a result, the first and second floors (commercial uses) of the proposed building would rise to 29'-9", which is close to the maximum permitted height of 30 feet, while the third floor would not setback and would continue to rise by 10'-6", reaching a total building height of 40'-3" without penetrating the required sky exposure plane.

Conclusions

The Proposed Action would result in a slight increase in the permitted bulk of buildings with the addition of 0.85 FAR of commercial space and/or community facility floor area. While available bulk will increase on the Projected Development Site, the available height will not increase and

a building of similar height to the proposed 40'-3" building could be constructed on the Projected Development Site in an as-of-right manner.

Thus, the Proposed Development would not adversely impact any of the constituent urban design elements or impact the overall character of the neighborhood. The Proposed Development would be consistent with the range of permitted uses east of the Primary Study Area. Therefore, the Proposed Action would not result in any significant adverse impact on the constituent elements of Urban Design, and a detailed analysis is not warranted.

Visual Resources

There are no significant visual resources within the vicinity of the Affected Area. The Proposed Action would not block any public view of a resource of significant aesthetic value. Therefore, it would not result in significant adverse impacts related to urban design and visual resources.

2.4 Hazardous Materials

According to the *CEQR Technical Manual*, the potential for significant impacts from hazardous materials can occur when: (a) hazardous material exists on a site, and (b) an action would increase pathways to their exposure, or (c) an action would introduce new activities or processes using hazardous materials.

Methodology

The hazardous materials assessment begins with a Phase I Environmental Site Assessment (ESA), which is a qualitative evaluation of the environmental conditions present at a site, based on a review of available information, site observations, and interviews. Pursuant to the 2021 *CEQR Technical Manual*, the Phase I ESA is conducted in accordance with the standards established by the current ASTM Phase I ESA Standard and includes research and field observations to determine whether the site may contain contamination from either past or present activities on the site or as a result of activities on adjacent or nearby properties. If a potential REC is identified during this assessment, then building any subsurface investigations are usually conducted as part of a Phase II ESA to confirm the presence and extent of the contamination.

Analysis

The Proposed Action, a Zoning Map Amendment to rezone Block 5513, Lots 10, 11, 12, 22, 27; and p/o of Lot 5 from an R3-2 and R3X zoning districts to an R3-2/C2-4 zoning district, would facilitate the development of Block 5513, Lot 11 with a new 3-story plus cellar, 30,190 GSF (14,863 ZSF; 1.51 FAR), mixed-use commercial and community facility building, which would include 4,459 GSF (4,459 ZSF; 0.45 FAR) of UG VI local retail space on the first floor, 5,202 GSF (5,202 ZSF; 0.53 FAR) of UG VII office space on the second floor, 5,202 GSF (5,202 ZSF; 0.53 FAR) of either a UG III(B) daycare center or a UG III(B) ambulatory diagnostic treatment center/ senior citizen center on the third floor, 1,023 GSF for building mechanicals on the roof, 2,157 GSF for commercial uses and 7,643 GSF for 20 off-street parking spaces at the cellar level, and 4,504 GSF of first floor space for 6 off-street parking spaces. It should be noted that although only 15 parking spaces are required (1 parking space per 1,000 sf of use), the RWCDS would assume 26 parking spaces per the Applicant's Proposed Development, which is beyond the minimum parking requirement.

Phase I ESA Summary

A Phase I ESA was conducted for the Development Site by Equity Environmental Engineering (EEE) in October of 2020. A copy of this report is included as **Appendix C-1**.

The purpose of a Phase I ESA is to determine whether any type of environmental hazard exists within or adjacent to the project site. Environmental hazards may include, but are not be limited to, hazardous/toxic wastes or raw chemicals stored, dumped, or spilled on the site, underground and above ground storage of petroleum or hazardous materials; asbestos within the building

materials/structures; and identification of potential off-site sources of hazardous waste contamination, such as industrial facilities adjacent to the subject property.

Recognized Environmental Conditions (RECs) are defined as the presence or likely presence of any hazardous substances or petroleum products under conditions that indicate an existing release, past release, or a material threat of a release into structures on the property or into the ground, groundwater, or surface waters of the property. De minimis RECs are those that do not present a threat to health or the environment and would not be the subject of an enforcement action by a government agency. All RECs, excluding de minimis RECs, were considered in the Phase I.

EEE has performed a Phase I ESA in conformance with the scope and limitations of ASTM Practice E 1527-13. The following conditions were observed:

The Subject Property is approximately 9,838 SF and is currently a paved parking lot with a chain link fence around the perimeter.

The following environmental conditions were identified:

A. Recognized Environmental Conditions (RECs)

No RECs were identified as a result of this assessment.

B. Controlled Recognized Environmental Conditions (CRECs)

No Controlled RECs were identified as a result of this assessment.

C. Historical Recognized Environmental Conditions (HRECs)

No Historic RECs were identified as a result of this assessment.

D. Vapor Encroachment Conditions (VECs)

The EDR Vapor Encroachment database identified several VECs (Vapor Encroachment Conditions) of concern within 1/10 of a mile of the Subject Property. These include a historic cleaner and historic auto upgradient of the Subject Property. Based on these findings, a vapor encroachment condition cannot be ruled out.

E. De Minimis Conditions

No, De Minimis Conditions were identified as a result of this assessment.

F. Data Gaps

Equity did identify one data gap that could affect its ability to identify Recognized Environmental Concerns (RECs) associated with the Subject Property. Equity was not able to physically enter the fenced in property and was only able to observe the site from the edges of the fenced area.

Equity's review of available information and observations of the subject and surrounding properties indicates that no RECs, CRECs, Historical RECs, or De Minimis conditions were identified as a result of this assessment, however, a VEC cannot be ruled out.

Based on the findings of the Phase I ESA, VECs were identified in relation to the Projected Development Site. Therefore, development of the Projected Development Site under the Proposed Action may have the potential for adverse impact related to hazardous materials and a Phase 2 ESA was undertaken, as summarized below.

Phase II Remedial Investigation Report Summary

A Phase II Site Investigation was performed on August 1, 8 and 16, 2022 by P.W. Grosser Consulting, Inc. Subsequently, a Remedial Investigation Report (RIR) was prepared (contained in **Appendix C-2**). The Phase II Site Investigation included the following activities:

1. Conducted a Site inspection to identify physical obstructions (i.e. subgrade obstructions, utilities, etc:);
2. Conducted a geophysical investigation to identify subsurface anomalies;
3. Installed four soil borings, SB001 to SB004, across the Site, and collected eight soil samples as follows:
    a. A soil sample was collected from the 0-2 foot interval at each boring to determine if pass site usage has impacted shallow soils.
    b. A soil sample was collected from the 18-20 foot interval at each boring to analyze soil quality at the proposed terminal depth of the planned excavation.
4. Installed one temporary groundwater monitoring well at the Site, GW001, to collect one groundwater sample for chemical analysis to evaluate groundwater quality beneath the site. The screen for the temporary well was set from 50 to 60 feet below grade to account for the water table which was identified to be at approximately 53 feet below grade.
5. Installed two soil vapor probes at the site, SV001 and SV002, to a depth of 12 feet below grade to investigate the potential for soil vapor intrusion at the basement slab level of the planned redevelopment.

The findings of the RIR are as follows:

1. Elevation of the property is approximately 68 feet above mean sea level.
2. Depth to groundwater was identified to be approximately 53 feet below grade.
3. Groundwater flow is estimated to be towards the northeast based on previous environmental assessments.
4. Soil samples collected during the Phase II ESA demonstrated that soil beneath the site meets Unrestricted Use Soil Cleanup Objectives (SCOs).
5. Groundwater samples collected during the Phase II ESA were compared to the Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards (AWQS) for groundwater.

a. No exceedances were detected for volatile organic compounds (VOCs).
b. No exceedances were detected for semi-volatile organic compounds (SVOCs)
c. No exceedances were detected for pesticides and/or polychlorinated biphenyls (PCBs)
d. Dissolve metals manganese (5,080 µg/L) and sodium (73,200 µg/L) were detected above the AWQS. Manganese and sodium are both naturally occurring compounds in groundwater beneath Long Island and are not believed to be indicative of point source or non-point source contamination.

6. Soil vapor samples collected during the Phase II ESA were compared to the New York State Department of Health (NYSDOH) Final Guidance for Evaluating Soil Vapor Intrusion matrices dated October 2006.
    a. Based on NYSDOH guidance for soil vapor intrusion, no VOCs were detected at concentrations which would require additional monitoring or mitigation.

Remedial Action Workplan Summary

A Remedial Action Workplan (RAWP) was prepared by P.W. Grosser Consulting, Inc. (provided in **Appendix C-3**) based on the findings of the RIR. The following tasks comprise the Remedial Action Plan:

1. Perform a Community Air Monitoring Program for particulates and volatile organic carbon compounds if excavated/exposed soils exhibiting visual and/or olfactory evidence of contamination are identified on site.
2. Removal of underground storage tanks and closure of petroleum spills in compliance with applicable local, State and Federal laws and regulations, if identified. (Note: The geophysical performed during the September 2022 Phase II ESA did not identify subsurface anomalies indicative of USTs)
3. Construction of a composite cover consisting of concrete building foundations to prevent human exposure to soil exceeding Unrestricted Use Soil Cleanup Objectives (SCOs), if identified at the site.
4. Installation of a vapor barrier system beneath the building slab and along foundation sidewalls to mitigate against potential future off-site soil vapor intrusion.
5. Based on the results of the Phase II ESA soil sampling, soil at the site meets NYSDEC Unrestricted Use SCOs and is therefore not a solid waste. If contaminated soil is identified during construction activities, impacted soil will be transportation off-Site for disposal at permitted facilities in accordance with applicable laws and regulations for handling, transport, and disposal of solid waste.
6. Periodic screening of excavated soil during intrusive work for indications of contamination by visual means, odor, and monitoring with a PID.

7. Site mobilization involving Site security setup, equipment mobilization, utility mark outs and marking & staking excavation areas.
8. Implementation of storm-water pollution prevention measures in compliance with applicable laws and regulations.
9. Submission of a Closure Report (CR) that describes remedial activities, if any, certifies that remedial requirements have been achieved, and lists changes from this RAP.

Conclusion

With the above remedial measures in-place, the potential for significant environmental impact associated with hazardous materials would be mitigated for the Projected Development Site. Accordingly, the Proposed Action would not result in the potential for significant adverse impact related to Hazardous Materials.

2.5 Air Quality

Ambient air quality describes pollutant levels in the surrounding environment to which the public has access. The impact of air pollutants emitted by motor vehicles (mobile source) and by fixed facilities (stationary source) are analyzed to assess potential health hazards due to ambient air quality, where the effects of both the proposed project on ambient air quality and the ambient air quality effect on the proposed project are considered. The analysis framework, as mandated by the State Environmental Review Act, follows the *New York City Environmental Quality Review 2021 Technical Manual (CEQR TM)*. The potential air quality impacts of the resulting emissions are estimated following the procedures and methodologies prescribed in the *CEQR TM*:

- *The potential for changes in vehicular travel associated with Proposed Project activities to result in significant mobile source (vehicular related) air quality impacts.*
- *The potential for an atypical (e.g., not at-grade) source of vehicular pollutants to significantly impact the Proposed Project.*
- *The potential for emissions from the heating, ventilation, and air conditioning (HVAC) systems of the Proposed Project to significantly impact nearby planned and/or existing land uses.*
- *The potential for air toxic emissions released from existing industrial facilities to significantly impact the Proposed Project.*
- *The potential for significant air quality impacts from the emissions of facilities that require Prevention of Significant Deterioration permits (Title V), and facilities which require a state facility permit to significantly impact the Proposed Project.*
- *The potential for facilities' malodorous emissions to unreasonably interfere with the proposed project's occupant's comfortable enjoyment of life or their property.*

Project Description

The Applicant is seeking to develop a new 3-story plus cellar, 30,190 GSF (14,863 ZSF; 1.51 FAR), mixed-use commercial and community facility building, which would include 4,459 GSF (4,459 ZSF; 0.45 FAR) of UG VI local retail space on the first floor, 5,202 GSF (5,202 ZSF; 0.53 FAR) of UG VII office space on the second floor, 5,202 GSF (5,202 ZSF; 0.53 FAR) of either a UG III(B) daycare center or a UG III(B) ambulatory diagnostic treatment center/ senior citizen center on the third floor, 1,023 GSF for building mechanicals on the roof, 2,157 GSF for commercial uses and 7,643 GSF for 20 off-street parking spaces at the cellar level, and 4,504 GSF of first floor space for 6 off-street parking spaces. It should be noted that though only 15 parking spaces are required (1 parking space per 1,000 sf of use), the RWCDS would assume 26 parking spaces per the Applicant's Proposed Development, which is beyond the minimum parking requirement.

Methodology & Standards

Air Pollutants and Applicable Standards/Guidelines

National Air Quality Standards

The U.S. Environmental Protection Agency (EPA) has identified six pollutants, known as criteria pollutants which are being of concern nationwide, and established threshold concentration based upon adverse effect on human health. The six pollutants and their characteristics are:

> *Carbon Monoxide (CO) is mainly produced by motor vehicles from the incomplete combustion of gasoline. The impact of CO on the ambient air is analyzed next to roadways, intersections, parking lots, and parking garages vents as these locations are the most affected.*
>
> *Nitrogen Dioxide (NO_2) is a main concern related to the burning of natural gas. Emitted NOx from the burning of fossil fuel gradually convert to NO_2 in a chemical reaction that is affected by ozone concentration and the presence of sunlight. In a micro scale analysis, buildings HVAC systems are analyzed for NO_2 impact.*
>
> *Ozone (O_3) is formed by chemical reaction between hydrocarbons and nitrogen oxides and its impact is analyzed on a regional scale by monitoring stations.*
>
> *Lead (Pb) in the ambient air is monitored on a regional level. In a project scale analysis, impact due to Lead concentration levels are analyzed if a new source, such as lead smelters, is introduced into the environment or if a project is located next to a lead emitter.*
>
> *Particulate Matter emissions are associated with both stationary sources and mobile sources. Two sizes of particulate matters are analyzed: Inhalable Particles (PM_{10}) and Fine Particulate Matter ($PM_{2.5}$), where the subscript number refers to the diameter of the particulate matter in micrometers.*
>
> *Sulfur Dioxide (SO_2) emission is principally associated with stationary sources that use oil or coal as the fossil fuel for the equipment. These fuels contain sulfur that bond to oxygen atoms in the burning process.*

As required by the Clean Air Act, National Ambient Air Quality Standards (NAAQS) have been established for the criteria pollutants by EPA, and New York State has adopted the NAAQS as the State ambient air quality standards.

NO_2 NAAQS

Nitrogen oxide (NO_x) emissions from gas combustion consist predominantly of nitric oxide (NO) at the source. The NO_x in these emissions are then gradually converted to NO_2, which is the

pollutant of concern, in the atmosphere (in the presence of ozone and sunlight as these emissions travel downwind of a source).

The 1-hour NO_2 NAAQS standard of 0.100 ppm (188 μg/m^3) is the 3-year average of the 98th percentile of daily maximum 1-hour average concentrations in a year. For determining compliance with this standard, the EPA has developed a modeling approach for estimating 1-hour NO_2 concentrations that is comprised of three tiers: Tier 1, the most conservative approach, assumes a full (100%) conversion of NO_x to NO_2; Tier 2 applies a conservative ambient NOx/NO_2 ratio of 80% to the NO_x estimated concentrations; and Tier 3, which is the most precise approach, employs AERMOD's PVMRM module. The PVMRM accounts for the chemical transformation of NO emitted from the stack to NO_2 within the source plume using hourly ozone background concentrations. When Tier 3 is utilized, AERMOD generates 8th highest daily maximum 1-hour NO_2 concentrations or total 1-hour NO_2 concentrations if hourly NO_2 background concentrations are added within the model.

Per the *CEQR TM*, a Tier 1 approach is initially applied, followed by a Tier 2 application of NO_x/NO_2 ratio of 80% to the NO_x modeled concentration to determine whether a violation of the NAAQS is likely to occur. A less conservative Tier 3 approach is then applied if exceedances of the 1-hour NO_2 NAAQS were estimated.

The annual NO_2 standard is 0.053 ppm (100 μg/m^3). In order to conservatively estimate annual NO_2 impacts, a NO_2 to NO_x ratio of 0.75 percent, which is recommended by the NYCDEP for an annual NO_2 analysis, was applied.

New York State Standards

As mentioned, New York State has adopted the national standard, NAAQS. In addition, the New York State Department of Environmental Conservation (NYSDEC) has established guidelines for maximum allowable concentration of "noncriteria pollutants," which are potentially toxic or carcinogenic pollutants. The maximum allowable guidelines set a maximum 1-hour and annual averaging time concentrations and are published in the DAR-1 AGC/SGC Table, where AGC/SGC refers to Annual and Short-term Guideline Concentrations. The most recent DAR-1 guidelines were created on February 12, 2021.

NYSDEC also regulates pollutants that produce discomfort due to odors, where significant discomfort is evaluated on quantity, characteristic or duration.

NYC Interim Guidelines

In addition to the NAAQS, the *CEQR TM* requires that projects subject to CEQR apply a $PM_{2.5}$ and CO 8-hour averaging time significant impact criteria (based on concentration increments). These criteria are named *de minimis* and they are more stringent than the NAAQS, and the state standards as the *de minimis* concentrations set a maximum increase of pollutant concentration that is below the national standard. If the estimated impacts of a proposed project are less than

the *de minimis* criteria, the impacts are not considered to be significant. As outlined in the *CEQR TM,* $PM_{2.5}$ significant impacts are evaluated as follow:

- *Predicted 24-hour maximum $PM_{2.5}$ concentration increase of more than half the difference between the 24-hour background concentration and the 24-hour standard; or*
- *Predicted annual average $PM_{2.5}$ concentration increments greater than 0.3 µg/m^3 at any receptor location for stationary sources.*

Background Concentrations

Determination of significant impact criteria is evaluated by adding the background concentrations at the nearest NYSDEC monitoring station to the concentrations of criteria pollutants in the ambient air of the existing and planned land uses.

Background concentrations of NO_2, SO_2, and $PM_{2.5}$ —the criteria pollutants of main concern for HVAC systems fueled by Fuel Oil #2—were obtained from the NYSDEC's annual report for 2020 at the nearest monitoring stations (JHS 126 and Queens College 2). **Table 2.5-1** shows the background concentrations and the NAAQS.

Table 2.5-1: Background Concentrations at the Nearest Monitoring Stations

Pollutant	Averaging Period	National and State Standards	Background Concentration	Monitoring Station
NO_2	98th Percentile of Daily Maximum 1-hour averaged over last 3 years	188 µg/m^3	53.1 ppb (99.85 µg/m^3)	Queens College 2
	Annual Arithmetic Mean	100 µg/m^3	14.79 ppb (27.81 µg/m^3)	
$PM_{2.5}$	24-Hour average of 98th percentile for last 3 years	35 µg/m^3	18.7 µg/m^3	JHS 126
	Average of last 3 years annual means	12 µg/m^3	7.6 µg/m^3	

The *de minimis* criteria for $PM_{2.5}$ was evaluated as described in the NYC Interim Guidelines. The concentrations increments are presented below:

- 24-hour $PM_{2.5}$ 8.15 µg/m^3
- Annual $PM_{2.5}$ 0.3 µg/m^3

Analysis

Mobile Sources

Projects may result in significant mobile source impacts when they create mobile sources of pollutants, change traffic patterns, or add new uses near mobile sources of pollutants. Per CEQR guidelines, a detailed analysis is conducted to predict whether the Proposed Action 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 ambient air CO and PM_{10}/$PM_{2.5}$ concentrations—the mobile source pollutants of concern—and compare the modeled concentrations with the applicable air quality standard.

Project-Generated Traffic

Per the *CEQR TM*, localized increases in CO and $PM_{2.5}$ levels may result from increased vehicular traffic volumes and changed traffic patterns in the study area as a consequence of the Proposed Development. As such, screening analyses for CO and $PM_{2.5}$ were carried out to determine whether the project-generated traffic has the potential to cause significant impacts.

According to the NYSDOT road functional classification and the traffic data, Northern Blvd is classified as a principal arterial road. To get a conservative analysis result, a maximum of 50 incremental vehicular trips is assumed to be induced by the Proposed Action, which is equivalent to 2 HDDV trips and is under the screening threshold of 23 for the principal arterial road. As such, detailed mobile source impact analysis is not warranted. Therefore, the Proposed Action has no potential for adverse impacts related to mobile source air emissions.

Parking Garage

Based on CEQR recommendations, the maximum capacities of parking garages are evaluated with a threshold criterion to predict whether the potential impacts associated with mobile source emissions are significant. The threshold criteria level, per CEQR guidelines, is 85 off-street parking spaces. If the threshold is met or exceeded, a detailed analysis is warranted. As discussed above, the Proposed Action would facilitate 26 parking spaces in Projected Development Site. The number of parking spaces do not exceed the parking spaces threshold criterion. Therefore, no detailed air quality analysis is required, and no significant mobile source air quality impacts are expected as a result of the parking facilities.

Existing Mobile Sources of Pollutant

According to *CEQR Technical Manual*, projects that would result in new sensitive uses within 200 feet of an atypical roadways or near an existing parking facility may result in significant mobile source air quality impacts. These impacts are estimated at sensitive receptors located at air intakes, operable windows, and terraces of the receptor building. There is no atypical roadway

within 200 feet of the proposed project, and there are no large parking facilities located near the proposed project. Therefore, no analysis was required, and no mobile source significant adverse air quality impacts are expected to the proposed project from vehicular emission generated at an existing nearby mobile source of pollutant.

Stationary Sources

According to CEQR, an action can result in stationary source air quality impacts when it creates new stationary sources of pollutants such as emission stacks for industrial plants, hospitals, or other large institutional uses, or even building boilers- that can affect surrounding uses, or when they introduce sensitive uses near existing (or planned future) emissions stacks, and the new uses might be affected by the emissions from the stack.

Project HVAC Systems Analysis

The HVAC analysis considers the potential for emissions from the HVAC systems of the proposed development to significantly impact existing land uses (*project-on-existing*) within 400 feet, and**,** if multiple buildings are proposed, the potential of each or all the proposed developments to significantly impact each other (*project-on-project*).

As outlined in the *CEQR TM*, the analysis of buildings' HVAC systems follows stationary sources methodology; a preliminary screening analysis is to be conducted as a first step to predict whether the potential impacts of the heat and hot water system boiler emissions can be significant. 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.

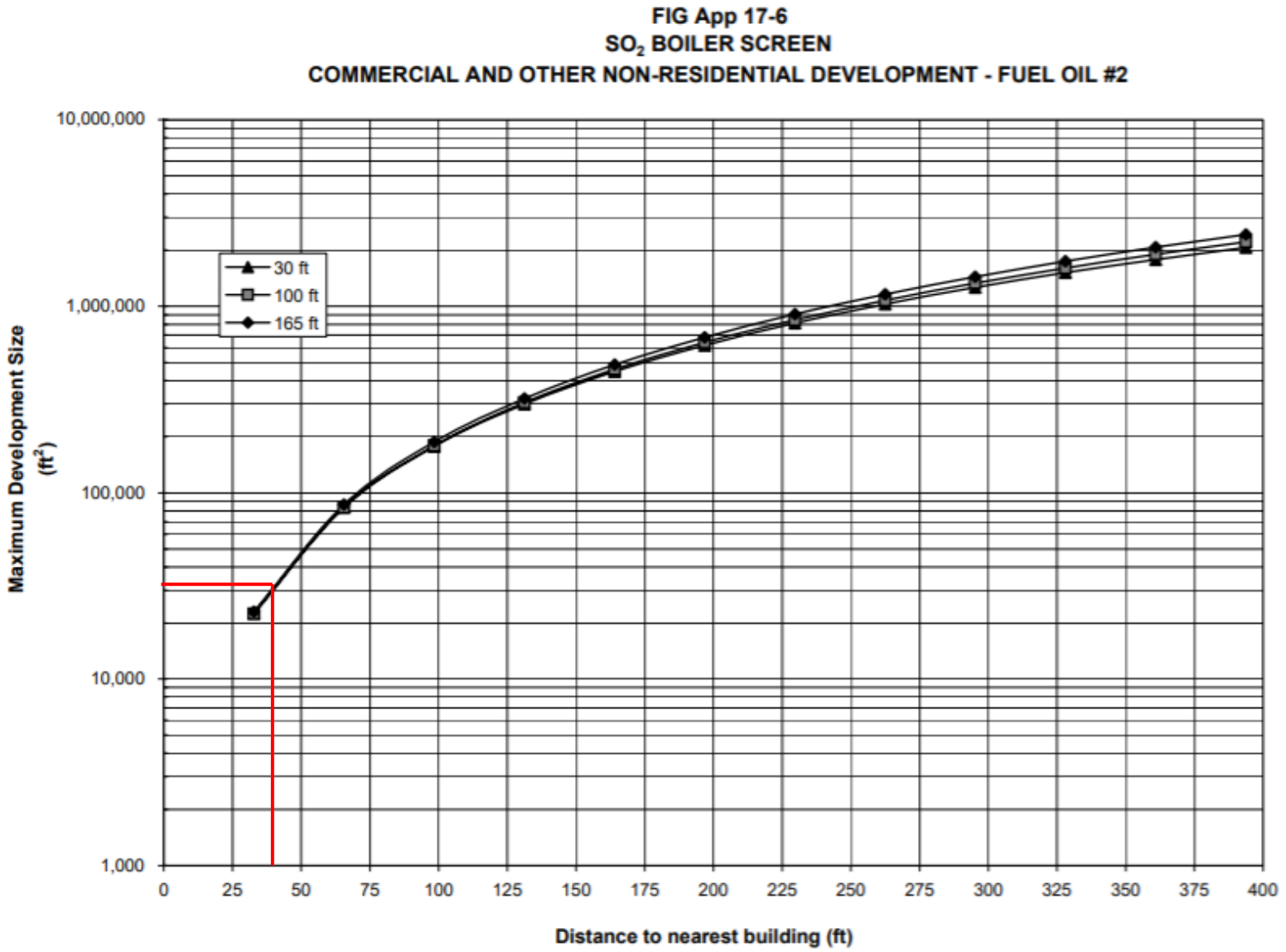
A new stationary source of emissions (HVAC System) would be introduced as a result of the Proposed Action. The Proposed Development would consist of a 3-story plus cellar, 40'-3"-tall mixed-use building, which for purposes of a conservative assessment, is assumed that it would use fuel oil #2 for its heat and hot water system. The building would contain commercial retail, commercial office, and medical office uses. There is no need for a *project-on-project* analysis because the proposed action consists of a single building.

A screening (*project-on-existing)* analysis was performed for a non-residential development HVAC fueled by fuel oil #2 to determine if the proposed HVAC system has the potential for adverse stationary source impacts on adjacent receptors.

Impacts from boiler emissions at the Projected Development Site are a function of fuel oil type, stack height, the minimum distance from the source to the nearest building, and square footage of the development. The proposed 30,190 GSF development would be heated by fuel oil #2 HVAC system, venting on the roof at a height of approximately 38-feet. The Project Site development size was plotted on the nomograph for non-residential developments utilizing fuel oil #2 depicted in Figure 17-6 of the *CEQR Technical Manual Appendix* (**Figure 2.5-1** below). This nomograph

indicates the minimum distance between the projected development and buildings of a similar or greater height to avoid a potential air quality impact. Per the *CEQR Technical Manual*, the CEQR nomographs for a 100-foot stack height was applied as the 100-foot curve height is closest to, but not higher than, the proposed stack height of the proposed building.

Figure 2.5-1: Projected Development Site Minimum Distance – HVAC Screen Nomograph



The screening analysis **Figure 2.5-1** nomograph shows that a detailed analysis is required if a building of similar or greater height is 35 feet or closer from the Proposed Development. A review of existing land uses within 400 feet of the Projected Development Site shows no buildings are of similar or greater height than the Proposed Development. The nearest building of similar or greater height is a 35-foot commercial retail use building located at Queens Block 6258, Lot 40 (42-99 Francis Lewis Blvd). The building on the property is approximately 1,680 feet to the east of the Projected Development Site. The Proposed Development is too far to cause an impact to the nearest similar sized building, and no further HVAC Stationary assessment is warranted and no significant adverse impacts are expected.

E-Designation (E-708)

An (E) designation for the use of natural gas and the minimum stack height is required for the Projected Development Site to prevent the potential impact of the HVAC source air pollution. The E-Designation language related to HVAC source air quality is as follows:

Block 5513, Lot 11 (Projected Development Site): Any new commercial and/or community facility development on the above-referenced property must ensure the heating, ventilating, and air conditioning (HVAC) system and hot water equipment stack is located at the highest tier and at least 38 feet above grade to avoid any potential significant adverse air quality impacts.

With this (E) designation in place, no significant adverse impacts on air quality related to HVAC systems are expected, and no further analysis is warranted.

Industrial Emissions Sources

400-Foot Study Area

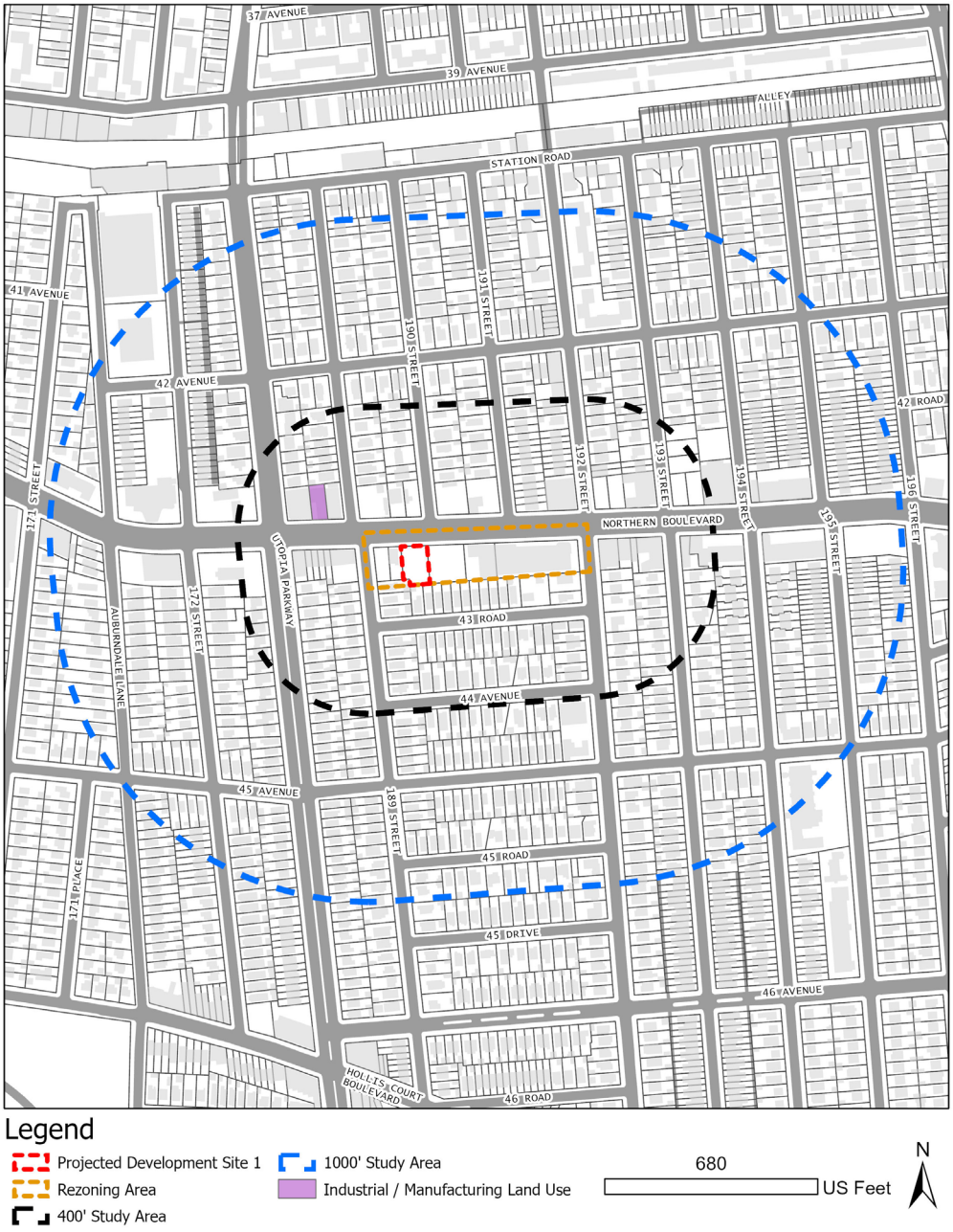
A search of potential industrial sites was performed to identify any NYC DEP, and USEPA1 Air Quality Permits issued within 400 feet of the Affected Area. The potential uses are preliminarily identified as manufacturing or industrial based on NYCDCP MAPPLUTO database. This search was performed to determine if hazardous air toxics would have the potential to impact the proposed development.

As shown in **Figure 2.5-2** below, one site was identified as potentially manufacturing or industrial in nature. All sites within the 400-foot radius were additionally screened using the DEP CATS database to find any registered industrial permits. No sites within the 400-Foot Study Area had active industrial permits that triggered or warranted an industrial emissions analysis. Therefore, no further analysis is needed and no significant adverse impacts are expected.

1,000-Foot Study Area

The surrounding area within a radius of 1,000 feet of the Affected Area was also screened for potential large or major industrial emission sources. Based on the search on NYS DEC info Locator[7] and reviews of DCP land use maps, no large and major emission sources were identified (see **Figure 2.5-2**).

Figure 2.5-2: Industrial Emissions Screening



[7] https://gisservices.dec.ny.gov/gis/dil/

2.6 Noise

Introduction

The Proposed Action would create noise-sensitive residential development. Therefore, an assessment of the potential for adverse effects on project occupants from ambient noise is warranted. The projected development would not create a significant stationary noise generator. Additionally, project-generated traffic would not double vehicular traffic on nearby roadways, and therefore would not result in a perceptible increase in vehicular noise. Therefore, this noise assessment is limited to an assessment of ambient noise that could adversely affect occupants of the development. Noise readings were collected at 167-17 Northern Boulevard as part of a separate action in June 2016. The readings are at a similar location and will be applied to the Project Site. Per the NYS Traffic Data, the traffic volumes on Northern Boulevard are very similar between 2011 and 2019, therefore, the traffic volumes in 2016 are assumed similar to the traffic volumes in 2019 and now.

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 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 2.6-1: Noise Levels of Common Sources

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

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

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

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

- L_{eq} is the continuous equivalent sound level. The sound energy from the fluctuating SPLs is averaged over time to create a single number to describe the mean energy, or intensity, level. High noise levels during a measurement period will have a greater effect on the L_{eq} than low noise levels. L_{eq} has an advantage over other descriptors because L_{eq} values from various noise sources can be added and subtracted to determine cumulative noise levels.
- Lmax is the highest SPL measured during a given period of time. It is useful in evaluating Leqs 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 2.6-2** 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 2.6-3** 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 2.6-2: Noise Exposure Guidelines for Use in City Environmental Impact Review

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

Notes:

(i) In addition, any new activity shall comply with Impact Thresholds detailed in Section 410.

[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 as 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 DNL contours supplied by the Port Authority of New York and New Jersey (PANYNJ), or the noise contours may be computed from the federally approved Aviation Environmental Design Tool (AEDT) Computer Model using flight data supplied by the PANYNJ.

[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 listed by octave bands).

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

Table 2.6-3: Attenuation Values to Achieve Acceptable Interior Noise Levels

	Marginally Unacceptable				Clearly Unacceptable
Vehicular Traffic	70 < L10 ≤ 73	73 < L10 ≤ 76	76 < L10 ≤ 78	78 < L10 ≤ 80	80 < L10
Aircraft[A]	65 < DNL ≤ 68	68 < DNL ≤ 71	71 < DNL ≤ 73	73 < DNL ≤ 75	75 < DNL
Train	65 < Ldn ≤ 68	68 < Ldn ≤ 71	71 < Ldn ≤ 73	73 < Ldn ≤ 75	75 < Ldn
Attenuation[B]	(i) 28 dB(A)	(ii) 31 dB(A)	(iii) 33 dB(A)	(iv) 35 dB(A)	See Note c

Note:

A. DNL descriptor based on average values of Ldn over a year period.
B. The above composite window-wall attenuation values are for residential dwellings and community facility development. Commercial office spaces and meeting rooms would be 5 dB(A) less in each category. All of the above categories require a closed window situation and hence an alternate means of ventilation.
C. The required attenuation value is the difference between Lbuild and Linterior,, using the appropriate noise descriptor Where:
Lbuild is the projected noise level under the build condition rounded up to the whole number
Linterior is the designed interior noise level (45 dB(A) for vehicular noise, 40 dB(A) for aircraft and train noise)

Source: 2021 CEQR Technical Manual

Measurement Location and Equipment

Measurements collected by Equity Environmental Engineering at 167-17 Northern Boulevard in June 2016 will be utilized for the Project Site. Per the NYS Traffic Data, the traffic volumes on Northern Boulevard are very similar between 2011 and 2019, therefore, the traffic volumes in 2016 are assumed similar to the traffic volumes in 2019 and now.

Because the predominant noise sources in the area of the Proposed Development consist of vehicular traffic, noise monitoring was conducted during peak weekday vehicular travel periods (AM, Midday, PM) on a typical midweek day. Pursuant to *CEQR Technical Manual* Methodology, one (1) measurement was collected for 20-minute periods: Location One (1) was collected along Northern Boulevard between 168th and 167th Street. This location is similar to the Project Site. The noise monitoring location is shown in **Figure 2.6-1 and Figure 2.6-2** below.

Noise monitoring was conducted using a using Type 2 Casella CEL-633C sound level meter with wind screen. The monitor was placed on a tripod at a height of approximately five 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.

Figure 2.6-1: Noise Monitoring Locations

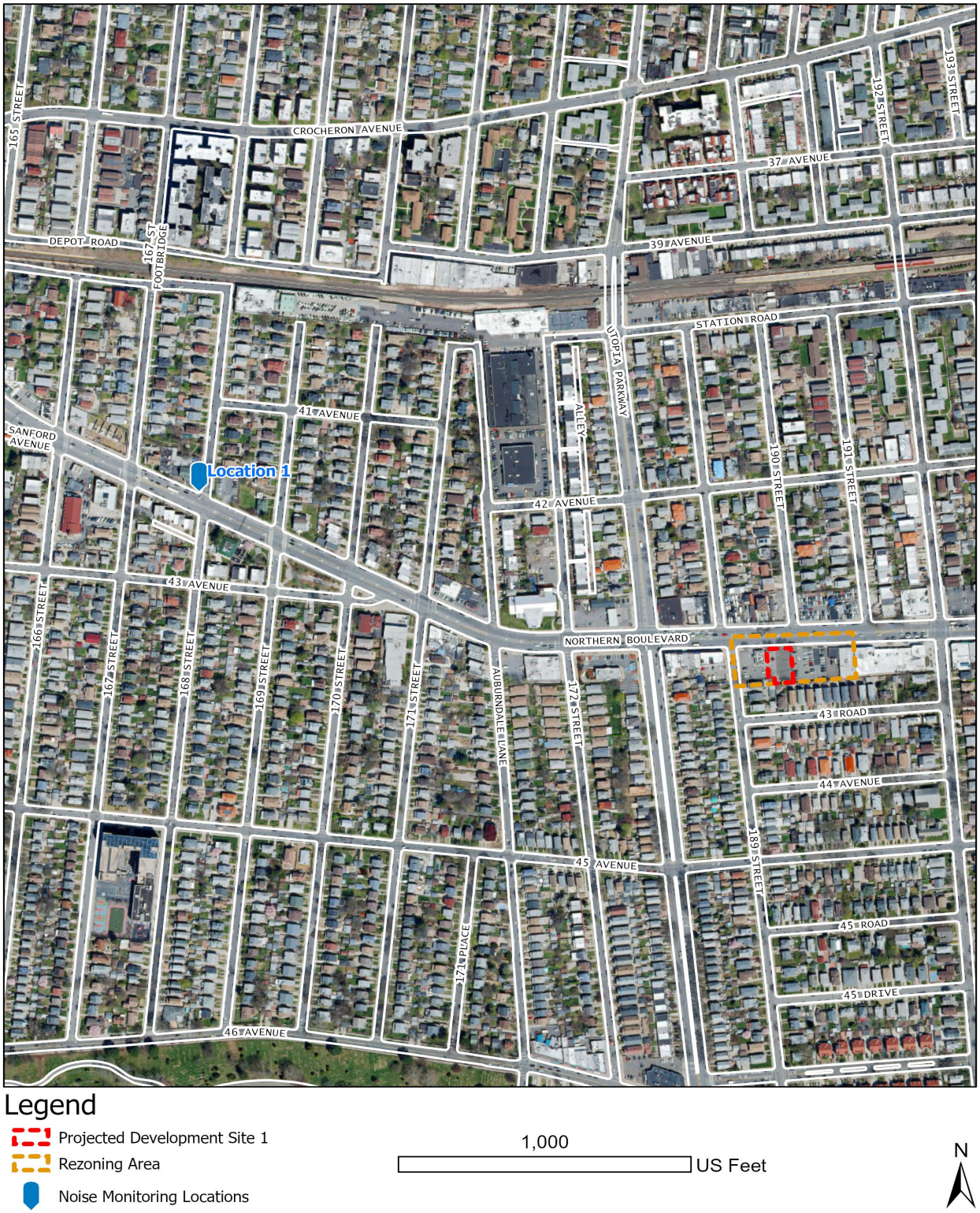


Figure 2.6-2: Noise Monitoring Location 1 – Northern Boulevard



Measurement Conditions

Monitoring was conducted during typical midweek conditions, on Thursday, June 16, 2016. The weather was dry and wind speeds were moderate during all monitoring periods. The sound meter was calibrated before and after each monitoring session.

Existing Conditions

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

Table 2.6-4 below contains the results for the measurements taken at Location 1:

Table 2.6-4 *Noise Levels (dB) at Location 1*			
Thursday, June 16th, 2016			
Time	**8:28 am – 8:48 am**	**12:00 pm – 12:20 pm**	**5:05 pm – 5:25 pm**
L_{max}	92.3	86.9	89.7
L_{10}	**76.5**	**75.5**	**76.5**
L_{eq}	**73.4**	**71.9**	**73.3**
L_{50}	71.5	70.0	72.0
L_{90}	59.5	51.5	58.0
L_{min}	51.3	46.6	45.2

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

Table 2.6-5 below contains the traffic counts and classifications collected at Location 1:

Table 2.6-5: Location 1 Traffic Volumes and Vehicle Classifications

	8:28 am – 8:48 am	**12:00 pm – 12:20 pm**	**5:05 pm – 5:25 pm**
Car/ Taxi	246	206	329
Van/Light Truck/SUV	406	339	436
Heavy Truck	23	25	24
Bus	17	12	22

Stationary Source Analysis

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 Action would not result in any significant adverse noise impacts related to building mechanical equipment.

Determination of Impacts/Building Attenuation Requirements

The 2021 *CEQR Technical Manual* contains noise exposure guidelines. For a residential/community facility use such as would occur under the Proposed Action, an L_{10} of between 65 and 70 dB(A) is identified as marginally acceptable general external exposure. An L_{10} of between 70 and 80 dB(A) is identified as marginally unacceptable general external exposure.

The highest recorded L_{10} at Location One (1) was 76.5 dB(A) during the morning monitoring period.

Based on the noise monitoring results, an E-Designation (E related to noise is to be placed on the Projected Development Site as follows:

E-Designation (E-708)

Projected Development Site 1 (Block 5513 / Lot 11): In order to ensure an acceptable interior noise environment, future residential, community facility and/or commercial uses must provide a closed-window condition with a minimum of 33 dB(A) window/wall attenuation on all facades to maintain an interior noise level no greater than 45 dB(A) for residential and community facility uses or no greater than 50 dB(A) for commercial uses. To maintain a closed-window condition, an alternate means of ventilation must be provided. Alternate means of ventilation includes, but is not limited to central air conditioning.

2.7 Neighborhood Character

Neighborhood character, as defined in the *CEQR Technical Manual*, is considered to be an amalgam of the various elements that give a neighborhood its distinct personality. These elements include land use, socioeconomic conditions, historic and cultural resources, urban design and visual resources, transportation, noise, and open space, as well as any other physical or social characteristics that help to define a community. Not all these elements affect neighborhood character in all cases; a neighborhood usually draws its distinctive character from a few defining features.

According to the *CEQR Technical Manual*, if a project has the potential to result in any significant adverse impacts on any of the above technical areas, a preliminary assessment of neighborhood character may be appropriate. A significant impact identified in one of these technical areas is not automatically equivalent to a significant impact on neighborhood character; rather, it serves as an indication that neighborhood character should be examined.

In addition, depending on the project, a combination of moderate changes in several of these technical areas may potentially have a significant effect on neighborhood character. As stated in the *CEQR Technical Manual*, a "moderate" effect is generally defined as an effect considered reasonably close to the significant adverse impact threshold for a particular technical analysis area. When considered together, elements may have the potential to significantly affect neighborhood character. Moderate effects on several elements may affect defining features of a neighborhood and, in turn, a pedestrian's overall experience. If it is determined that two or more categories may have potential 'moderate effects' on the environment, CEQR states that an assessment should be conducted to determine if the Proposed Development result in a combination of moderate effects to several elements that cumulatively may affect neighborhood character. If a project would result in only slight effects in several analysis categories, then further analysis is generally not needed.

This chapter reviews the defining features of the neighborhood and examines the Proposed Action's potential to affect the neighborhood character of the surrounding study area. The study area is generally coterminous with the study area used for the land use and zoning analysis in chapter 2. The impact analysis of neighborhood character that follows below focuses on changes to the technical areas listed above that exceeded CEQR preliminary screening thresholds that were assessed in this EAS Short Form.

The assessment begins with a review of existing conditions and the neighborhood of the study area. The information is drawn from the preceding sections of this EAS but is presented in a more integrated way. While the other sections present all relevant details about aspects of the environmental setting, the discussion for neighborhood character focuses on a limited number of important features that gives the neighborhood its own sense of place and that distinguish them from other parts of the city. A concise discussion of the changes anticipated by the 2028 analysis year under the Future No-Action Condition is then included. A brief overview of the Proposed Development is then presented, along with an analysis of whether any anticipated

significant adverse impacts and moderate adverse effects, regarding the relevant technical CEQR assessment categories for neighborhood character, would adversely affect any of the defining features.

2.7.1 Existing Conditions

Land Use Study Area

As shown in **Figure 2.1-1** and stated in **Section 1.3**, the surrounding area is a mix of commercial and residential buildings.

On the block of the Affected Area, Block 5513, there are 15 lots occupied by one or two-family buildings built between 1930 and 1955 that range in height slightly from 2- to 2.5-stories.

Block 5514 to the south is entirely occupied by low-density residential buildings that include 31 lots with one or two-family homes that range in height from 2- to 2.5-stories tall and were all built between 1920 and 2010 with the majority built in 1920. There are also three lots occupied by multifamily walkup buildings that are all 2-stories and were built between 1925 and 1950.

West of Block 5513, across 189th Street, is Block 5512 that is largely within the 400-ft Study Area. The portion of Block 5512 that is within the study area comprised of 22 lots occupied by single and two-family homes that range in height from 1- to 2.5 stories and were constructed between 1930 and 1935. The northern portion of Block 5512 with frontage along Northern Boulevard is occupied by three lots with 2-story commercial buildings constructed between 1920 and 1930 as well as three lots occupied by three 2-story mixed commercial residential buildings with two constructed around 1920 and one constructed in 2004.

North of the Affected Area, across Northern Boulevard, there are four blocks with more than half of their areas within the 400-ft Study Area. Block 5364, between Utopia Parkway and 189th Street, includes 10 lots that are occupied by one- and two-family homes ranging from 2- to 2.5-stories in height and constructed between 1925 and 1998; two commercial or office buildings ranging between 1- and 2-stories in height that were constructed in 1950 and 1971; and one 1-story industrial/manufacturing building constructed in 1950.

Between 189th Street and 190th Street is Block 5365 that includes 12 lots with one- and two-family homes ranging in height between 1.5- and 2.5-stories tall and constructed between 1901 and 1965; one 1-story commercial building constructed in 1950; one 2.5-story tall mixed commercial and residential building constructed in 1930; and one vacant lot.

Between 190th Street and 191st Street is Block 5366 that includes 11 lots with one- and two-family homes ranging in height between 2- and 2.5-stories that were constructed between 1930 and 1960. Block 5366 and two commercial lots that include one 1-story building that was constructed in 1961.

Between 191st Street and 192nd Street is Block 5367 that includes 22 lot with one- and two-family homes ranging in height from 2- and 2.5-stories that were constructed between 1930 and 2017 with the vast majority of the homes built in 1950. Block 5367 is also occupied by one 1-story commercial building constructed in 1963.

Affected Area

As noted earlier, the Affected Area consists of Lots 10, 11, 12, 22, 27, and p/o Lot 5 on the northern side of Block 5513 with a total area of 73,422 SF. Apart from Lot 5, all lots within the Affected Area have frontage along Northern Boulevard. The land use of the Affected Area includes three lots that are occupied by one-story commercial buildings; one two-family home; and two lots serving as parking lots or that are vacant.

Existing zoning districts in the Surrounding Area include:

R3-2

R3-2 districts are low-density non-contextual residential districts designed to provide for all types of residential buildings. R3-2 districts permit a variety of housing types, including detached, semi-detached, and attached one- and two-family homes, as well as low-rise multifamily buildings. These districts also include community facilities and open uses which serve the residents of these districts or benefit from a residential environment. R3-2 districts permit the following Use Groups: UGs I, II, III(A), III(B), IV(B), IV(C).

R3-2 districts require a minimum lot area of 2,850 square feet, and a minimum lot width of 30 feet. The amount of required open space on residential lots in R3-2 districts is governed by yard requirements. New single or two family detached homes must have two side yards totaling at least five feet, but there is no minimum width requirement for either one. R3-2 districts also permit semi-detached and zero lot line buildings which are set along a side lot line, and require one side yard at least five feet wide, subject to certain modifications per ZR Section 23-33. For all other residences, no side yards are required subject to certain modifications per ZR Section 23-33. The front yard of a new home must be at least 15 feet deep. For qualifying residential sites with a lot width of at least 150 feet, and for corner lots the front yard depth may be reduced by five feet, except that a front yard shall be no shallower than 5 feet. The minimum required rear yard depth is 20-30 feet, subject to modifications pursuant to ZR Section 23-343.

The maximum FAR is 0.75 for standard zoning lots or 1.0 for qualifying residential sites. The maximum community facility FAR is 1.0. The maximum height of a residential building is governed by either a pitched roof or a flat roof envelope. For the pitched roof envelope, the height of a building is governed by a perimeter wall height of 25 feet before additional height must conform to the sky exposure plane. Above the 25-foot perimeter wall height, sloping planes control the maximum height of the building or other structure requiring either a setback or a pitched roof. These planes start at the maximum permitted height

of the perimeter walls and meet at a ridge line of 35 feet above the base plane. For a flat roof envelope, the maximum permitted height is 35 feet. For qualifying residential sites and qualifying senior housing, the maximum building and base height is 35 feet.

Parking requirements vary depending on the use and transit zone designation. In the Inner Transit Zone, one off-street parking space is required for each standard market dwelling unit within multiple dwellings, while no parking is required for affordable dwelling units and qualifying senior units. In the Outer Transit Zone, parking is required for 35% of all standard market dwelling units, while no parking is required for affordable dwelling units and qualifying senior units, and can be waived if 5 spaces or fewer are required. Beyond the Greater Transit Zone, parking is required for 50% of market rate and affordable dwelling units, and 10% of qualifying senior units; here, parking can be waived if fewer than 1 space is required. In the Outer Transit Zone and beyond the Greater Transit Zone the following applies: For qualifying residential sites parking is waived where the number of dwelling units is 75 or less. For zoning lots existing on December 5, 2024 where the lot width is 25 feet or less, no parking shall be required.

R3X

R3X contextual districts, mapped extensively in lower-density neighborhoods, permit only one- and two-family detached residences on zoning lots as narrow as 30 feet in width and 2,850 square feet in lot area. These districts also include community facilities and open uses that serve the residents of these districts or benefit from a residential environment. Forest Hills in Queens and Prince's Bay and Westerleigh in Staten Island are typical R3X neighborhoods. R3X districts permit the following Use Groups: UGs I, II, III(A), III(B), IV(B), IV(C).

The amount of required open space on residential lots in R3X districts is governed by yard requirements. New single- or two-family detached homes must have two side yards with a minimum width of five feet each. R3X districts also permit semi-detached and zero lot line buildings which are set along a side lot line, and require one side yard at least five feet wide, subject to certain modifications per ZR Section 23-33. The front yard of a new home must be at least 10 feet deep. For qualifying residential sites with a lot width of at least 150 feet and for corner lots, the front yard depth may be reduced by five feet, except that a front yard shall be no shallower than 5 feet. The minimum required rear yard depth is 20-30 feet, subject to modifications pursuant to ZR Section 23-343.

The maximum FAR is 0.75 for standard zoning lots or 1.00 for qualifying residential sites. The maximum community facility FAR is 1.00. The maximum height of a residential building is governed by a perimeter wall height of 25 feet before additional height must conform to the sky exposure plane. Above the 25-foot perimeter wall height, sloping planes control the maximum height of the building or other structure requiring either a setback or a pitched roof. These planes start at the maximum permitted height of the perimeter walls and meet at a ridge line of 35 feet above the base plane. For qualifying

residential sites and qualifying senior housing, the maximum building and base height is 35 feet.

Parking requirements vary depending on the use and transit zone designation. In the Inner Transit Zone, one off-street parking space is required for each standard market dwelling unit within multiple dwellings, while no parking is required for affordable dwelling units and qualifying senior units. In the Outer Transit Zone, parking is required for 50% of all standard market dwelling units, while no parking is required for affordable dwelling units and qualifying senior units. Beyond the Greater Transit Zone, parking is required for 100% of market rate dwelling units, 50% of affordable dwelling units, and 10% of qualifying senior units. In the Outer Transit Zone and beyond the Greater Transit Zone the following applies: For qualifying residential sites parking is waived where the number of dwelling units is 75 or less. Further, no parking is required for zoning lots existing on December 5, 2024, where the lot width is 25 feet or less.

C2-2 Commercial Overlay

C2 districts are commercial overlays mapped within residential districts. Mapped along streets that serve local retail needs, they are found extensively throughout the city's lower- and medium-density areas and occasionally in higher-density districts. Typical retail uses include neighborhood grocery stores, restaurants, and beauty parlors. Unless otherwise indicated on the zoning maps, the depth of overlay districts ranges from 100 to 200 feet.

Overlay districts differ from other commercial districts in that residential bulk is governed by the residence district within which the overlay is mapped. All other commercial districts that permit residential use are assigned a specific residential district equivalent.

The maximum commercial or community facility floor area ratio (FAR) is also determined by the residence district, per Section 33-121 of the NYC Zoning Resolution. For this location, the C2-2 overlay is mapped over an R3-2 zoning district, where:

- The maximum FAR for a zoning lot containing only commercial use, only community facility use, or both commercial and community facility uses is 1.60 FAR.

- The maximum height of a front wall and the required front setback of a building or other structure shall be determined by the Residence District within which such Commercial District is mapped with the following exceptions:

    - In accordance with the provisions of Section 32-42 (Location Within Buildings), no commercial building or portion thereof occupied by non-residential uses listed under Use Groups VI through X shall exceed in height 30 feet or two stories, whichever is less.

- For community facility buildings or buildings used for both community facility use and commercial use, the maximum height of a front wall shall be 30 feet or two stories, whichever is less, and the height above street line shall be 30 feet.

- The residential bulk remains subject to the R3-2 zoning regulations, which govern setbacks, yard requirements, and other dimensional controls.

- On qualifying residential sites located on any zoning lot or portion of a zoning lot in any commercial district in which such building is permitted and subject to the individual maximum floor area ratios for commercial, community facility, and residential uses, the maximum permitted floor area for a zoning lot with buildings containing residential and non-residential uses is 2.50 FAR within the Greater Transit Zone, and 1.60 FAR outside of the Greater Transit Zone.

Parking for commercial and community facility use varies depending on the use, size, and transit zone designation.

Affected Area

The Affected Area is zoned R3-2 and R3X zoning districts, which permits low-density residential uses at a maximum standard FAR of 0.75, which could be increased to 1.00 if providing qualifying affordable unit or qualifying senior units, and community facility uses at 1.00 FAR.

2.7.2 Future No-Action Conditions

The No-Action Scenario is the same as the existing conditions for the Projected Development Site and non-Applicant owned sites in the Affected Area. No alternative sites have been filed with the DOB as no commercial development is possible without a commercial overlay and residential development with frontage along Northern Boulevard is unlikely.

2.7.3 Future With-Action Conditions

The Applicant's Proposed Development will be the With-Action scenario with a new 3-story plus cellar, 30,190 GSF (14,863 ZSF; 1.51 FAR), mixed-use commercial and community facility building, which would include 4,459 GSF (4,459 ZSF; 0.45 FAR) of UG VI local retail space on the first floor, 5,202 GSF (5,202 ZSF; 0.53 FAR) of UG VII office space on the second floor, 5,202 GSF (5,202 ZSF; 0.53 FAR) of either a UG III(B) daycare center or a UG III(B) ambulatory diagnostic treatment center/ senior citizen center on the third floor, 1,023 GSF for building mechanicals on the roof, 2,157 GSF for commercial uses and 7,643 GSF for 20 off-street parking spaces at the cellar level, and 4,504 GSF of first floor space for 6 off-street parking spaces. It should be noted that though only 15 parking spaces are required (1 parking space per 1,000 sf of use), the RWCDS would assume 26 parking spaces per the Applicant's Proposed Development, which is beyond the

minimum parking requirement. The non-Applicant owned lots within the Affected Area would remain in their existing condition under the proposed C2-4 overlay.

The Proposed Action would introduce a mixed-use district that would permit residential, community facility, and commercial districts. The Proposed Action would not result in a substantial increase in bulk as the proposed C2-4 zoning district would permit 1.60 FAR of commercial space, but would permit a wider range of uses that includes commercial use groups IV(A), V, VI, VII, VIII, IX(A), IX(C), and X. The new development would be consistent with residential land uses and commercial land uses in the Study Area. The expanded number of uses permitted by mapping the proposed C2-4 overlay would also legalize the existing commercial uses on Lots 10, 22, and 27.

The Applicant believes that the proposed rezoning would allow for the productive redevelopment of the Affected Area with land uses that are similar to the surrounding area and therefore, the Proposed Action would not generate a land use that would be incompatible with surrounding uses. Therefore, there would be no significant adverse impacts to Land Use as a result of the Proposed Action, and further analysis is not required.

Historic and Cultural

The project would result in in-ground disturbance to develop the proposed mixed-use building with cellar space for parking. LPC was contacted for their initial review of the proposed project's potential to impact historic and cultural resources on or near the Affected Area. In a letter dated October 28, 2020, LPC indicated that the Study Area does not contain any sites or buildings of known architectural or archaeological significance (see **Appendix B**). Furthermore, a survey was conducted of sites or resources that have been designated as either listed or eligible for listing in the State and National Register (S/NR) of historic places. As shown in **Figure 2.2-1** above, no site or resources were found within 400 feet of the Affected Area. Thus, the Proposed Development is not anticipated to result in significant adverse impacts to sensitive architectural or archaeological resources.

Urban Design and Visual Resources

The Applicant-owned Projected Development Site would be rezoned from R3-2 and R3X zoning districts to an R3-2/C2-4 zoning district. The proposed Zoning Map Amendment would permit a mixed-use commercial and community facility development on the Development Site to a maximum FAR of 1.60 under the proposed R3-2/C2-4 zoning district.

The building would be a new 3-story plus cellar, 30,190 GSF (14,863 ZSF; 1.51 FAR), mixed-use commercial and community facility building, which would include 4,459 GSF (4,459 ZSF; 0.45 FAR) of UG VI local retail space on the first floor, 5,202 GSF (5,202 ZSF; 0.53 FAR) of UG VII office space on the second floor, 5,202 GSF (5,202 ZSF; 0.53 FAR) of either a UG III(B) daycare center or a UG III(B) ambulatory diagnostic treatment center/ senior citizen center on the third floor, 1,023 GSF for building mechanicals on the roof, 2,157 GSF for commercial uses and 7,643 GSF for 20 off-

street parking spaces at the cellar level, and 4,504 GSF of first floor space for 6 off-street parking spaces. It should be noted that though only 15 parking spaces are required (1 parking space per 1,000 sf of use), the RWCDS would assume 26 parking spaces per the Applicant's Proposed Development, which is beyond the minimum parking requirement.

Per the Applicant's Proposed Development, the building would provide an optional front open area with a depth of 10 feet along Northern Boulevard (a wide street with a width of approximately 100 feet). Accordingly, the proposed mixed commercial and community facility building would be compliant with the bulk regulations in ZR 33-441 (Alternate Front Setbacks). ZR 33-441 requires that any commercial or community facility buildings within C2 districts with bulk governed by R3 residential zoning districts would be subject to a sky exposure plane beginning at a maximum street wall height of 30 feet above the street line level with a vertical to horizontal ratio of 1.4 to 1 when an optional front open area with a depth of at least 10 feet is provided on wide streets. Meanwhile, per ZR 32-42 (Location Within Buildings), no commercial building or portion thereof occupied by non-residential uses listed under Use Groups VI through X shall exceed in height 30 feet or two stories, whichever is less. As a result, the first and second floors (commercial uses) of the proposed building would rise to 29'-9", which is close to the maximum permitted height of 30 feet, while the third floor would not setback and would continue to rise by 10'-6", reaching a total building height of 40'-3" without penetrating the required sky exposure plane.

The Proposed Action would result in a slight increase in the permitted bulk of buildings with the addition of 0.85 FAR of commercial space and/or community facility floor area. While available bulk will increase on the Projected Development Site, the available height will not increase. And a building of similar height to the proposed 40'-3"-tall building could be constructed on the Projected Development Site in an as of right manner. Thus, the Projected Development would not adversely impact any of the constituent urban design elements or impact the overall character of the neighborhood. The Proposed Development would be consistent with the range of permitted uses east of the Primary Study Area. Therefore, the Proposed Action would not result in any significant adverse impact on the constituent elements of Urban Design, and a detailed analysis is not warranted.

Visual Resources

There are no significant visual resources within the vicinity of the Affected Area. The Proposed Action would not block any public view of a resource of significant aesthetic value. Therefore, it would not result in significant adverse impacts related to urban design and visual resources.

Noise

As noted in Section 2.6, the Proposed Action would not result in significant adverse impacts associated with project-generated mobile or stationary source noise. 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 Action would not result in any significant adverse noise impacts related to building mechanical equipment.

Conclusion of Neighborhood Character

Based on the above qualitative assessment of impact categories, no impacts with regards to neighborhood character, no impacts with regards to neighborhood character are anticipated and no further analysis is required.

2.8 Construction

Construction, although temporary, can result in disruptive and noticeable effects on the Affected Area. A determination of the significance of construction and the need for mitigation is based on the duration and magnitude of these effects. Construction is typically of greatest importance when it could affect traffic conditions, archaeological resources, and the integrity of historic resources, community noise patterns and air quality conditions. All analyses were undertaken in accordance with the guidelines contained in the *CEQR Technical Manual*.

The Proposed Action involves a rezoning in the Murray Hill neighborhood of Queens. On the site controlled by the Applicant, construction is expected to last up to approximately 12 months. As construction would take place over a 12-month period, potential impacts would be minimal and, as discussed below, not expected to have any significant adverse impacts. The following is a brief discussion of the effects associated with the construction related activities on traffic, air quality, noise, historical resources, and hazardous materials resulting from the construction on the Projected Development Site.

Effect of Construction on Traffic

The Proposed Action would result in new development on Projected Development Site 1, which is currently vacant. During construction, vehicle trips from workers traveling to and from the construction site would be generated, and from the movement of materials and equipment.

The infrastructure of New York City is comprised of physical systems that support the population, including water supply, wastewater, sanitation, energy, roadways, bridges, tunnels, and public transportation. This section covers only the effect of the Proposed Action on traffic operations. Given typical construction hours of 7:00 AM to 4:00 PM, worker trips would be concentrated in off-peak hours typically before both the AM and PM peak commuter periods. Truck movements typically would be spread throughout the day on weekdays and would generally occur between the hours of 7:00 AM and 4:30 PM. Traffic generated by construction workers traveling to and from their work sites and construction truck traffic would not represent a substantial increment during the area's peak travel periods. Construction activities may result in short-term disruption of both traffic and pedestrian movements at the development sites. This would occur primarily due to the temporary loss of curbside lanes from the staging of equipment and the movement of materials to and from the site. Additionally, construction would at times result in the temporary closing of sidewalks adjacent to the site. These conditions would not lead to significant adverse effects on traffic and transportation conditions.

Effect of Construction on Air Quality

Possible impacts on local air quality during construction induced by the Proposed Action include fugitive dust (particulate) emission from land clearing operation and demolition as well as mobile source emissions (hydrocarbons, nitrogen oxide, and carbon monoxide) generated by construction equipment and vehicles.

Fugitive dust emissions from land clearing operations can occur from excavation, hauling, dumping, spreading, grading, compaction, wind erosion, and traffic over unpaved areas. Actual quantities of emissions depend on the extent and nature of the clearing operations, the type of equipment employed, the physical characteristics of the underlying soil, the speed at which construction vehicles are operated, and the type of fugitive dust control methods employed. Much of the fugitive dust generated by construction activities should be of a short-term duration and relatively contained within a proposed site, not significantly impacting nearby buildings or residents. All appropriate fugitive dust control measures – including watering of exposed areas and dust covers for trucks – would be employed during construction of the development sites. Therefore, the fugitive source emissions generated by the Proposed Action would not be significant.

Mobile source emissions may result from the operation of construction equipment, trucks delivering materials and removing debris, workers' private vehicles, or occasional disruptions in traffic near the construction site. As the number of construction-related vehicle trips generated by the Proposed Action would be relatively small and the emissions from such vehicles as well as construction equipment would occur over a limited period, the mobile source emissions generated by the Proposed Action would not be significant. Overall, the Proposed Action would not have the potential to result in significant adverse air quality impacts.

Effect of Construction on Noise

Noise and vibration from construction equipment operation and noise from construction workers' vehicles and delivery vehicles traveling to and from the construction sites can affect community noise levels. The level of impact of these noise sources depends on the noise characteristics of the equipment and activities involved the construction schedule, and the location of potentially sensitive noise receptors.

Noise and vibration levels at a given location are dependent on the kind and number of pieces of construction equipment being operated, as well as the distance of the location from the construction site and the types of structures, if any, between the location and the noise source. Noise levels caused by construction activities can vary widely, depending on the phase of construction (e.g., demolition, land clearing and excavation, foundation, erection of structure, construction of exterior walls) and the specific task being undertaken.

Construction noise associated with the Proposed Action is expected to be like noise generated by other residential construction projects in the city. Increased noise level caused by construction activities can be expected to be more significant during early excavation phases of construction and would be of relatively short duration. Increases in noise levels caused by delivery trucks and other construction vehicles would not be significant.

Construction noise is regulated by the New York City Noise Control Code and by Environmental Protection Agency noise emission standards for construction equipment. These local and federal

requirements mandate that certain classifications of construction equipment and motor vehicles meet specified noise emissions standards; that, except under exceptional circumstances, construction activities be limited to weekdays between the hours of 7:00 AM and 6:00 PM; and that construction material be handled and transported in such a manner as not to create unnecessary noise. In addition, whenever possible, appropriate low noise emission level equipment and operational procedures can be utilized to minimize noise and its effect on adjacent uses.

Thus, while there may be short periods of time when noise is greater than the Noise Control Code, these regulations would be followed in such a matter that no significant adverse noise impacts would be expected to result from the Proposed Action.

Effect of Construction on Historic Resources

In order to determine whether the projected development has the potential to affect nearby off-site historic or architectural resources, the study area was screened for historic and architectural resources. No historic or architectural resources were identified within the Affected Area or within the 400-foot study area. Therefore, adverse construction-related impacts are not expected as a result of the Proposed Action.

Effect of Construction on Hazardous Materials

The Proposed Action would result in new development in the area. As such, a hazardous materials assessment was undertaken, as presented **Section 2.4** of this EAS. As discussed in the section, all contaminants and contaminated materials are expected to be removed in accordance with environmental regulations and no significant adverse impacts are expected.

Conclusion

Based on the above qualitative construction analysis, and detailed analysis in the preceding technical sections, construction-related activities are not expected to have any significant adverse impacts on traffic, air quality, noise, historic resources, or hazardous materials conditions as a result of the Proposed Action.

2.9 Disadvantaged Community Assessment

Methodology

The Disadvantaged Community Assessment was conducted following the guidance provided by the New York State Department of Environmental Conservation (NYSDEC) and the City of New York's Environmental Justice (EJ) policies. The assessment is conducted pursuant to NYCDEC guidance for Project's requiring a CEQR EAS Short Form, and is structured as follows:

1. Identification of Disadvantaged Community Status

To determine whether the Project Site is within, or within ½ mile of a disadvantaged community, the following tools were used:

- New York State Disadvantaged Communities Assessment Tool (DACAT): This GIS-based tool identifies census tracts designated as disadvantaged communities (DAC) based on data from the Climate Justice Working Group (CJWG).
- Geospatial Analysis: The project location was mapped and measured for proximity to the nearest designated disadvantaged community, ensuring compliance with the ½-mile buffer analysis specified in the assessment requirements.

2. Assessment of Potential Impacts

If the Project Site is found to be within, or within ½ mile of a disadvantaged community, or if the Proposed Action(s) could affect a disadvantaged community, further assessment is required. If either of these conditions are met, potential direct and indirect impacts to nearby disadvantaged communities are evaluated to determine if the proposed project would create any new sources of pollution or increase pollution from existing sources in the following categories:

- Air Quality Impacts: Assessment of air emissions, including particulate matter (e.g., dust, diesel emissions, or other fossil fuel emissions), oxides of nitrogen (NOx), volatile organic compounds (VOCs), hazardous air pollutants (HAPs), or other regulated air pollutants.
- Noise Pollution: Evaluation of temporary noise during construction and long-term operational noise levels.
- Light Pollution: New lighting in contrast to existing lighting.
- Wastewater Treatment or Wastewater Discharges: Identification of any changes in wastewater discharge affecting the community.
- Stormwater and Flooding Considerations: Analysis of stormwater runoff and potential flooding impacts.
- Solid and Hazardous Waste Management: Identification of potential waste generation and handling practices.

- Odor Impacts: Assessment of potential odor emissions from construction activities, building operations, and waste management that may affect nearby communities.

3. Assessment of Magnitude of Impacts

If a potential impact is identified, the magnitude of these impacts must be evaluated. Considerations for magnitude of impact (Small vs. Moderate to Large) are described below.

Small Impact:

- Air emissions will occur at a level that does not require a state air pollution control permit.
- Solid or hazardous waste will be generated in an amount easily transported to and handled at a permitted disposal facility.
- Wastewater discharges will not occur or expand.
- There will be no traffic associated with the project or the traffic generated is limited to non-truck traffic and will not increase to a level causing level of service impacts.
- The disadvantaged community is identified by the Disadvantaged Community Assessment Tool as having comparatively lower burdens or vulnerabilities.

Moderate to Large Impact:

- Air emissions will occur at a level that requires a state air pollution control permit (i.e., Air State Facility or Title V permit);
- Solid or hazardous waste will be generated in an amount requiring substantial increase in truck traffic to transport to a permitted disposal facility;
- Solid or hazardous waste will be managed or disposed on site, requiring a state solid or hazardous waste management facility permit;
- Wastewater discharges will occur or expand, requiring a State Pollutant Discharge or safety impacts;
- The disadvantaged community is identified by the Disadvantaged Community Elimination System (SPDES) permit;
- Proposed operations would potentially result in off-site pollution impacts;
- Traffic associated with the project will increase to a level or type causing level of service or safety impacts;
- The disadvantaged community is identified by the DACAT as having comparatively higher burdens or vulnerabilities; and
- The action involves a DEC permit application that requires preparation of an 'Existing Burden Report' analyzing potential pollutant impacts to a disadvantaged community. As anticipated, the reviewing agency should evaluate the cumulative environmental burden already experienced by the community, including existing pollution sources and health indicators.

4. Evaluation of Moderate to Large Impacts

Where moderate to large impacts are predicted, these impacts should be identified and assessed considering its setting, probability of occurring, duration, irreversibility, geographic scope, and magnitude. The evaluation should consider the potential for cumulative impacts and whether impacts are expected to be short-term or long-term. Where potential impacts are identified, measures or design elements that have been included by the project sponsor to avoid or reduce impacts should be described.

Preliminary Assessment

The Proposed Action would facilitate the development of Block 5513, Lot 11 with a new 3-story plus cellar, 30,190 GSF (14,863 ZSF; 1.51 FAR), mixed-use commercial and community facility building, which would include 4,459 GSF (4,459 ZSF; 0.45 FAR) of UG VI local retail space on the first floor, 5,202 GSF (5,202 ZSF; 0.53 FAR) of UG VII office space on the second floor, 5,202 GSF (5,202 ZSF; 0.53 FAR) of either a UG III(B) daycare center or a UG III(B) ambulatory diagnostic treatment center/ senior citizen center on the third floor, 1,023 GSF for building mechanicals on the roof, 2,157 GSF for commercial uses and 7,643 GSF for 20 off-street parking spaces at the cellar level, and 4,504 GSF of first floor space for 6 off-street parking spaces.

The Project Site is located at 189-10 Northern Boulevard in the Murray Hill neighborhood of Queens, Community District 11. As shown in **Figure 2.9-1** below, the Project Site is not located within, or within ½ mile of a disadvantaged community. As shown below, the nearest disadvantaged community is located greater than ½ mile west of the Projected Development Site (Census Tract ID 36081116700).

Conclusion

The Project Site is not located within or within ½ mile of a disadvantaged community. Further, the Proposed Action would not contribute to environmental burdens that disproportionately affect such communities. Accordingly, no further assessment is warranted.

Figure 2.9-1: Disadvantaged Community Map



APPENDIX A

ILLUSTRATIVE PROPOSED ARCHITECTURAL PLANS

ADDRESS	189-10 NORTHERN BOULEVARD QUEENS NY11358
BLOCK	5513
LOT	11
ZONE	R3-2 (CURRENT); C2-4 / R3-2 (PROPOSED)
MAP No.	10d
COMMUNITY BOARD :	411
LOT AREA:	9,837.62 SF.

BULK REGULATIONS

ZR. 33-121. MAX. FLOOR AREA RATIO (F.A.R.):

	MAX. F.A.R.	MAX. F.A. (SF.)	PROPOSED F.A. (SF.)	PROPOSED F.A.R.
COMMERCIAL	1.00	9,837.62	9,661.00	0.98
COMM. FACILITY	1.60	15,740.19	5,202.00	0.53
			TOTALS	1.51

ZONING FLOOR AREA CHART

	G.F.A. (SF.)	COMMERCIAL G.F.A.(SF.)	COMM. FACI. G.F.A.(SF.)	ACC. PARK. G.F.A.(SF.)	COMMERCIAL Z.F.A.(SF.)	COMM. FACI. Z.F.A.(SF.)	TOTAL Z.F.A.(SF.)
CELLAR	9,800.00	2,157.00	0.00	7,643.00	0.00	0.00	0.00
1st. FLOOR	8,963.00	4,459.00	0.00	4,504.00	4,459.00	0.00	4,459.00
2nd. FLOOR	5,202.00	5,202.00	0.00	0.00	5,202.00	0.00	5,202.00
3rd. FLOOR	5,202.00	0.00	5,202.00	0.00	0.00	5,202.00	5,202.00
ROOF	1,023.00	1,023.00	0.00	0.00	0.00	0.00	0.00
TOTALS	30,190.00	12,841.00	5,202.00	12,147.00	9,661.00	5,202.00	14,863.00

YARD REGULATIONS

ZR.33-25. SIDE YARD; 33-26 & 24-36 REAR YARD; 33-441 FRONT YARD

	REQUIRED	PROVIED
SIDE YARD	0' OR 8'0"	0'
REAR YARD	20'0" (COMMERCIAL); 30'-0"(COMMUNITY FACILITY)	31'-7 5/8" & 48'-1 3/8"
FRONT YARD	10'-0" (WIDE STREET)	10'-0"

HEIGHT AND SETBACK (ZR33-441: ALTERNATE REQ'D FRONT SETBACKS)

DEPTH OF OPTIONAL FRONT OPEN AREA 10'0" (WIDE STREET)	**PROVIDED: 10'-0"**
MAX. HEIGHT OF COMMERCIAL However, in accordance with the provisions of Section 32-42 (Location within Buildings), no commercial building, or portion thereof, occupied by non-residential uses listed in Use Group 6A, 6B, 6C, 6F, 7, 8, 9 or 14 shall exceed in height 30 feet or two stories, whichever is less	***PROVIDED: 2nd. Floor 29'-9" Height***
SKY EXPOSURE PLANE RATIO : 1.4(V) : 1(H) (WIDE STREET)	**PROPOSED BLDG.: 3 Stories And 40'-3" Height**

ACCESSORY OFF-STREET PARKING REQUIREMENT

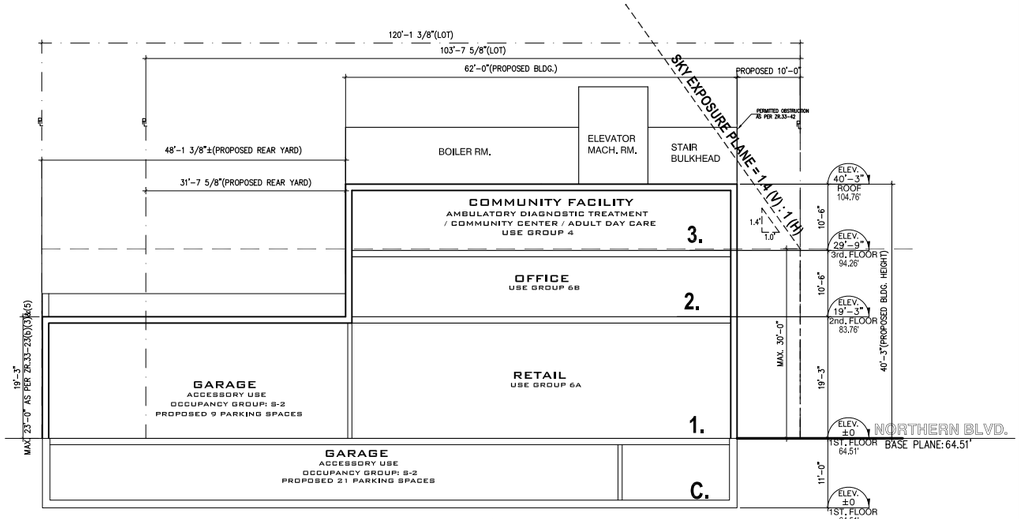
ZR. 36-21: PARKING NUMBER REQUIRED

FOR AMBULATORY DIAGNOSTIC USE: IN C2-4: REQ'D 1 PER 1000 SF; MIN. REQ'D PARKING SPACE: 5,202.00/1000=5	**TOTAL MIN. REQ'D 15 PARKING SPACES PROPOSED: 20 PARKING SPACES @ CELLAR 6 PARKING SPACES @ 1ST. FLOOR PROPOSED TOTAL 26 PARKING SPACES**
FOR RETAIL & OFFICE USE: IN C2-4: REQ'D 1 PER 1000 SF; MIN. REQ'D PARKING SPACE: 9,661/1000=9.66=10	

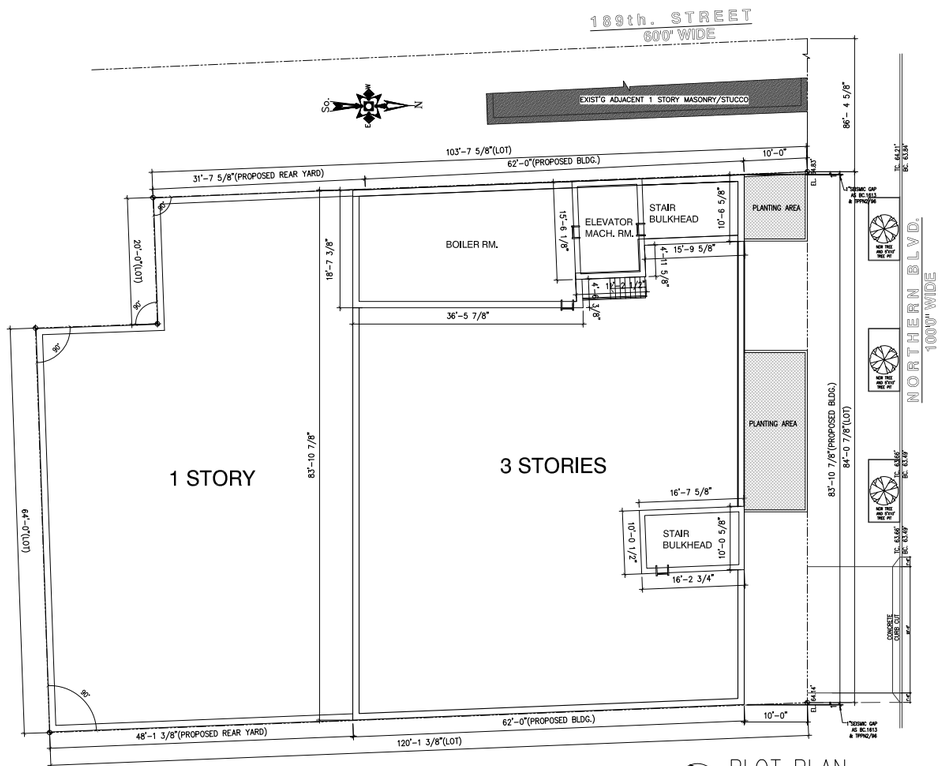
BICYCLE PARKING REQUIREMENT

ZR.25-811 & 36-711: BICYCLE PARKING NUMBER REQUIRED

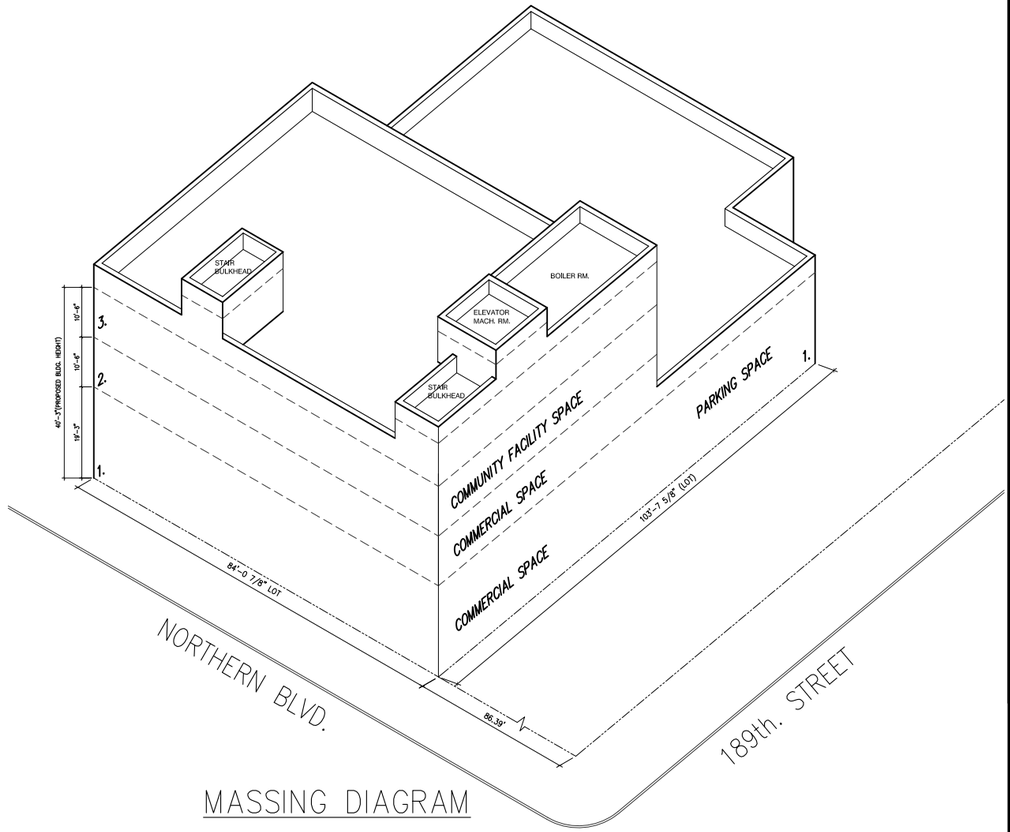
FOR AMBULATORY DIAGNOSTIC USE: 1 PER 10,000 SF; MIN. 5202.00/10,000=0.52(NOT REQ'D)	**FOR RETAIL USE: 1 PER 10,000 SF; MIN. 3,511.60/10,000=0.35 (NOT REQ'D) FOR OFFICE USE: 1 PER 10,000 SF; MIN. 4,824.60/7,500=0.64 (NOT REQ'D)**



BUILDING HEIGHT DIAGRAM
SCALE: 1/24" =1'-0"



PLOT PLAN
SCALE: 1/24" =1'-0"



MASSING DIAGRAM

OWNER:

DESIGN BY:

AMERILAND BROOK LLC
Architecture, Zoning & Building Code, Interior Design
Address : 30-05 Stratton St Queens, NY 11354
Phone : 718-878-6295
Email : amerilandbrooknyc@gmail.com

PROJECT
189-10 Northern BLVD.
Queens, NY11358

DRAWING TITLE
Zoning Information; Plot Plan & Section

SEAL & SIGNATURE



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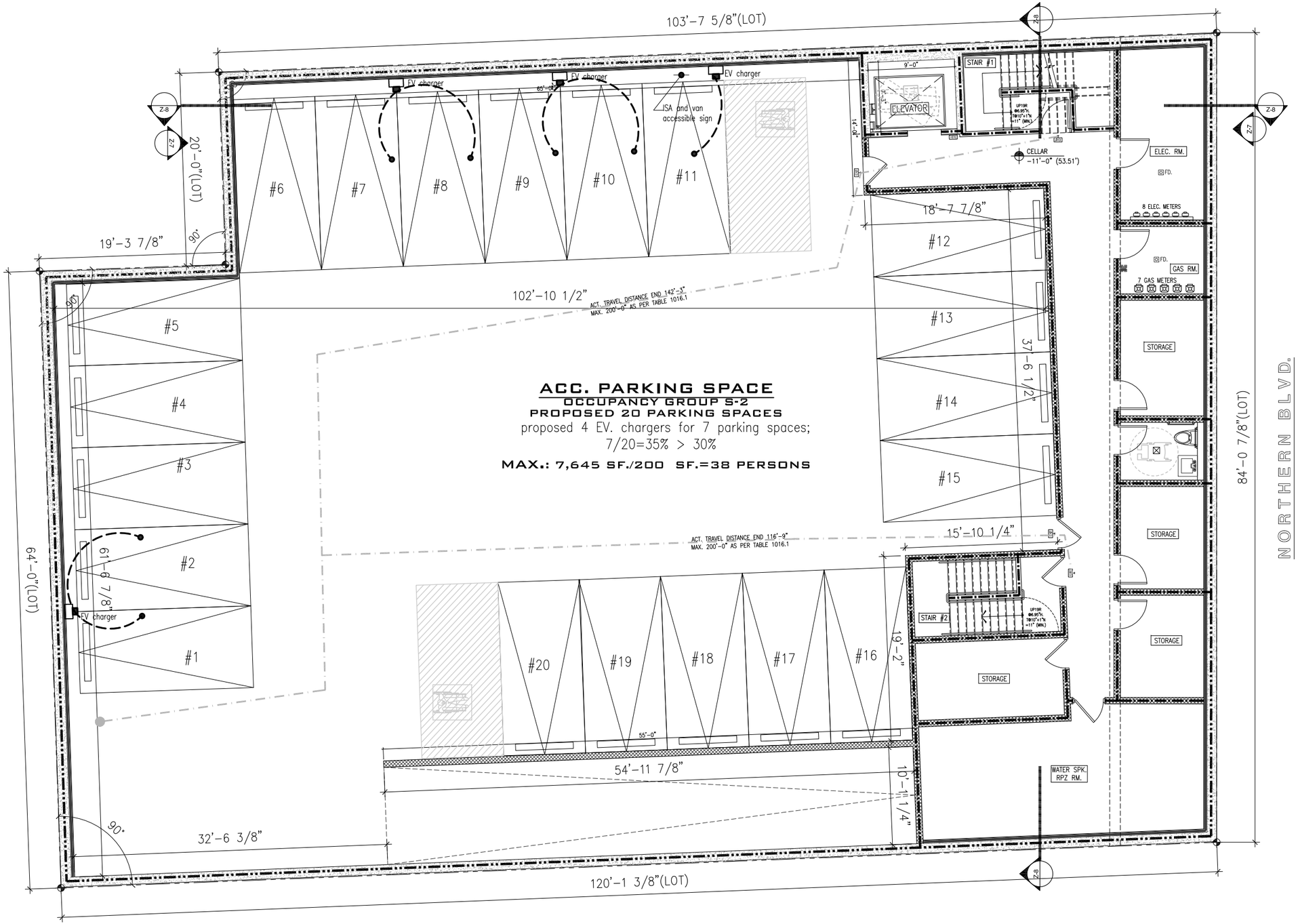
DATE:	02/18/2022		
DRAWING BY:			



EV charger

CELLAR PLAN

Scale

01' 3' 5' 10' 20'

OWNER:

DESIGN BY:

AMERILAND BROOK LLC

Architecture, Zoning & Building Code, Interior Design

Address : 30-05 Stratton St Queens, NY 11354
Phone : 718-878-6295
Email : amerilandbrooknyc@gmail.com

PROJECT

189-10 Northern BLVD.
Queens, NY11358

DRAWING TITLE

Cellar Plan

SEAL & SIGNATURE

STATE OF NEW YORK
XIAOHONG ZHAO
086301
LICENSED PROFESSIONAL ENGINEER

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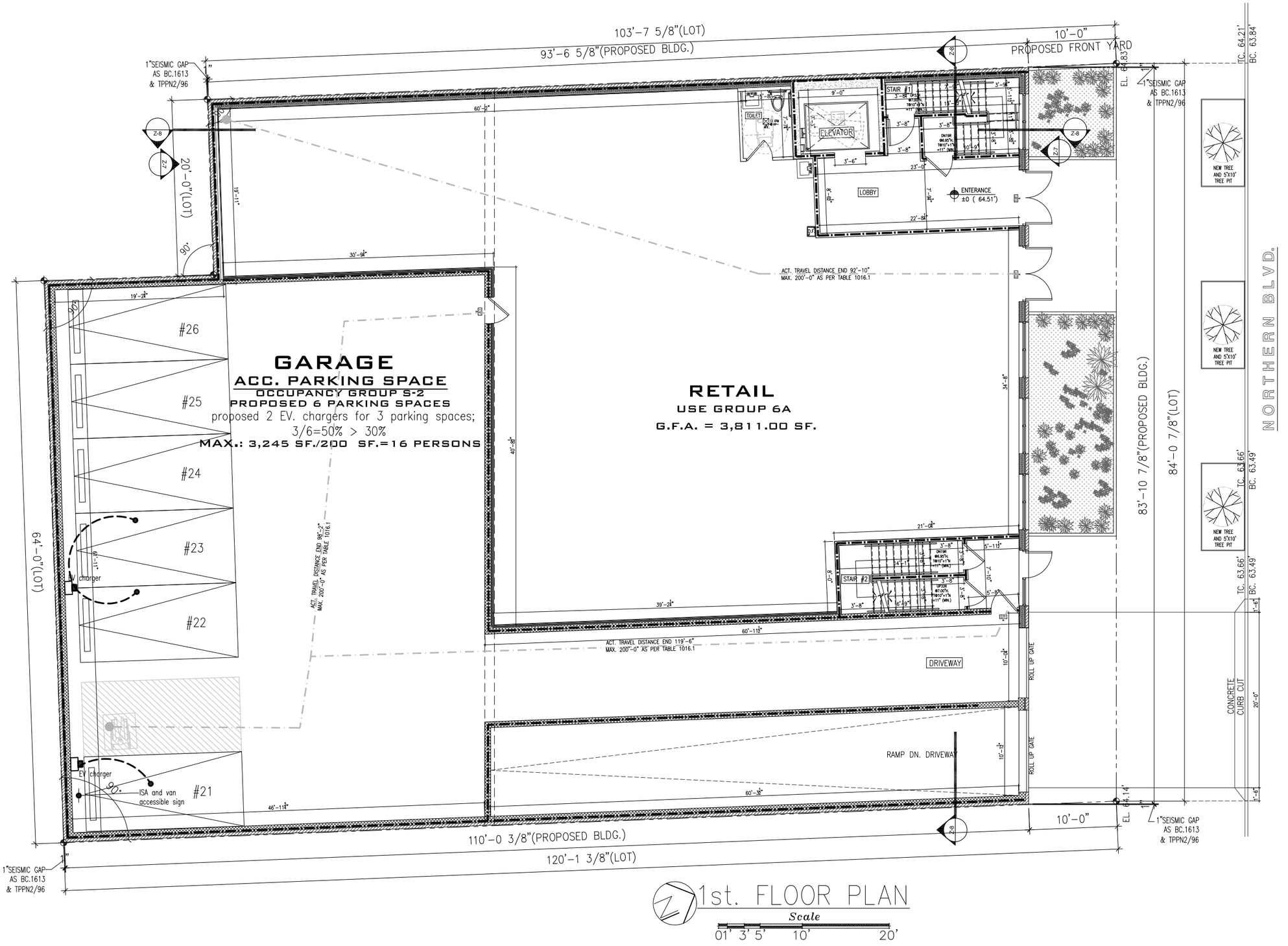
Z-2	02 OF 08
DATE:	06/18/2020
DRAWING BY:	



1st. FLOOR PLAN

Scale 01' 3' 5' 10' 20'

OWNER:

DESIGN BY:

AMERILAND BROOK LLC

Architecture, Zoning & Building Code, Interior Design

Address : 30-05 Stratton St Queens, NY 11354
Phone : 718-878-6295
Email : amerilandbrooknyc@gmail.com

PROJECT

189-10 Northern BLVD.
Queens, NY11358

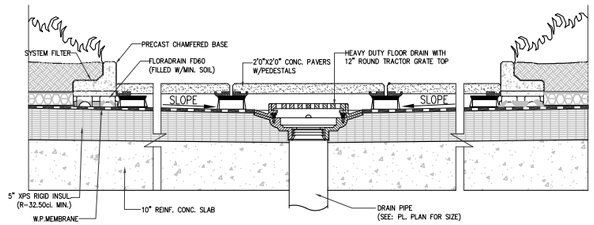
DRAWING TITLE

1st. Floor Plan

SEAL & SIGNATURE

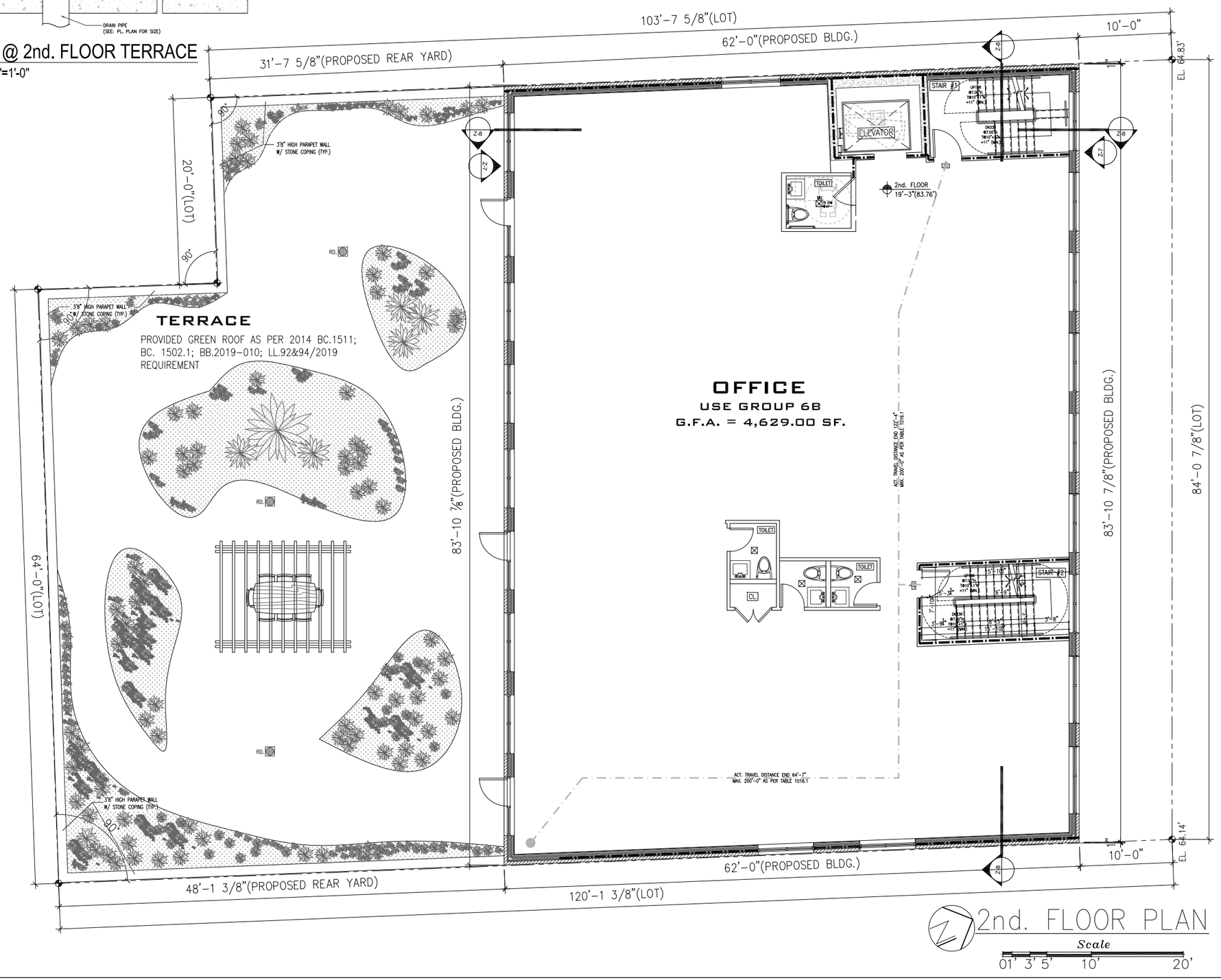
STATE OF NEW YORK
XIAOHONG ZHAO
086301
LICENSED PROFESSIONAL ENGINEER

DWG No:	FILE No:
Z-3	03 OF 08
DATE:	06/18/2020
DRAWING BY:	



DETAIL @ 2nd. FLOOR TERRACE

SCALE: 1/2"=1'-0"



2nd. FLOOR PLAN

Scale

01' 3' 5' 10' 20'

OWNER:

DESIGN BY:

AMERILAND BROOK LLC
Architecture, Zoning & Building Code, Interior Design
Address : 30-05 Stratton St Queens, NY 11354
Phone : 718-878-6295
Email : amerilandbrooknyc@gmail.com

PROJECT

189-10 Northern BLVD.
Queens, NY11358

DRAWING TITLE

2nd. Floor Plan

SEAL & SIGNATURE

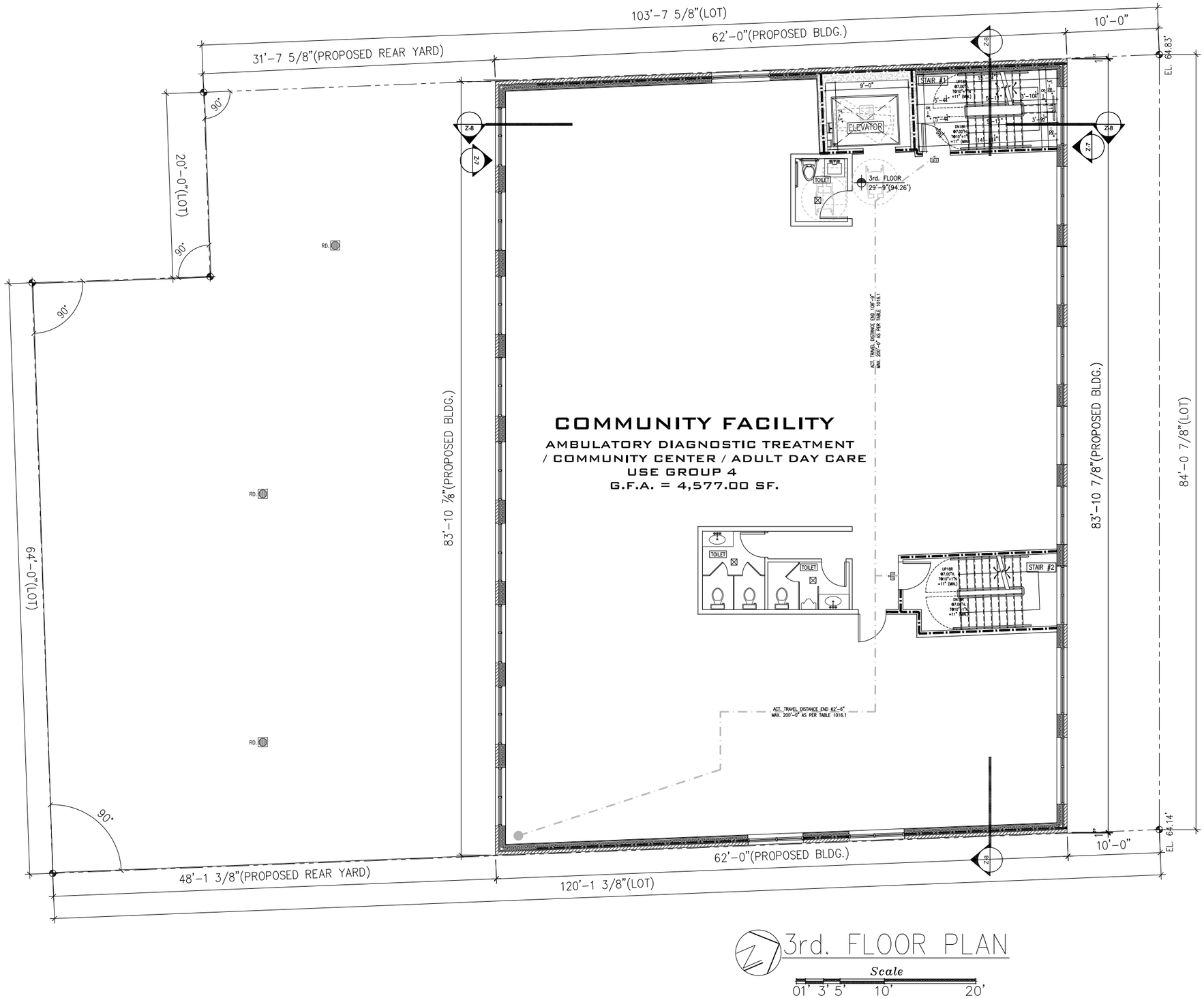
STATE OF NEW YORK
XIAOHONG ZHAO
086301
LICENSED PROFESSIONAL ENGINEER

DWG No: Z-4

FILE No: 04 OF 08

DATE: 06/18/2020

DRAWING BY:



3rd. FLOOR PLAN

Scale
01' 3' 5' 10' 20'

OWNER:

DESIGN BY:

AMERILAND BROOK LLC
Architecture, Zoning & Building Code, Interior Design

Address : 30-05 Stratton St Queens, NY 11354
Phone : 718-878-6295
Email : amerilandbrooknyc@gmail.com

PROJECT

189-10 Northern BLVD.
Queens, NY11358

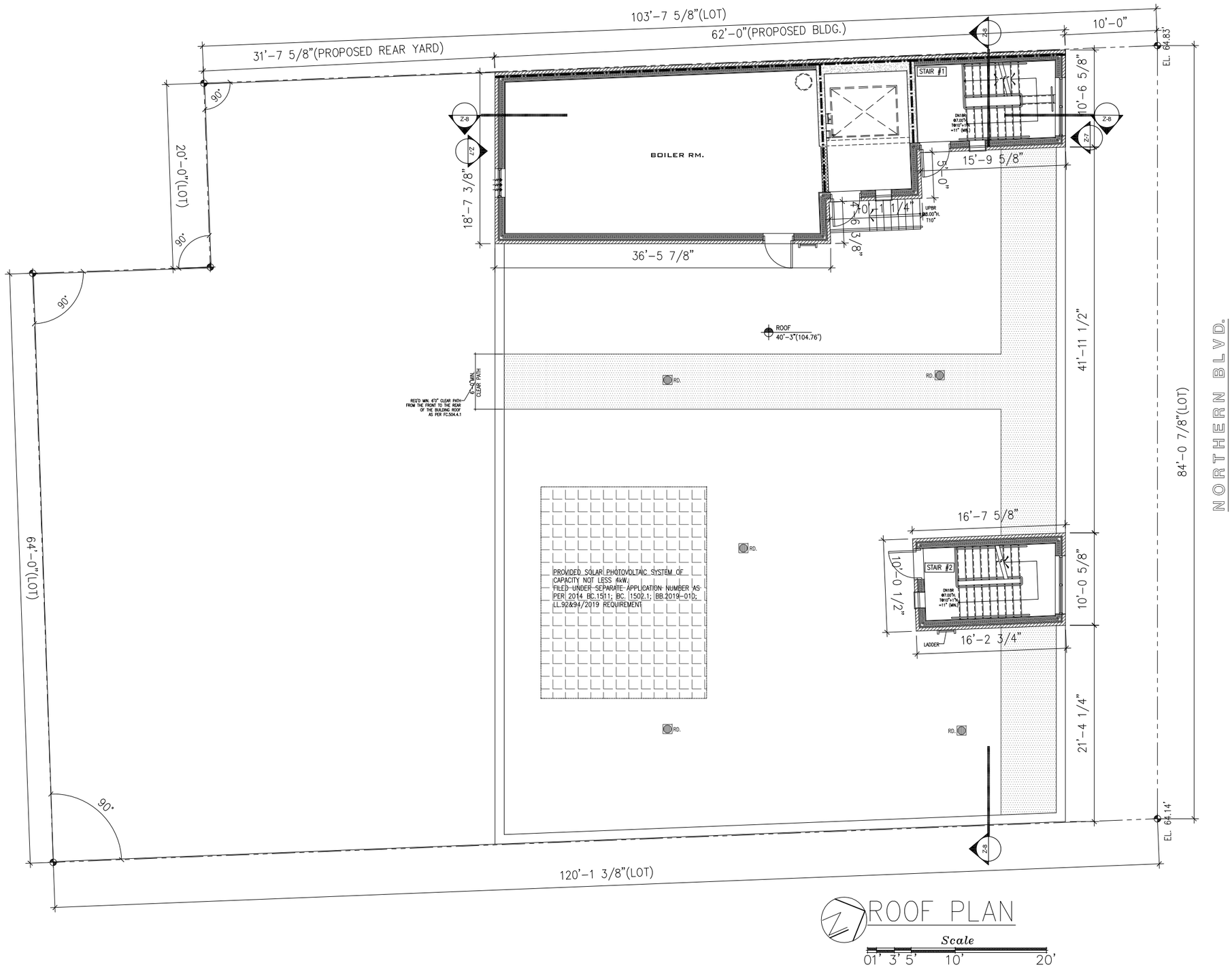
DRAWING TITLE

3rd. Floor Plan

SEAL & SIGNATURE

STATE OF NEW YORK
XIAOHONG ZHAO
086301
LICENSED PROFESSIONAL ENGINEER

DWG No:	FILE No:
Z-5	02/18/2022
DATE:	05 OF 08
DRAWING BY:	



ROOF PLAN

Scale 01' 3' 5' 10' 20'

OWNER:

DESIGN BY:

AMERILAND BROOK LLC

Architecture, Zoning & Building Code, Interior Design

Address : 30-05 Stratton St Queens, NY 11354
Phone : 718-878-6295
Email : amerilandbrooknyc@gmail.com

PROJECT

189-10 Northern BLVD.
Queens, NY11358

DRAWING TITLE

Roof Plan

SEAL & SIGNATURE

STATE OF NEW YORK
XIAOHONG ZHAO
086301
LICENSED PROFESSIONAL ENGINEER

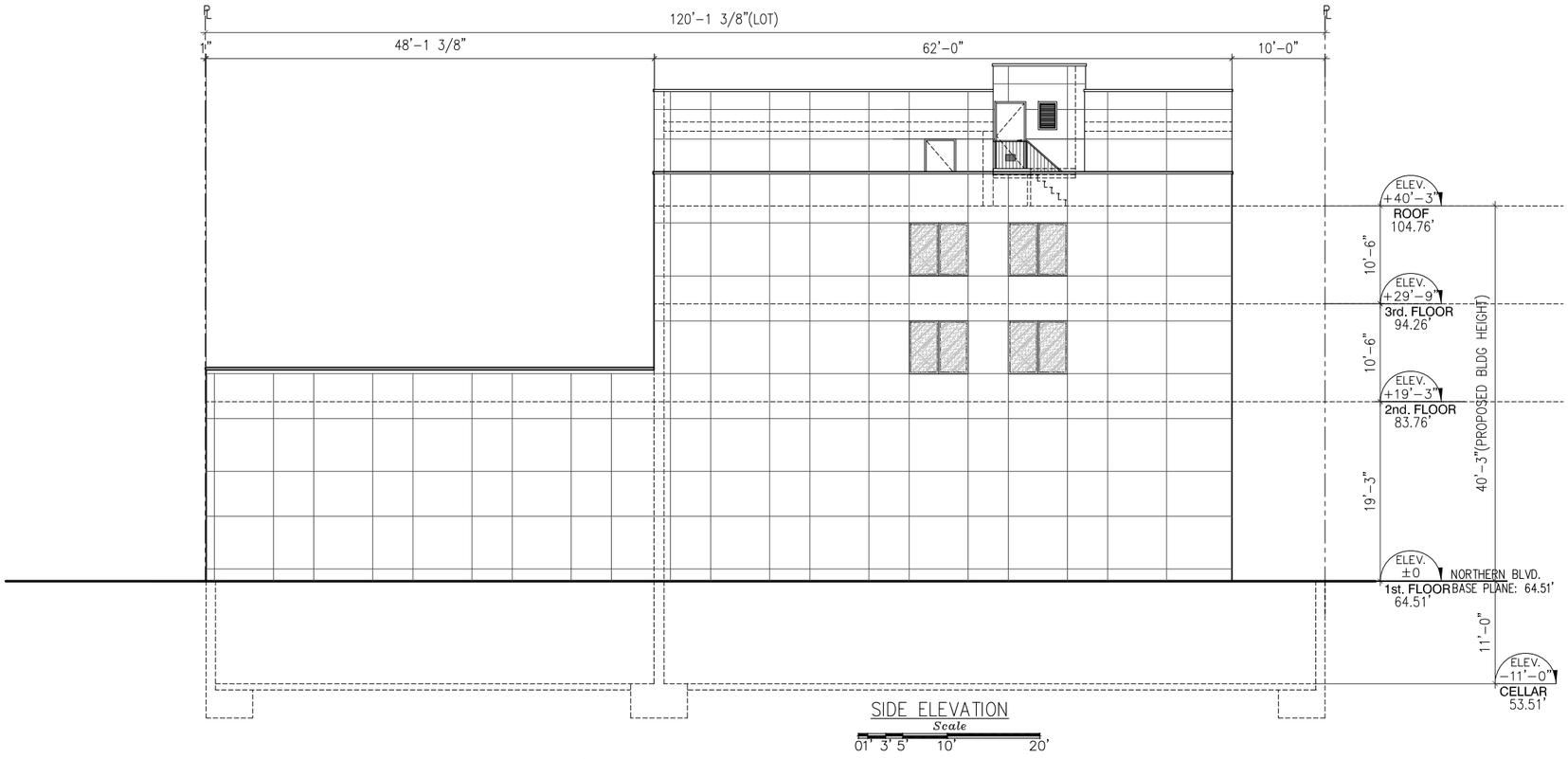
DWG No: Z-6

FILE No: 06/18/2020

DATE:

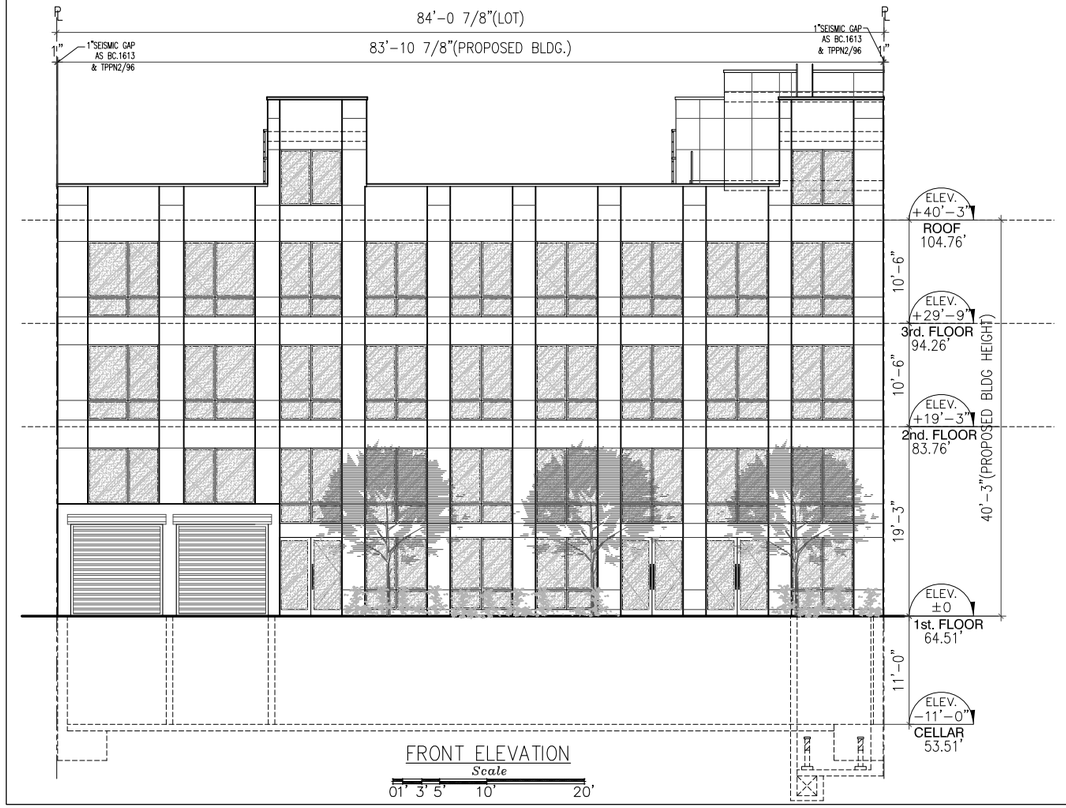
DRAWING BY:

06 OF 08



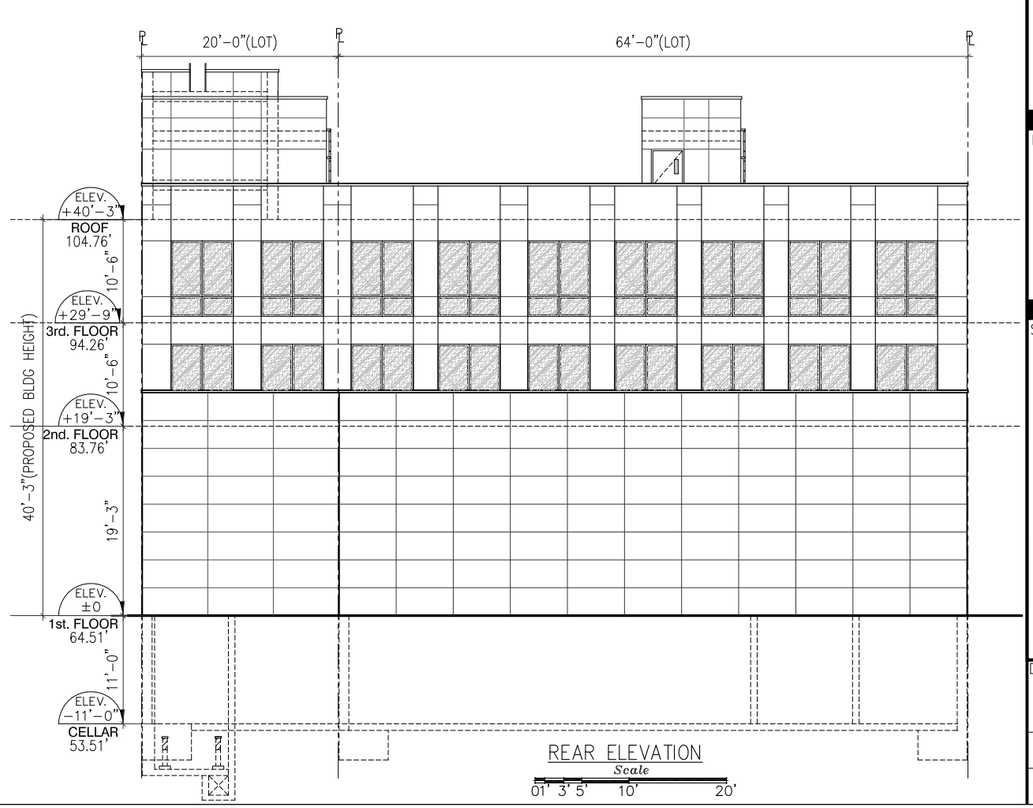
SIDE ELEVATION

Scale 01' 3' 5' 10' 20'



FRONT ELEVATION

Scale 01' 3' 5' 10' 20'



REAR ELEVATION

Scale 01' 3' 5' 10' 20'

OWNER:

DESIGN BY:

AMERILAND BROOK LLC

Architecture, Zoning & Building Code, Interior Design

Address : 30-05 Stratton St Queens, NY 11354
Phone : 718-878-6295
Email : amerilandbrooknyc@gmail.com

PROJECT

189-10 Northern BLVD.
Queens, NY11358

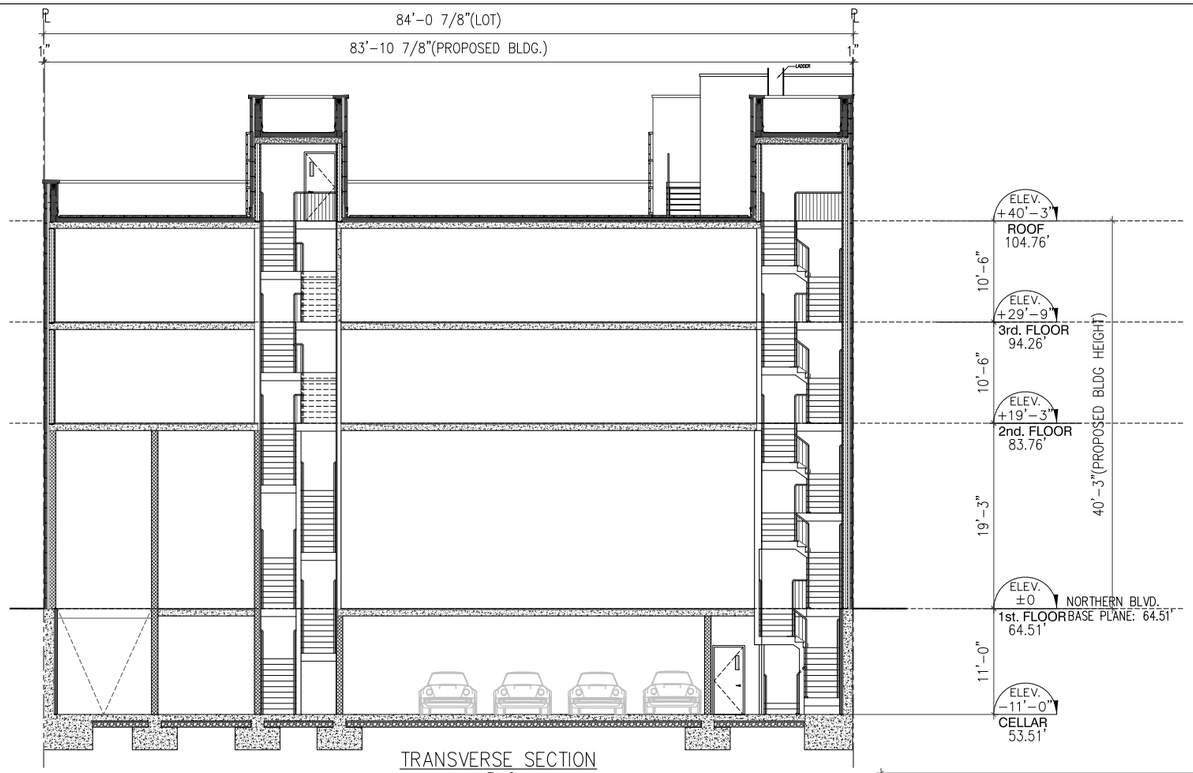
DRAWING TITLE

Elevations

SEAL & SIGNATURE

STATE OF NEW YORK ★ XIAOHONG ZHAO ★ 086301 ★ LICENSED PROFESSIONAL ENGINEER

DWG No:	Z-7	FILE No:	07 OF 08
DATE:		06/19/2020	
DRAWING BY:			



TRANSVERSE SECTION

Scale

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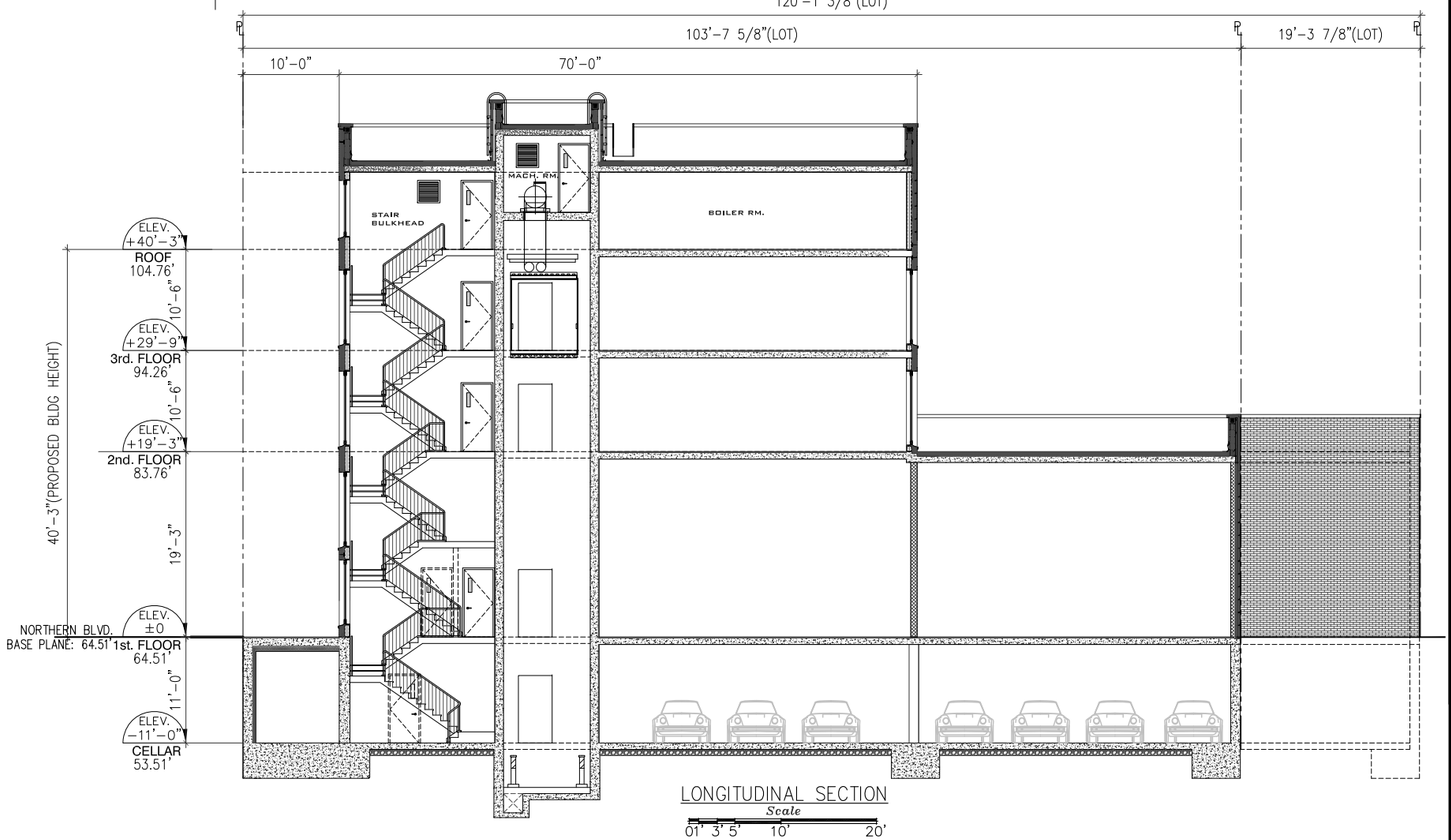

LONGITUDINAL SECTION

Scale

01' 3' 5' 10' 20'

OWNER:

DESIGN BY:

AMERILAND BROOK LLC

Architecture, Zoning & Building Code, Interior Design

Address : 30-05 Stratton St Queens, NY 11354
Phone : 718-878-6295
Email : amerilandbrooknyc@gmail.com

PROJECT

189-10 Northern BLVD.
Queens, NY11358

DRAWING TITLE

Sections

SEAL & SIGNATURE



DWG No: Z-8

FILE No: 08 OF 08

DATE: 06/18/2020

DRAWING BY:


PARKING


PARKING


PARKING





APPENDIX B

AGENCY CORRESPONDENCE

NYC 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-Q
Project: 189-10 NORTHERN BLVD
Date Received: 10/22/2020

Properties with no Architectural or Archaeological significance:

1) 43-17 189 STREET, BBL: 4055130005
2) 189-02 NORTHERN BOULEVARD, BBL: 4055130008
3) 189-08 NORTHERN BOULEVARD, BBL: 4055130010
4) NORTHERN BOULEVARD, BBL: 4055130011
5) 189-14 NORTHERN BOULEVARD, BBL: 4055130012
6) 190-10 NORTHERN BOULEVARD, BBL: 4055130022

Gina Santucci

10/28/2020

SIGNATURE DATE

Gina Santucci, Environmental Review Coordinator

File Name: 35240_FSO_DNP_10282020.docx

APPENDIX C-1

PHASE I ESA

PHASE I ENVIRONMENTAL SITE ASSESSMENT



189-10 Northern Boulevard
Queens, New York 11358

October 29, 2020

Prepared for:

Ameriland Brook LLC
Ms. Xiaohong Shannon Zhao
64-35 213th Street
Queens, New York 11364

Prepared by:

EQUITY ENVIRONMENTAL ENGINEERING, LLC

500 International Drive, Suite 150
Mount Olive, New Jersey 07828
(973) 527-7451

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189-10 Northern Blvd
Queens, New York 11358

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PHASE I ENVIRONMENTAL SITE ASSESSMENT

189-10 Northern Blvd
Queens, New York 11358

EXECUTIVE SUMMARY

Equity Environmental Engineering, LLC (Equity) was retained by Ameriland Brook LLC to conduct a Phase I Environmental Site Assessment (Phase I) to identify Recognized Environmental Conditions (RECs) associated with current and prior site use at the property identified as 189-10 Northern Boulevard Queens, New York 11358. Equity conducted the assessment in accordance with the requirements of ASTM International Standard E1527-13, "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process" and good professional practices.

Site Overview

The Subject Property is as follows:

Property Designation	189-10 Northern Blvd
Property Address	189-10 Northern Boulevard Queens, New York 11358
Parcel ID	Block 5513 / Lot 11
Parcel Size	9,838 Square Feet
Number of Buildings	Zero (0)
Number of Stories	N/A
Finished Area (SF)	N/A
Date Constructed	N/A
Construction Type	N/A
Property Usage	Fenced Parking Lot
Inspection Date	10/22/20
Weather Conditions	Cloudy, 60's
Site Contact/Title	Xiaohong Shannon Zhao/Owner
Site Contact Phone	(646) 201-6853

Definitions

The ASTM International Phase I Standard defines environmental conditions as follows:

- ***Recognized Environmental Conditions (RECs)***

  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.

- ***Controlled Recognized Environmental Conditions (CRECs)***

  The term "Controlled Recognized Environmental Condition" is 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).

- ***Historical Recognized Environmental Conditions (HRECs)***

  The term "Historical Recognized Environmental Condition" is a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted residential use criteria established by a regulatory authority, without subjecting the property to any required controls, such as property use restrictions or activity and use limitations (AULs, which include both institutional controls and engineering controls).

- ***Vapor Encroachment Conditions (VECs)***

  The term "Vapor Encroachment Condition" is a condition where the presence or likely presence of chemicals of concern vapors in the subsurface of the target property caused by the release of vapors from contaminated soil and/or groundwater either on or near the target property.

- ***De Minimis Conditions***

  The term "De Minimis Condition" is 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.

- ***Data Gaps***

  The term "Data Gap" is a lack of or inability to obtain information required by this practice despite good faith efforts by the environmental professional to gather such information. Data gaps may result from incompleteness in any of the activities required by this practice, including, but not limited to site reconnaissance (for example, an inability to conduct the site visit), and interviews (for example, an inability to interview the key site manager, regulatory officials, etc.).

- ***Non-Scope Considerations***

  Consideration of business environmental risk issues some of which are identified in Section 13 and Appendix XI of ASTM International E1528-14e1 (e.g., asbestos, ecological resources, mold, radon, wetlands, regulatory compliance et. Al.).

Findings

The following environmental conditions were identified:

A. Recognized Environmental Conditions (RECs)

No RECs were identified as a result of this assessment.

B. Controlled Recognized Environmental Conditions (CRECs)

No Controlled RECs were identified as a result of this assessment.

C. Historical Recognized Environmental Conditions (HRECs)

No Historic RECs were identified as a result of this assessment.

D. Vapor Encroachment Conditions (VECs)

The EDR Vapor Encroachment database identified several VECs (Vapor Encroachment Conditions) of concern within 1/10 of a mile of the Subject Property. These include a historic cleaner and historic auto upgradient of the Subject Property. Based on these findings, a vapor encroachment condition cannot be ruled out. Details on the VECs can be found in Appendix C.

E. De Minimis Conditions

No, De Minimis Conditions were identified as a result of this assessment.

F. Data Gaps

Equity did identify one data gap that could affect its ability to identify Recognized Environmental Concerns (RECs) associated with the Subject Property. Equity was not able to physically enter the fenced in property and was only able to observe the site from the edges of the fenced area.

Conclusions

Equity's review of available information and observations of the subject and surrounding properties indicates that no RECs, CRECs, Historical RECs, or De Minimis conditions were identified as a result of this assessment, however, a VEC cannot be ruled out.

PHASE I ENVIRONMENTAL SITE ASSESSMENT

189-10 Northern Boulevard
Queens, New York 11358

I. INTRODUCTION

A. Purpose

Equity Environmental Engineering, LLC (Equity) was contracted by Ameriland Services LLC to perform a Phase I Environmental Site Assessment of the referenced property in accordance with the ASTM International Standard E1527-13, "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process. The ASTM International Standard satisfies the requirements of the United States Environmental Protection Agency's (USEPA) All Appropriate Inquiry Standard, 40 CFR Part 312, which is required to qualify for certain landowner liability protections under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). The ASTM International Standard constitutes "all appropriate inquiry into previous ownership and uses of the property consistent with good commercial or customary practice". The investigation was conducted to identify Recognized Environmental Conditions (RECs), which are identified as 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.

It is Equity's understanding that the Phase I is being conducted as part of a rezoning application for the Subject Property. The rezoning is being sought for future development of the site.

B. Scope-of-Services

The Phase I consisted of the following components:

1. review of environmental and historical records
2. site reconnaissance
3. interviews
4. report preparation

The environmental assessment is non-invasive and does not include any testing or sampling of materials, such as soil, water, air or building materials. The environmental assessment included a non-invasive (no sampling) evaluation of the potential for asbestos-containing materials, lead-based paint, and lead in drinking water.

C. Significant Assumptions, Limitations and Exceptions

Unless noted, Equity assumes that the information obtained through the records review, site inspection, and interviews is correct. Equity does not warrant the accuracy of this information or warrant that any RECs that were not identified through the Phase I process do not exist on the property. RECs do not include De Minimis conditions that do not present a threat to human health or the environment, and that would not be subject to an enforcement action by government agencies.

D. Special Terms and Conditions

No Special Terms or Conditions apply to this project.

E. Reliance

This report is for the use and benefit of Ameriland Brook LLC and any of their respective affiliates, agents and advisors.

II. SITE DESCRIPTION

A. Location and Description

- The Subject Parcel is identified as 189-10 Northern Boulevard Queens, New York 11358. Title to the property is vested in Prince St 606 LLC. The Subject Property is identified as Block 5513 /Lot 11 on the Queens Borough Tax Map. The Subject Property is an irregular shaped lot on Northern Boulevard. The Subject Property is located in Queens County, New York.

  A USGS Site Location Map and Site Boundary Map are included as Figures 1 and 2 and Appendix A.

B. Site and Vicinity Characteristics

The Subject Property is located in a R3-2/R3X zoning district surrounded by residential properties to the south, commercial properties to the west and north, and a parking lot to the east.

C. Current Use of the Property

The Subject Property is currently a paved parking lot with a chain link fence around the perimeter.

D. Description of Structures, Improvements and Utilities

There are currently no structures present on the Subject Property.

Utilities at the property include the following:

1. Electricity

There is no electricity at the site.

2. Water

There is no potable water supplied to the site. No groundwater drinking wells were reported or identified as a result of this assessment.

3. Sewers

There is no sewer discharge from the site.

4. Heat

There is no heating for the site.

E. Current Uses of Adjoining Properties

The following sites adjoin the parcel:

- North – Northern Blvd. and Commercial/Parking (Car Dealership)
- East – Commercial (parking lot)
- South – Residential houses
- West – Restaurant (Bonchon)

III. USER-PROVIDED INFORMATION

The ASTM International Standard defines the "User" as the person on whose behalf the Phase I is being conducted. The ASTM International Standard requires the User to provide site information for the Phase I. Equity was not provided with the following information.

- Liens (i.e., legal, deed notice) or Activity and Use Limitations (i.e., engineering controls, etc.) were identified.

- Specialized knowledge or commonly known information regarding current or historical hazardous material use on the Subject Property or adjoining properties, which would be considered a REC, were identified.

  There were no indications that the fair market value of the property was reduced due to environmental concerns.

IV. RECORDS REVIEW

A. Standard Environmental Record Sources

EDR was contracted by Equity to prepare an environmental database survey for the subject site and surrounding areas. A copy of the EDR report, which summarizes the environmental concerns presented by nearby sites, is attached as Appendix C. The listing of a site on any of these databases is, in itself, not indicative of an existing environmental concern. Distance, geology, and groundwater flow gradient are the factors that determine the importance of a listed site to the soil and groundwater quality on the Subject Property. Equity has relied on distance from the listed site and topographical gradient to judge whether that site has the potential to affect the Subject Property.

According to the EDR environmental database search, the TP (Target Property) was not identified on any database. The surrounding properties were identified in the federal and state databases within a one-mile search radius of the Subject Property and are identified as follow:

Database	Target Property	0-1/8 Mile	1/8 – 1/4 Mile	1/4 – 1/2 Mile	1/2 – 1 Mile
RCRA-LQG	0	1	2	-	-
RCRA-SQG	0	0	5	-	-
RCRA-VSQG	0	0	2	-	-
RCRA-NonGen/NLR	0	8	33	-	-
EDR Historic Auto	0	1	-	-	-
NY Spills	0	7	-	-	-
NY Manifest	0	8	35	-	-
NY Drycleaners	0	0	1	-	-
NJ Manifest	0	0	1	-	-
NY AST	0	0	8	-	-
NY UST	0	0	5	-	-
NY E Designation	0	0	-	-	-
NY L Tanks	0	2	3	19	-
PA Manifest	0	0	0	-	-
NY VCP	0	0	0	0	-
NY HSWDS	0	0	0	0	-
NY SWF/LF	0	0	0	0	-
NY Brownfields	0	0	0	0	-
NY SHWS	0	0	0	0	0

Additional information regarding each of the individual properties identified in the databases listed above is provided in **Appendix C**.

B. Orphans Summary

The EDR Orphan Summary lists twenty-three properties that were included in certain federal or state environmental databases but were reported by EDR to be unmapped due to insufficient address information. The listing of orphan sites within the database search was reviewed, cross-referencing available address information with facility names. Upon review, it was determined that no orphan sites appear to be associated with the Subject or adjoining properties. Additional information regarding the EDR Orphan Summary Report can be found in **Appendix C.**

C. City Environmental Quality Review "E" Designation

EDR was contracted by Equity to prepare an environmental database survey for the Subject Property and surrounding areas. A copy of the EDR report includes City Planning Commission approved amendments to the Paramus Zoning Map - which may include environmental designations of certain tax lots that have physical or historical evidence of uses related to hazardous materials. The "E" designations shown on the zoning maps function as indicators of the environmental review that must be conducted when the lots are developed in accordance with the regulations of the rezoned district. The City Planning Commission's rezoning actions, including environmental designations, were made effective upon the City Council's approval of the Zoning Map Amendment. Based upon a review of the NYCDEP "E" Designation database October 12, 2020, the Subject Property was not identified.

D. Physical Setting Source

The Subject Property is located in Queens, New York and surrounded by parking lots, Northern Boulevard, and commercial and residential properties. The ground surface at the site is predominantly level. Ground cover consists of the concrete sidewalk and the paved parking area. The Subject Property is accessed from the north via Northern Boulevard. Based on a review of the 2013 USGS Flushing and Jamaica, 7.5-minute topographic maps for the area, groundwater is inferred to flow to the northeast toward the Little Neck Bay.

Based on the soil survey maps published by the USDA Soil Conservation Service (1994) and information provided in the EDR Report, the subsurface soils expected at the site include Urban Land, which is variable in texture and does not qualify as hydric soil. Urban land soils are those which have lost original characteristics due to human activity (construction, development, demolition, debris, etc.). The geologic age identification of the rock at the Subject Property is of the Cenozoic Era, Quaternary System, Pleistocene Series, (Code Qp). No settling ponds, lagoons, surface impoundments, wetlands or natural catch basins were observed on the Subject Property during this investigation.

E. Historical Use Information on the Property

The historical sources reviewed indicate that the currently building was constructed in 1948 as depicted in the historic aerial photographs and Sanborn Fire Insurance Maps. Copies of

digital Sanborn Fire Insurance Maps are provided in **Appendix D**. Copies of historic aerial photographs are provided in **Appendix F**.

1. Sanborn Fire Insurance Maps

Equity reviewed digital Sanborn Fire Insurance Maps provided by EDR, Inc. ranging from 1903 to 2006. Copies are provided in Appendix D. The following is a summary of the review of these maps. Northern Boulevard was a common endpoint for many Sanborn Maps and therefore some additional years that did not include the Subject Property were reviewed to characterize the surrounding area. The following is a summary of the Sanborn Maps:

Year	Subject Property	Surrounding Area
1903	The Subject Property is undeveloped and is a portion of a large lot.	The surrounding area is almost entirely undeveloped. There is one residential dwelling on current block 5364.
1916, 1934	Subject Property is undeveloped, but is now a portion of a smaller lot than the 1903 map.	North Northern Blvd, the blocks are mostly developed with dwellings and some vacant lots. There is also a plumbing supplies lot on current block 5364 and a club on current block 5367. South of Northern Blvd, there are several stores and mostly small dwellings. On the same block as the Subject Property there is an auto sales lot and a store front. The store front is on the other portion of the shared lot with Subject Property.
1951	The Subject Property is still undeveloped, but the shared lot has extended to almost the entire northern half of the block.	South of Northern Blvd, the used auto sales and the store front have combined lots and the auto building has expanded. Almost all vacant lots on other blocks have been filled with dwellings and a church is now on block 5515.
1980, 1982, 1985	The Subject Property is still undeveloped and shares the lot with the auto services buildings.	South of Northern Blvd, the auto sales and services has expanded to include an upholstery building and repair garage. All vacant lots

		are now filled with dwellings and the church on block 5515 has a school building on the same lot. North of Northern Blvd, all vacant lots are now occupied by commercial properties and dwellings. On block 5364 the plumbing supply store expanded and an office building is also present. On block 5365 there is now an auto sales and rental property along Northern Blvd. On block 5366 there is also an auto sales lot along Northern Blvd. On block 5367, there is a commercial property along Northern Blvd, and a contractor storage building to the north.
1988, 1991, 1992, 1993, 1995, 1999, 2001, 2002, 2003, 2004	The Subject Property is unchanged and still shares the lot.	The large auto sales and services building is now marked as a commercial building. The auto repair and upholstery buildings still remain.
2005, 2006	The Subject Property is now labeled as parking and the Lot seems to be combined with current lot 12.	On block 5512 the northeastern lot is now a bank and parking lot.

2. USGS Topographic Maps

Equity reviewed a total of nine (9) historical Topographic Maps provided by EDR, Inc. ranging from 1897 to 2013. The only discernable information from these maps was that most of the surrounding area was developed sometime between 1900 and 1947. Copies are provided in **Appendix E**.

3. Historic Aerial Photographs

Equity reviewed a total of thirteen (13) aerial photographs spanning from 1924 to 2017. The Subject Property is depicted as not being developed with any structures in all of the available aerial photos. In 1924, the lot appears to be portion of farm land before development in the area occurred. From the 1946 through the 1961 photos, the lot appears to be undeveloped near residential and/or commercial properties. From the 1966 photo through 2017, the lot appears to be paved and used as a parking lot that remained relatively unchanged. Copies are provided in **Appendix F**.

4. City Directory

Equity reviewed local city directory listings provided by EDR, Inc. from 1922 to 2017 for the subject and adjacent properties. There were no findings for the address at the Subject Property. The surrounding area is characterized primarily by commercial and residential listings. Adjoining properties had listings including College Point Car Rentals (2005), Bayside Auto Lease (2000), Econo Car Rental (1991, 2000), Totora Agency (1970, 1967), and Cattrano Billiard Supply & Equipment Co. (1962). The City Directory report is included in **Appendix G**.

5. Regulatory File Review

Equity reviewed title information for the Subject Property contained in the New York City Zola database. Title to the property is vested in Prince St 606 LLC. The Subject Property is identified as Block 5513/Lot 11. There were zero complaints, zero violations, one job, and zero actions filled at the Subject Property. The one job is in relation to the proposed 3 story development that is pending based on a rezoning approval.

Equity submitted an Freedom of Information Law (FOIL) request to the New York City Department of Environmental Protection (NYCDEP) on October 12, 2020. A response was unavailable prior to the completion of this report. In the event records of environmental concern are identified this report will be amended and stakeholders will be notified.

Regulatory records are included in **Appendix H**.

6. Prior Environmental Assessments and Reports

Equity was not provided with any prior environmental assessments or reports.

F. Historical Use Information on Adjoining Properties

The following information summarizes the historical use of properties adjoining the site based on a review of the Sanborn Fire Insurance Maps and Historic Aerial Photographs.

- North – Northern Blvd. and Commercial
- East – Commercial
- South – Residential
- West – Commercial

V. SITE RECONNAISSANCE

A. Methodology and Limiting Conditions

Zachary Landis, Junior Environmental Engineer of Equity Environmental, conducted the Phase I site inspection on October 22, 2020. No site representative was available to lead the walkthrough of the Subject Property.

The limiting condition for the site visit was that the site was fenced in and locked with no reasonable means of entry. The assessment of the site took place along the perimeter of the fenced property.

B. On-Site Operations/Manufacturing

The Subject Property consists of a fenced-in, paved parking lot. At the time of site reconnaissance, there were three passenger cars, one dumpster truck and two dumpsters onsite. There was also miscellaneous storage along the south fence including a propane tank, antifreeze containers, unidentifiable buckets, assorted wood and metal, and furniture. The parking lot had a clear division in the pavement running north-south, that indicated the eastern half of the property was more recently paved. Both halves of the pavement were in poor condition with large cracks and depressions spread out over the entire surface. Photographs of the Subject Property are provided in **Appendix B**.

C. Chemical and Petroleum Use and Storage (USTs, ASTs, and Containers)

No USTs or ASTs were found during site reconnaissance. A Propane tank and antifreeze bottles were stored along the rear edge of the lot. Multiple buckets that may contain other substances were also along the back edge of the property; however, no definitive contents could be discerned from outside the fence line.

D. Solid and Hazardous Waste

Two, two-yard dumpsters were observed in the northeast corner of the parking area on the Subject Property and are used for cardboard and solid waste. No hazardous waste was observed on the Subject Property.

E. Releases or Spills

No staining or spills were observed during the site reconnaissance. The southwestern portion of the site's ground surface was not easily visible from outside the fence line.

F. Groundwater Wells

No potable, production, irrigation, or monitoring wells were observed or determined through the assessment.

G. Surface Water, Stormwater Drainage and Wastewater Discharge

No drainage areas were visible during site reconnaissance; however, it is possible drainage was missed as a result of the data gap for the site.

H. Wetlands

Equity reviewed National Wetland Inventory maps included as a layer within the EDR Radius Map Report. No wetlands were identified within the Subject Property. The report is provided in **Appendix C.**

I. Polychlorinated Biphenyls (PCBs)

No equipment likely to contain PCBs were observed during the site reconnaissance.

J. Drains and Sumps

No drainage areas were visible during site reconnaissance; however, it is possible drainage was missed as a result of the lack of access to the site.

K. Vapor Migration/Encroachment

A Vapor Encroachment Screening in accordance with ASTM International E2600-15 was performed by Equity. The EDR Vapor Encroachment database identified several VECs (Vapor Encroachment Conditions) of concern within 1/10 of a mile of the Subject Property. These include a historic cleaner and historic auto upgradient of the Subject Property. Based on these findings, a vapor encroachment condition cannot be ruled out. Details on the VECs can be found in Appendix C.

L. Other Environmental Considerations

Given that there was no structure onsite, no asbestos, lead-based paint, or mold could be observed.

M. Off-Site Concerns

There were no offsite concerns.

VI. INTERVIEWS

As part of the Phase I reconnaissance Equity did not conduct any.

VII. RECOGNIZED ENVIRONMENTAL CONDITIONS (RECs)

Equity completed the Phase I of the Subject Property in accordance with the scope and limitations of ASTM International Practice 1527-13. Any exceptions to, or deletions from, this practice are noted in appropriate sections of this report. RECs are defined as 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. Controlled Recognized Environmental Condition is 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). Historical RECs are RECs previously remediated to current unrestricted residential use applicable regulatory standards. De Minimis conditions are those that do not present a threat to human health or the environment and would not be the subject of an enforcement action by a government agency. Data Gaps are a lack of or inability to obtain information required by the practice that affects the ability of the environmental professional to identify RECs despite good faith efforts to gather the information.

A. Recognized Environmental Conditions (RECs)

No RECs were identified as a result of this assessment.

B. Controlled Recognized Environmental Conditions (CRECs)

No Controlled RECs were identified as a result of this assessment.

C. Historical Recognized Environmental Conditions (HRECs)

No Historic RECs were identified as a result of this assessment.

D. Vapor Encroachment Concerns (VECs)

The EDR Vapor Encroachment database identified several VECs (Vapor Encroachment Conditions) of concern within 1/10 of a mile of the Subject Property. These include a historic cleaner and historic auto upgradient of the Subject Property. Based on these findings, a vapor encroachment condition cannot be ruled out. Details on the VECs can be found in Appendix C.

E. De Minimis Conditions

No, De Minimis Conditions were identified as a result of this assessment.

F. Data Gaps

The lack of total access to the property hampered our ability to closely examine the entire property, however, Equity does not consider this something that would affect our ability to identify Recognized Environmental Concerns (RECs) associated with the Subject Property.

Conclusions

Equity's review of available information and observations of the subject and surrounding properties indicates that no RECs, CRECs, Historical RECs, or De Minimis conditions were identified as a result of this assessment. However, a VEC cannot be ruled out.

IX. DEVIATIONS

Equity did not deviate from the scope of service outlined in Section I of this report.

X. REFERENCES

The following references were used in the preparation of this report:

1. EDR Environmental Databases
2. Sanborn Fire Insurance Maps
3. Aerial Photographs
4. City Directory
5. Historical Topographic Maps
6. City Databases
7. New York City Zola Database
8. New York City Department of Buildings Database
9. NYC Oasis Database

XI. SIGNATURE(S) OF ENVIRONMENTAL PROFESSIONALS

We declare that, to the best of our professional knowledge and belief, we meet the definition of Environmental Professional, as defined in the USEPA All Appropriate Inquiry Standard, 40 CFR, Part 312.10. We have the specific qualifications based on education, training, and experiences to assess a property of the nature, history, and setting of the Subject Property. We have developed and performed all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR, Part 312.

Assessor:

Zachary Landis
Junior Engineer

Environmental Professional:

Robert Jackson
Managing Director

XII. QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONALS

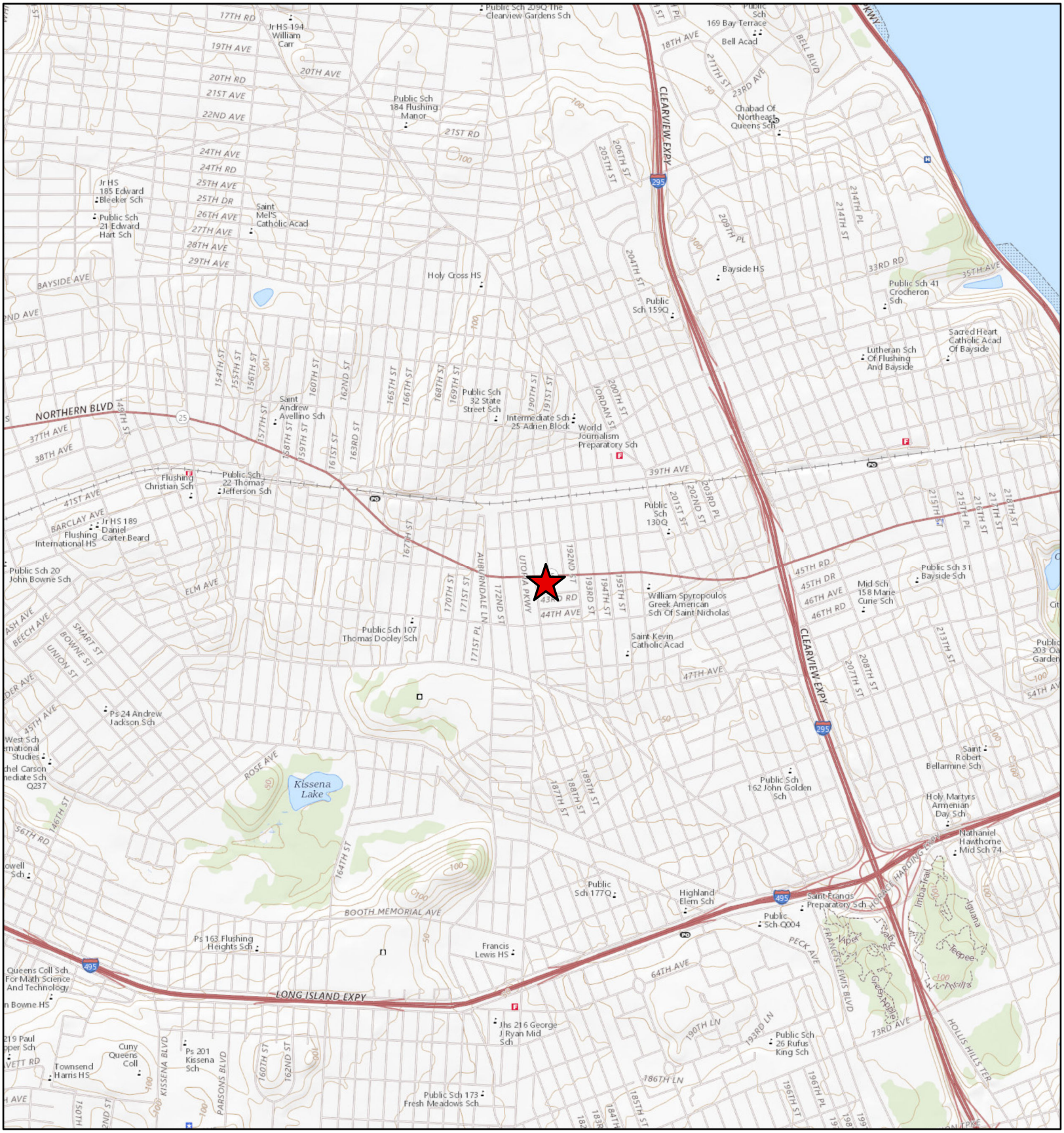
Qualifications of the Environmental Professionals are provided in **Appendix I**.

PHASE I ENVIRONMENTAL SITE ASSESSMENT

189-10 Northern Boulevard
Queens, New York 11358

Appendix A

Figures



Legend

189-10 Northern Boulevard

N

1

Miles

Figure 1
Phase I ESA
USGS Site Location Map

189-10 Northern Boulevard
Queens, New York

equity environmental engineering
500 International Drive, Suite 150, Mount Olive, NJ 07828
Office: (973) 527-7451 / Fax: (973) 858-0280

DRAWN BY / DATE	REV / DATE	DRAWING NUMBER
GB/10.6.20		2020077-01



Legend

189-10 Northern Boulevard

N

150

US Feet

Figure 2
Phase I ESA
Site Boundary Map

189-10 Northern Boulevard
Queens, New York

equity environmental engineering
500 International Drive, Suite 150, Mount Olive, NJ 07828
Office: (973) 527-7451 / Fax: (973) 858-0280

DRAWN BY / DATE	REV / DATE	DRAWING NUMBER
GB/10.6.20		2020077-02

PHASE I ENVIRONMENTAL SITE ASSESSMENT

189-10 Northern Boulevard
Queens, New York 11358

Appendix B

Site Photographs



01 VIEW OF THE SUBJECT PROPERTY FRONTAGE FACING SOUTH



02 VIEW OF THE RANDOM STORAGE IN THE REAR OF THE LOT FACING WEST



03 VIEW OF THE DUMPSTERS KEPT ONSITE FACING SOUTH



04 VIEW OF THE LARGE DEPRESSION IN THE PAVED SURFACE FACING SOUTH



05 VIEW OF THE CENTER OF THE SUBJECT PROPERTY FACING WEST



06 VIEW OF THE RANDOM STORAGE IN THE REAR OF THE LOT FACING WEST



07 VIEW OF THE FRONT OF THE SUBJECT PROPERTY FACING WEST



08 VIEW OF THE EAST SIDE OF THE SUBJECT PROPERTY FACING SOUTH

APPENDIX C-2

REMEDIAL INVESTIGATION REPORT

189-10 NORTHERN BOULEVARD

QUEENS, NEW YORK

Phase II ESA Investigation Report

CEQR Number: 22DCP018Q

Lead Agency

NYC Department of City Planning

120 Broadway, 31st Floor

AABREU@planning.nyc.gov

Prepared for:

Ameriland Brook LLC

30-05 Stratton Street

Flushing, New York 11345

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Prepared by:

P.W.Grosser Consulting, Inc

630 Johnson Avenue, Suite 7

Bohemia, New York 11716

631-589-6353

September 2022

REMEDIAL INVESTIGATION REPORT

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Figure 2	Site Plan
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Figure 4	Groundwater Exceedances
Figure 5	Soil Vapor Detections

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Table 2	Soil Analytical Results – SVOCs
Table 3	Soil Analytical Results – Metals.
Table 4	Soil Analytical Results – Pesticides and PCBs.
Table 5	Groundwater Analytical Results – VOCs.
Table 6	Groundwater Analytical Results – SVOCs.
Table 7	Groundwater Analytical Results – Metals (Total and Dissolved).
Table 8	Groundwater Analytical Results – Pesticides and PCBs.
Table 9	Soil Vapor Analytical Results – VOCs.

APPENDICES

Appendix A	Proposed Redevelopment Plan
Appendix B	Geophysical Work Summary and Maps
Appendix C	Soil Boring Logs
Appendix D	Laboratory Analytical Reports

- LIST OF ACRONYMS

Acronym	Definition
AOC	Area of Concern
CAMP	Community Air Monitoring Plan
COC	Contaminant of Concern
CPP	Citizen Participation Plan
CSM	Conceptual Site Model
DER-10	New York State Department of Environmental Conservation Technical Guide 10
FID	Flame Ionization Detector
GPS	Global Positioning System
HASP	Health and Safety Plan
HAZWOPER	Hazardous Waste Operations and Emergency Response
IRM	Interim Remedial Measure
NAPL	Non-aqueous Phase Liquid
NYC VCP	New York City Voluntary Cleanup Program
NYC DOHMH	New York City Department of Health and Mental Hygiene
NYC OER	New York City Office of Environmental Remediation
NYS DOH ELAP	New York State Department of Health Environmental Laboratory Accreditation Program
OSHA	Occupational Safety and Health Administration
PID	Photoionization Detector
QEP	Qualified Environmental Professional
RI	Remedial Investigation
RIR	Remedial Investigation Report
SCO	Soil Cleanup Objective
SPEED	Searchable Property Environmental Electronic Database

CERTIFICATION

I, _____, am a Qualified Environmental Professional, as defined in RCNY § 43-1402(ar). I have primary direct responsibility for implementation of the Remedial Investigation for the Site name Site, (NYC VCP Site No. site number). I am responsible for the content of this Phase II ESA Report, have reviewed its contents and certify that this Phase II ESA is accurate to the best of my knowledge and contains all available environmental information and data regarding the property.

Qualified Environmental Professional Date Signature

EXECUTIVE SUMMARY

This Phase II ESA was developed in response to the findings identified in the October 2020 Phase I ESA prepared by Equity Environmental Engineering (Equity) and in accordance with the City Environmental Quality Review (CEQR) Technical Manual, November 2020. The Scope of Work was detailed in the July 2022 Phase II ESA Work Plan prepared by PW Grosser Consulting, Inc. (PWGC) which was reviewed and accepted by the New York City Department of City Planning (NYCDCP).

Site Location and Current Usage

The Site is located at 189-10 Northern Boulevard in the Flushing section in Queens, New York and is identified as Block 5311 and Lot 11 on the New York City Tax Map. **Figure 1** shows the Site location. The Site is 9,838 square feet and is bounded by Northern Boulevard to the north; dwelling units and 43rd road to the south, a parking lot to the east, and a restaurant, 189th street to the west. A map of the site boundary is shown in **Figure 2**. Currently, the Site is vacant and is used for staging construction materials.

Summary of Proposed Redevelopment Plan

The proposed future use of the Site will consist of a three-story mixed-use building which will also include a full basement to be used for parking. The first floor will be partially utilized as a garage and the remaining area on the first floor will be utilized as retail space. The second floor will be utilized as office space and the third floor will be utilized as a community facility. The roof will be occupied by a boiler room, mechanical room, and stair bulkhead. Excavation of the proposed cellar is anticipated to a depth of 12 feet below the Northern boulevard sidewalk grade with an elevator pit that will extend to a planned depth of 18 feet below grade. The layout of the proposed site development is presented in **Appendix A**. The current zoning designation is R3-2 and RX3. The proposed use will be consistent with zoning for the property when the zoning will be changed from R3-2 and RX3 to R3-2/C2-3 and R3X/C2-3.

Summary of Past Uses of Site

Historical usage of the Site indicates that it was first developed in approximately 1966 and used as a parking lot from approximately 1966 to the present day.

No areas of concern were identified as part of October 2022 Phase I ESA and during this Phase II site inspection.

Summary of the Work Performed under the Phase II ESA:

1. Conducted a Site inspection to identify physical obstructions (i.e. subgrade obstructions, utilities, etc:);
2. Conducted a geophysical investigation to identify subsurface anomalies;
3. Installed four soil borings, SB001 to SB004, across the Site, and collected eight soil samples as follows:
    a. A soil sample was collected from the 0-2 foot interval at each boring to determine if pass site usage has impacted shallow soils.
    b. A soil sample was collected from the 18-20 foot interval at each boring to analyze soil quality at the proposed terminal depth of the planned excavation.
4. Installed one temporary groundwater monitoring well at the Site, GW001, to collect one groundwater sample for chemical analysis to evaluate groundwater quality beneath the site. The screen for the temporary well was set from 50 to 60 feet below grade to account for the water table which was identified to be at approximately 53 feet below grade.
5. Installed two soil vapor probes at the site, SV001 and SV002, to a depth of 12 feet below grade to investigate the potential for soil vapor intrusion at the basement slab level of the planned redevelopment.

Summary of Environmental Findings

1. Elevation of the property is approximately 68 feet above mean sea level.
2. Depth to groundwater was identified to be approximately 53 feet below grade.
3. Groundwater flow is estimated to be towards the northeast based on previous environmental assessments.
4. Soil samples collected during the Phase II ESA demonstrated that soil beneath the site meets Unrestricted Use Soil Cleanup Objectives.

5. Groundwater samples collected during the Phase II ESA were compared to the Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards (AWQS) for groundwater.

    a. No exceedances were detected for volatile organic compounds (VOCs).

    b. No exceedances were detected for semi-volatile organic compounds (SVOCs)

    c. No exceedances were detected for pesticides and/or polychlorinated biphenyls (PCBs)

    d. Dissolve metals manganese (5,080 µg/L) and sodium (73,200 µg/L) were detected above the AWQS. Manganese and sodium are both naturally occurring compounds in groundwater beneath Long Island and are not believed to be indicative of point source or non-point source contamination.

6. Soil vapor samples collected during the Phase II ESA were compared to the New York State Department of Health (NYSDOH) Final Guidance for Evaluating Soil Vapor Intrusion matrices dated October 2006.

    a. Based on NYSDOH guidance for soil vapor intrusion, no VOCs were detected at concentrations which would require additional monitoring or mitigation.

PHASE II ESA REPORT

1.0 SITE BACKGROUND

Ameriland Brook LLC retained PWGC to investigate the 0.23-acre site located at 189-10 Northern Boulevard in the Flushing section of Queens, New York. Mixed commercial residential use is proposed for the property as part of a pending redevelopment. The Phase II ESA fieldwork was performed on August 1, 8 and 16, 2022.

1.1 Site Location and Current Usage

The Site is located at 189-10 Northern Boulevard in the Flushing section in Queens, New York and is identified as Block 5311 and Lot 11 on the New York City Tax Map. **Figure 1** shows the Site location. The Site is 9,838 square feet and is bounded by Northern Boulevard to the north; dwelling units and 43rd road to the south, a parking lot to the east, and a restaurant, 189th street to the west. A map of the site boundary is shown in **Figure 2**. Currently, the Site is vacant and is used for staging construction materials.

1.2 Proposed Redevelopment Plan

The proposed future use of the Site will consist of a three-story mixed-use building which will also include a full basement to be used for parking. The first floor will be partially utilized as a garage and the remaining area on the first floor will be utilized as retail space. The second floor will be utilized as office space and the third floor will be utilized as a community facility. The roof will be occupied by a boiler room, mechanical room, and stair bulkhead. Excavation of the proposed cellar is anticipated to a depth of 12 feet below the Northern boulevard sidewalk grade with an elevator pit that will extend to a planned depth of 18 feet below grade. The layout of the proposed site development is presented in **Appendix A**. The current zoning designation is R3-2 and RX3. The proposed use will be consistent with zoning for the property when the zoning will be changed from R3-2 and RX3 to R3-2/C2-3 and R3X/C2-3.

1.3 Site History

Historical usage of the Site indicates that it was first developed in approximately 1966 and used as a parking lot from approximately 1966 to the present day. No areas of concern were identified as part of October 2022 Phase I ESA and during this Phase II site inspection.

2.0 PHASE II ESA INVESTIGATION ACTIVITIES

1. Conducted a Site inspection to identify physical obstructions (i.e. subgrade obstructions, utilities, etc:);

2. Conducted a geophysical investigation to identify subsurface anomalies;

3. Installed four soil borings, SB001 to SB004, across the Site, and collected eight soil samples as follows:

    a. A soil sample was collected from the 0–2-foot interval at each boring to determine if past site usage has impacted shallow soils.

    b. A soil sample was collected from the 18–20-foot interval at each boring to analyze soil quality at the proposed terminal depth of the planned excavation.

4. Installed one temporary groundwater monitoring well at the Site, GW001, to collected one groundwater sample for chemical analysis to evaluate groundwater quality beneath the site. The screen for the temporary well was set from 50 to 60 feet below grade to account for the water table which was identified to be at approximately 53 feet below grade.

5. Installed two soil vapor probes at the site, SV001 and SV002, to a depth of 12 feet below grade to investigate for the potential for soil vapor intrusion at the basement slab level of the planned redevelopment.

2.1 Geophysical Investigation

On August 1, 2022, PWGC and East Coast Geophysics, Inc. (ECG) of Bensalem, Pennsylvania mobilized to the subject property to perform a geophysical survey. The purpose of the geophysical survey was to determine the absence/presence of subsurface anomalies at the subject property and to investigate the presence of subgrade utilities. ECG technicians utilized a GSSI SIR-3000 cart-mounted Ground Penetrating Radar (GPR)system, RD7000 high-range precision utility detector, and Fisher TW-6 pipe and cable locator. The survey was limited to a depth of 3-5 feet bgs. The limiting factor from GPR depth of penetration, the proximity of

equipment to large metallic features, parking vehicles, metal fencing, other large metallic surface features and areas of surface debris.

No subgrade features such as USTs, drywells, sanitary structures, or other items of environmental concern were identified. However, due to the access limitations on the day of the survey, PWGC cannot attest to the absence of such structures at inaccessible portions of the property. The geophysical report is included as **Appendix B.**

2.2 Borings and Monitoring Wells

Drilling and Soil Logging

Soil sampling was performed in accordance with the New York State Department of Environmental Conservation (NYSDEC) Technical Guidance for Site Investigation and Remediation, May 2010 (DER-10)

A total of four borings, SB001 to SB002, were installed at the site. Borings were installed with a Geoprobe drill rig and soils were sampled continuously from grade to a depth of 20 feet below grade. Disposable acetate liners were utilized within the rods. Soil samples were field screened with a photoionization detector (PID) for the presence of volatile organics. The PID was calibrated with a fresh air zero and a 100 parts per million (ppm) isobutylene span calibration. PID readings were 0.0 ppm in each of the soil borings and there was no visual or olfactory evidence of impact on the soil. Boring logs were prepared by a geologist and are attached in **Appendix C**. A map showing the location of soil borings is shown in **Figure 3**.

Groundwater Monitoring Well Construction

One temporary groundwater monitoring well was installed at the boring location of SB001. The temporary well consisted of a 1-inch diameter PVC pipe outfitted with a 10-foot long slotted screen which was set at 50 to 60 feet below grade to intersect with the groundwater table at approximately 53 feet below grade. The temporary well was purged using a check valve collected to disposable polyethylene tubing to collect a sample of the groundwater. The location of the temporary well point is illustrated on **Figure 3**.

Soil Vapor Point Installation

Two temporary soil vapor probes, SV001 and SV002, were installed as part of the Phase II ESA. Soil vapor sampling locations are shown on **Figure 3**. At each location, the vapor

sampling points were installed at a depth matching the planned depth of the future basement slab. Both of the soil vapor sampling probes were attached to ¼-inch polyethylene tubing which extended to the proposed excavation depth and was sealed at the surface with bentonite slurry.

Temporary soil vapor probes were installed in accordance with procedures specified in the Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York (NYSDOH October 2006). Each sampling point was tested using helium tracer gas to confirm the bentonite seal's integrity prior to sample collection.

2.3 Sample Collection and Chemical Analysis

Sampling performed as part of the field investigation was conducted in a manner to assess overall subsurface quality at the site. Discrete (grab) samples have been used to determine the presence and/or impact of contaminants on public health and the environment. The sampling performed and presented in this Phase II ESA provides a sufficient basis for the evaluation of remedial action alternatives, the establishment of a qualitative human health exposure assessment, and the selection of a final remedy, if necessary.

Soil Sampling

Samples were collected from each of the borings and placed in laboratory-supplied bottleware and labeled with the appropriate boring ID and sample depth. Samples were then placed on ice in a cooler and delivered to York Analytical Laboratories of Stratford, Connecticut, a New York State Department of Health (NYSDOH) Environmental Laboratory Approved Program (ELAP) certified laboratory, under proper chain of custody procedures.

Eight soil samples were collected for chemical analysis during this Phase II ESA. The soil samples were collected from 0-2 feet and from 18-20 feet bgs at each boring location to match the vertical extent of the planned excavation of the proposed redevelopment. For quality assurance/ quality control (QA/QC) purposes PWGC collected a blind duplicated sample (duplicate of sample SB001 (0-2')). Soil samples were analyzed for the parameters detailed on the table included on Page 18 of this report. Soil sample analytical data is reported on **Table 1** through **Table 4**.

Groundwater Sampling

One groundwater sample was collected for chemical analysis during this Phase II ESA. The groundwater sample was analyzed for the parameters detailed on the table included on Page 18 of this report. Groundwater sample analytical data is reported in **Table 5** through **Table 8**.

Soil Vapor Sampling

Two soil vapor probes were installed and two soil vapor samples were collected for chemical analysis during this Phase II ESA. Soil vapor sampling locations are shown in **Figure 3**. Soil vapor samples were analyzed for the parameters detailed on the table included on Page 18 of this report. Soil vapor sample analytical data is reported in **Table 9**. Methodologies used for soil vapor assessment conform to the *NYS DOH Final Guidance on Soil Vapor Intrusion, October 2006.*

Chemical Analysis

Chemical analytical work presented in this Phase II ESA has been performed in the following manner:

Factor	Description
Chemical Analytical Laboratory	Chemical analytical laboratory used in the Phase II ESA was York Analytical Laboratories, Inc.
Chemical Analytical Methods	Soil analytical methods: • TAL Metals by USEPA Method 6010C (rev. 2007); • VOCs by USEPA Method 8260C (rev. 2006); • SVOCs by USEPA Method 8270D (rev. 2007); • Pesticides by USEPA Method 8081B (rev. 2000); • PCBs by USEPA Method 8082A (rev. 2000);

	Groundwater analytical methods: • TAL Metals by USEPA Method 6010C (rev. 2007); total and dissolved. • VOCs by USEPA Method 8260C (rev. 2006); • SVOCs by USEPA Method 8270D (rev. 2007); • Pesticides by USEPA Method 8081B (rev. 2000); • PCBs by WSEPA Method 8082A (rev. 2000); Soil vapor analytical methods: • VOCs by USEPA Method TO-15

Results of Chemical Analyses

Laboratory data for soil, groundwater and soil vapor are summarized in **Tables 1** through **Table 9**. Laboratory data deliverables for all samples evaluated in this Phase II ESA are provided in digital form in **Appendix D**.

3.0 ENVIRONMENTAL EVALUATION

3.1 Geological and Hydrogeological Conditions

The topography of the site and surrounding area was reviewed from the United States Geological Survey (USGS) 7.5-minute series topographic map for the Flushing, NY quadrangle. The property elevation is approximately 68 feet below the National Geodetic Vertical Datum (NGVD).

Stratigraphy

Based on inspection of soil borings performed at the site as part of the Phase II ESA, no historic fill was identified at the site. The site is overlain by a layer of asphalt and concrete, ranging from grade to approximately 0.5-foot bgs. Soils underlying the asphalt and concrete consist of about 1 to 15 feet of well-graded clayey fine sands and some silty sands followed by 15 to 20 feet of poorly graded gravelly sands with little or minimal fines.

Hydrogeology

The approximate depth to groundwater is 53 feet below the existing grade. Groundwater flow is expected to be north-northeast beneath the site.

3.2 Soil Chemistry

Soil/fill sample analytical results were compared to the New York State Department of Environmental Conservation (NYSDEC) 6NYCRR Part 375 Section 6.8 Unrestricted Use Soil Cleanup Objectives and Restricted Residential Use Soil Cleanup Objectives (SCOs), the latter of which is based on the intended future site usage.

No VOCs, SVOCs, Metals, Pesticides or PCBs were detected at concentrations greater than Unrestricted Use SCOs for each of the eight soil samples as well as the blind duplicate sample. Soil sample analytical results are summarized on **Tables 1 through Table 4.**

3.3 Groundwater Chemistry

The groundwater sample analytical results were compared to the Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards (AWQS) for groundwater.

No VOCs, SVOCs, Pesticides and PCBs were detected at concentrations greater than AWQS.

Metals including barium (1,760 µg/L), chromium (206 µg/L), lead (52 µg/L), magnesium (36,400 µg/L), manganese (11,600 µg/L), nickel (114 µg/L) and sodium (74,900 µg/L) were reported above their respective AWQS. Dissolved metals were also analyzed to more accurately reflect metal concentrations that are dissolved and potentially mobile in groundwater. Given that total metals have an affinity to adhere to soil and colloidal particles, elevated metals can be seen in turbid groundwater samples typically obtained during the sampling process. The comparison of the total to dissolved analysis demonstrates which metals exist dissolved in the groundwater rather than what has adhered to the soils. The analytical results for the dissolved metals indicated the presence of manganese (5,080 µg/L) and sodium (73,200 µg/L) above the AWQS. Manganese and sodium are both naturally occurring compounds in groundwater beneath Long Island and are not believed to be indicative of point source or non-point source contamination.

Figure 4 shows the location and posts the values for groundwater that exceed the New York State 6NYCRR Part 703.5 Class GA groundwater standards. However, as discussed above, these exceedances are not indicative of point source or non-point source contamination.

3.4 Soil Vapor Chemistry

Soil vapor results indicated low levels of petroleum-related VOC and low levels of chlorinated VOCs (CVOCs). The total concentration of petroleum-related VOCs (BTEX) ranged from 124.6 µg/m^3 (SV002) to 192.9 µg/m^3 (SV001). CVOC detections included trichloroethylene (TCE) and ranged from non-detect at SV001 to 3.590 µg/m^3 at SV001. When compared to the NYSDOH soil vapor decision matrices no further action is recommended based on the detection of TCE being lower than the lowest concentration of 6 µg/m3 in the soil vapor decision matrices. Acetone, a typical laboratory contaminant, was detected at concentrations ranging from 1,560 µg/m^3 (SV002) to 2,370 µg/m^3 (SV001). Analytical results are indicative of background concentrations of VOCs in soil vapor in a highly developed and urbanized area.

Figure 5 shows the location and posts the values for soil vapor samples with detected concentrations.

3.5 Prior Activity

Based on an evaluation of the data and information from the Phase II ESA, the disposal of significant amounts of hazardous waste is not suspected at this site.

4.0 SUMMARY AND RECOMMENDATIONS

PWGC has performed a Phase II ESA at the subject property in conformance with the scope and limitations of ASTM Practice E1903-19 for the following objectives:

1 Conducted a Site inspection to identify physical obstructions (i.e. subgrade obstructions, utilities, etc:);

2 Conducted a geophysical investigation to identify subsurface anomalies.

3 Installed four soil borings, SB001 to SB004, across the Site, and collected eight soil samples as follows:

   a. A soil sample was collected from the 0–2-foot interval at each boring to determine if past site usage has impacted shallow soils.

   b. A soil sample was collected from the 18–20-foot interval at each boring to analyze soil quality at the proposed terminal depth of the planned excavation.

4 Installed one temporary groundwater monitoring well at the Site, GW001, to collected one groundwater sample for chemical analysis to evaluate groundwater quality beneath the site. The screen for the temporary well was set from 50 to 60 feet below grade to account for the water table which was identified to be at approximately 53 feet below grade.

5 Installed two soil vapor probes at the site, SV001 and SV002, to a depth of 12 feet below grade to investigate for the potential for soil vapor intrusion at the basement slab level of the planned redevelopment.

4.1 Conclusions

Based on the results of the Phase II ESA, PWGC offers the following conclusions:

- No subgrade features such as USTs, drywells, sanitary structures, or other items of environmental concern were identified during the geophysical survey. However, due to

the access limitations on the day of the survey, PWGC cannot attest to the absence of such structures at inaccessible portions of the property.

- Based on the laboratory analytical results, there were no VOCs, SVOCs, Metals, Pesticides and PCBs were detected at concentrations greater than Unrestricted Use SCOs for each of the eight soil samples as well as the blind duplicate sample.
- Based on the laboratory analytical results, there were no VOCs, SVOCs, Pesticides and PCBs were detected at concentrations greater than AWQS for the groundwater sample. However, the analytical results for the dissolved metals indicated the presence of manganese (5,080 µg/L) and sodium (73,200 µg/L) above the AWQS. Manganese and sodium are both naturally occurring compounds in groundwater beneath Long Island and are not believed to be indicative of point source or non-point source contamination.
- Based on NYSDOH guidance for soil vapor intrusion, no VOCs were detected at concentrations which would require additional monitoring or mitigation.

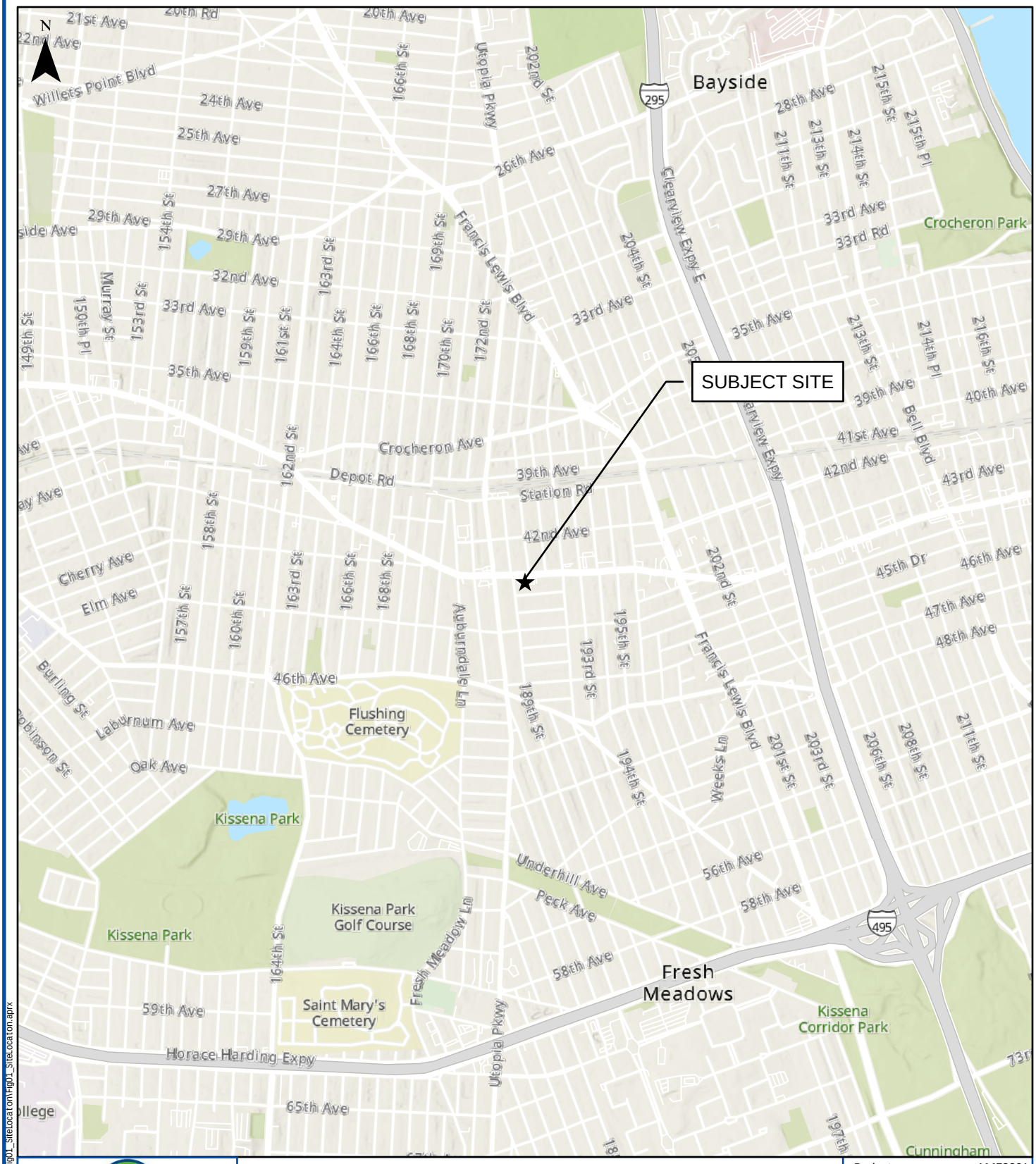
4.2 Recommendations

Based on the conclusions detailed above, PWGC recommends no further action for the subject property.

Site-Specific Standards, Criteria and Guidance

- 6 NYCRR Part 371 - Identification and Listing of Hazardous Wastes
- 6 NYCRR Part 375 - Inactive Hazardous Waste Disposal Sites
- 6 NYCRR Parts 700-706 - Water Quality Standards (June 1998)
- TOGS 1.1.1 - Ambient Water Quality Standards & Guidance Values and Groundwater Effluent Limitations
- Technical Guidance for Screening Contaminated Sediments (January 1999)
- NYSDOH Indoor Air Sampling & Analysis Guidance (August 8, 2001 or subsequent update)
- NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York (draft October 2004 or subsequent final draft)

FIGURES



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CLIENT DRIVEN SOLUTIONS

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SITE LOCATION

189-10 Northern Boulevard
Flushing, NY

0 ¼ ½ ¾ 1 Miles

Project:	AME2201
Date:	5/13/2022
Designed by:	RM
Drawn by:	HS
Approved by:	RM
Figure No:	1

Document Path: W:\Projects\A-D\AME\Map Files\Fig01_SiteLocation\Fig01_SiteLocation.aprx



Document Path: W:\Projects\A-D\AME\Map Files\Fig01_SiteLocation\Fig01_SiteLocation.aprx

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DRAWING PREPARED FOR:

REVISION	DATE	INITIAL	COMMENTS

DRAWING INFORMATION:

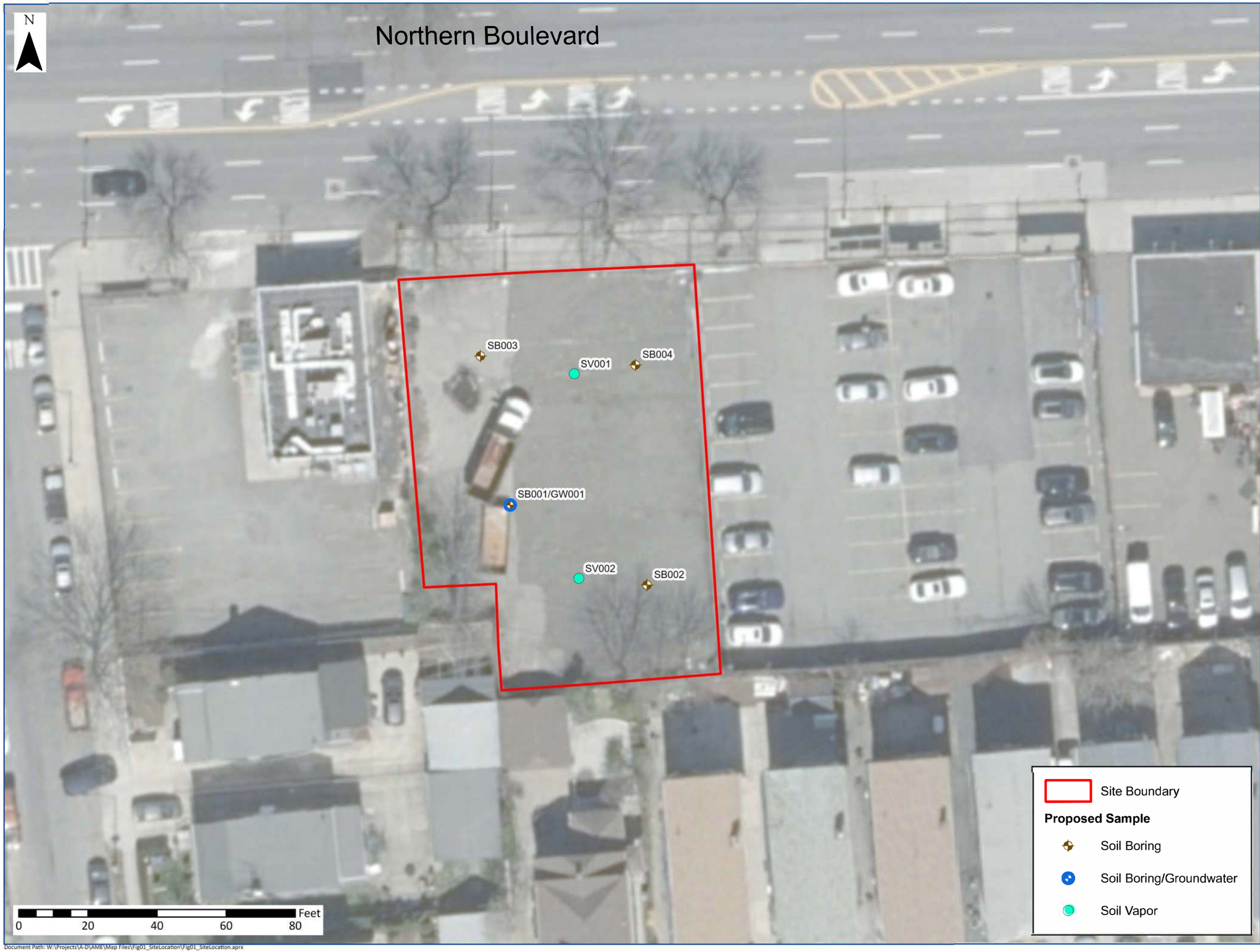
Project:	AME2201	Designed by:	RM
Date:	5/13/2022	Drawn by:	HS
Scale:	AS SHOWN	Approved by:	RM

SITE PLAN

189-10 Northern Boulevard
Flushing, NY

FIGURE NO:

2



Document Path: W:\Projects\A-D\AME\Map Files\Fig01_SiteLocation\Fig01_SiteLocation.aprx

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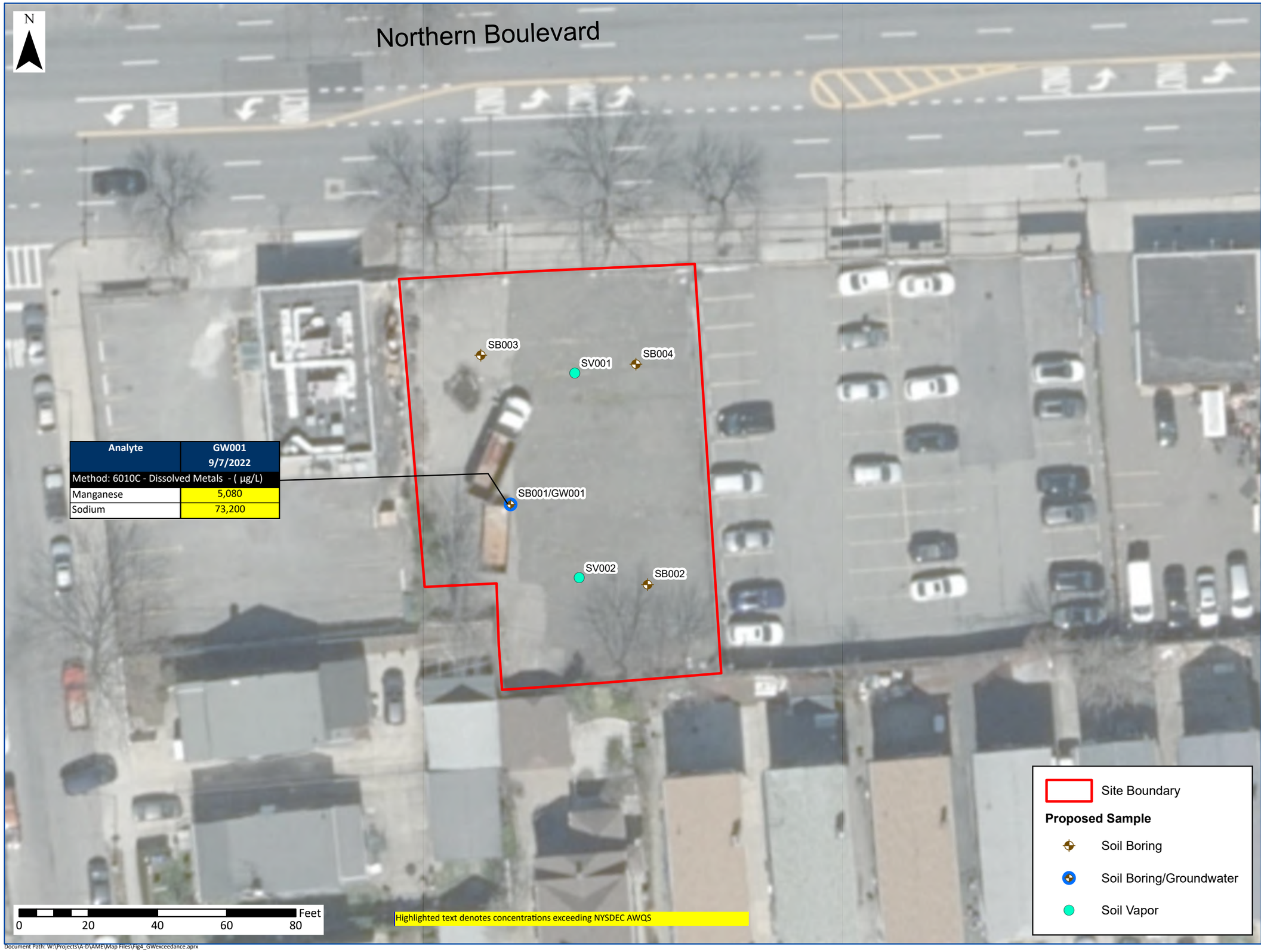
Date:	6/29/2022	Drawn by:	HS
Scale:	AS SHOWN	Approved by:	RM

SAMPLING LOCATIONS

189-10 Northern Boulevard
Flushing, NY

FIGURE NO:

3



Analyte	GW001 9/7/2022
Method: 6010C - Dissolved Metals - (µg/L)	
Manganese	5,080
Sodium	73,200

Highlighted text denotes concentrations exceeding NYSDEC AWQS

Document Path: W:\Projects\A-D\AME\Map Files\Fig4_GWexceedance.aprx

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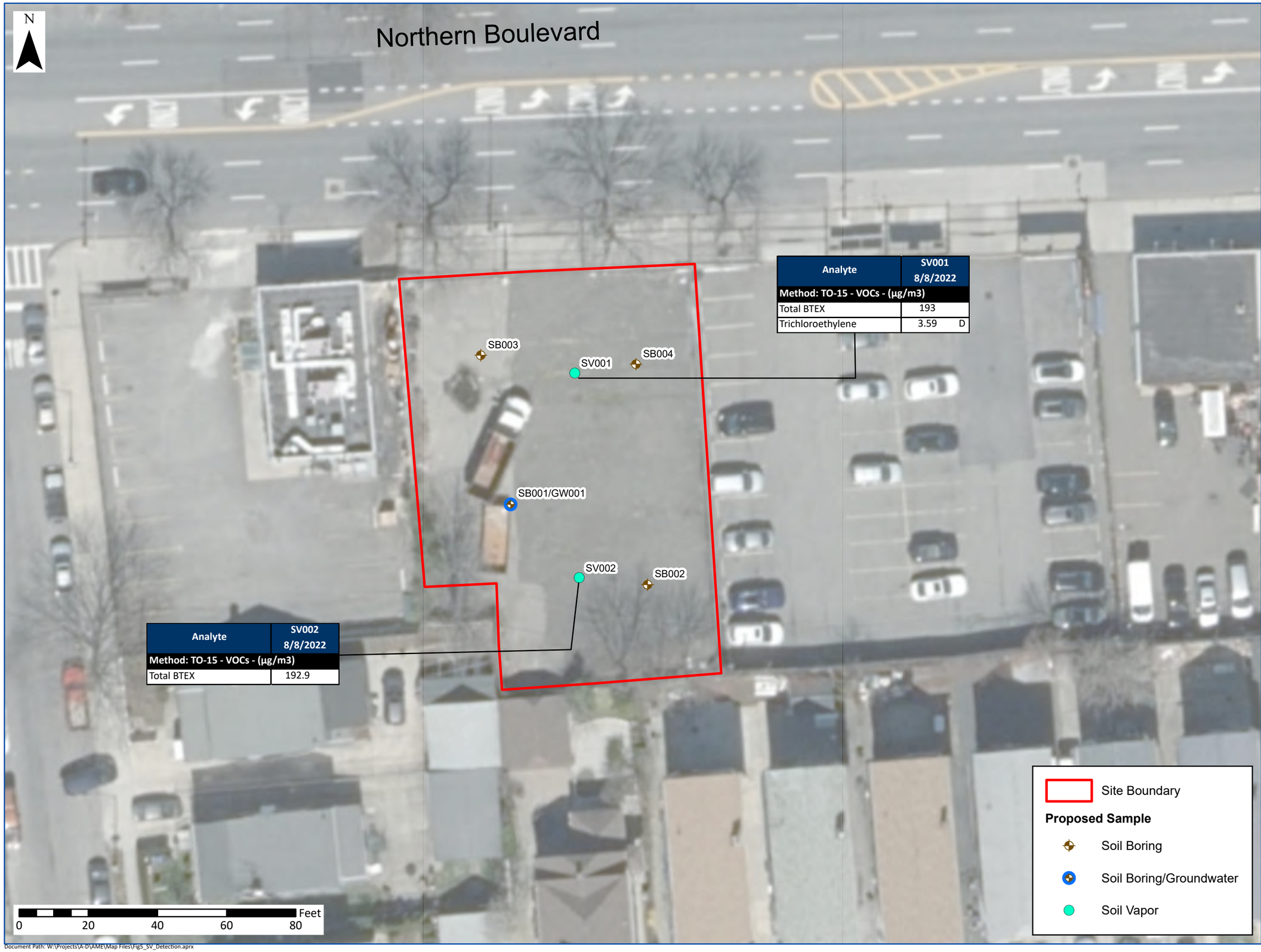
Groundwater Sampling Exceedances

189-10 Northern Boulevard
Flushing, NY

FIGURE NO:

4



Analyte	SV001 8/8/2022
Method: TO-15 - VOCs - (µg/m3)	
Total BTEX	193
Trichloroethylene	3.59 D

Analyte	SV002 8/8/2022
Method: TO-15 - VOCs - (µg/m3)	
Total BTEX	192.9

Site Boundary

Proposed Sample

Soil Boring

Soil Boring/Groundwater

Soil Vapor

Document Path: W:\Projects\A-D\AME\Map Files\Fig5_SV_Detection.aprx

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Date:	9/7/2022	Drawn by:	HS
Scale:	AS SHOWN	Approved by:	RM

Soil Vapor Sampling Detections

189-10 Northern Boulevard
Flushing, NY

FIGURE NO:

5

APPENDIX C-3

REMEDIAL ACTION WORK PLAN

Remedial Action Plan

For

189-10 Northern Boulevard

Queens, New York

Block 5311, Lot 11

CEQR Number: 22DCP018Q

Lead Agency

NYC Department of City Planning

120 Broadway, 31st Floor

AABREU@planning.nyc.gov

Prepared for:

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DECEMBER 28, 2022

REMEDIAL ACTION PLAN

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LIST OF ACRONYMS

Acronym	Definition
AST	Aboveground Storage Tank
CAMP	Community Air Monitoring Plan
C&D	Construction & Demolition
CEQR	City Environmental Quality Review
CFR	Code of Federal Regulations
CHASP	Construction Health and Safety Plan
CO	Certificate of Occupancy
CPC	City Planning Commission
DSNY	Department of Sanitation
"E"	E-Designation
EAS	Environmental Assessment Statement
EIS	Environmental Impact Statement
ESA	Environmental Site Assessment
EC/IC	Engineering Control and Institutional Control
ELAP	Environmental Laboratory Accreditation Program
FDNY	New York City Fire Department
GPR	Ground Penetrating Radar
HASP	Health and Safety Plan
HAZWOPER	Hazardous Waste Operations Emergency Response
IDW	Investigation Derived Waste
Notice - NNO	Notice of No Objection
Notice - NTP	Notice To Proceed
Notice - NOS	Notice Of Satisfaction
Notice - FNOS	Final Notice of Satisfaction
NYC BSA	New York City Board of Standards and Appeals
NYC DCP	New York City Department of City Planning
NYC DEP	New York City Department of Environmental Protection
NYC DOB	New York City Department of Buildings
NYC DOF	New York City Department of Finance
NYC HPD	New York City Housing Preservation and Development
NYCRR	New York Codes Rules and Regulations
NYC OER	New York City Office of Environmental Remediation

NYS DEC	New York State Department of Environmental Conservation
NYS DEC DER	New York State Department of Environmental Conservation Division of Environmental Remediation
NYS DEC PBS	New York State Department of Environmental Conservation Petroleum Bulk Storage
NYS DOH	New York State Department of Health
NYS DOT	New York State Department of Transportation
OSHA	United States Occupational Health and Safety Administration
PAHs	Polycyclic Aromatic Hydrocarbons
PCBs	Polychlorinated Biphenyls
PE	Professional Engineer
PID	Photo Ionization Detector
PM	Particulate Matter
QEP	Qualified Environmental Professional
RA	Register Architect
RAP	Remedial Action Plan
RCA	Recycled Concrete Aggregate
RCR	Remedial Closure Report
RD	Restrictive Declaration
RI	Remedial Investigation
SCOs	Soil Cleanup Objectives
SCG	Standards, Criteria and Guidance
SMP	Site Management Plan
SPDES	State Pollutant Discharge Elimination System
SSDS	Sub-Slab Depressurization System
SVOCs	Semi-Volatile Organic Compounds
USCS	Unified Soil Classification System
USGS	United States Geological Survey
UST	Underground Storage Tank
TAL	Target Analyte List
TCL	Target Compound List
TCO	Temporary Certificate of Occupancy
VB	Vapor Barrier
VOCs	Volatile Organic Compounds

EXECUTIVE SUMMARY

Ameriland Brook LLC has established this plan to remediate, if required, a 9,838-square foot site located at 189-10 Northern Boulevard in Queens, New York. A Phase II Subsurface Investigation (Phase II) was performed to compile and evaluate data and information necessary to develop this Remedial Action Plan (RAP). The Phase II Report was prepared by PW Grosser Consulting, Inc and submitted to the New York City Department of City Planning in September 2022. The action described in this document achieves the objectives, complies with applicable environmental standards, criteria and guidance and conforms with applicable laws and regulations.

Site Location and Current Usage

This Remedial Action Plan (RAP) and site-specific Construction Health and Safety Plan (CHASP) have been developed for the upcoming redevelopment to be performed at 189-10 Northern Boulevard in the Flushing section of Queens, New York (the Site). This RAP describes the activities to be implemented at the Site in coordination with the New York City Department of City Planning to adhere to the CEQR requirements that apply to the property. The site-specific CHASP (Appendix A) addresses site-specific hazards, identifies potential contaminants of concern and safety requirements associated with site activities in accordance with ASTM and OSHA guidelines.

Summary of Proposed Redevelopment Plan

The proposed future use of the Site will consist of a three-story mixed-use building which will also include a full basement to be used for parking. The first floor will be partially utilized as a garage and the remaining area on the first floor will be utilized as retail space. The second floor will be utilized as office space and the third floor will be utilized as a community facility. The roof will be occupied by a boiler room, mechanical room, and stair bulkhead. Excavation of the proposed cellar is anticipated to a depth of 12 feet below the Northern boulevard sidewalk grade with an elevator pit that will extend to a planned depth of 18 feet below grade. The layout of the proposed site development is presented in Appendix A. The current zoning designation is R3-2 and RX3. The proposed use will be consistent with zoning for the property when the zoning will be changed from R3-2 and RX3 to R3-2/C2-3 and R3X/C2-3.

REMEDIAL ACTION PLAN

1.0 SITE BACKGROUND

This Remedial Action Plan (RAP) and site-specific Construction Health and Safety Plan (CHASP) have been developed for the upcoming redevelopment to be performed at 189-10 Northern Boulevard in the Flushing section of Queens, New York (the Site). This RAP describes the activities to be implemented at the Site in coordination with the New York City Department of City Planning to adhere to the CEQR requirements that apply to the property. The site-specific CHASP (**Appendix B**) addresses site-specific hazards, identifies potential contaminants of concern and safety requirements associated with site activities in accordance with ASTM and OSHA guidelines.

1.1 Site Location and Current Usage

The Site is located at 189-10 Northern Boulevard in the Flushing section in Queens, New York and is identified as Block 5311 and Lot 11 on the New York City Tax Map. Figure 1 shows the Site location. The Site is 9,838 square feet and is bounded by Northern Boulevard to the north; dwelling units and 43rd road to the south, a parking lot to the east, and a restaurant, 189th street to the west. A map of the site boundary is shown in Figure 2. Currently, the Site is vacant and is used for staging construction materials.

1.2 Proposed Redevelopment Plan

The proposed future use of the Site will consist of a three-story mixed-use building which will also include a full basement to be used for parking. The first floor will be partially utilized as a garage and the remaining area on the first floor will be utilized as retail space. The second floor will be utilized as office space and the third floor will be utilized as a community facility. The roof will be occupied by a boiler room, mechanical room, and stair bulkhead. Excavation of the proposed cellar is anticipated to a depth of 12 feet below the Northern boulevard sidewalk grade with an elevator pit that will extend to a planned depth of 18 feet below grade. The layout of the proposed site development is presented in Appendix A. The current zoning designation is R3-2 and RX3. The proposed use will be consistent with zoning for the property when the zoning will be changed from R3-2 and RX3 to R3-2/C2-3 and R3X/C2-3. A copy of the proposed redevelopment plans is included as Appendix C.

1.3 Environmental Investigation Report

As documented in the September 2022 Phase II ESA Investigation Report prepared by PWGC, the following work has been performed at the site:

1. Conducted a Site inspection to identify physical obstructions (i.e. subgrade obstructions, utilities, etc:);
2. Conducted a geophysical investigation to identify subsurface anomalies;
3. Installed four soil borings, SB001 to SB004, across the Site, and collected eight soil samples as follows:
    a. A soil sample was collected from the 0-2 foot interval at each boring to determine if pass site usage has impacted shallow soils.
    b. A soil sample was collected from the 18-20 foot interval at each boring to analyze soil quality at the proposed terminal depth of the planned excavation.
4. Installed one temporary groundwater monitoring well at the Site, GW001, to collect one groundwater sample for chemical analysis to evaluate groundwater quality beneath the site. The screen for the temporary well was set from 50 to 60 feet below grade to account for the water table which was identified to be at approximately 53 feet below grade.
5. Installed two soil vapor probes at the site, SV001 and SV002, to a depth of 12 feet below grade to investigate the potential for soil vapor intrusion at the basement slab level of the planned redevelopment.

1.4 Findings of Environmental Investigation

As documented in the September 2022 Phase II ESA Investigation Report prepared by PWGC, the following findings were identified at the site:

1. Elevation of the property is approximately 68 feet above mean sea level.
2. Depth to groundwater was identified to be approximately 53 feet below grade.
3. Groundwater flow is estimated to be towards the northeast based on previous environmental assessments.

4. Soil samples collected during the Phase II ESA demonstrated that soil beneath the site meets Unrestricted Use Soil Cleanup Objectives (SCOs).

5. Groundwater samples collected during the Phase II ESA were compared to the Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards (AWQS) for groundwater.

    a. No exceedances were detected for volatile organic compounds (VOCs).

    b. No exceedances were detected for semi-volatile organic compounds (SVOCs)

    c. No exceedances were detected for pesticides and/or polychlorinated biphenyls (PCBs)

    d. Dissolve metals manganese (5,080 µg/L) and sodium (73,200 µg/L) were detected above the AWQS. Manganese and sodium are both naturally occurring compounds in groundwater beneath Long Island and are not believed to be indicative of point source or non-point source contamination.

6. Soil vapor samples collected during the Phase II ESA were compared to the New York State Department of Health (NYSDOH) Final Guidance for Evaluating Soil Vapor Intrusion matrices dated October 2006.

    a. Based on NYSDOH guidance for soil vapor intrusion, no VOCs were detected at concentrations which would require additional monitoring or mitigation.

The analytical results for the September 2022 Phase II ESA are included in **Tables 1 through 9**.

2.0 DESCRIPTION OF REMEDIATION

2.1 Objectives

Based on the results of the soil, groundwater and soil vapor sampling performed at the site no remedial actions are warranted. The remedial activities described in this RAP will only apply if contaminated soil, groundwater and/or soil vapor are identified during construction activities. The Site mitigation and remediation objectives for contaminated media identified during construction activities are:

Soil

- Prevent direct contact with contaminated soil, if identified.
- Prevent exposure to contaminants volatilizing from contaminated soil, if identified.
- Prevent migration of contaminants that would result in groundwater or surface water contamination., if identified.

Groundwater

- Remove contaminant sources which may result in impact to groundwater, if identified.
- Prevent direct exposure to contaminated groundwater, if identified.
- Prevent exposure to contaminants volatilizing from contaminated groundwater, if identified.

Soil Vapor

- Install a vapor barrier beneath the subgrade foundation of the building to mitigate against potential future off-site soil vapor intrusion.

Remedial and mitigation measures described herein will be performed in accordance with applicable laws and regulations, and the site-specific CHASP. This RAP is protective of public health and/or the environment.

2.2 Summary of Remedial Activities

This RAWP details activities that will be performed to adhere to the remedial objectives outlined in section 2.1. The proposed remedial activities discussed below will not be implemented unless as yet unidentified contamination is discovered during construction activities.

The proposed remedial action will consist of:

1. Perform a Community Air Monitoring Program for particulates and volatile organic carbon compounds if excavated/exposed soils exhibiting visual and/or olfactory evidence of contamination are identified on site.
2. Removal of underground storage tanks and closure of petroleum spills in compliance with applicable local, State and Federal laws and regulations, if identified. (Note: The geophysical performed during the September 2022 Phase II ESA did not identify subsurface anomalies indicative of USTs)
3. Construction of a composite cover consisting of concrete building foundations to prevent human exposure to soil exceeding Unrestricted Use Soil Cleanup Objectives (SCOs), if identified at the site.
4. Installation of a vapor barrier system beneath the building slab and along foundation sidewalls to mitigate against potential future off-site soil vapor intrusion.
5. Based on the results of the Phase II ESA soil sampling, soil at the site meets NYSDEC Unrestricted Use SCOs and is therefore not a solid waste. If contaminated soil is identified during construction activities, impacted soil will be transportation off-Site for disposal at permitted facilities in accordance with applicable laws and regulations for handling, transport, and disposal of solid waste.
6. Periodic screening of excavated soil during intrusive work for indications of contamination by visual means, odor, and monitoring with a PID.
7. Site mobilization involving Site security setup, equipment mobilization, utility mark outs and marking & staking excavation areas.

8. Implementation of storm-water pollution prevention measures in compliance with applicable laws and regulations.

9. Submission of a Closure Report (CR) that describes remedial activities, if any, certifies that remedial requirements have been achieved, and lists changes from this RAP.

2.3 Soil/Fill Management

Soil and materials management on-Site and off-Site, including excavation, handling, and disposal, will be conducted in accordance with the Soil/Materials Management Plan in **Appendix A**. The location of planned excavations is shown in **Figure 3**.

Based on the soil analytical data collected during the September 2022 Phase II ESA, soil generated from the site meet Unrestricted Use SCOs. Reuse of soils on site will be conducted as needed for sub-foundation backfill. As soils at the site have demonstrated to meet Unrestricted Use SCOs it is therefore not considered a "solid waste" as per NYSDEC Part 360. As such, the material to be generated from the site is exempt from NYSDEC Part 360 rules and regulations for solid waste.

If impacted soils are observed at the site during construction, the soil will be excavated and staged in a designated containment apparatus such as a stockpile (underlined and covered with polyethylene sheeting or tarps) or placed within a container (roll-off trailer or drum). Impacted soils will include soils identified on site which exhibit olfactory and/or visual evidence of contamination and/or have been characterized for laboratory analysis and determined to not meet Unrestricted Use SCOs.

Soils in which contamination is suspected will be handled as a solid waste in accordance with applicable NYSDEC Part 360 requirements. Soils which are identified to be impacted and fail to meet Unrestricted Use SCOs will not be reused on site.

End-Point Sampling

In-situ soil samples collected at the planned terminal excavation depth of 18-20 feet below grade during the September 2022 Phase II ESA demonstrated that soils at this depth meet Unrestricted Use SCOs. Therefore, confirmatory endpoint sampling following construction excavation is not warranted.

If impacted soils are identified during redevelopment endpoint sampling will be conducted in accordance with NYSDEC DER-10 protocols.

If endpoint samples are warranted, a New York State Department of Health ELAP certified lab will be used for sample analyses. Labs for end-point sample analyses will be reported in the CR. The CR will provide a tabular and map summary of end-point sample results. End-point samples will be analyzed for the following parameters utilizing the following methodology:

- TCL Volatile organic compounds by EPA Method 8260;
- TCL Semi-volatile organic compounds by EPA Method 8270;
- Pesticides/PCBs by EPA Method 8081/8082; and
- Target Analyte List Metals

Quality Assurance/Quality Control

If endpoint sampling is warranted, the following Quality Assurance/Quality Control methods will be used:

- One blind duplicate sample per 20 endpoint samples.
- One matrix spike/matrix spike duplicate (MS/MSD) sample per 20 endpoint samples.
- One equipment blank per day of sampling.
- One trip blank per day of sample shipment.

Import and Reuse of Soils

Import of soils onto the property and reuse of soils already onsite will be performed in conformance with the Soil/Materials Management Plan in **Appendix A**. Imported fill material is not anticipated to be necessary as part of this redevelopment. Material generated from the site which meets Unrestricted Use SCOs may be used as backfill as necessary during redevelopment.

2.4 Vapor Mitigation Measures

A vapor barrier will be installed beneath the foundation of the future building. As part of construction and as a mitigation measure against potential future off-site soil vapor intrusion, a 20-mil (or thicker) continuous vapor barrier membrane will be installed beneath the bottom

foundation and behind the foundation walls of the new building. The proposed vapor barrier product for this project is Stego Wrap 20-Mil Vapor Barrier. The product specifications for this vapor barrier are included in **Appendix D**. The proposed vapor barrier system should be used unless an amendment is approved by DEP.

Composite Cover System

Since soils at the site meet Unrestricted Use SCOs, a composite cover system is not warranted. However, the property will be serviced by a sitewide cover consisting of a building foundation which will extend across the entirety of the lot. In the event that contaminated soil is identified during construction activities and not removed from the site this sitewide cover can act as a remedial composite cover system, if required.

3.0 REMEDIAL ACTION MANAGEMENT

3.1 Project Organization and Oversight

Principal personnel who will participate in the project will include a Qualified Environmental Professionals (QEP) for this project. The QEPs for this project will be as follows:

- Andrew Lockwood, PG – Sr. Vice President – PW Grosser Consulting, Inc.
- Ryan Morley, PG – Project Manager – PW Grosser Consulting, Inc.

3.2 Work Hours

The hours for operation of remedial construction will be from 7:00 AM to 5:00 PM during weekdays: Monday through Friday. These hours conform to the New York City Department of Buildings (NYCDOB) construction code requirements. Expanded work hours or weekend work may be performed if appropriate permits are granted by NYCDOB.

3.3 Construction Health and Safety Plan

The site-specific Construction Health and Safety Plan (CHASP) is included in **Appendix B**. Work performed under this RAP will be in compliance with applicable health and safety laws and regulations, including Site and OSHA worker safety requirements and HAZWOPER requirements. Confined space entry, if any, will comply with OSHA requirements and industry standards and will address potential risks. The parties performing the remedial construction work will ensure that performance of work is in compliance with the CHASP and applicable laws and regulations.

If impacted and potentially hazardous materials are identified on site the field personnel involved in remedial activities will participate in training required under 29 CFR 1910.120, including 40-hour hazardous waste operator training and annual 8-hour refresher training. Site Safety Officer will be responsible for maintaining workers training records.

Personnel entering an exclusion zone will be trained in the provisions of the CHASP and be required to sign an CHASP acknowledgment. Site-specific training will be provided to field personnel. Additional safety training may be added depending on the tasks performed. Emergency telephone numbers will be posted at the site location before remedial work begins. A

safety meeting will be conducted before each shift begins. Topics to be discussed include task hazards and protective measures (physical, chemical, environmental); emergency procedures; PPE levels and other relevant safety topics. Meetings will be documented in a logbook or specific form.

An emergency contact sheet with names and phone numbers is included in the CHASP. That document will define the specific project contacts for use in case of emergency.

3.4 Community Air Monitoring Plan

Real-time air monitoring for volatile organic compounds (VOCs) and particulate levels at the perimeter of the exclusion zone or work area will be performed if impacted soils, as defined in the third paragraph section 2.3 of this work plan, are identified at the site during redevelopment activities. Continuous monitoring will be performed for remedial activities until removal of impacted materials has been performed. Activities which would necessitate Community Air Monitoring include, but are not limited to, impacted soil/waste excavation and handling, test pit excavation or trenching and areas of known or suspected contamination.

VOC Monitoring, Response Levels, and Actions

If air monitoring is warranted, volatile organic compounds (VOCs) will be monitored at the downwind perimeter of the immediate work area (i.e., the exclusion zone) on a continuous basis during invasive work. Upwind concentrations will be measured at the start of each workday and periodically thereafter to establish background conditions. The monitoring work will be performed using equipment appropriate to measure the types of contaminants known or suspected to be present. The equipment will be calibrated at least daily for the contaminant(s) of concern or for an appropriate surrogate. The equipment will be capable of calculating 15-minute running average concentrations, which will be compared to the levels specified below.

- If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities will be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities will resume with continued monitoring.
- If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 5 ppm over background but less than 25 ppm, work

activities will be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities will resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less - but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.

- If the organic vapor level is above 25 ppm at the perimeter of the work area, activities will be shutdown.

15-minute readings must be recorded and be available for DEP personnel to review. Instantaneous readings, if any, used for decision purposes will also be recorded.

Particulate Monitoring, Response Levels, and Actions

If air monitoring is warranted, particulate concentrations will be monitored continuously at the upwind and downwind perimeters of the exclusion zone at temporary particulate monitoring stations. The particulate monitoring will be performed using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM-10) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level. The equipment will be equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration should be visually assessed during work activities.

- If the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m^3) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques will be employed. Work will continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed 150 mcg/m^3 above the upwind level and provided that no visible dust is migrating from the work area.
- If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 mcg/m^3 above the upwind level, work will be stopped, and a re-evaluation of activities initiated. Work will resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 mcg/m^3 of the upwind level and in preventing visible dust migration.

Readings will be recorded and be available for DEP personnel to review.

3.5 Site Preparation

Mobilization

Mobilization will be conducted as necessary for each phase of work at the Site. Mobilization includes field personnel orientation, equipment mobilization (including securing sampling equipment needed for the field investigation), marking/staking sampling locations and utility mark-outs. Each field team member will attend an orientation meeting to become familiar with the general operation of the Site, health and safety requirements, and field procedures.

Utility Marker Layouts, Easement Layouts

The presence of utilities and easements on the Site will be fully investigated prior to the performance of invasive work such as excavation or drilling under this plan by using, at a minimum, the One-Call System (811). Underground utilities may pose an electrocution, explosion, or other hazard during excavation or drilling activities. Invasive activities will be performed incompliance with applicable laws and regulations to assure safety. Utility companies and other responsible authorities will be contacted to locate and mark the locations, and a copy of the Markout Ticket will be retained by the contractor prior to the start of drilling, excavation or other invasive subsurface operations. Overhead utilities may also be present within the anticipated work zones. Electrical hazards associated with drilling in the vicinity of overhead utilities will be prevented by maintaining a safe distance between overhead power lines and drill rig masts.

Proper safety and protective measures pertaining to utilities and easements, and compliance with applicable laws and regulations will be employed during invasive and other work contemplated under this RAP. The integrity and safety of on-Site and off-Site structures will be maintained during invasive, excavation or other remedial activity performed under the RAP.

Dewatering

Dewatering is not anticipated for this redevelopment project.

Equipment and Material Staging

Equipment and materials will be stored and staged in a manner that complies with applicable laws and regulations.

Stabilized Construction Entrance

Steps will be taken to ensure that trucks departing the site will not track soil, fill or debris off-Site. Such actions may include use of cleaned asphalt or concrete roads or use of stone or other aggregate-based egress paths between the truck inspection station and the property exit. Measures will be taken to ensure that adjacent roadways will be kept clean of project related soils, fill and debris.

3.6 Traffic Control

Drivers of trucks leaving the Site with soil/fill will be instructed to proceed without stopping in the vicinity of the site to prevent neighborhood impacts.

3.7 Demobilization

Demobilization will include:

- As necessary, restoration of temporary access areas and areas that may have been disturbed to accommodate support areas (e.g., staging areas, decontamination areas, storage areas, temporary water management areas, and access area);
- Removal of sediment from erosion control measures and truck wash and disposal of materials in accordance with applicable laws and regulations;
- Equipment decontamination, and;
- General refuse disposal.

Equipment will be decontaminated and demobilized at the completion of field activities. Investigation equipment and large equipment (*e.g.*, soil excavators) will be washed at the truck inspection station as necessary. In addition, investigation and remediation derived waste will be appropriately disposed.

3.10 Reporting and Record Keeping

Daily Reports

If impacted soils are identified on site, daily reports providing a general summary of activities for each day of *active remedial work* will be emailed to the DCP Project Manager by the end of the following day. Those reports will include:

- Project number and statement of the activities and an update of progress made and locations of work performed;
- Quantities of material imported and exported from the Site;
- Status of on-Site soil/fill stockpiles;
- A summary of citizen complaints, with relevant details (basis of complaint; actions taken; etc.);
- A summary of CAMP excursions, if any;
- Photograph of notable Site conditions and activities.

The frequency of the reporting period may be revised in consultation with DCP project manager based on planned project tasks. Daily email reports are not intended to be the primary mode of communication for notification to DCP of emergencies (accidents, spills), requests for changes to the RAP or other sensitive or time critical information. However, such information will be included in the daily reports.

Record Keeping and Photo-Documentation

Job-site record keeping for remedial work, if necessary, will be performed. These records will be maintained on-Site during the project and will be available for inspection by DCP staff. Representative photographs will be taken of the Site prior to remedial activities and during major remedial activities to illustrate remedial program elements and contaminant source areas. Photographs will be submitted at the completion of the project in the CR in digital format (i.e. jpeg files).

3.11 Deviations from the Remedial Action Plan

Changes to the RAP will be reported to the DCP Project Manager and will be documented in daily reports and reported in the CR. The process to be followed if there are deviations from the RAP will include a request for approval for the change from DCP noting the following:

- Reasons for deviating from the approved RAP;
- Effect of the deviations on the project, and;
- Determination that the remedial action with the deviation(s) is protective of public health and the environment.

4.0 CLOSURE REPORT

A Closure Report (CR) will be submitted to the lead agency following implementation of the activities defined in this RAP. The CR will document that the work required under this RAP has been completed and has been performed in compliance with this plan. The CR will include:

- Information required by this RAP;
- Description of changes in the remedial action from the elements provided in this RAP and associated design documents;
- Tabular summary of end point sampling results and material characterization results, if necessary;
- Account of the source area locations and characteristics of contaminated material removed from the Site including a map showing source areas, if required.
- Account of the disposal destination of contaminated material removed from the Site. Documentation associated with disposal of material will include transportation and disposal records, and letters approving receipt of the material.
- Account of the origin and required chemical quality testing for material imported onto the Site.
- Reports and supporting material will be submitted in digital form.

APPENDIX D

NOISE BACKUP

Instrument Model	CEL-633C		
Overload	No	Evening Start	19
Battery Low	No	Night Start	23
Duration	00:20:06 HH:MM:SS	Day Penalty	0.000000000
End Date & Time	6/16/2016 12:20:03 PM	Evening Penalty	5.000000000
Pause Duration	00:00:02 HH:MM:SS	Night Penalty	10.000000000
Response	Random	LAF 10%	75.5 dB
Run Number	10	LAF 50%	70 dB
Serial Number	5044657	LAF 90%	51.5 dB
Site	Unallocated	LAF 95%	49 dB
Location	Unallocated	LAF variable%	76.5 dB
Person	Unallocated	LCpeak	108.7 dB
Process	Unallocated	LCpeak with Time	108.7 dB (6/16/2016 12:10:43 PM)
Result	Cumulative	Start Date & Time	6/16/2016 11:59:57 AM
LAFmax	90.4 dB	LAE	102.7 dB
LAFmax with Time	90.4 dB (6/16/2016 12:10:43 PM)	LAeq	71.9 dB
LAFmin	45.6 dB	LAleq	73.5 dB
LAFmin with Time	45.6 dB (6/16/2016 12:04:04 PM)	LCeq	78 dB
LAImax	91.9 dB	LCeq-LAeq	6.1 dB
LAImax with Time	91.9 dB (6/16/2016 12:10:43 PM)	Lepd(Projected)	71.9 dB
LAImin	46 dB	Lex8h(Projected)	71.9 dB
LAImin with Time	46.0 dB (6/16/2016 12:03:50 PM)	LZeq	79.3 dB
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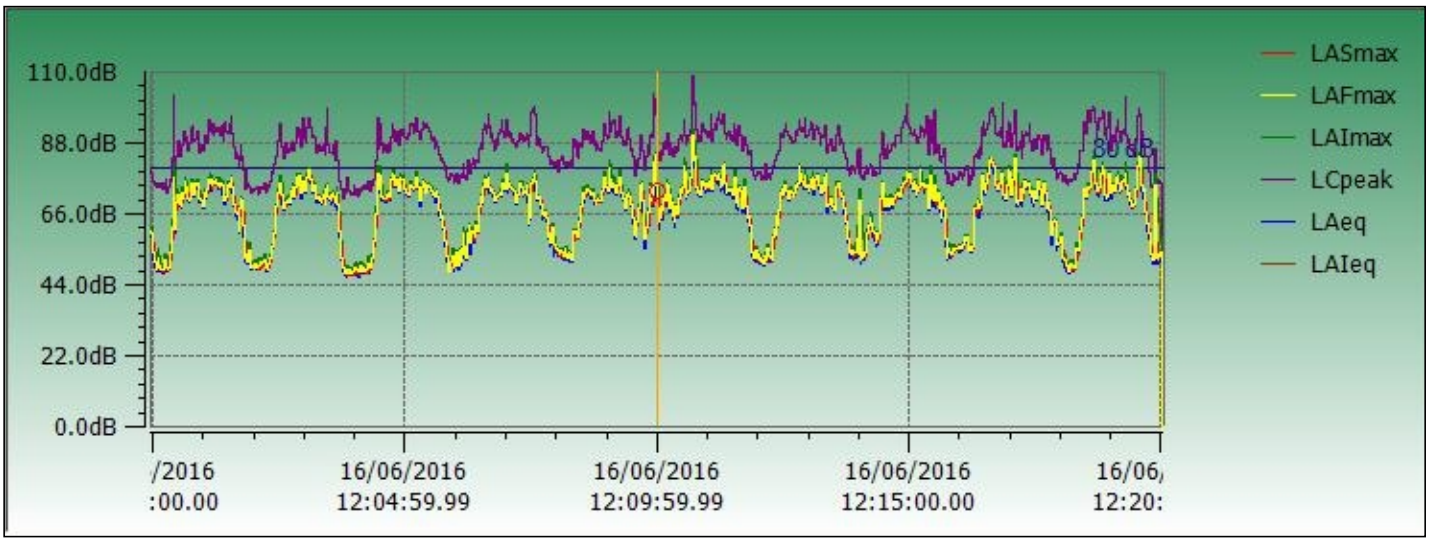
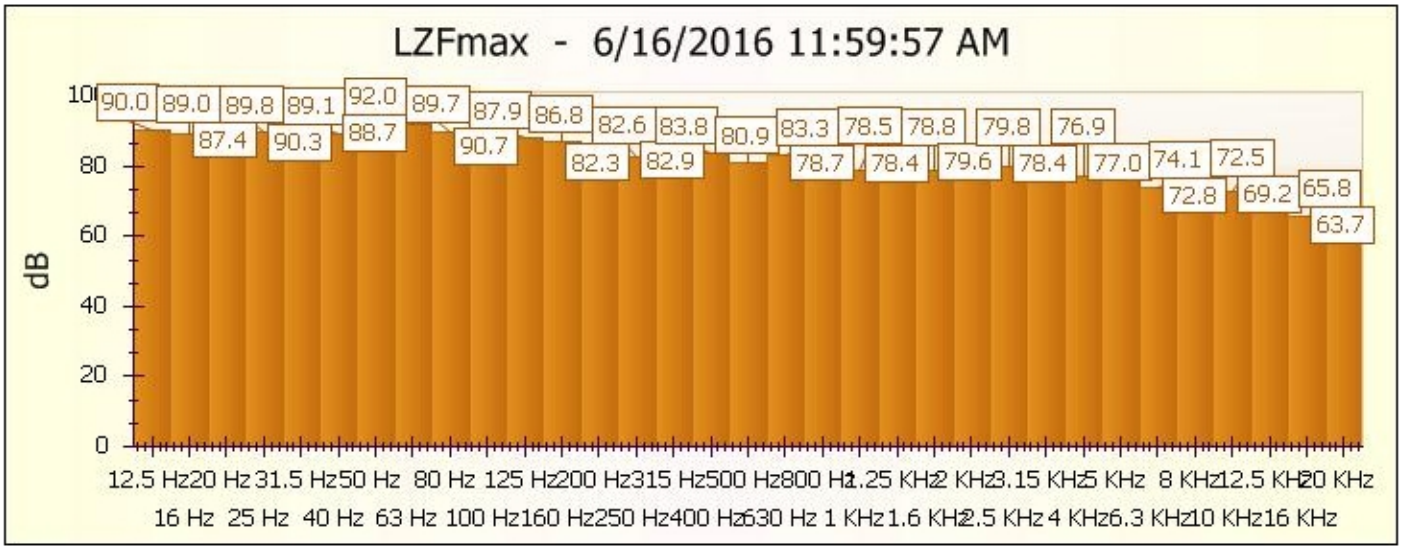
LDEN	0	Lex8h	58.1 dB
CNEL	0		
Day Start	7		
Notes			

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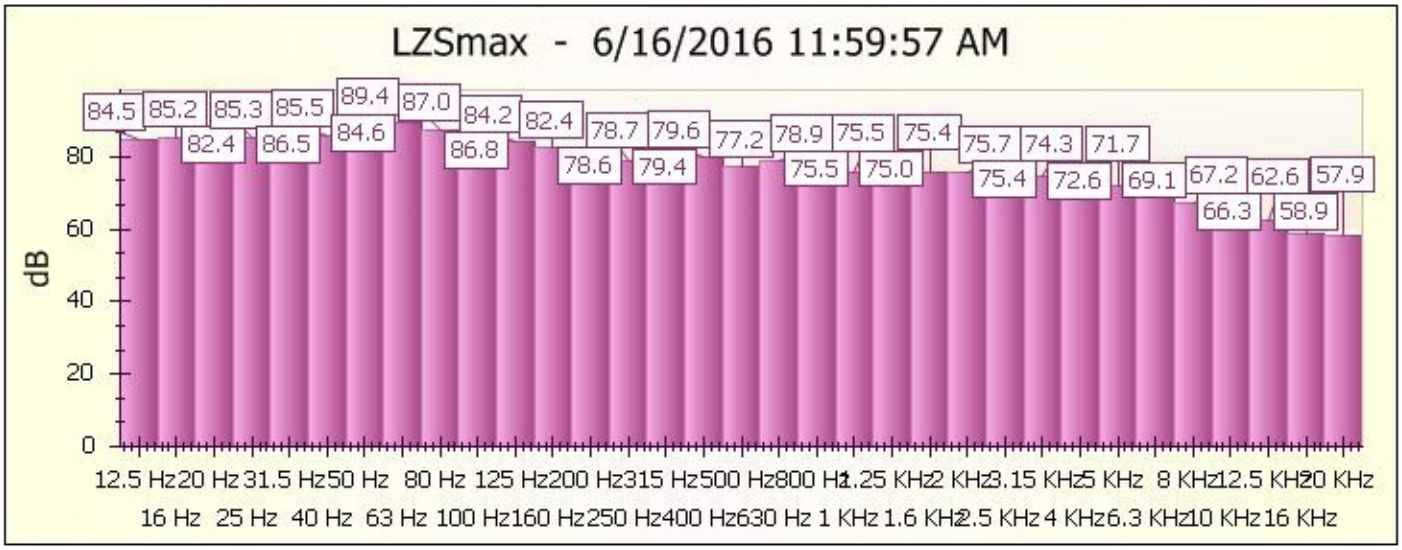
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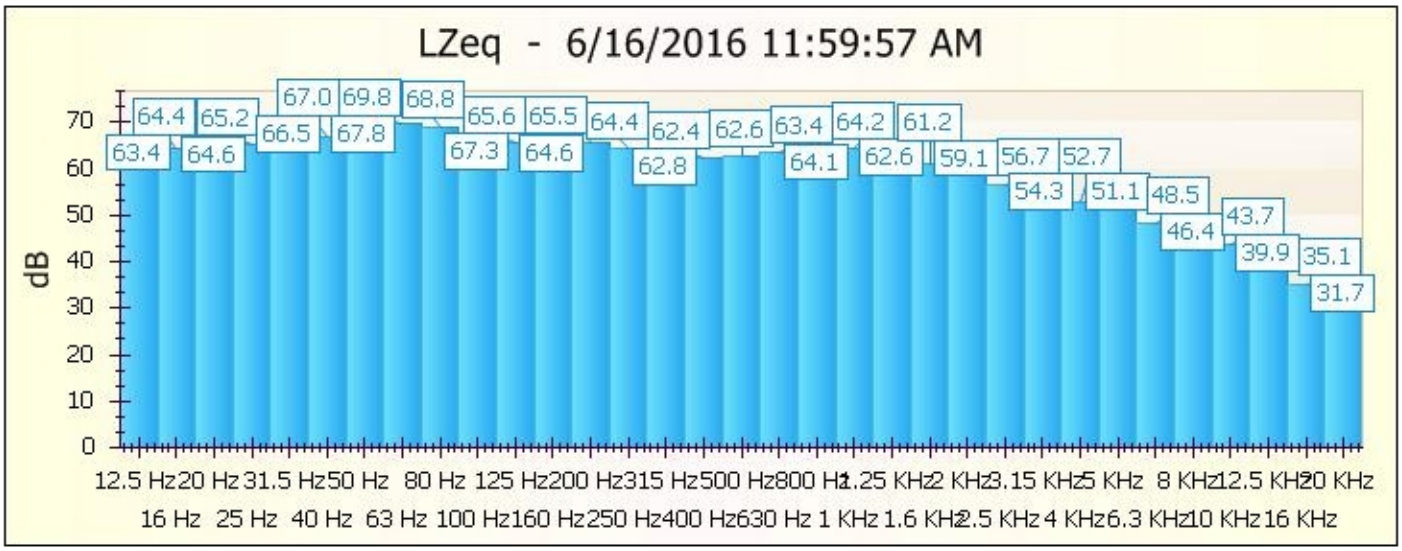
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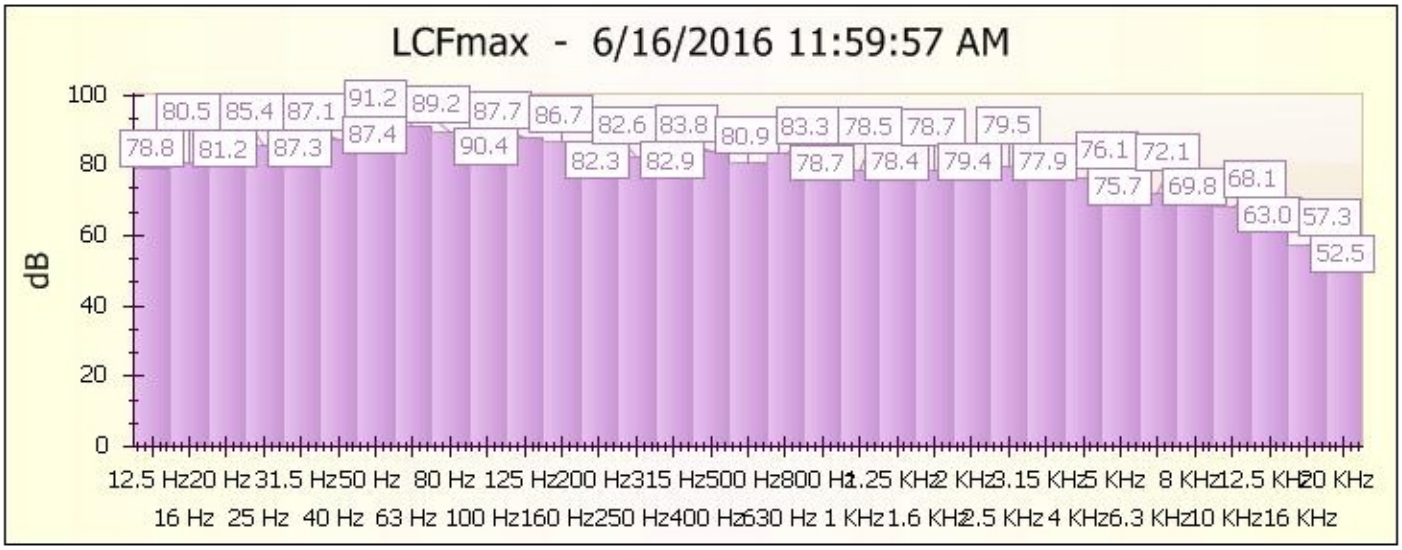
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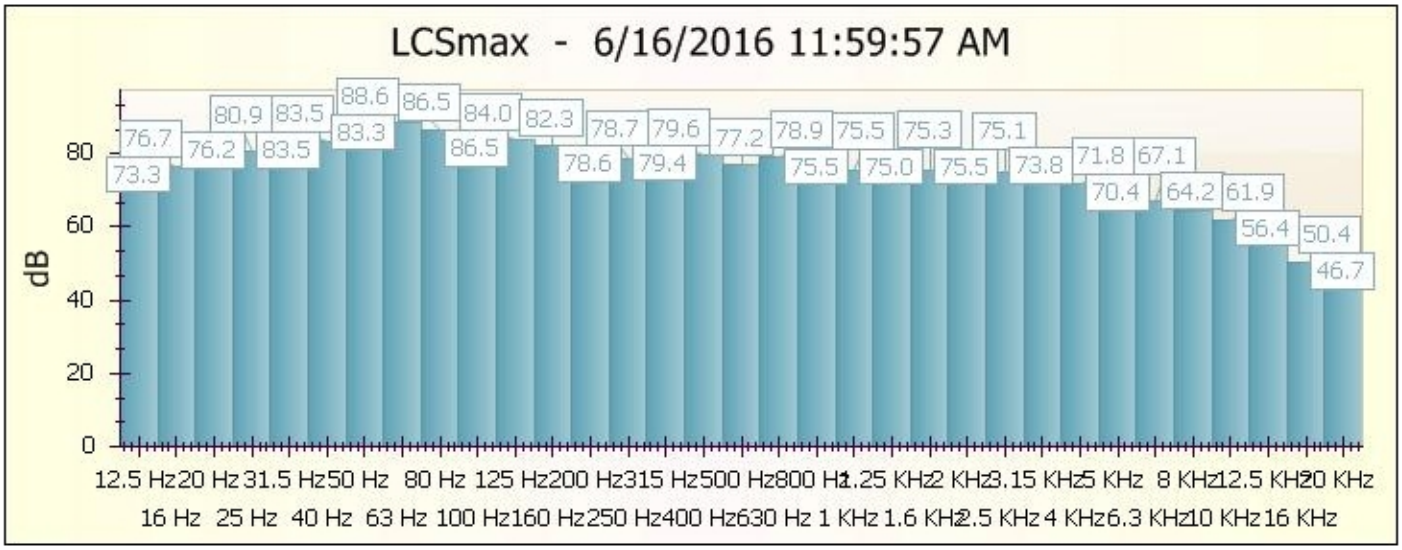
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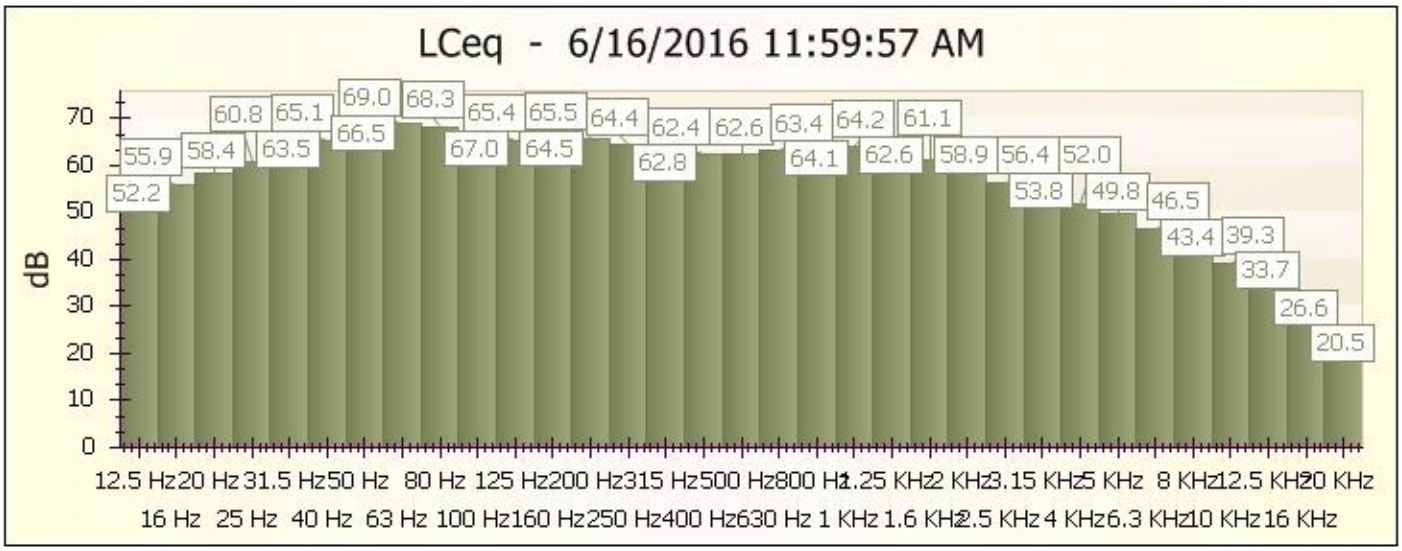
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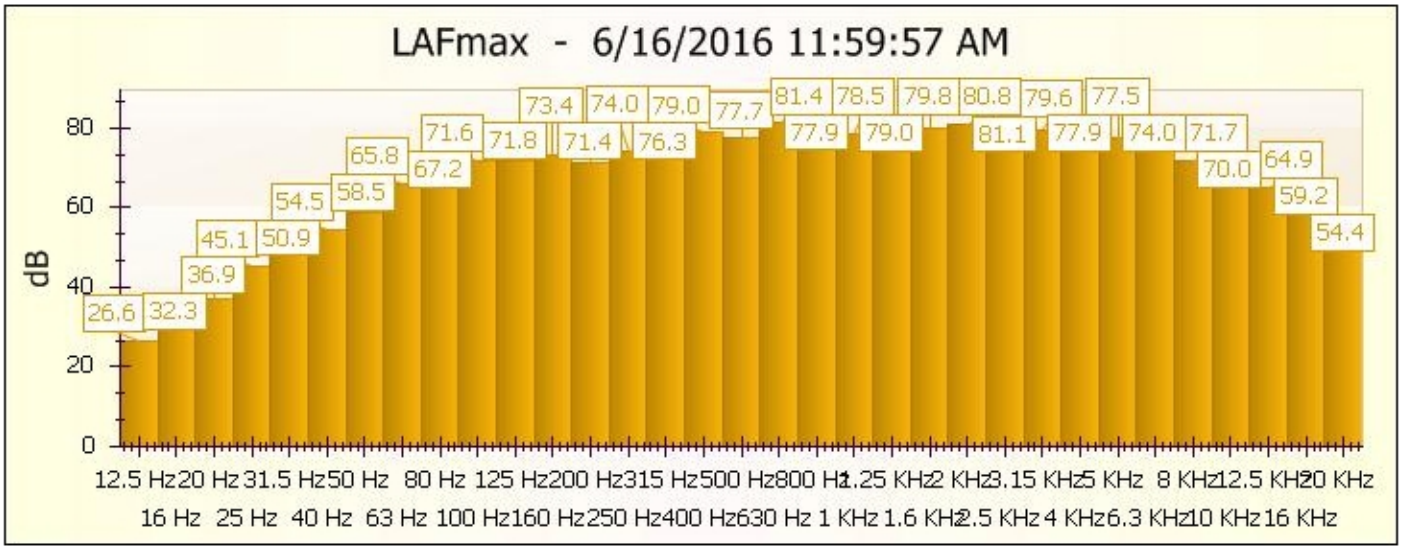
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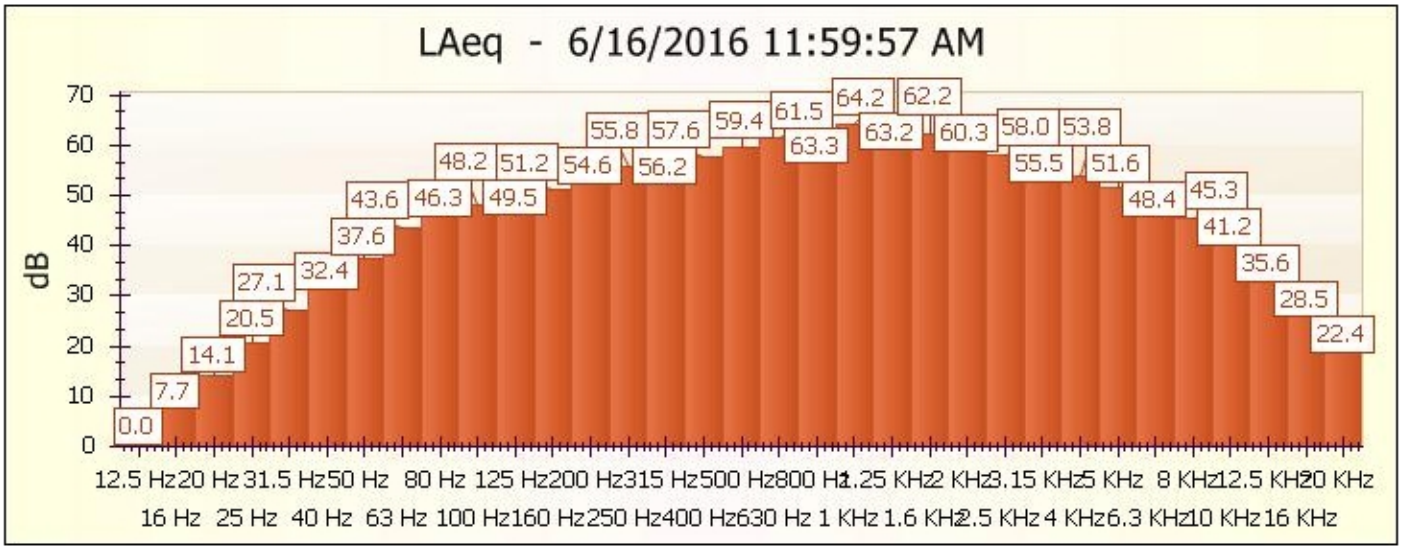
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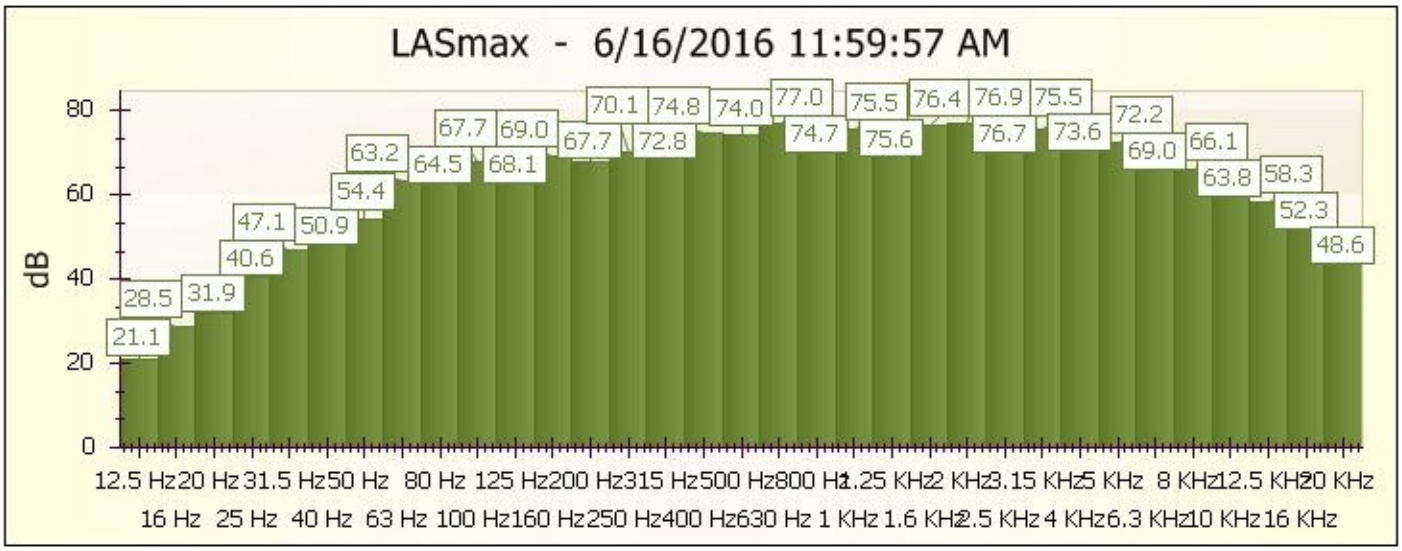
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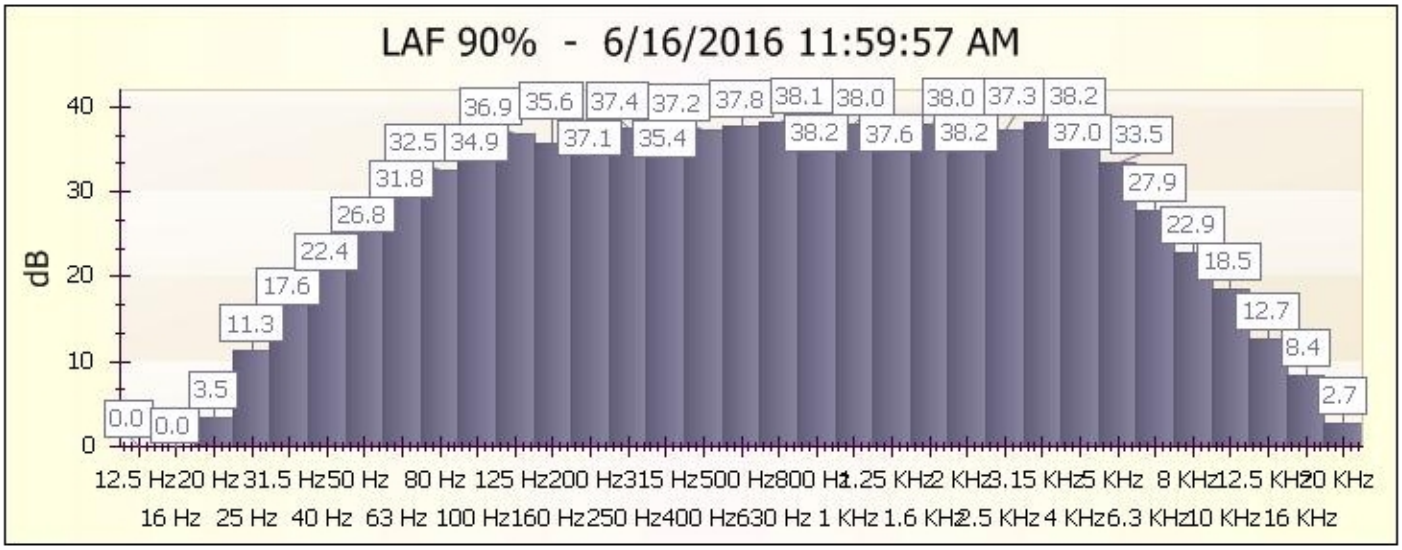
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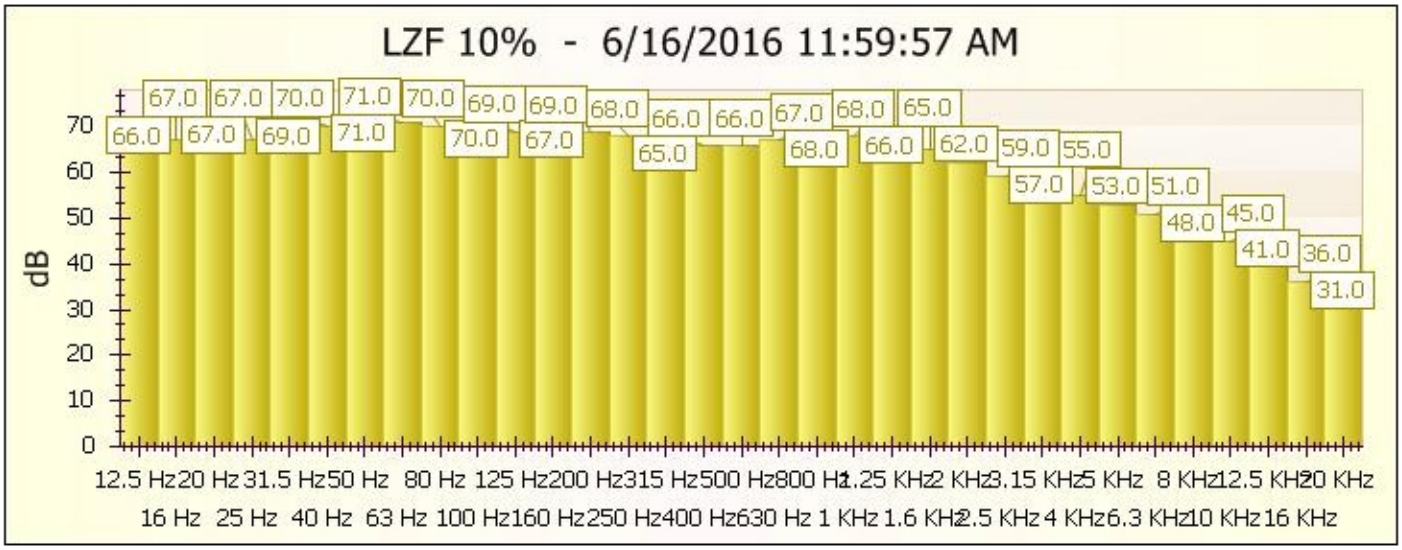
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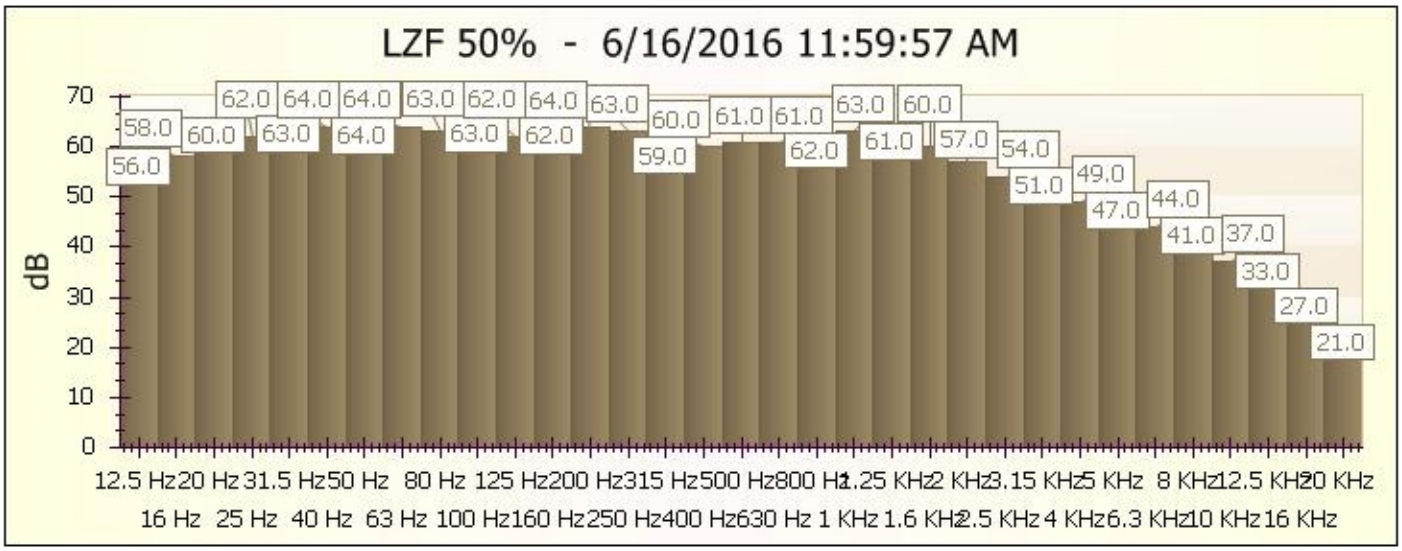
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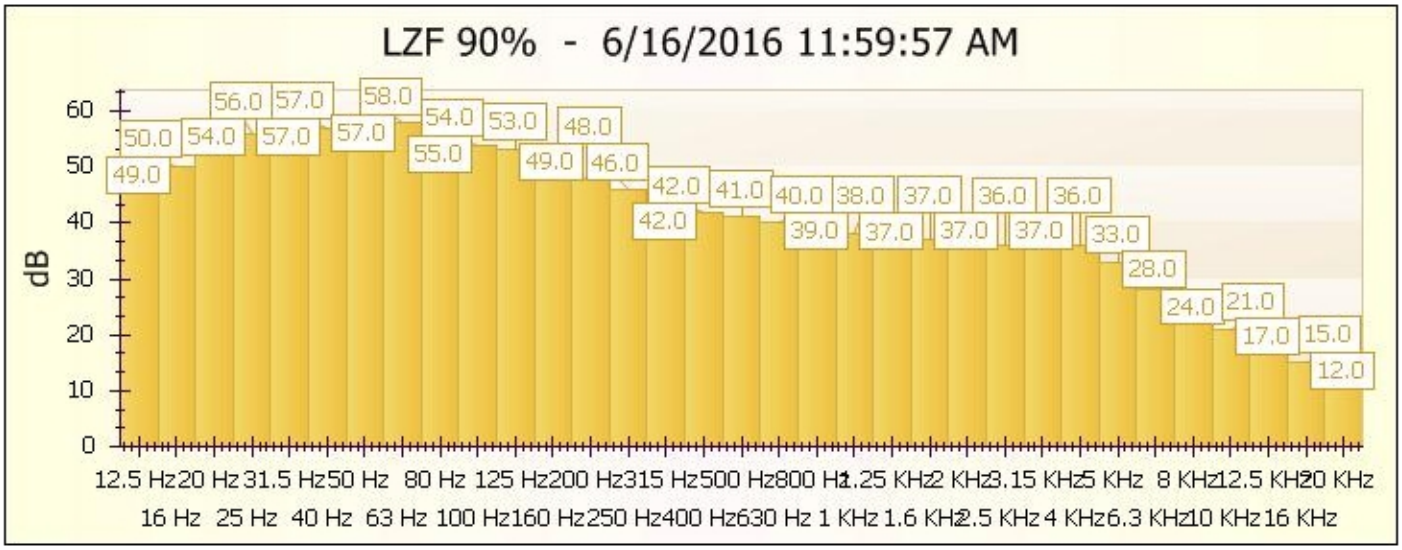
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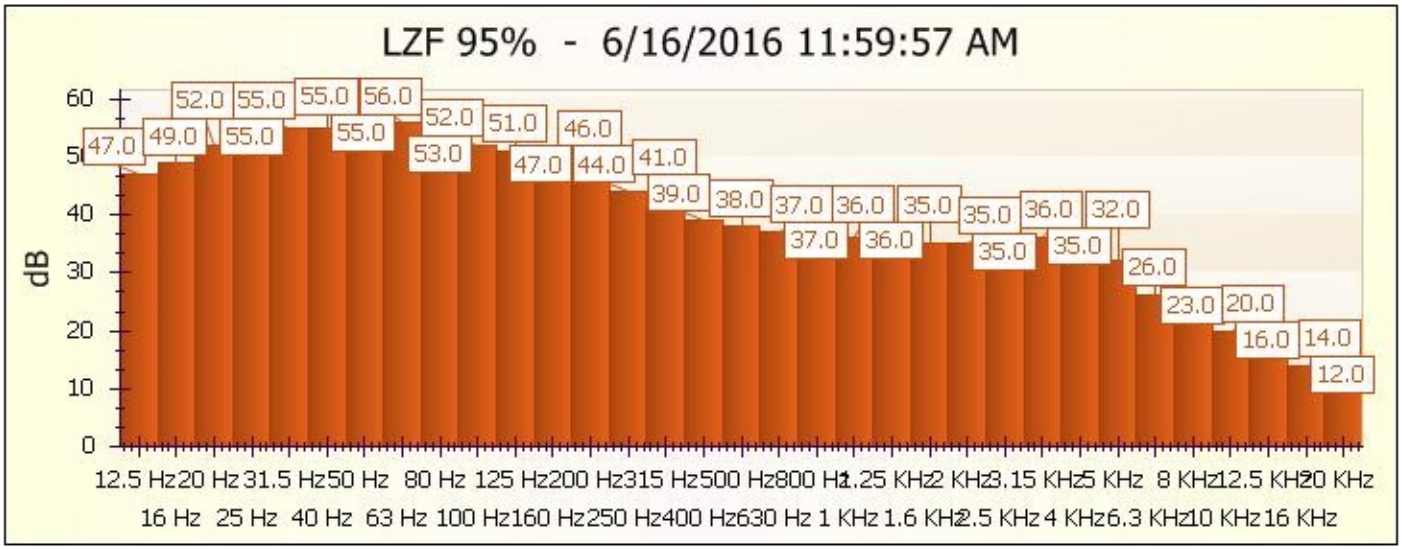
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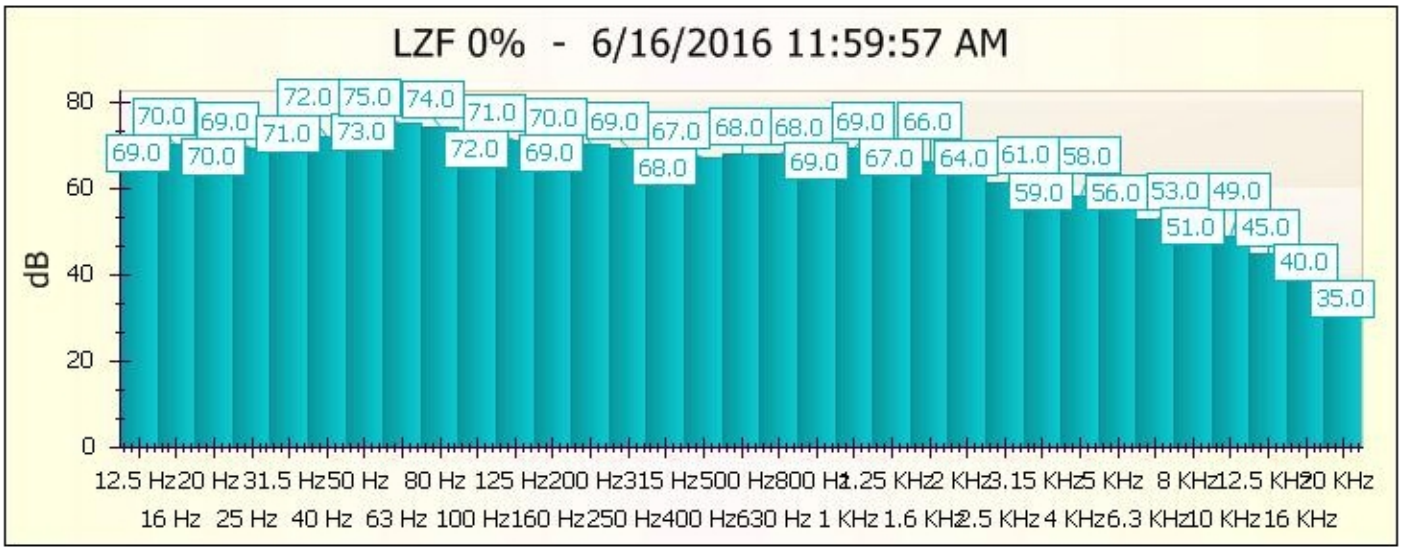
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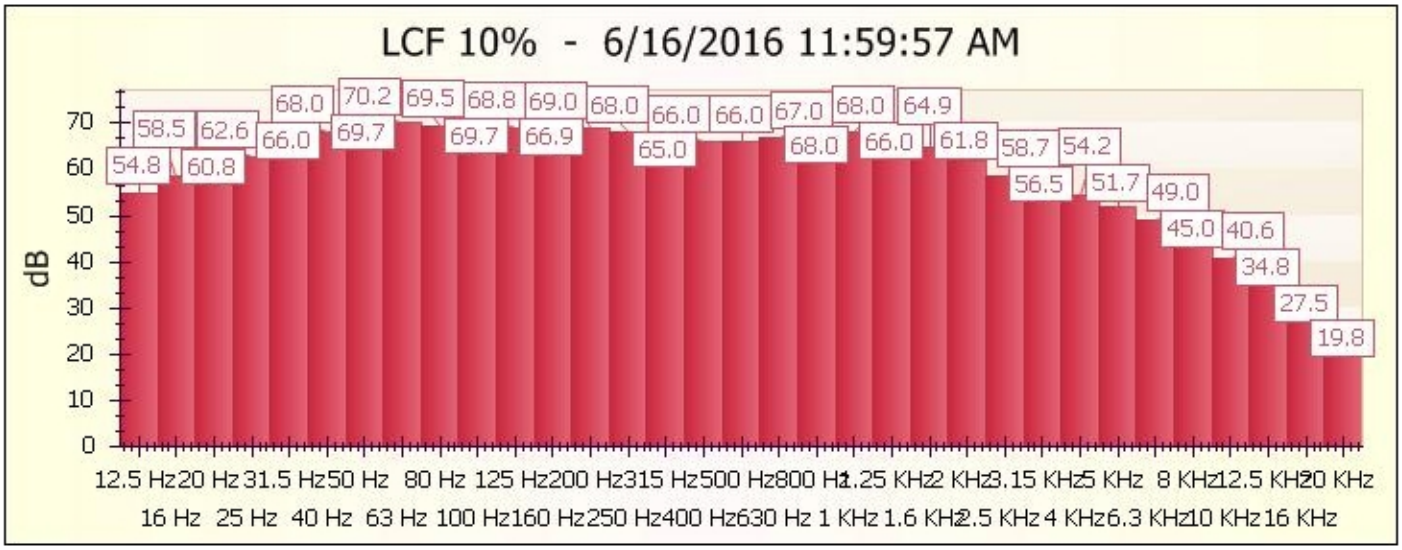
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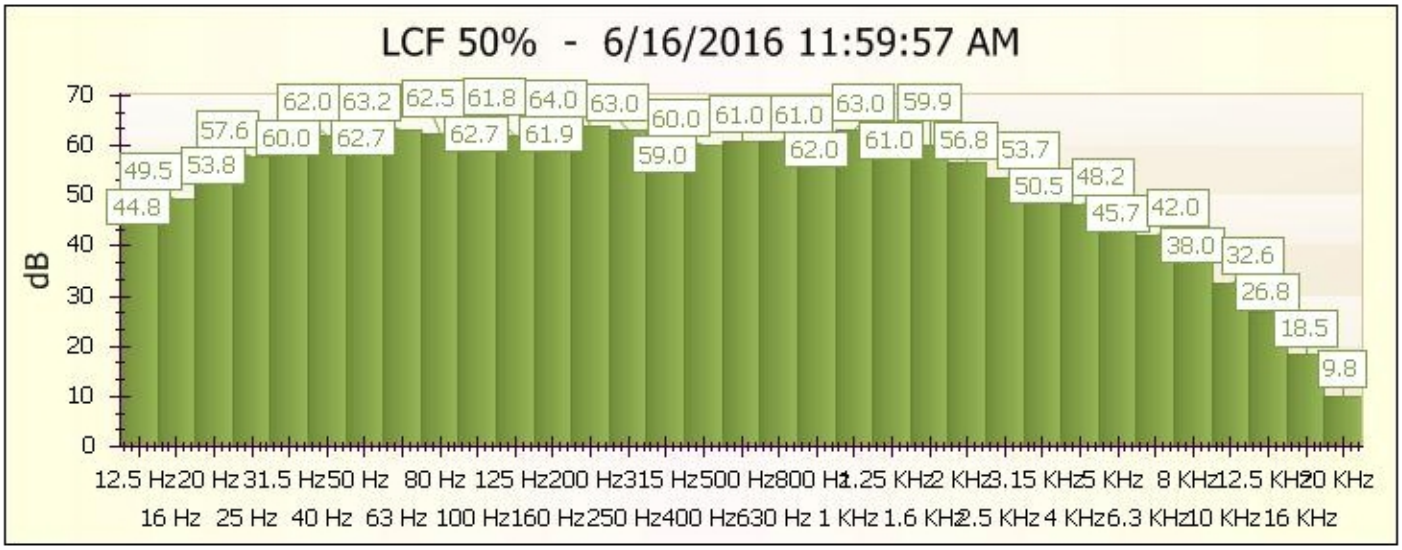
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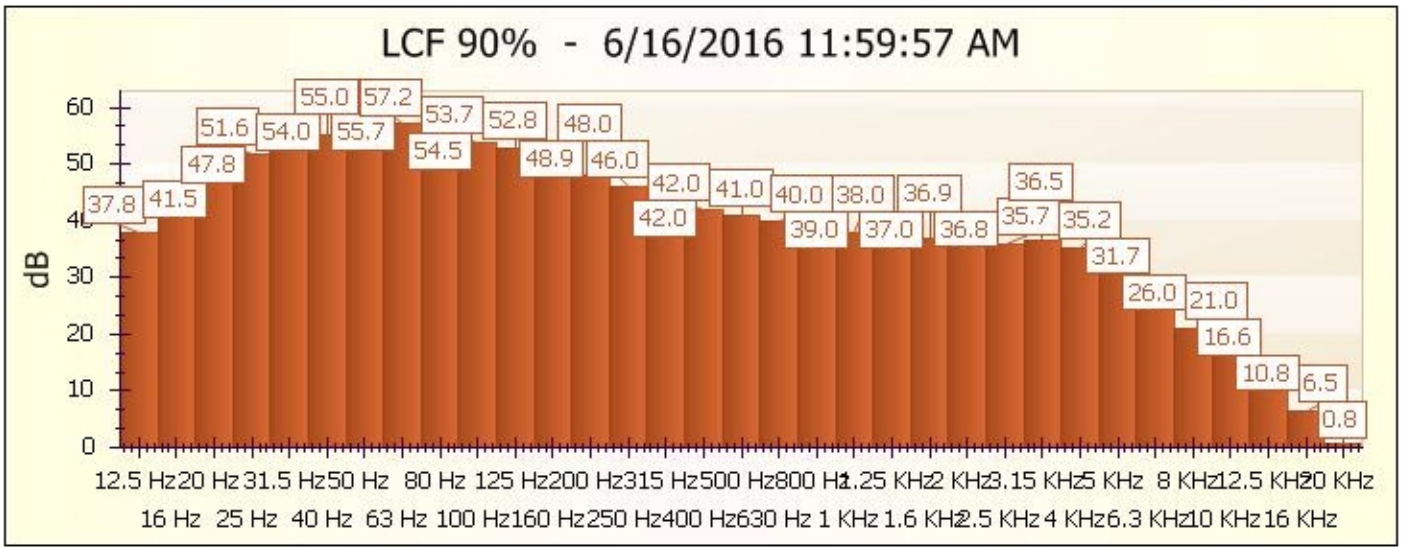
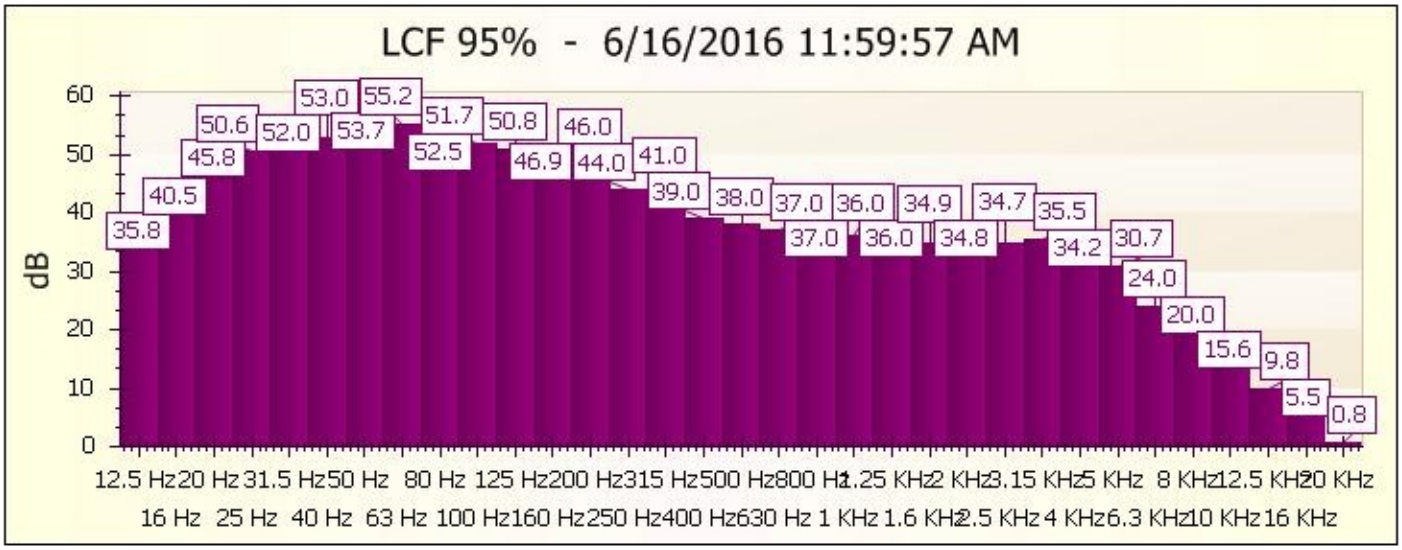
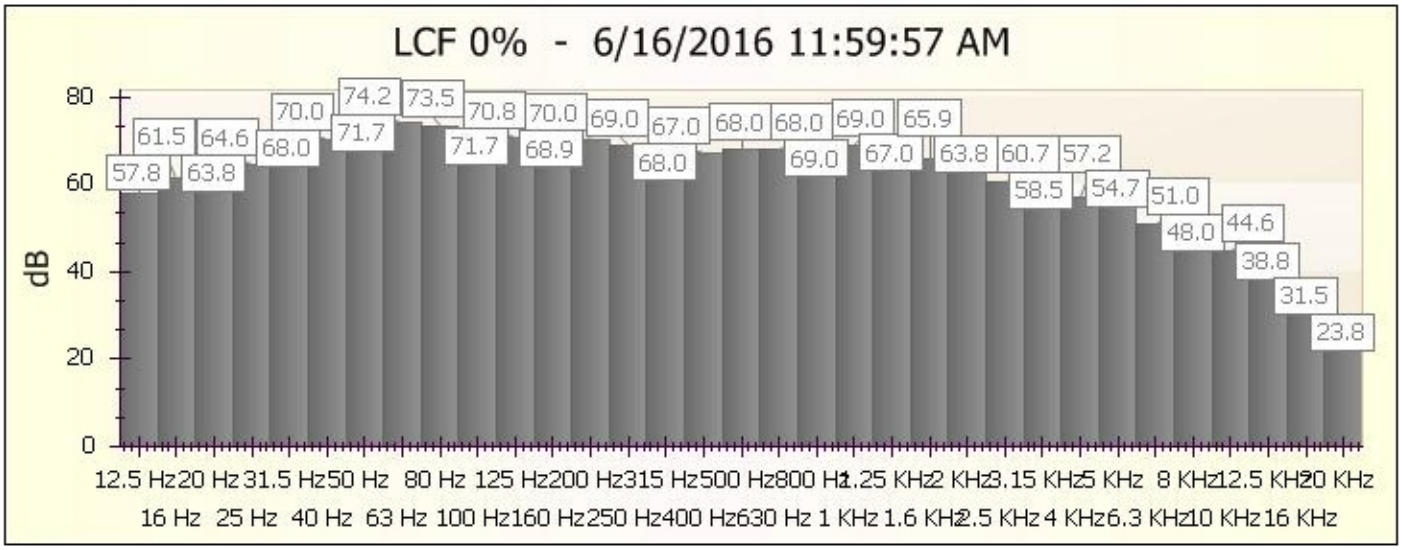
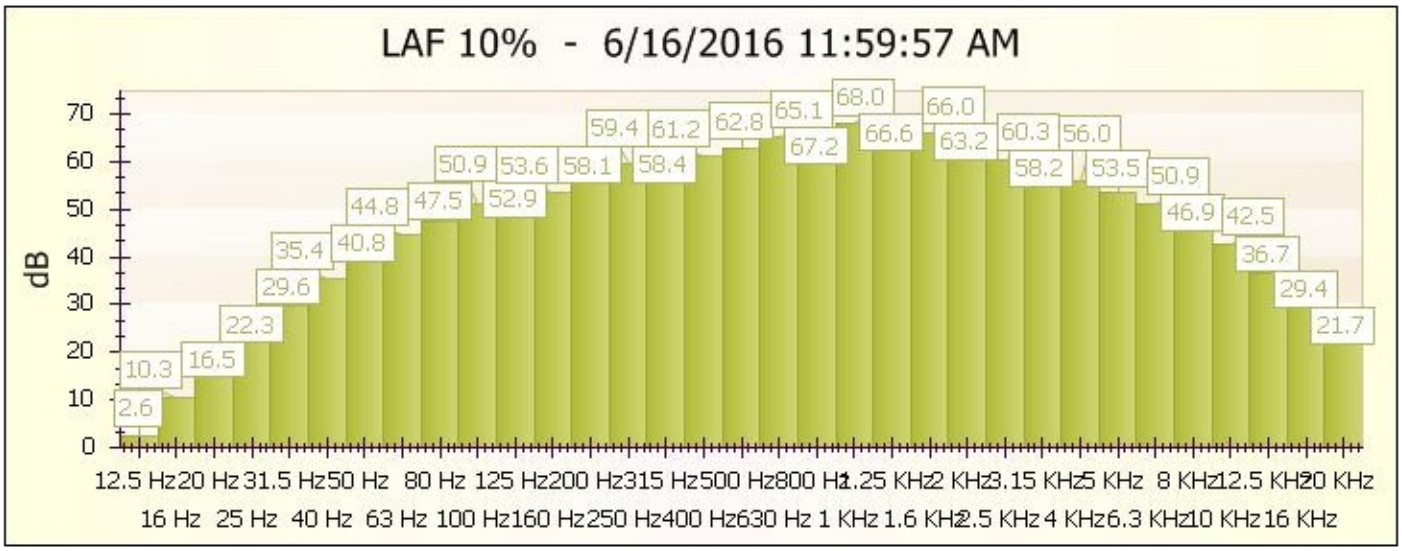
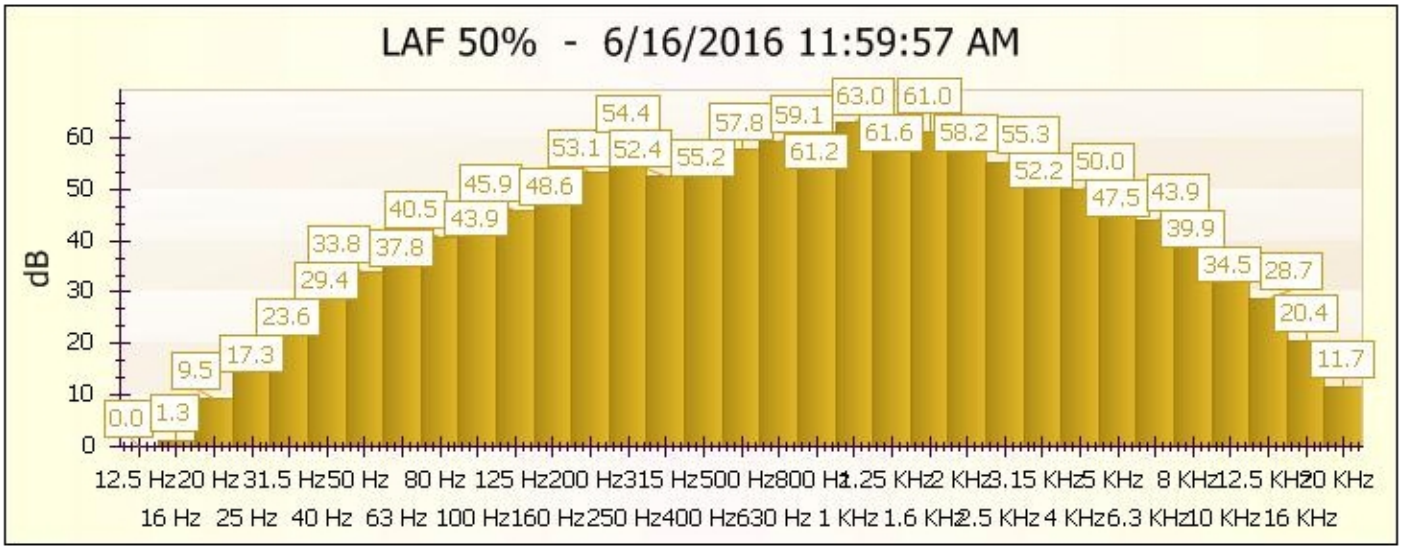
20
30
40
50
60
70
44.8
49.5
53.8
57.6
60.0
62.0
62.7
63.2
62.5
62.7
61.8
61.9
64.0
63.0
59.0
60.0
61.0
62.0
61.0
63.0
61.0
59.9
56.8
53.7
50.5
48.2
45.7
42.0
38.0
32.6
26.8
18.5
9.8
12.5 Hz 16 Hz
20 Hz 25 Hz
31.5 Hz 40 Hz
50 Hz 63 Hz
80 Hz 100 Hz
125 Hz 160 Hz
200 Hz 250 Hz
315 Hz 400 Hz
500 Hz 630 Hz
800 Hz 1 KHz
1.25 KHz 1.6 KHz
2 KHz 2.5 KHz
3.15 KHz 4 KHz
5 KHz 6.3 KHz
8 KHz 10 KHz
12.5 KHz 16 KHz
20 KHz

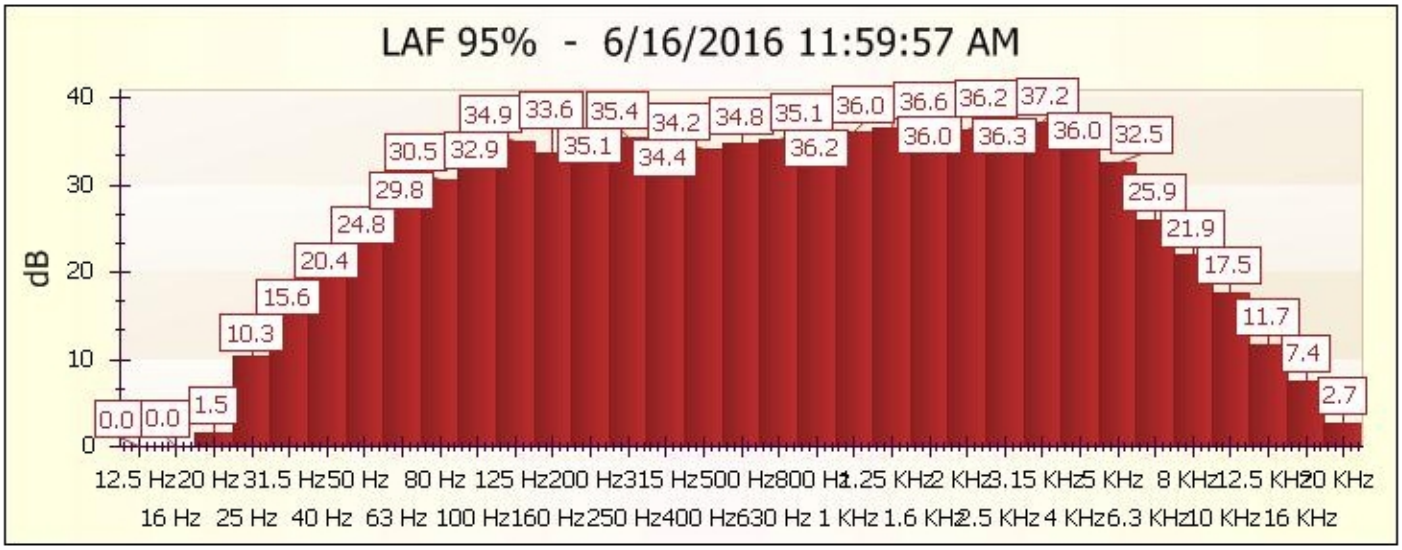

LCF 90% - 6/16/2016 11:59:57 AM
dB
0
10
20
30
40
50
60
37.8
41.5
47.8
51.6
54.0
55.0
55.7
57.2
54.5
53.7
52.8
48.9
48.0
46.0
42.0
42.0
41.0
40.0
39.0
38.0
37.0
36.9
36.8
36.5
35.7
35.2
31.7
26.0
21.0
16.6
10.8
6.5
0.8
12.5 Hz 16 Hz
20 Hz 25 Hz
31.5 Hz 40 Hz
50 Hz 63 Hz
80 Hz 100 Hz
125 Hz 160 Hz
200 Hz 250 Hz
315 Hz 400 Hz
500 Hz 630 Hz
800 Hz 1 KHz
1.25 KHz 1.6 KHz
2 KHz 2.5 KHz
3.15 KHz 4 KHz
5 KHz 6.3 KHz
8 KHz 10 KHz
12.5 KHz 16 KHz
20 KHz

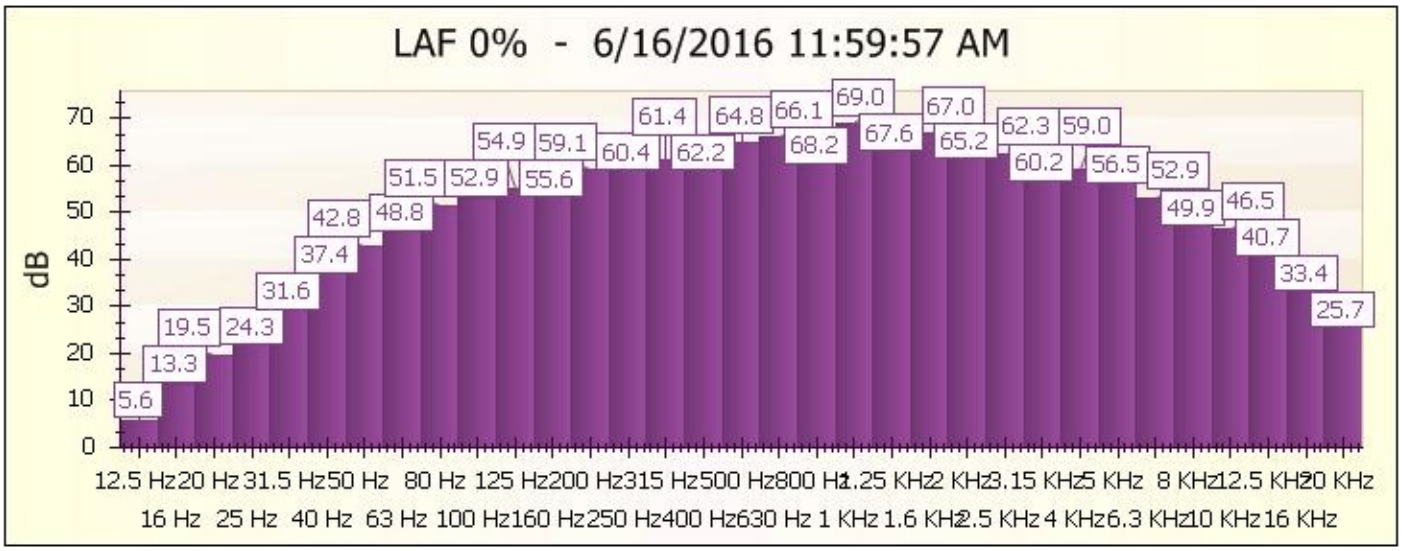

LCF 95% - 6/16/2016 11:59:57 AM
dB
60
50
40
30
20
10
0
35.8
40.5
45.8
50.6
52.0
53.0
53.7
55.2
52.5
51.7
50.8
46.9
46.0
44.0
41.0
39.0
38.0
37.0
37.0
36.0
36.0
34.9
34.8
34.7
35.5
34.2
30.7
24.0
20.0
15.6
9.8
5.5
0.8
12.5 Hz 16 Hz
20 Hz 25 Hz
31.5 Hz 40 Hz
50 Hz 63 Hz
80 Hz 100 Hz
125 Hz 160 Hz
200 Hz 250 Hz
315 Hz 400 Hz
500 Hz 630 Hz
800 Hz 1 KHz
1.25 KHz 1.6 KHz
2 KHz 2.5 KHz
3.15 KHz 4 KHz
5 KHz 6.3 KHz
8 KHz 10 KHz
12.5 KHz 16 KHz
20 KHz


LCF 0% - 6/16/2016 11:59:57 AM
dB
80
60
40
20
0
57.8
61.5
63.8
64.6
68.0
70.0
71.7
74.2
73.5
71.7
70.8
68.9
70.0
68.0
69.0
67.0
68.0
68.0
69.0
69.0
67.0
65.9
63.8
60.7
58.5
57.2
54.7
51.0
48.0
44.6
38.8
31.5
23.8
12.5 Hz 16 Hz
20 Hz 25 Hz
31.5 Hz 40 Hz
50 Hz 63 Hz
80 Hz 100 Hz
125 Hz 160 Hz
200 Hz 250 Hz
315 Hz 400 Hz
500 Hz 630 Hz
800 Hz 1 KHz
1.25 KHz 1.6 KHz
2 KHz 2.5 KHz
3.15 KHz 4 KHz
5 KHz 6.3 KHz
8 KHz 10 KHz
12.5 KHz 16 KHz
20 KHz

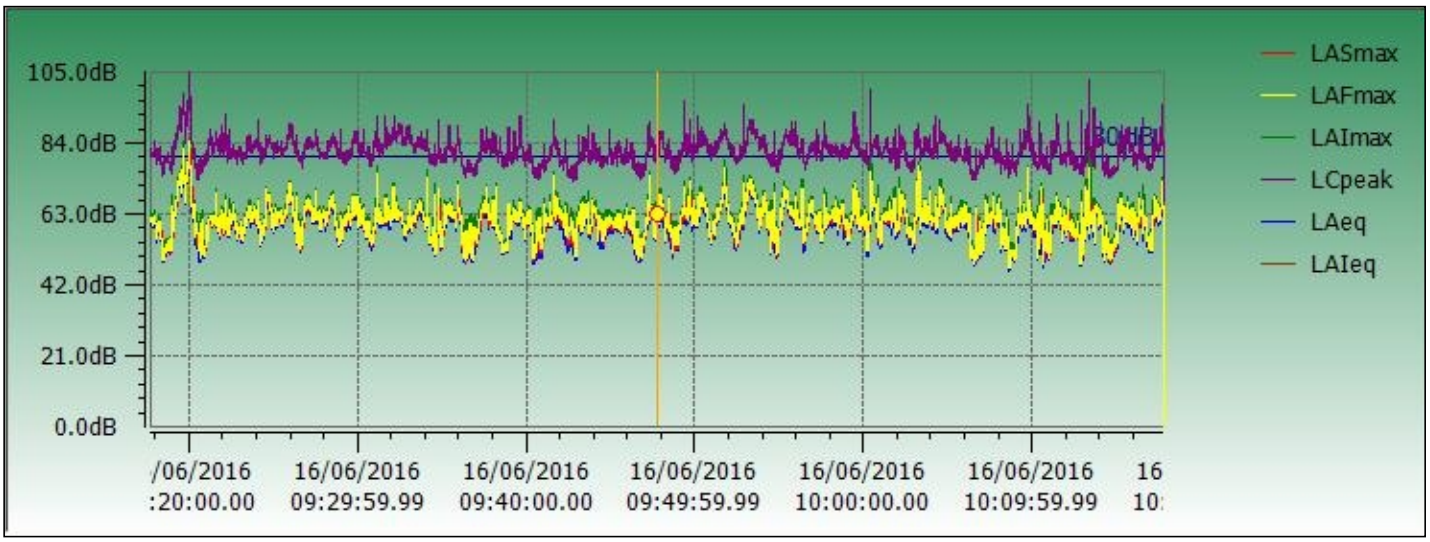

LAF 10% - 6/16/2016 11:59:57 AM
dB
70
60
50
40
30
20
10
0
2.6
10.3
16.5
22.3
29.6
35.4
40.8
44.8
47.5
52.9
50.9
53.6
58.1
58.4
59.4
61.2
62.8
65.1
67.2
68.0
66.6
66.0
63.2
60.3
58.2
56.0
53.5
50.9
46.9
42.5
36.7
29.4
21.7
12.5 Hz 16 Hz
20 Hz 25 Hz
31.5 Hz 40 Hz
50 Hz 63 Hz
80 Hz 100 Hz
125 Hz 160 Hz
200 Hz 250 Hz
315 Hz 400 Hz
500 Hz 630 Hz
800 Hz 1 KHz
1.25 KHz 1.6 KHz
2 KHz 2.5 KHz
3.15 KHz 4 KHz
5 KHz 6.3 KHz
8 KHz 10 KHz
12.5 KHz 16 KHz
20 KHz

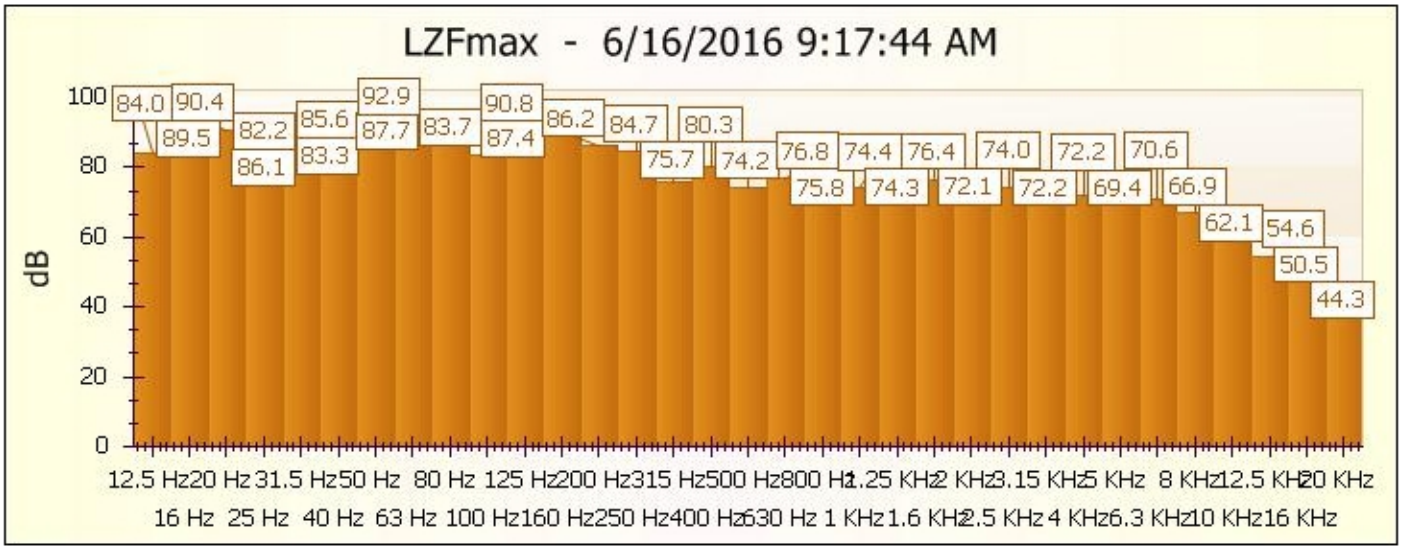

LAF 50% - 6/16/2016 11:59:57 AM
dB
0.0 1.3 9.5 17.3 23.6 29.4 33.8 37.8 40.5 43.9 45.9 48.6 53.1 52.4 54.4 55.2 57.8 59.1 61.2 63.0 61.6 61.0 58.2 55.3 52.2 50.0 47.5 43.9 39.9 34.5 28.7 20.4 11.7
12.5 Hz 16 Hz 20 Hz 25 Hz 31.5 Hz 40 Hz 50 Hz 63 Hz 80 Hz 100 Hz 125 Hz 160 Hz 200 Hz 250 Hz 315 Hz 400 Hz 500 Hz 630 Hz 800 Hz 1 KHz 1.25 KHz 1.6 KHz 2 KHz 2.5 KHz 3.15 KHz 4 KHz 5 KHz 6.3 KHz 8 KHz 10 KHz 12.5 KHz 16 KHz 20 KHz

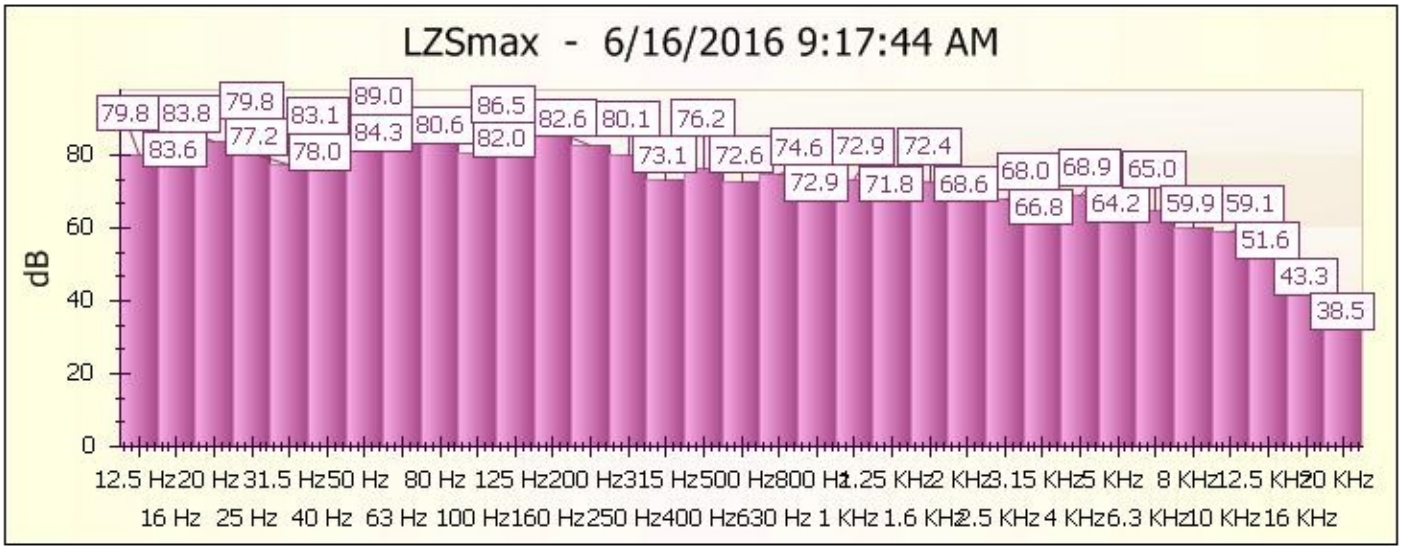

LAF 95% - 6/16/2016 11:59:57 AM
dB
0.0 0.0 1.5 10.3 15.6 20.4 24.8 29.8 30.5 32.9 34.9 33.6 35.4 35.1 34.2 34.4 34.8 35.1 36.2 36.0 36.6 36.0 36.2 36.3 37.2 36.0 32.5 25.9 21.9 17.5 11.7 7.4 2.7
12.5 Hz 16 Hz 20 Hz 25 Hz 31.5 Hz 40 Hz 50 Hz 63 Hz 80 Hz 100 Hz 125 Hz 160 Hz 200 Hz 250 Hz 315 Hz 400 Hz 500 Hz 630 Hz 800 Hz 1 KHz 1.25 KHz 1.6 KHz 2 KHz 2.5 KHz 3.15 KHz 4 KHz 5 KHz 6.3 KHz 8 KHz 10 KHz 12.5 KHz 16 KHz 20 KHz

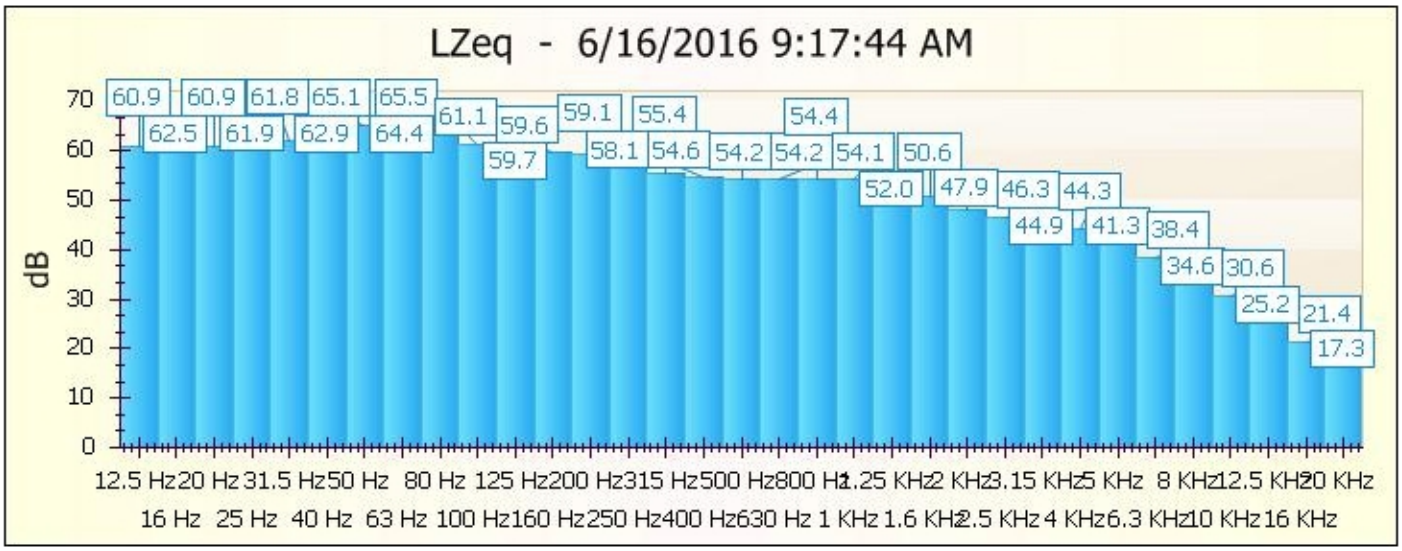

LAF 0% - 6/16/2016 11:59:57 AM
dB
5.6 13.3 19.5 24.3 31.6 37.4 42.8 48.8 51.5 52.9 55.6 54.9 59.1 60.4 61.4 62.2 64.8 66.1 68.2 69.0 67.6 67.0 65.2 62.3 59.0 60.2 56.5 52.9 49.9 46.5 40.7 33.4 25.7
12.5 Hz 16 Hz 20 Hz 25 Hz 31.5 Hz 40 Hz 50 Hz 63 Hz 80 Hz 100 Hz 125 Hz 160 Hz 200 Hz 250 Hz 315 Hz 400 Hz 500 Hz 630 Hz 800 Hz 1 KHz 1.25 KHz 1.6 KHz 2 KHz 2.5 KHz 3.15 KHz 4 KHz 5 KHz 6.3 KHz 8 KHz 10 KHz 12.5 KHz 16 KHz 20 KHz

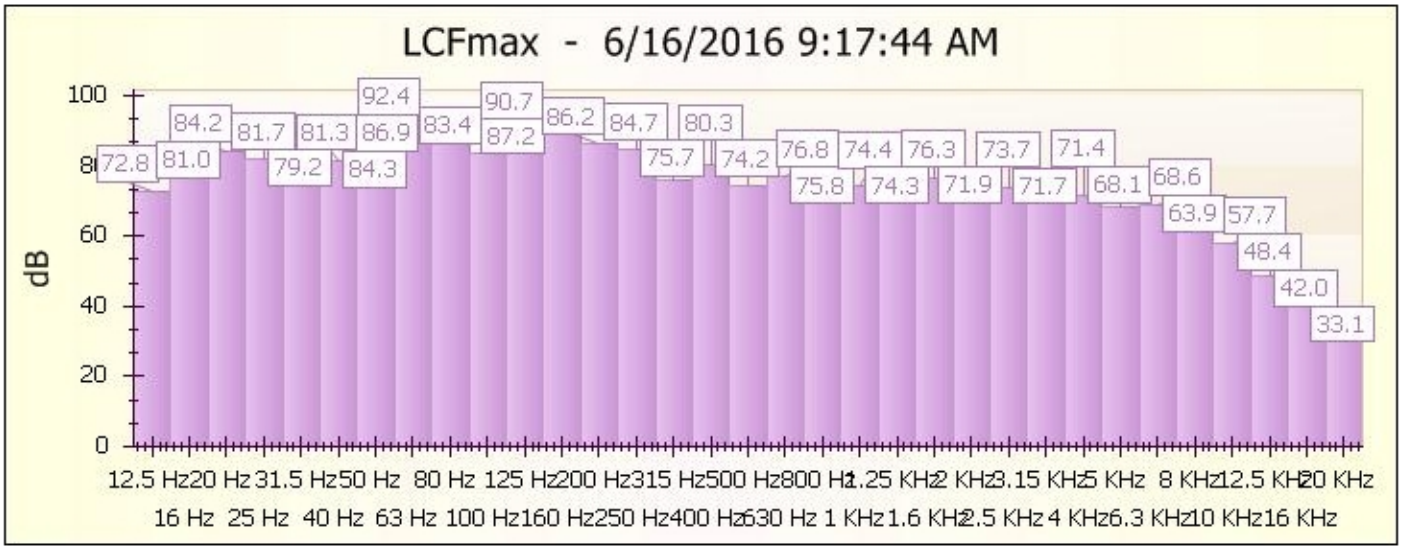
Instrument Model	CEL-633C		
Overload	No	Evening Start	19
Battery Low	No	Night Start	23
Duration	01:00:05 HH:MM:SS	Day Penalty	0.000000000
End Date & Time	6/16/2016 10:17:49 AM	Evening Penalty	5.000000000
Pause Duration	00:00:01 HH:MM:SS	Night Penalty	10.000000000
Response	Random	LAF 10%	65 dB
Run Number	9	LAF 50%	60 dB
Serial Number	5044657	LAF 90%	53 dB
Site	Unallocated	LAF 95%	51.5 dB
Location	Unallocated	LAF variable%	67 dB
Person	Unallocated	LCpeak	105 dB
Process	Unallocated	LCpeak with Time	105.0 dB (6/16/2016 9:20:02 AM)
Result	Cumulative	Start Date & Time	6/16/2016 9:17:44 AM
LAFmax	84.5 dB	LAE	98.1 dB
LAFmax with Time	84.5 dB (6/16/2016 9:20:03 AM)	LAeq	62.5 dB
LAFmin	45.4 dB	LAleq	64.5 dB
LAFmin with Time	45.4 dB (6/16/2016 10:08:39 AM)	LCeq	72.5 dB
LAImax	84.9 dB	LCeq-LAeq	10 dB
LAImax with Time	84.9 dB (6/16/2016 9:20:02 AM)	Lepd(Projected)	62.5 dB
LAImin	46.4 dB	Lex8h(Projected)	62.5 dB
LAImin with Time	46.4 dB (6/16/2016 10:08:44 AM)	LZeq	74.4 dB
LDN	0	Lepd	53.5 dB
LDEN	0	Lex8h	53.5 dB
CNEL	0		
Day Start	7		
Notes			

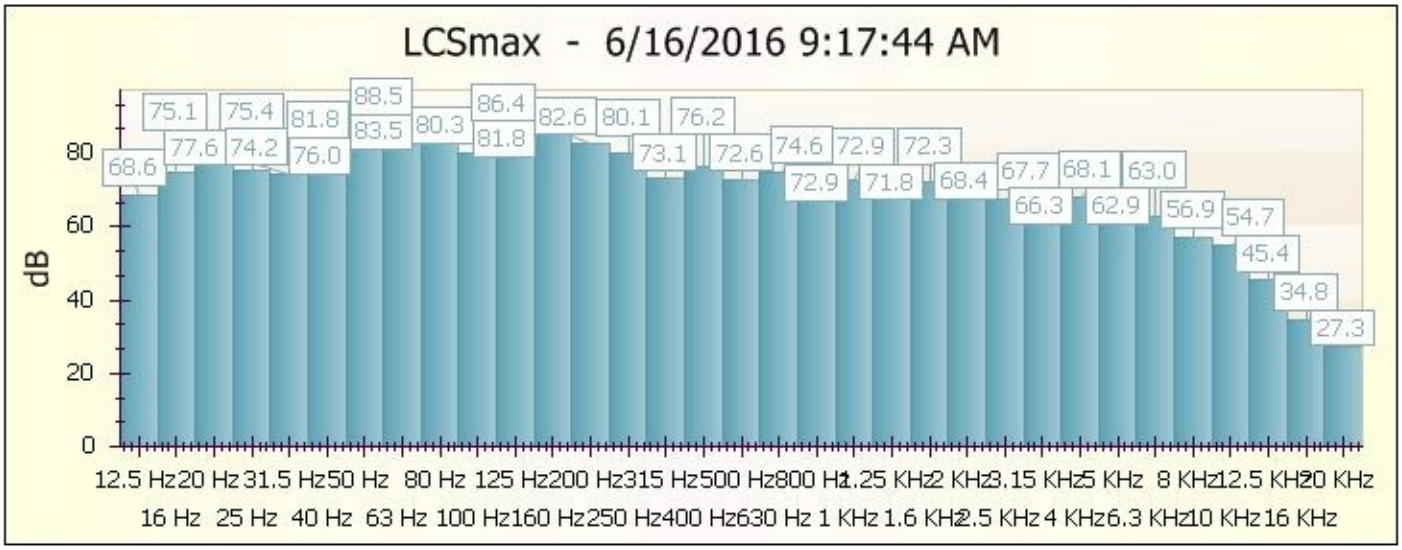


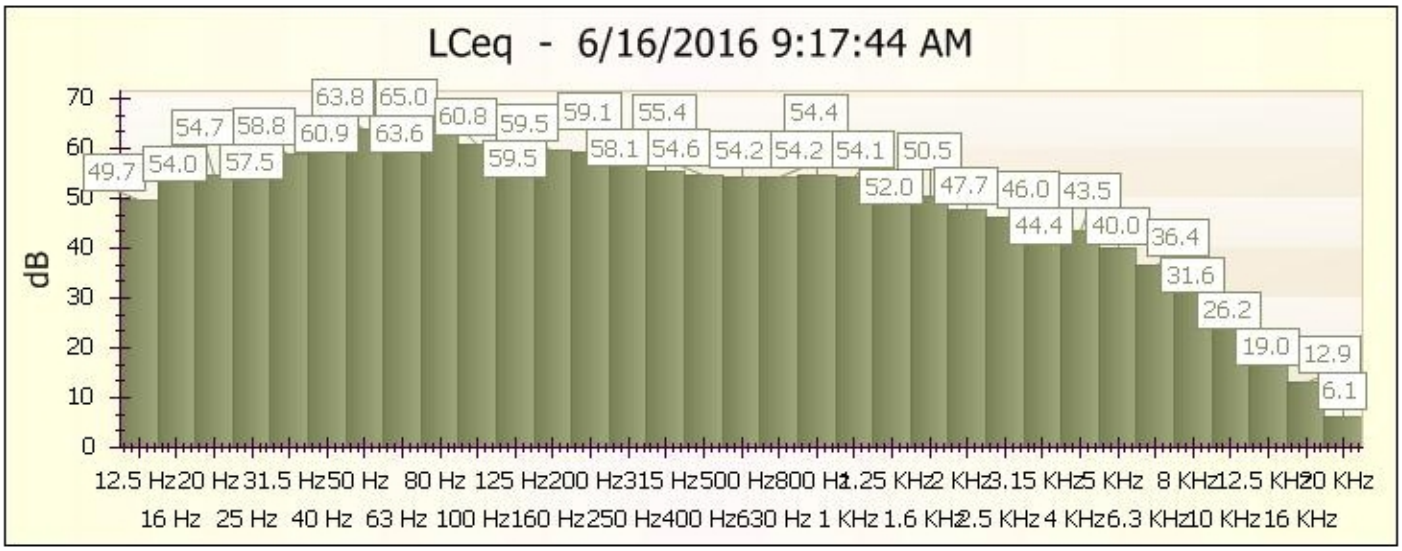

LZFmax - 6/16/2016 9:17:44 AM
dB
100
80
60
40
20
0
84.0 90.4 89.5 82.2 86.1 85.6 83.3 92.9 87.7 83.7 90.8 87.4 86.2 84.7 75.7 80.3 74.2 76.8 75.8 74.4 74.3 76.4 72.1 74.0 72.2 72.2 69.4 70.6 66.9 62.1 54.6 50.5 44.3
12.5 Hz 20 Hz 31.5 Hz 50 Hz 80 Hz 125 Hz 200 Hz 315 Hz 500 Hz 800 Hz 1.25 KHz 2 KHz 3.15 KHz 5 KHz 8 KHz 12.5 KHz 20 KHz
16 Hz 25 Hz 40 Hz 63 Hz 100 Hz 160 Hz 250 Hz 400 Hz 630 Hz 1 KHz 1.6 KHz 2.5 KHz 4 KHz 6.3 KHz 10 KHz 16 KHz

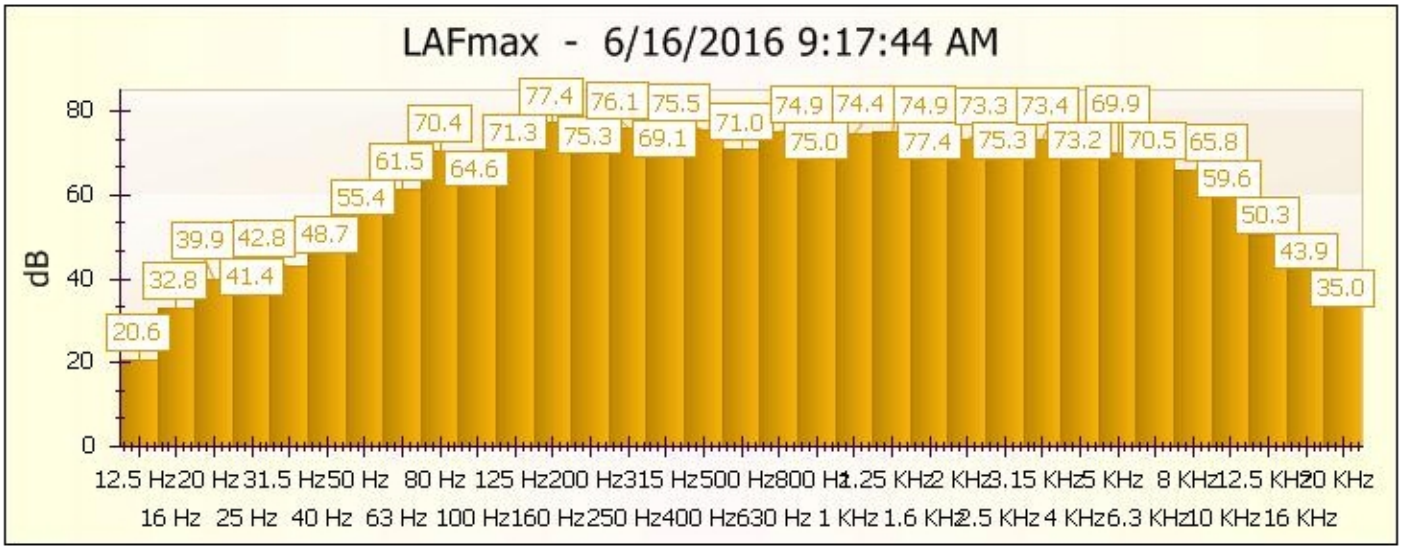

LZSmax - 6/16/2016 9:17:44 AM
dB
80
60
40
20
0
79.8 83.8 83.6 79.8 77.2 83.1 78.0 89.0 84.3 80.6 86.5 82.0 82.6 80.1 73.1 76.2 72.6 74.6 72.9 72.9 72.4 71.8 68.6 68.0 66.8 68.9 64.2 65.0 59.9 59.1 51.6 43.3 38.5
12.5 Hz 20 Hz 31.5 Hz 50 Hz 80 Hz 125 Hz 200 Hz 315 Hz 500 Hz 800 Hz 1.25 KHz 2 KHz 3.15 KHz 5 KHz 8 KHz 12.5 KHz 20 KHz
16 Hz 25 Hz 40 Hz 63 Hz 100 Hz 160 Hz 250 Hz 400 Hz 630 Hz 1 KHz 1.6 KHz 2.5 KHz 4 KHz 6.3 KHz 10 KHz 16 KHz

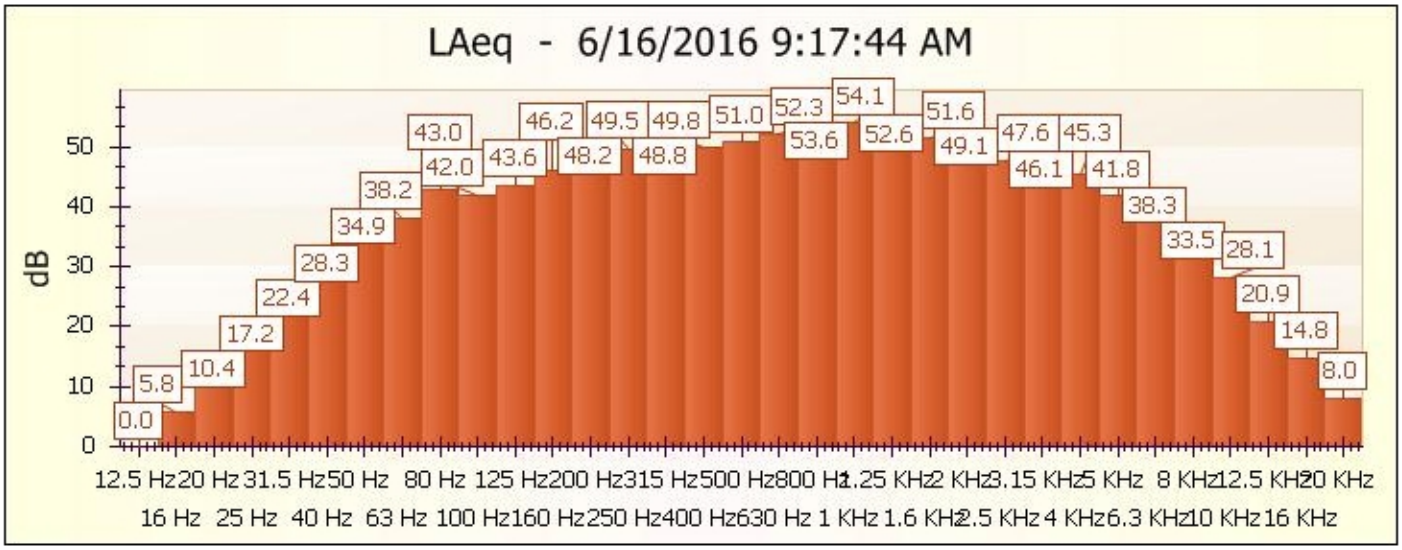

LZeq - 6/16/2016 9:17:44 AM
dB
70
60
50
40
30
20
10
0
60.9 60.9 61.8 65.1 65.5 62.5 61.9 62.9 64.4 61.1 59.6 59.7 59.1 58.1 55.4 54.6 54.2 54.4 54.2 54.1 52.0 50.6 47.9 46.3 44.9 44.3 41.3 38.4 34.6 30.6 25.2 21.4 17.3
12.5 Hz 20 Hz 31.5 Hz 50 Hz 80 Hz 125 Hz 200 Hz 315 Hz 500 Hz 800 Hz 1.25 KHz 2 KHz 3.15 KHz 5 KHz 8 KHz 12.5 KHz 20 KHz
16 Hz 25 Hz 40 Hz 63 Hz 100 Hz 160 Hz 250 Hz 400 Hz 630 Hz 1 KHz 1.6 KHz 2.5 KHz 4 KHz 6.3 KHz 10 KHz 16 KHz

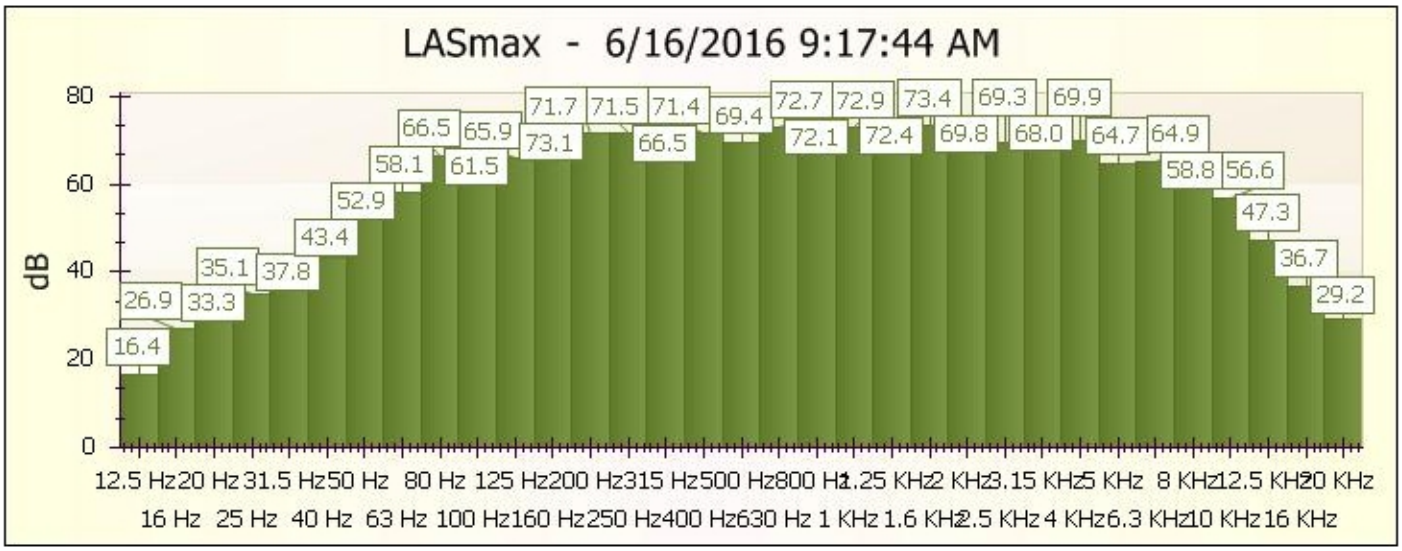

LCFmax - 6/16/2016 9:17:44 AM
dB
100
80
60
40
20
0
72.8 84.2 81.7 81.3 92.4 83.4 90.7 86.2 84.7 80.3 75.7 74.2 76.8 74.4 76.3 73.7 71.4 68.6 57.7 48.4 42.0 33.1
81.0 79.2 86.9 84.3 87.2 75.8 74.3 71.9 71.7 68.1 63.9
12.5 Hz 20 Hz 31.5 Hz 50 Hz 80 Hz 125 Hz 200 Hz 315 Hz 500 Hz 800 Hz 1.25 KHz 2 KHz 3.15 KHz 5 KHz 8 KHz 12.5 KHz 20 KHz
16 Hz 25 Hz 40 Hz 63 Hz 100 Hz 160 Hz 250 Hz 400 Hz 630 Hz 1 KHz 1.6 KHz 2.5 KHz 4 KHz 6.3 KHz 10 KHz 16 KHz

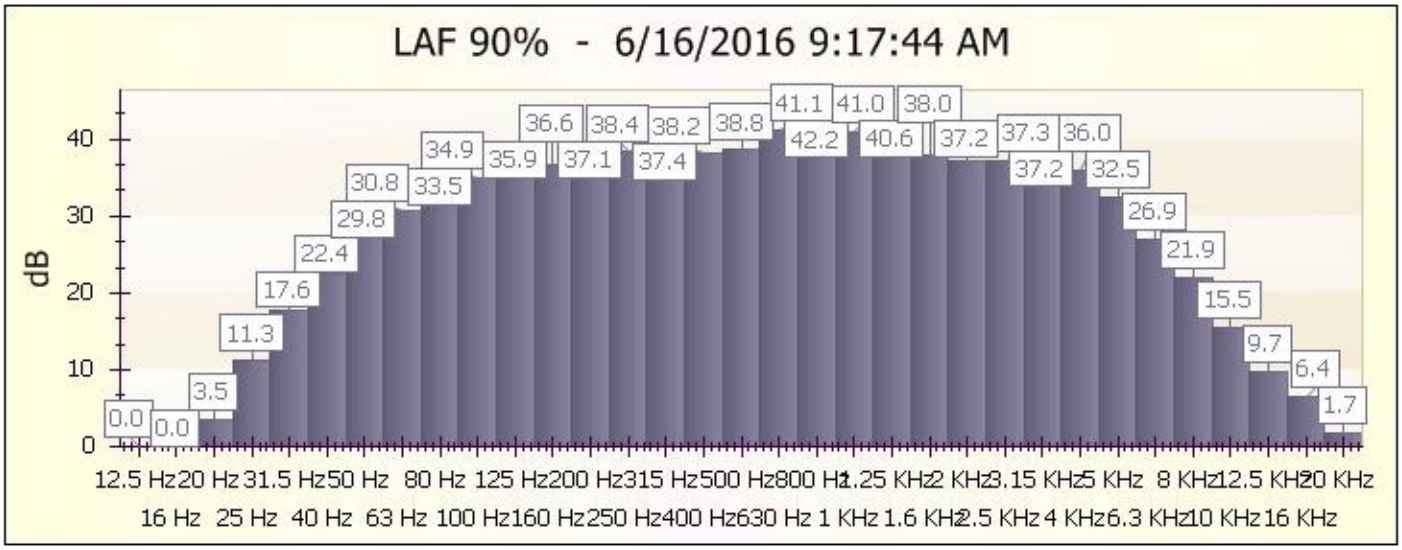

LCSmax - 6/16/2016 9:17:44 AM
dB
80
60
40
20
0
68.6 75.1 77.6 74.2 75.4 76.0 81.8 88.5 83.5 80.3 86.4 81.8 82.6 80.1 73.1 76.2 72.6 74.6 72.9 72.9 71.8 72.3 68.4 67.7 66.3 68.1 62.9 63.0 56.9 54.7 45.4 34.8 27.3
12.5 Hz 20 Hz 31.5 Hz 50 Hz 80 Hz 125 Hz 200 Hz 315 Hz 500 Hz 800 Hz 1.25 KHz 2 KHz 3.15 KHz 5 KHz 8 KHz 12.5 KHz 20 KHz
16 Hz 25 Hz 40 Hz 63 Hz 100 Hz 160 Hz 250 Hz 400 Hz 630 Hz 1 KHz 1.6 KHz 2.5 KHz 4 KHz 6.3 KHz 10 KHz 16 KHz

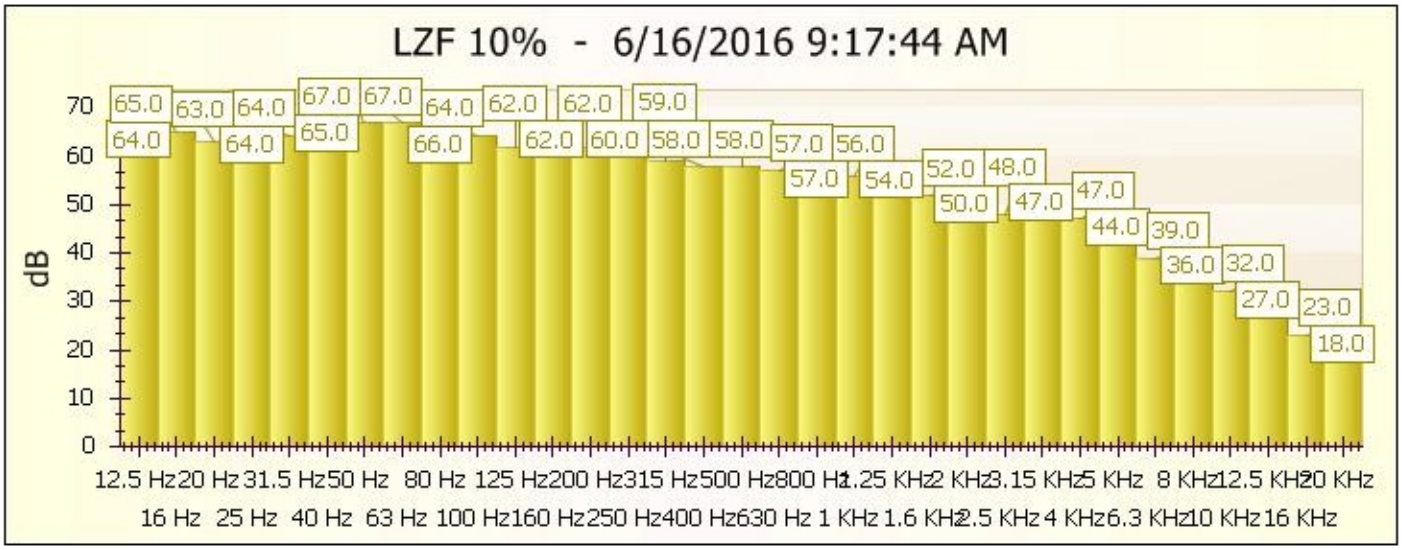

LCeq - 6/16/2016 9:17:44 AM
dB
70
60
50
40
30
20
10
0
49.7 54.7 58.8 60.9 63.8 63.6 65.0 60.8 59.5 59.1 58.1 55.4 54.6 54.2 54.4 54.2 54.1 52.0 50.5 47.7 46.0 44.4 43.5 40.0 36.4 31.6 26.2 19.0 12.9 6.1
54.0 57.5 59.5
12.5 Hz 20 Hz 31.5 Hz 50 Hz 80 Hz 125 Hz 200 Hz 315 Hz 500 Hz 800 Hz 1.25 KHz 2 KHz 3.15 KHz 5 KHz 8 KHz 12.5 KHz 20 KHz
16 Hz 25 Hz 40 Hz 63 Hz 100 Hz 160 Hz 250 Hz 400 Hz 630 Hz 1 KHz 1.6 KHz 2.5 KHz 4 KHz 6.3 KHz 10 KHz 16 KHz

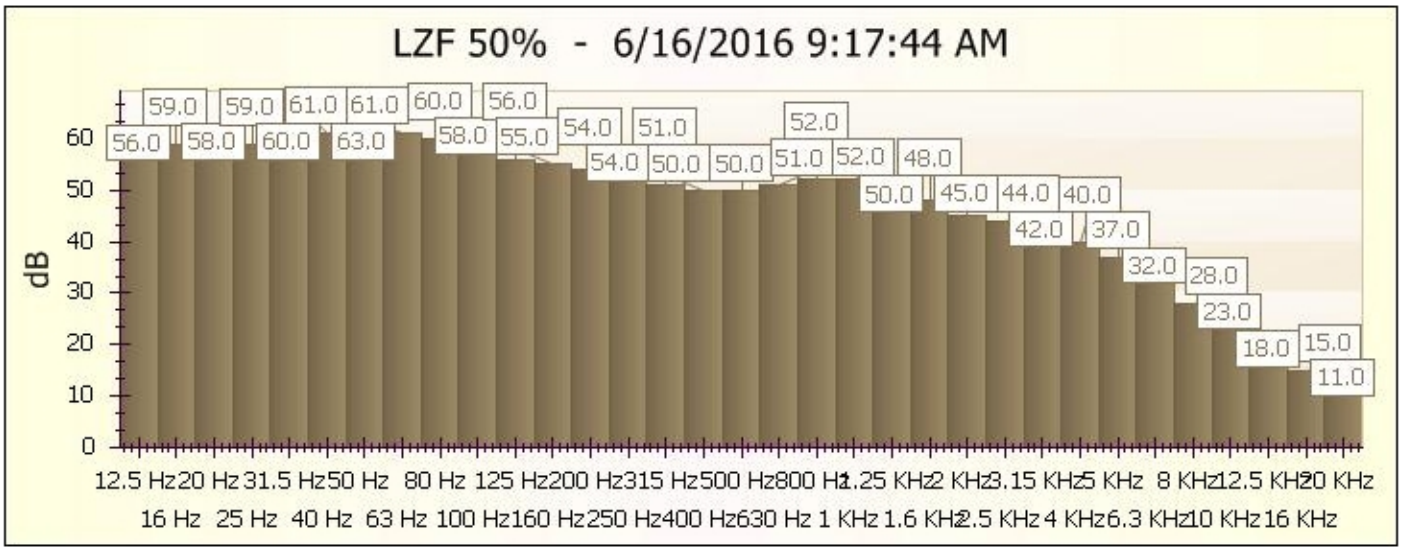

LAFmax - 6/16/2016 9:17:44 AM
dB
0
20
40
60
80
20.6
32.8
39.9
42.8
41.4
48.7
55.4
61.5
64.6
70.4
71.3
75.3
77.4
76.1
75.5
69.1
71.0
74.9
74.4
74.9
75.0
77.4
73.3
73.4
75.3
73.2
69.9
70.5
65.8
59.6
50.3
43.9
35.0
12.5 Hz 16 Hz
20 Hz 25 Hz
31.5 Hz 40 Hz
50 Hz 63 Hz
80 Hz 100 Hz
125 Hz 160 Hz
200 Hz 250 Hz
315 Hz 400 Hz
500 Hz 630 Hz
800 Hz 1 KHz
1.25 KHz 1.6 KHz
2 KHz 2.5 KHz
3.15 KHz 4 KHz
5 KHz 6.3 KHz
8 KHz 10 KHz
12.5 KHz 16 KHz
20 KHz

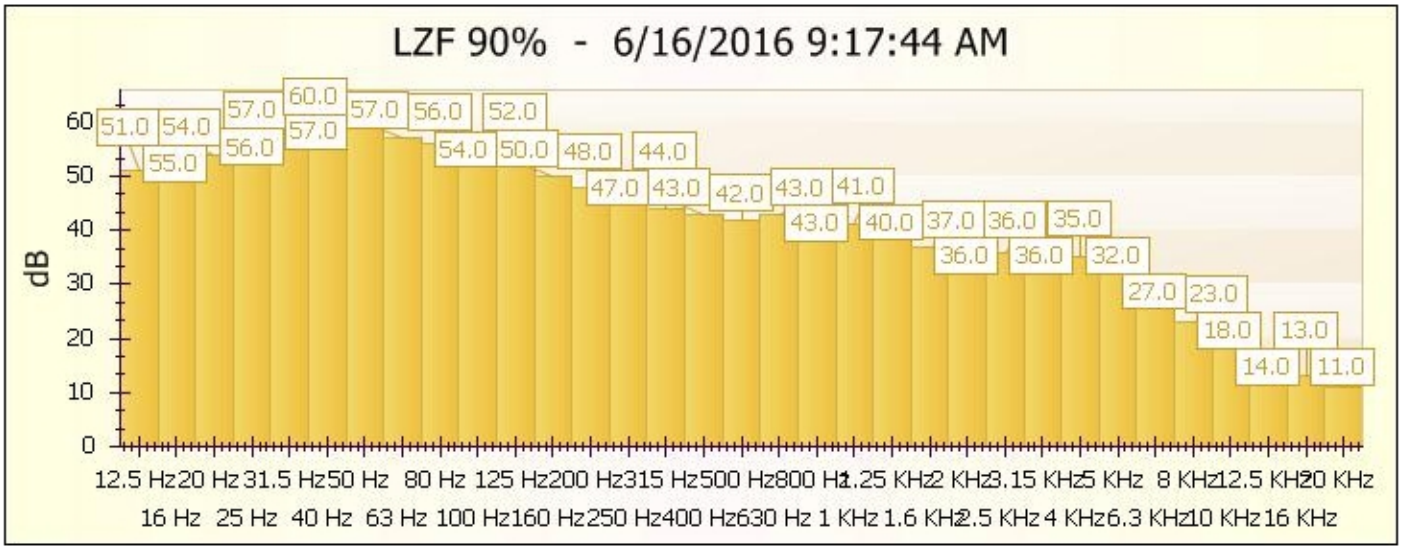

LAeq - 6/16/2016 9:17:44 AM
dB
0
10
20
30
40
50
0.0
5.8
10.4
17.2
22.4
28.3
34.9
38.2
42.0
43.0
43.6
46.2
48.2
49.5
48.8
49.8
51.0
52.3
53.6
54.1
52.6
51.6
49.1
47.6
46.1
45.3
41.8
38.3
33.5
28.1
20.9
14.8
8.0
12.5 Hz 16 Hz
20 Hz 25 Hz
31.5 Hz 40 Hz
50 Hz 63 Hz
80 Hz 100 Hz
125 Hz 160 Hz
200 Hz 250 Hz
315 Hz 400 Hz
500 Hz 630 Hz
800 Hz 1 KHz
1.25 KHz 1.6 KHz
2 KHz 2.5 KHz
3.15 KHz 4 KHz
5 KHz 6.3 KHz
8 KHz 10 KHz
12.5 KHz 16 KHz
20 KHz

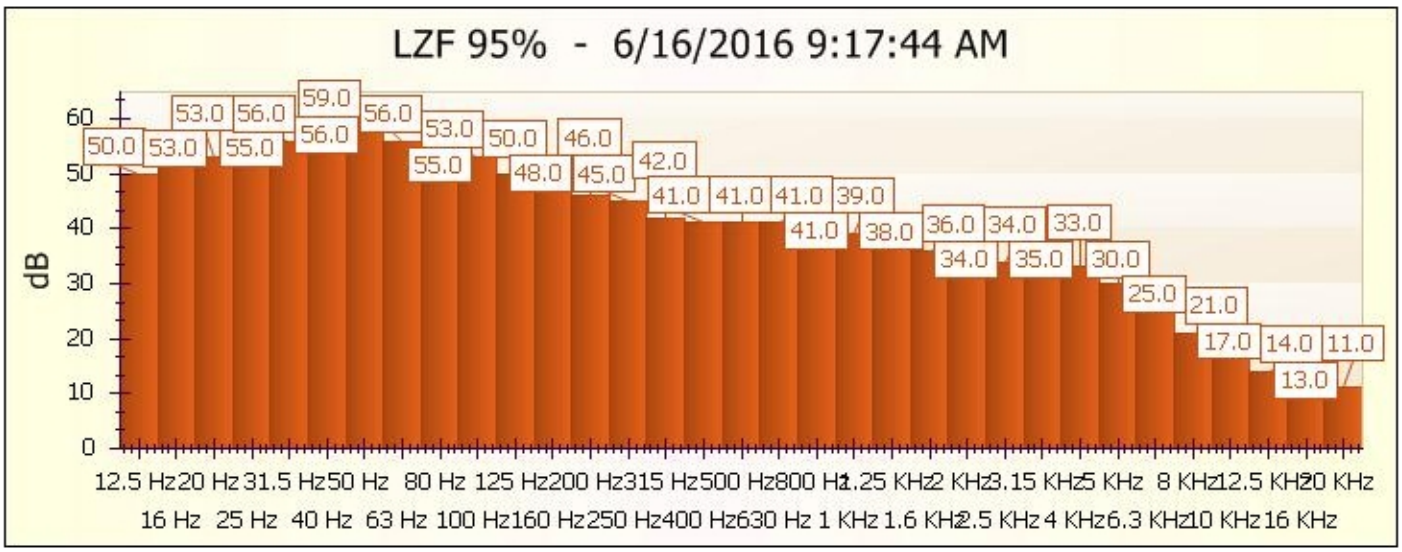

LASmax - 6/16/2016 9:17:44 AM
dB
0
20
40
60
80
16.4
26.9
33.3
35.1
37.8
43.4
52.9
58.1
61.5
66.5
65.9
71.7
73.1
71.5
66.5
71.4
69.4
72.7
72.1
72.9
72.4
73.4
69.8
69.3
68.0
69.9
64.7
64.9
58.8
56.6
47.3
36.7
29.2
12.5 Hz 16 Hz
20 Hz 25 Hz
31.5 Hz 40 Hz
50 Hz 63 Hz
80 Hz 100 Hz
125 Hz 160 Hz
200 Hz 250 Hz
315 Hz 400 Hz
500 Hz 630 Hz
800 Hz 1 KHz
1.25 KHz 1.6 KHz
2 KHz 2.5 KHz
3.15 KHz 4 KHz
5 KHz 6.3 KHz
8 KHz 10 KHz
12.5 KHz 16 KHz
20 KHz

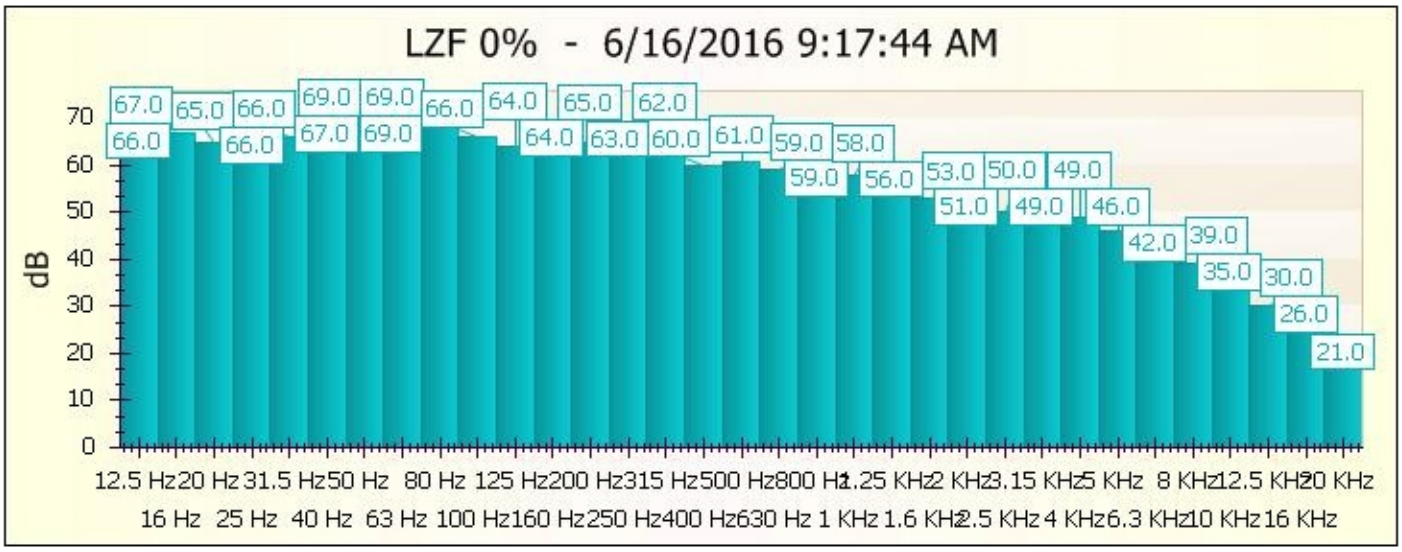

LAF 90% - 6/16/2016 9:17:44 AM
dB
0 10 20 30 40
0.0 0.0 3.5 11.3 17.6 22.4 29.8 30.8 33.5 34.9 35.9 36.6 37.1 38.4 37.4 38.2 38.8 41.1 42.2 41.0 40.6 38.0 37.2 37.3 37.2 36.0 32.5 26.9 21.9 15.5 9.7 6.4 1.7
12.5 Hz 16 Hz 20 Hz 25 Hz 31.5 Hz 40 Hz 50 Hz 63 Hz 80 Hz 100 Hz 125 Hz 160 Hz 200 Hz 250 Hz 315 Hz 400 Hz 500 Hz 630 Hz 800 Hz 1 KHz 1.25 KHz 1.6 KHz 2 KHz 2.5 KHz 3.15 KHz 4 KHz 5 KHz 6.3 KHz 8 KHz 10 KHz 12.5 KHz 16 KHz 20 KHz

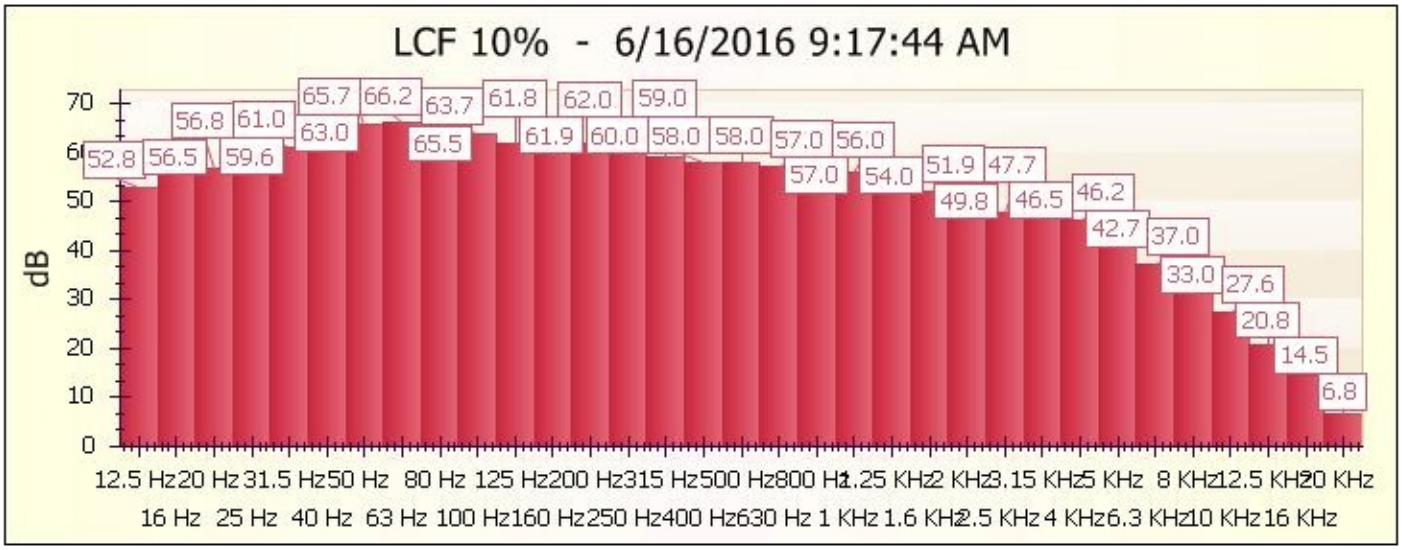

LZF 10% - 6/16/2016 9:17:44 AM
dB
0 10 20 30 40 50 60 70
65.0 63.0 64.0 67.0 67.0 64.0 62.0 62.0 59.0 64.0 64.0 65.0 66.0 62.0 60.0 58.0 58.0 57.0 56.0 57.0 54.0 52.0 48.0 50.0 47.0 47.0 44.0 39.0 36.0 32.0 27.0 23.0 18.0
12.5 Hz 16 Hz 20 Hz 25 Hz 31.5 Hz 40 Hz 50 Hz 63 Hz 80 Hz 100 Hz 125 Hz 160 Hz 200 Hz 250 Hz 315 Hz 400 Hz 500 Hz 630 Hz 800 Hz 1 KHz 1.25 KHz 1.6 KHz 2 KHz 2.5 KHz 3.15 KHz 4 KHz 5 KHz 6.3 KHz 8 KHz 10 KHz 12.5 KHz 16 KHz 20 KHz

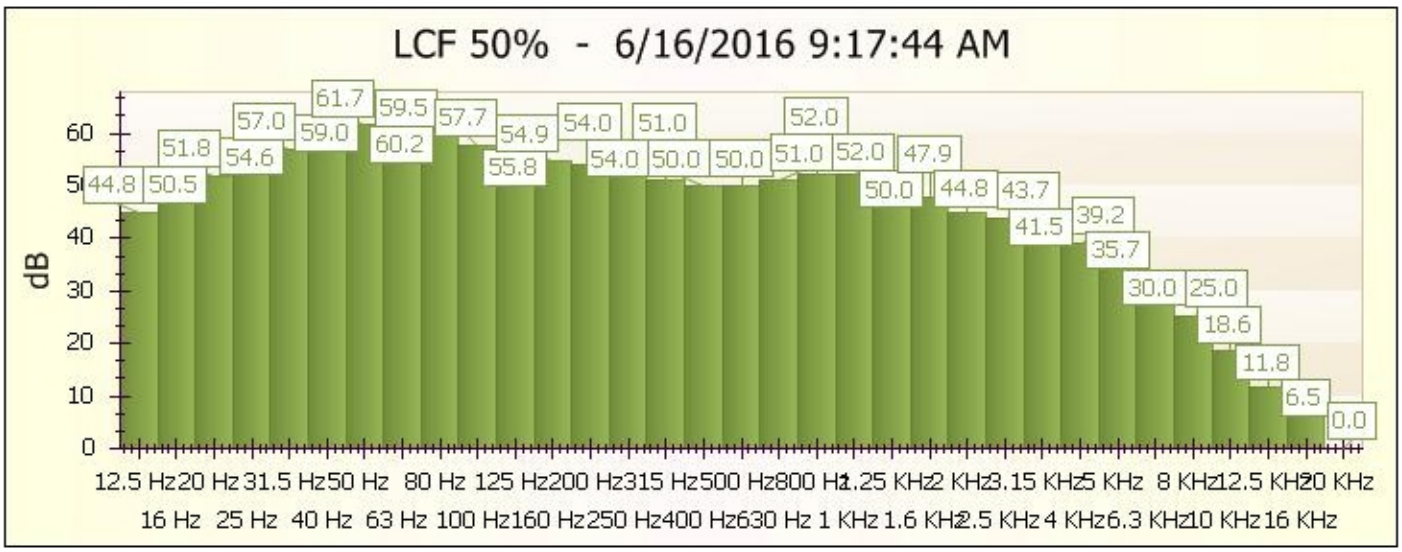

LZF 50% - 6/16/2016 9:17:44 AM
dB
0 10 20 30 40 50 60
59.0 59.0 61.0 61.0 60.0 56.0 56.0 58.0 60.0 63.0 58.0 55.0 54.0 51.0 54.0 50.0 50.0 52.0 51.0 52.0 48.0 50.0 45.0 44.0 40.0 42.0 37.0 32.0 28.0 23.0 18.0 15.0 11.0
12.5 Hz 16 Hz 20 Hz 25 Hz 31.5 Hz 40 Hz 50 Hz 63 Hz 80 Hz 100 Hz 125 Hz 160 Hz 200 Hz 250 Hz 315 Hz 400 Hz 500 Hz 630 Hz 800 Hz 1 KHz 1.25 KHz 1.6 KHz 2 KHz 2.5 KHz 3.15 KHz 4 KHz 5 KHz 6.3 KHz 8 KHz 10 KHz 12.5 KHz 16 KHz 20 KHz

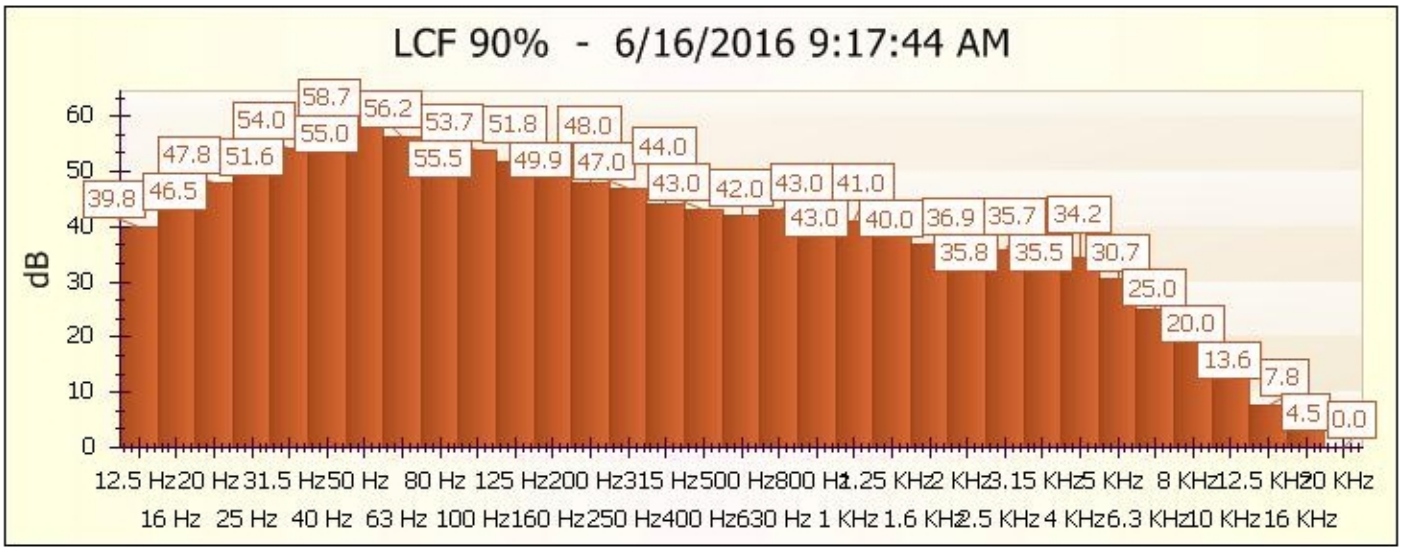

LZF 90% - 6/16/2016 9:17:44 AM
dB
0
10
20
30
40
50
60
51.0 54.0 57.0 60.0 57.0 56.0 52.0
55.0 56.0 57.0 54.0 50.0 48.0 44.0
47.0 43.0 42.0 43.0 41.0
43.0 40.0 37.0 36.0 35.0
36.0 36.0 32.0
27.0 23.0
18.0 13.0
14.0 11.0
12.5 Hz 20 Hz 31.5 Hz 50 Hz 80 Hz 125 Hz 200 Hz 315 Hz 500 Hz 800 Hz 1.25 KHz 2 KHz 3.15 KHz 5 KHz 8 KHz 12.5 KHz 20 KHz
16 Hz 25 Hz 40 Hz 63 Hz 100 Hz 160 Hz 250 Hz 400 Hz 630 Hz 1 KHz 1.6 KHz 2.5 KHz 4 KHz 6.3 KHz 10 KHz 16 KHz

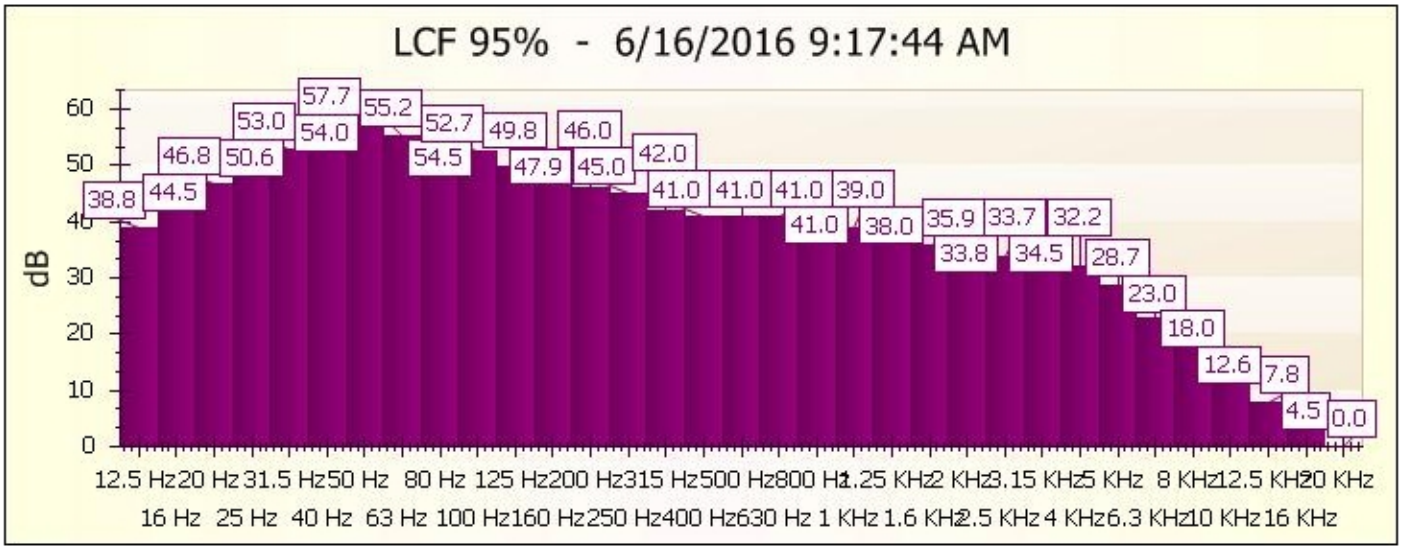

LZF 95% - 6/16/2016 9:17:44 AM
dB
0
10
20
30
40
50
60
50.0 53.0 55.0 56.0 59.0 56.0 53.0 50.0 46.0
53.0 56.0 55.0 48.0 45.0 42.0
41.0 41.0 41.0 39.0
41.0 38.0 36.0 34.0 33.0
34.0 35.0 30.0
25.0 21.0
17.0 14.0 11.0
13.0
12.5 Hz 20 Hz 31.5 Hz 50 Hz 80 Hz 125 Hz 200 Hz 315 Hz 500 Hz 800 Hz 1.25 KHz 2 KHz 3.15 KHz 5 KHz 8 KHz 12.5 KHz 20 KHz
16 Hz 25 Hz 40 Hz 63 Hz 100 Hz 160 Hz 250 Hz 400 Hz 630 Hz 1 KHz 1.6 KHz 2.5 KHz 4 KHz 6.3 KHz 10 KHz 16 KHz

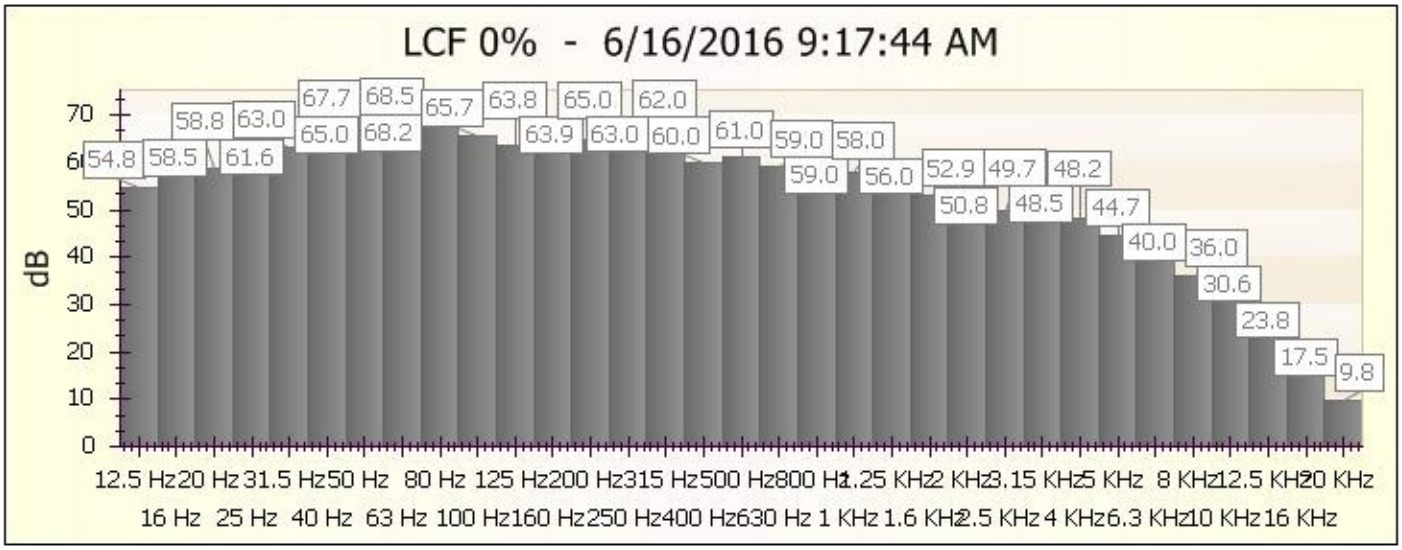

LZF 0% - 6/16/2016 9:17:44 AM
dB
0
10
20
30
40
50
60
70
67.0 65.0 66.0 69.0 69.0 66.0 64.0 65.0 62.0
66.0 66.0 67.0 69.0 64.0 63.0 60.0 61.0 59.0 58.0
59.0 56.0 53.0 50.0 49.0
51.0 49.0 46.0
42.0 39.0
35.0 30.0
26.0
21.0
12.5 Hz 20 Hz 31.5 Hz 50 Hz 80 Hz 125 Hz 200 Hz 315 Hz 500 Hz 800 Hz 1.25 KHz 2 KHz 3.15 KHz 5 KHz 8 KHz 12.5 KHz 20 KHz
16 Hz 25 Hz 40 Hz 63 Hz 100 Hz 160 Hz 250 Hz 400 Hz 630 Hz 1 KHz 1.6 KHz 2.5 KHz 4 KHz 6.3 KHz 10 KHz 16 KHz

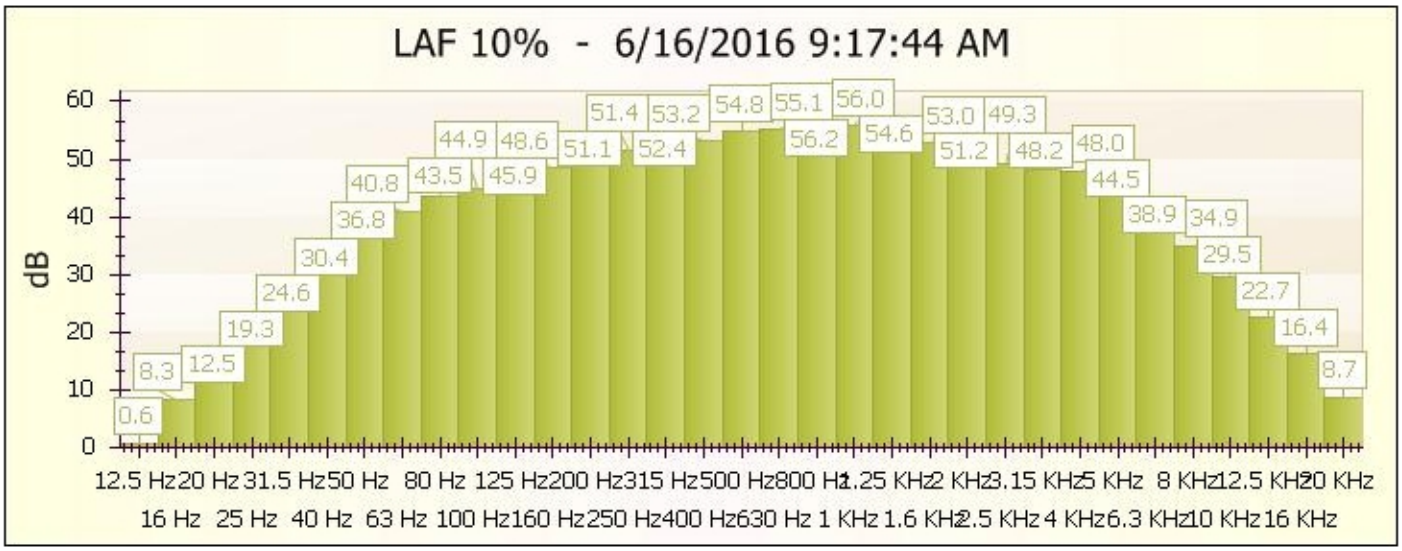

LCF 10% - 6/16/2016 9:17:44 AM
dB
70
60
50
40
30
20
10
0
52.8 56.5 59.6 63.0 65.5 61.9 60.0 58.0 58.0 57.0 54.0 49.8 46.5 42.7 37.0 33.0 27.6 20.8 14.5 6.8
56.8 61.0 65.7 66.2 63.7 61.8 62.0 59.0 57.0 56.0 51.9 47.7 46.2
12.5 Hz 16 Hz 20 Hz 25 Hz 31.5 Hz 40 Hz 50 Hz 63 Hz 80 Hz 100 Hz 125 Hz 160 Hz 200 Hz 250 Hz 315 Hz 400 Hz 500 Hz 630 Hz 800 Hz 1 KHz 1.25 KHz 1.6 KHz 2 KHz 2.5 KHz 3.15 KHz 4 KHz 5 KHz 6.3 KHz 8 KHz 10 KHz 12.5 KHz 16 KHz 20 KHz

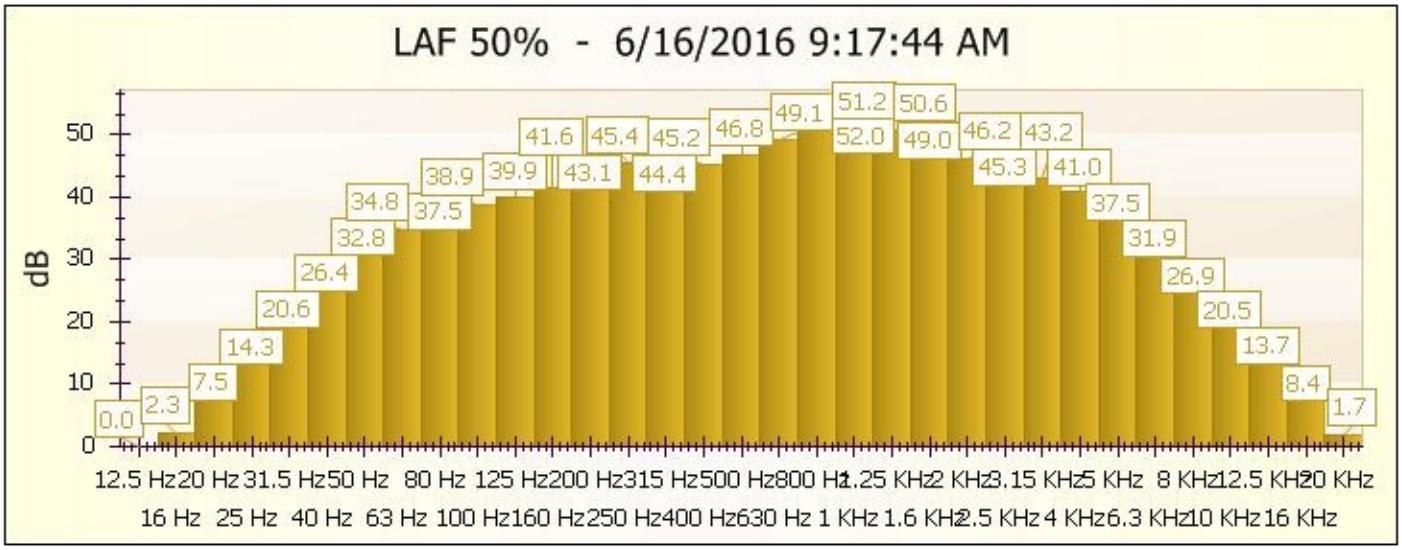

LCF 50% - 6/16/2016 9:17:44 AM
dB
60
50
40
30
20
10
0
44.8 50.5 54.6 59.0 60.2 55.8 54.0 50.0 50.0 51.0 52.0 50.0 44.8 43.7 41.5 39.2 35.7 30.0 25.0 18.6 11.8 6.5 0.0
51.8 57.0 61.7 59.5 57.7 54.9 54.0 51.0 52.0 47.9
12.5 Hz 16 Hz 20 Hz 25 Hz 31.5 Hz 40 Hz 50 Hz 63 Hz 80 Hz 100 Hz 125 Hz 160 Hz 200 Hz 250 Hz 315 Hz 400 Hz 500 Hz 630 Hz 800 Hz 1 KHz 1.25 KHz 1.6 KHz 2 KHz 2.5 KHz 3.15 KHz 4 KHz 5 KHz 6.3 KHz 8 KHz 10 KHz 12.5 KHz 16 KHz 20 KHz

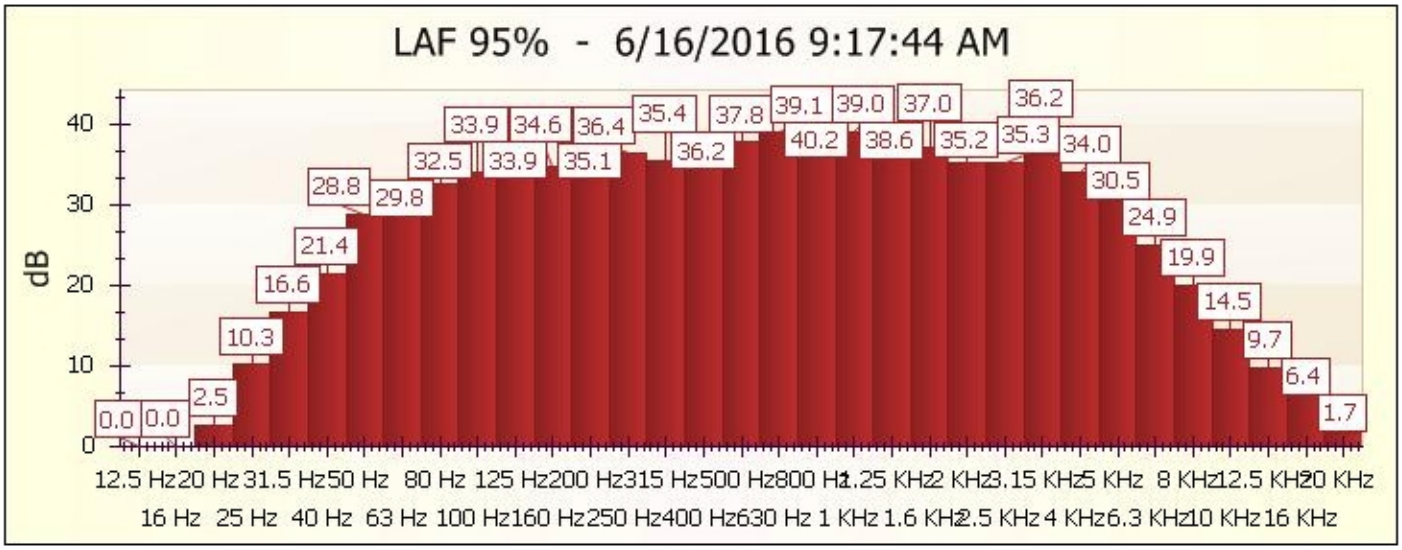

LCF 90% - 6/16/2016 9:17:44 AM
dB
60
50
40
30
20
10
0
39.8 46.5 51.6 55.0 55.5 49.9 47.0 43.0 42.0 43.0 40.0 35.8 35.5 30.7 25.0 20.0 13.6 7.8 4.5 0.0
47.8 54.0 58.7 56.2 53.7 51.8 48.0 44.0 43.0 41.0 36.9 35.7 34.2
12.5 Hz 16 Hz 20 Hz 25 Hz 31.5 Hz 40 Hz 50 Hz 63 Hz 80 Hz 100 Hz 125 Hz 160 Hz 200 Hz 250 Hz 315 Hz 400 Hz 500 Hz 630 Hz 800 Hz 1 KHz 1.25 KHz 1.6 KHz 2 KHz 2.5 KHz 3.15 KHz 4 KHz 5 KHz 6.3 KHz 8 KHz 10 KHz 12.5 KHz 16 KHz 20 KHz

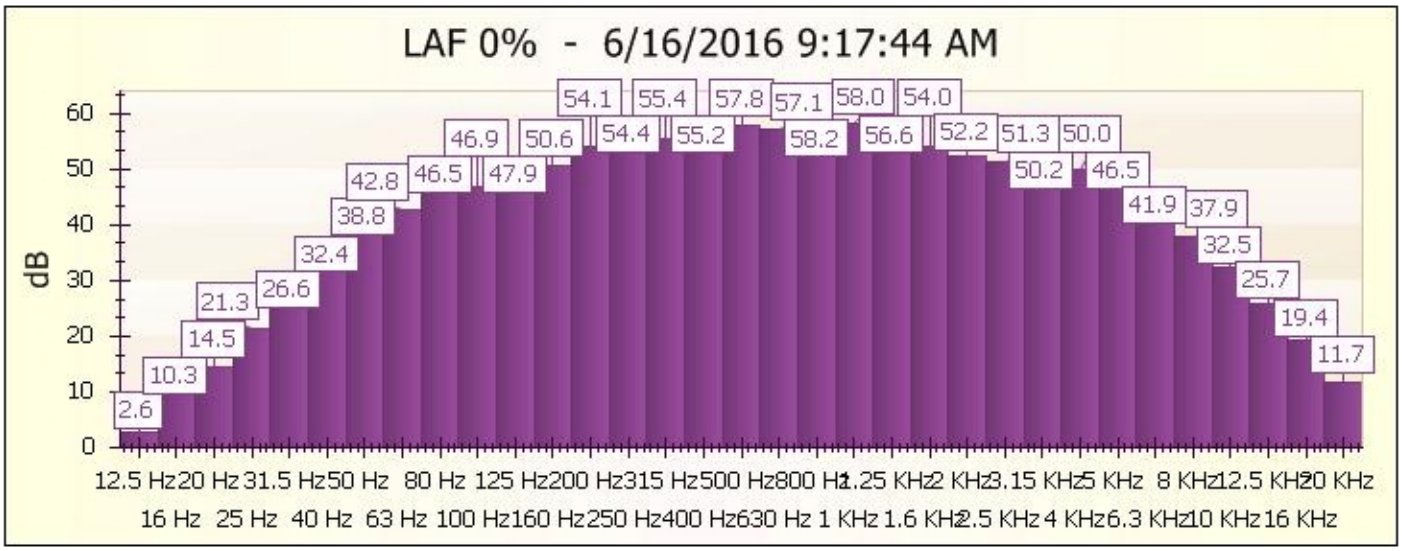

LCF 95% - 6/16/2016 9:17:44 AM
dB
38.8 44.5 46.8 50.6 53.0 54.0 57.7 55.2 52.7 54.5 49.8 47.9 46.0 45.0 42.0 41.0 41.0 41.0 39.0 41.0 38.0 35.9 33.8 33.7 34.5 32.2 28.7 23.0 18.0 12.6 7.8 4.5 0.0
12.5 Hz 16 Hz 20 Hz 25 Hz 31.5 Hz 40 Hz 50 Hz 63 Hz 80 Hz 100 Hz 125 Hz 160 Hz 200 Hz 250 Hz 315 Hz 400 Hz 500 Hz 630 Hz 800 Hz 1 KHz 1.25 KHz 1.6 KHz 2 KHz 2.5 KHz 3.15 KHz 4 KHz 5 KHz 6.3 KHz 8 KHz 10 KHz 12.5 KHz 16 KHz 20 KHz


LCF 0% - 6/16/2016 9:17:44 AM
dB
54.8 58.5 58.8 61.6 63.0 65.0 67.7 68.2 68.5 65.7 63.8 63.9 65.0 63.0 62.0 60.0 61.0 59.0 59.0 58.0 56.0 52.9 50.8 49.7 48.5 48.2 44.7 40.0 36.0 30.6 23.8 17.5 9.8
12.5 Hz 16 Hz 20 Hz 25 Hz 31.5 Hz 40 Hz 50 Hz 63 Hz 80 Hz 100 Hz 125 Hz 160 Hz 200 Hz 250 Hz 315 Hz 400 Hz 500 Hz 630 Hz 800 Hz 1 KHz 1.25 KHz 1.6 KHz 2 KHz 2.5 KHz 3.15 KHz 4 KHz 5 KHz 6.3 KHz 8 KHz 10 KHz 12.5 KHz 16 KHz 20 KHz


LAF 10% - 6/16/2016 9:17:44 AM
dB
0.6 8.3 12.5 19.3 24.6 30.4 36.8 40.8 43.5 45.9 44.9 48.6 51.1 51.4 52.4 53.2 54.8 55.1 56.2 56.0 54.6 53.0 51.2 49.3 48.2 48.0 44.5 38.9 34.9 29.5 22.7 16.4 8.7
12.5 Hz 16 Hz 20 Hz 25 Hz 31.5 Hz 40 Hz 50 Hz 63 Hz 80 Hz 100 Hz 125 Hz 160 Hz 200 Hz 250 Hz 315 Hz 400 Hz 500 Hz 630 Hz 800 Hz 1 KHz 1.25 KHz 1.6 KHz 2 KHz 2.5 KHz 3.15 KHz 4 KHz 5 KHz 6.3 KHz 8 KHz 10 KHz 12.5 KHz 16 KHz 20 KHz

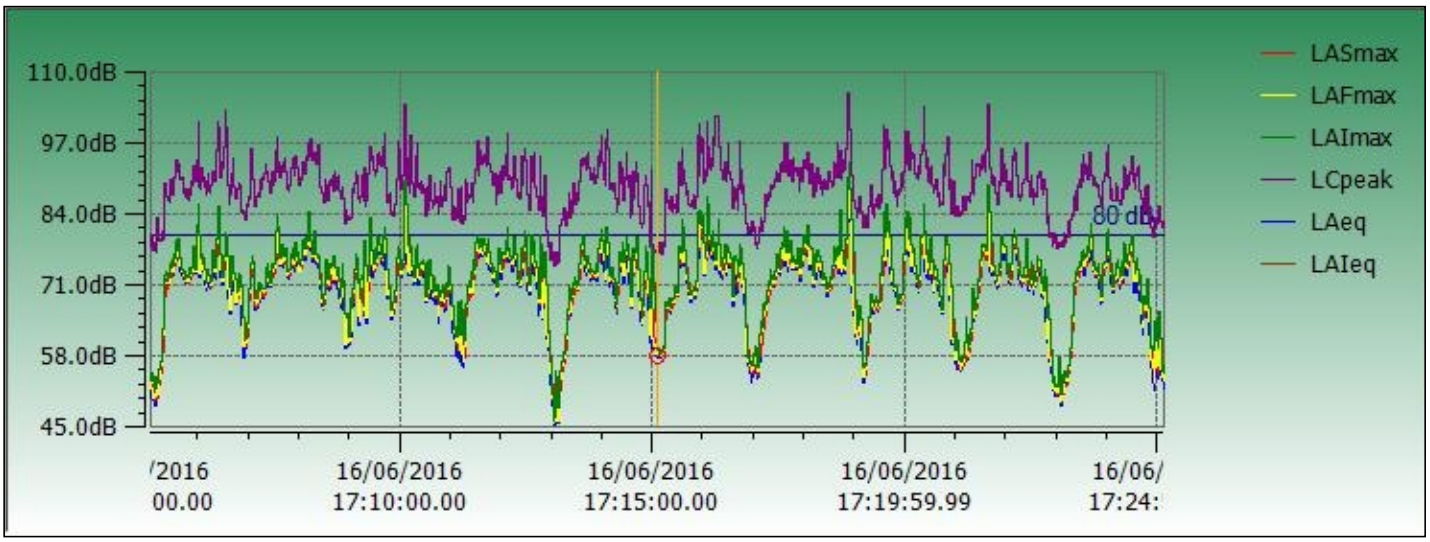

LAF 50% - 6/16/2016 9:17:44 AM
dB
0.0 2.3 7.5 14.3 20.6 26.4 32.8 34.8 37.5 38.9 39.9 41.6 43.1 45.4 44.4 45.2 46.8 49.1 52.0 51.2 49.0 50.6 46.2 45.3 43.2 41.0 37.5 31.9 26.9 20.5 13.7 8.4 1.7
12.5 Hz 16 Hz 20 Hz 25 Hz 31.5 Hz 40 Hz 50 Hz 63 Hz 80 Hz 100 Hz 125 Hz 160 Hz 200 Hz 250 Hz 315 Hz 400 Hz 500 Hz 630 Hz 800 Hz 1 KHz 1.25 KHz 1.6 KHz 2 KHz 2.5 KHz 3.15 KHz 4 KHz 5 KHz 6.3 KHz 8 KHz 10 KHz 12.5 KHz 16 KHz 20 KHz

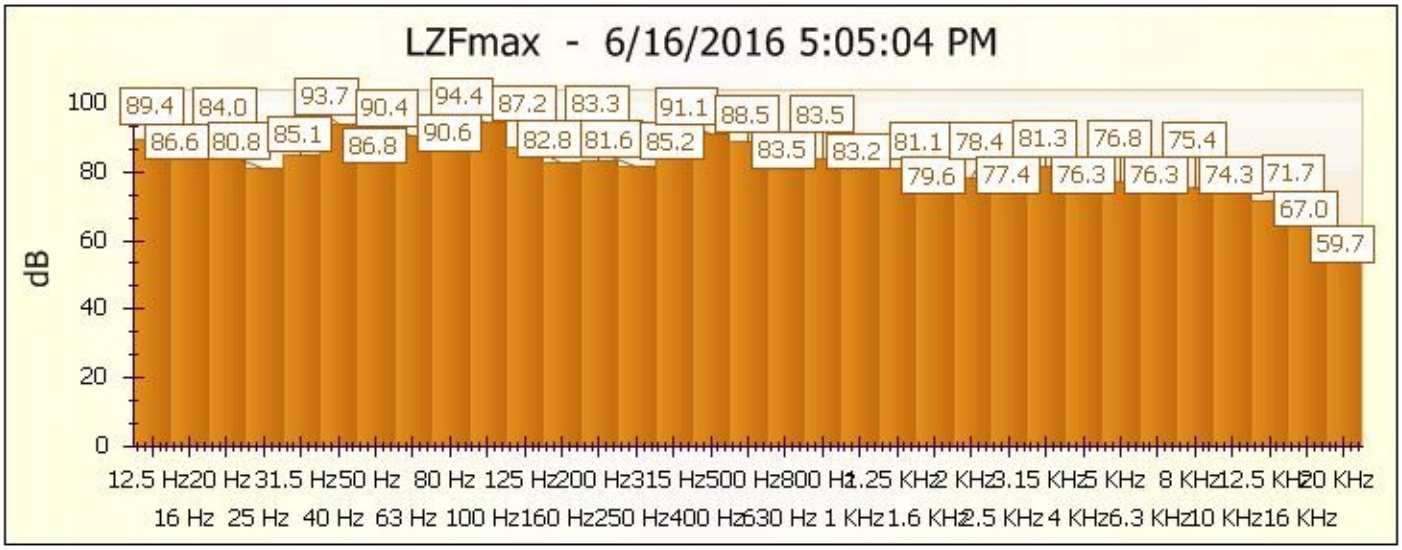

LAF 95% - 6/16/2016 9:17:44 AM
dB
0.0 0.0 2.5 10.3 16.6 21.4 28.8 29.8 32.5 33.9 33.9 34.6 35.1 36.4 36.2 35.4 37.8 40.2 39.1 38.6 39.0 37.0 35.2 36.2 35.3 34.0 30.5 24.9 19.9 14.5 9.7 6.4 1.7
12.5 Hz 16 Hz 20 Hz 25 Hz 31.5 Hz 40 Hz 50 Hz 63 Hz 80 Hz 100 Hz 125 Hz 160 Hz 200 Hz 250 Hz 315 Hz 400 Hz 500 Hz 630 Hz 800 Hz 1 KHz 1.25 KHz 1.6 KHz 2 KHz 2.5 KHz 3.15 KHz 4 KHz 5 KHz 6.3 KHz 8 KHz 10 KHz 12.5 KHz 16 KHz 20 KHz

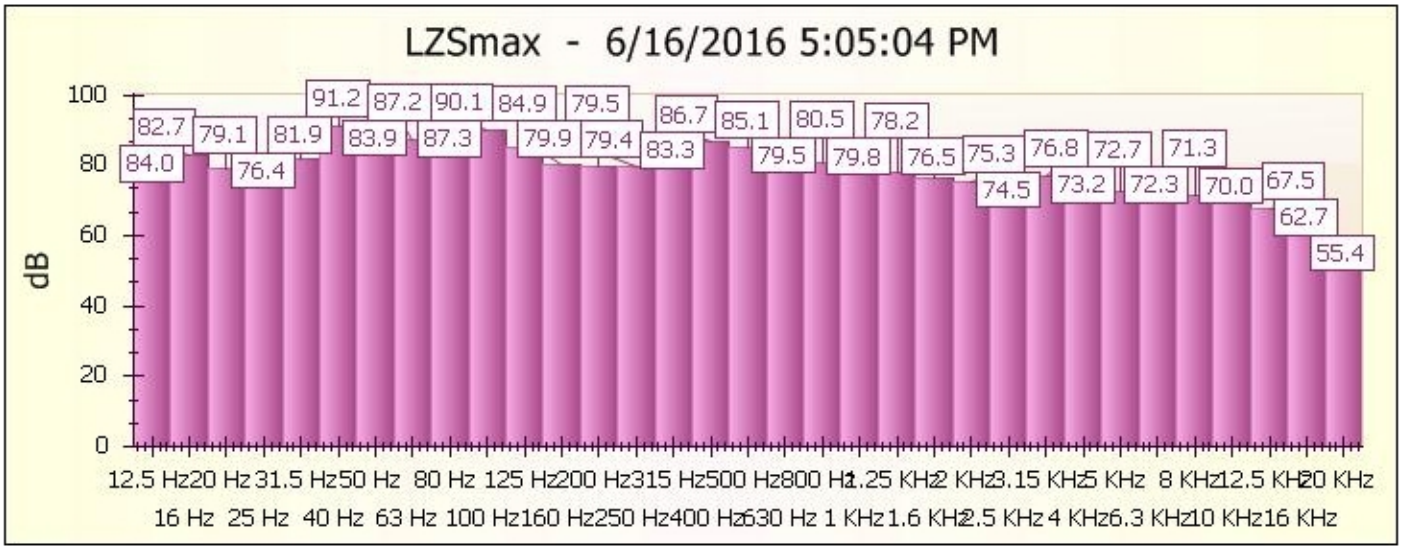

LAF 0% - 6/16/2016 9:17:44 AM
dB
2.6 10.3 14.5 21.3 26.6 32.4 38.8 42.8 46.5 47.9 46.9 50.6 54.1 54.4 55.4 55.2 57.8 57.1 58.2 58.0 56.6 54.0 52.2 51.3 50.0 50.2 46.5 41.9 37.9 32.5 25.7 19.4 11.7
12.5 Hz 16 Hz 20 Hz 25 Hz 31.5 Hz 40 Hz 50 Hz 63 Hz 80 Hz 100 Hz 125 Hz 160 Hz 200 Hz 250 Hz 315 Hz 400 Hz 500 Hz 630 Hz 800 Hz 1 KHz 1.25 KHz 1.6 KHz 2 KHz 2.5 KHz 3.15 KHz 4 KHz 5 KHz 6.3 KHz 8 KHz 10 KHz 12.5 KHz 16 KHz 20 KHz

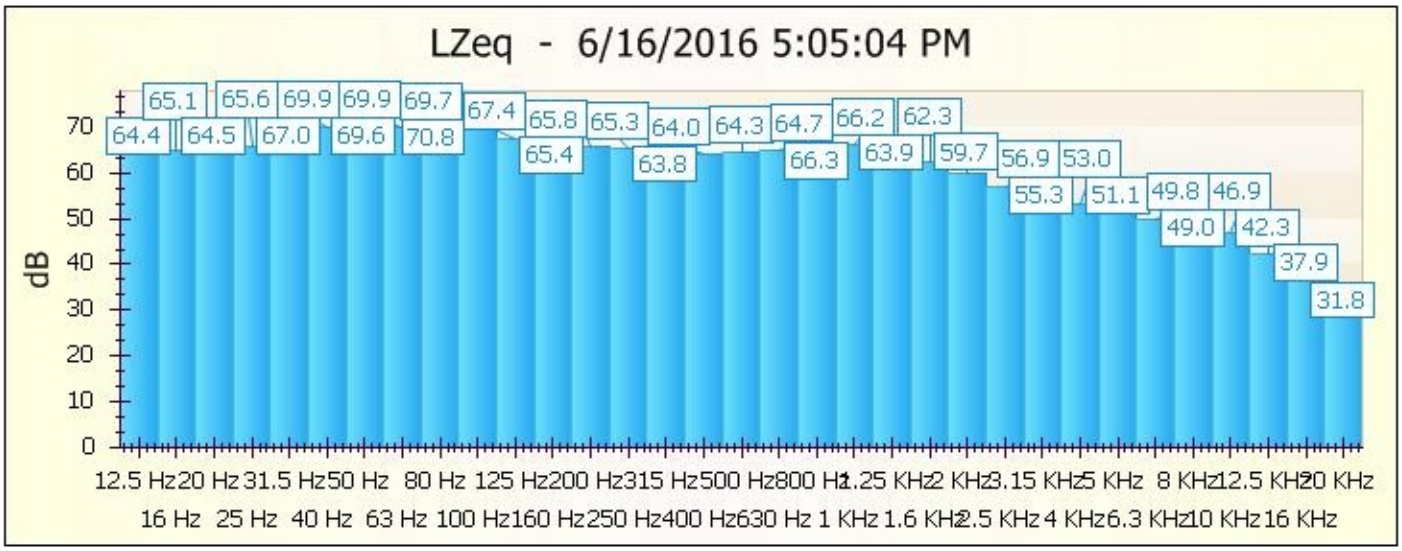
Instrument Model	CEL-633C		
Overload	No	Evening Start	19
Battery Low	No	Night Start	23
Duration	00:20:04 HH:MM:SS	Day Penalty	0.000000000
End Date & Time	6/16/2016 5:25:08 PM	Evening Penalty	5.000000000
Pause Duration	00:00:00 HH:MM:SS	Night Penalty	10.000000000
Response	Random	LAF 10%	76.5 dB
Run Number	12	LAF 50%	72 dB
Serial Number	5044657	LAF 90%	58 dB
Site	Unallocated	LAF 95%	55 dB
Location	Unallocated	LAF variable%	77.5 dB
Person	Unallocated	LCpeak	106.3 dB
Process	Unallocated	LCpeak with Time	106.3 dB (6/16/2016 5:18:53 PM)
Result	Cumulative	Start Date & Time	6/16/2016 5:05:04 PM
LAFmax	92.9 dB	LAE	104.1 dB
LAFmax with Time	92.9 dB (6/16/2016 5:18:53 PM)	LAeq	73.3 dB
LAFmin	44.1 dB	LAleq	75.3 dB
LAFmin with Time	44.1 dB (6/16/2016 5:13:06 PM)	LCeq	79.4 dB
LAImax	93.6 dB	LCeq-LAeq	6.1 dB
LAImax with Time	93.6 dB (6/16/2016 5:18:53 PM)	Lepd(Projected)	73.3 dB
LAImin	44.6 dB	Lex8h(Projected)	73.3 dB
LAImin with Time	44.6 dB (6/16/2016 5:13:06 PM)	LZeq	80.7 dB
LDN	0	Lepd	59.5 dB
LDEN	0	Lex8h	59.5 dB
CNEL	0		
Day Start	7		

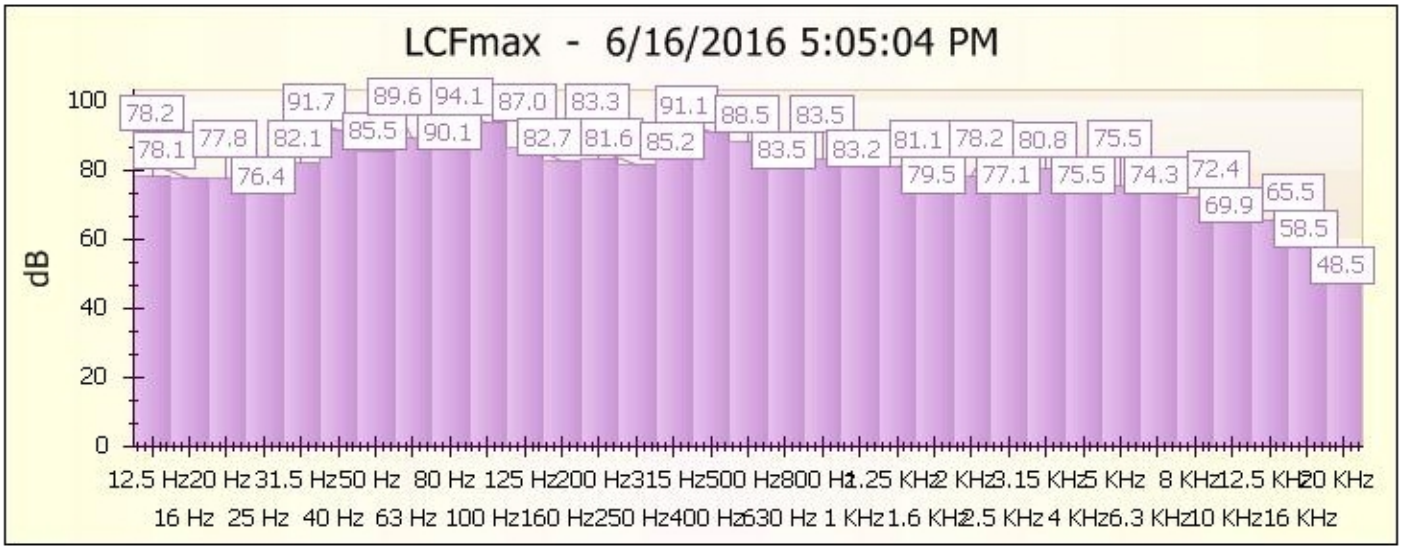
Notes

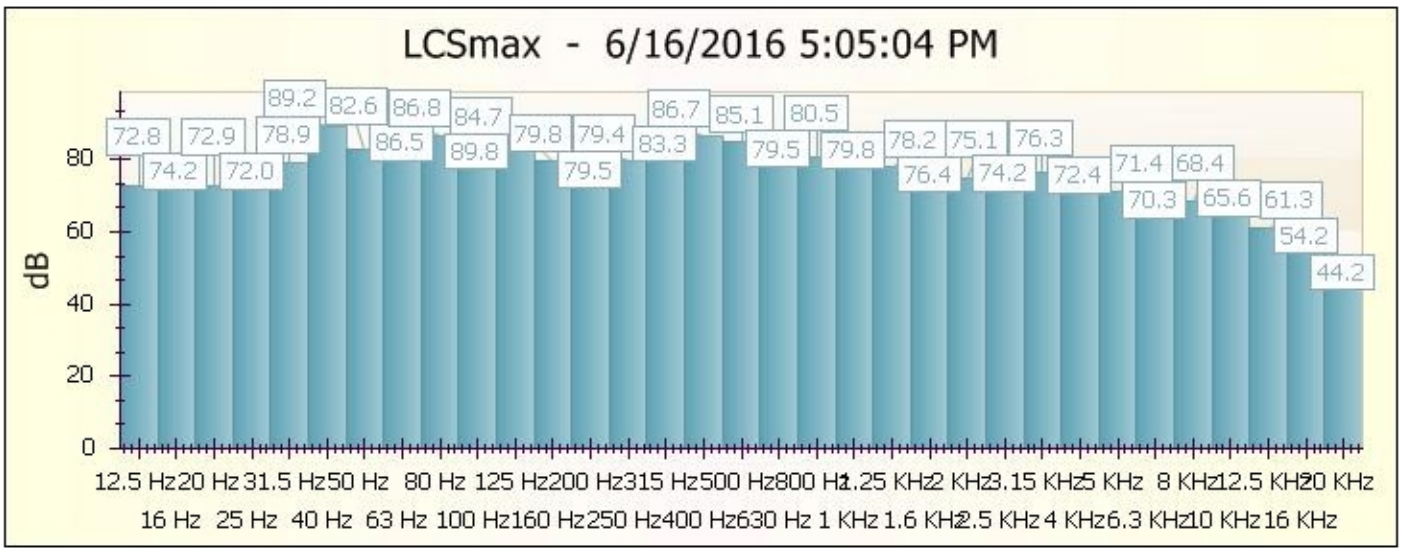


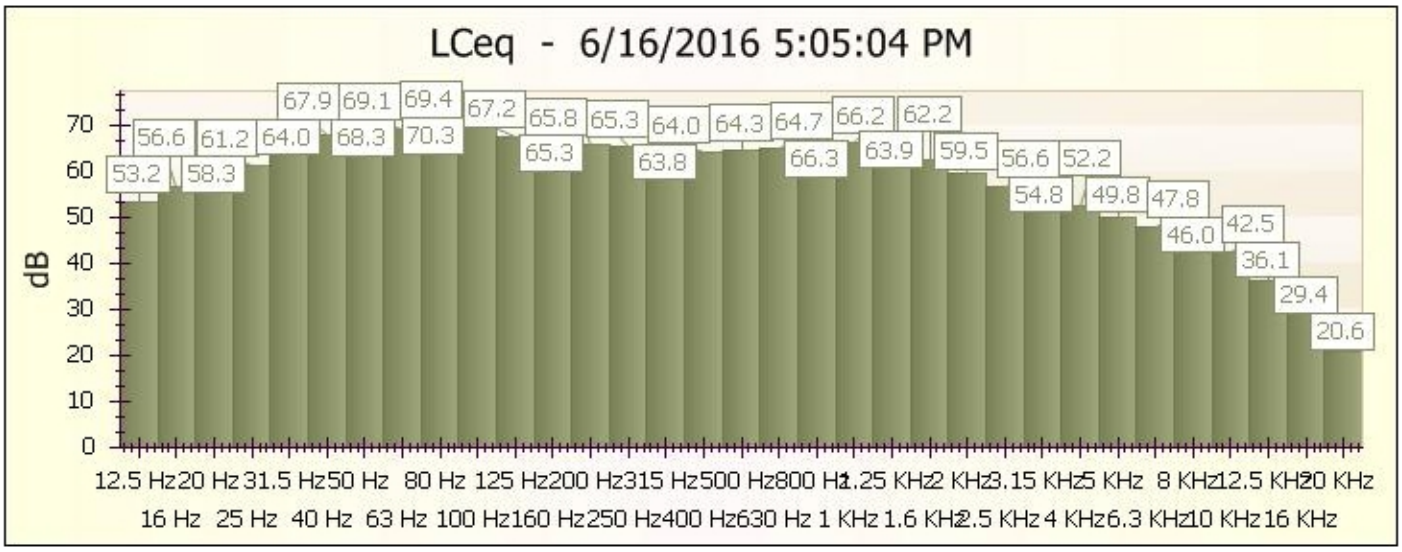

LZFmax - 6/16/2016 5:05:04 PM
dB
89.4 84.0 93.7 90.4 94.4 87.2 83.3 91.1 88.5 83.5
86.6 80.8 85.1 86.8 90.6 82.8 81.6 85.2 83.5 83.2 81.1 78.4 81.3 76.8 75.4
79.6 77.4 76.3 76.3 74.3 71.7
67.0
59.7
12.5 Hz 20 Hz 31.5 Hz 50 Hz 80 Hz 125 Hz 200 Hz 315 Hz 500 Hz 800 Hz 1.25 KHz 2 KHz 3.15 KHz 5 KHz 8 KHz 12.5 KHz 20 KHz
16 Hz 25 Hz 40 Hz 63 Hz 100 Hz 160 Hz 250 Hz 400 Hz 630 Hz 1 KHz 1.6 KHz 2.5 KHz 4 KHz 6.3 KHz 10 KHz 16 KHz

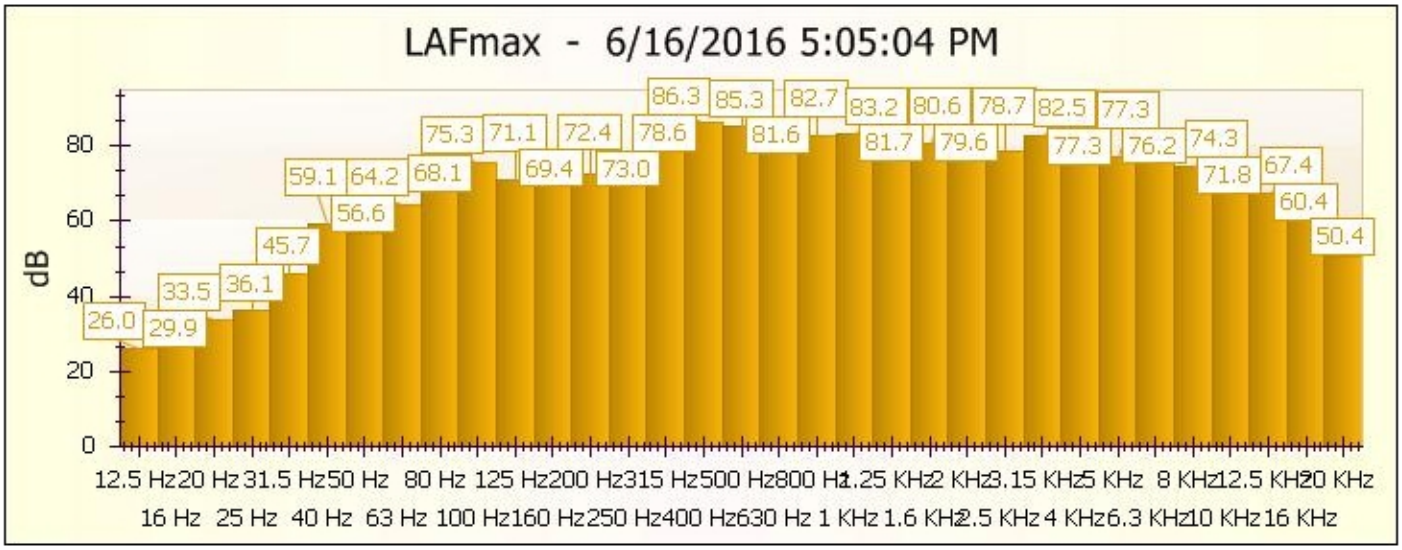

LZSmax - 6/16/2016 5:05:04 PM
dB
82.7 79.1 91.2 87.2 90.1 84.9 79.5 86.7 85.1 80.5 78.2
84.0 76.4 81.9 83.9 87.3 79.9 79.4 83.3 79.5 79.8 76.5 75.3 76.8 72.7 71.3
74.5 73.2 72.3 70.0 67.5
62.7
55.4
12.5 Hz 20 Hz 31.5 Hz 50 Hz 80 Hz 125 Hz 200 Hz 315 Hz 500 Hz 800 Hz 1.25 KHz 2 KHz 3.15 KHz 5 KHz 8 KHz 12.5 KHz 20 KHz
16 Hz 25 Hz 40 Hz 63 Hz 100 Hz 160 Hz 250 Hz 400 Hz 630 Hz 1 KHz 1.6 KHz 2.5 KHz 4 KHz 6.3 KHz 10 KHz 16 KHz

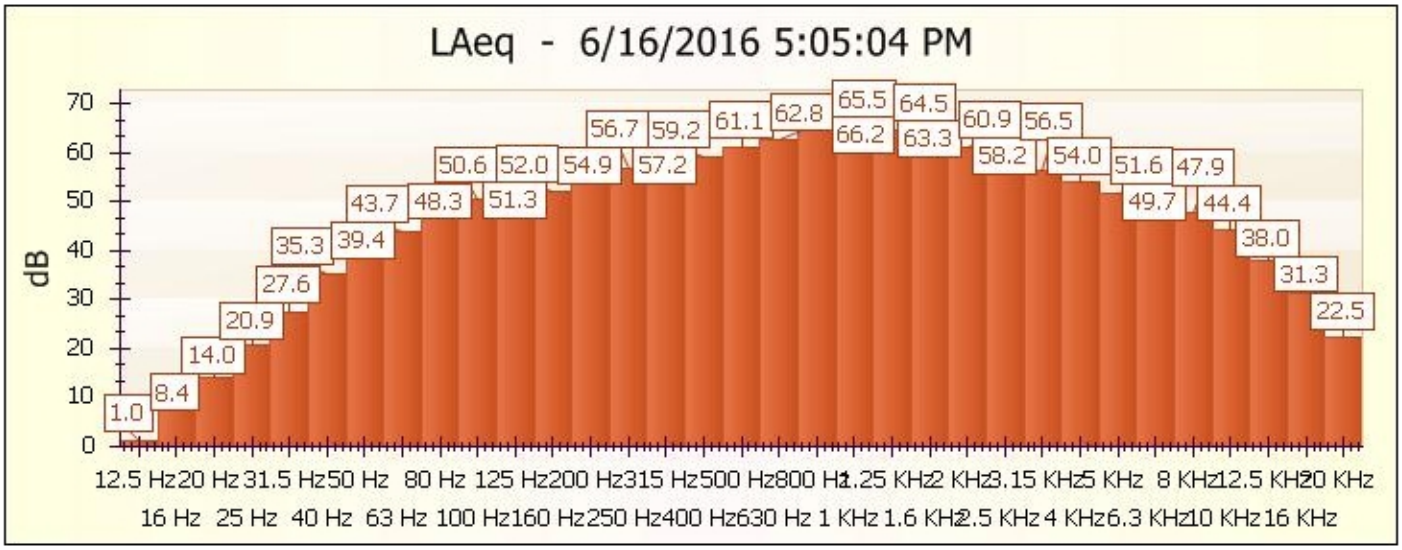

LZeq - 6/16/2016 5:05:04 PM
dB
65.1 65.6 69.9 69.9 69.7 67.4 65.8 65.3 64.0 64.3 64.7 66.2 62.3
64.4 64.5 67.0 69.6 70.8 65.4 63.8 66.3 63.9 59.7 56.9 53.0
55.3 51.1 49.8 46.9
49.0 42.3
37.9
31.8
12.5 Hz 20 Hz 31.5 Hz 50 Hz 80 Hz 125 Hz 200 Hz 315 Hz 500 Hz 800 Hz 1.25 KHz 2 KHz 3.15 KHz 5 KHz 8 KHz 12.5 KHz 20 KHz
16 Hz 25 Hz 40 Hz 63 Hz 100 Hz 160 Hz 250 Hz 400 Hz 630 Hz 1 KHz 1.6 KHz 2.5 KHz 4 KHz 6.3 KHz 10 KHz 16 KHz


LCFmax - 6/16/2016 5:05:04 PM
dB
100
80
60
40
20
0
78.2 78.1 77.8 76.4 91.7 82.1 85.5 89.6 90.1 94.1 87.0 82.7 83.3 81.6 91.1 85.2 88.5 83.5 83.5 83.2 81.1 79.5 78.2 77.1 80.8 75.5 75.5 74.3 72.4 69.9 65.5 58.5 48.5
12.5 Hz 16 Hz 20 Hz 25 Hz 31.5 Hz 40 Hz 50 Hz 63 Hz 80 Hz 100 Hz 125 Hz 160 Hz 200 Hz 250 Hz 315 Hz 400 Hz 500 Hz 630 Hz 800 Hz 1 KHz 1.25 KHz 1.6 KHz 2 KHz 2.5 KHz 3.15 KHz 4 KHz 5 KHz 6.3 KHz 8 KHz 10 KHz 12.5 KHz 16 KHz 20 KHz


LCSmax - 6/16/2016 5:05:04 PM
dB
80
60
40
20
0
72.8 74.2 72.9 72.0 89.2 78.9 82.6 86.5 86.8 89.8 84.7 79.8 79.4 79.5 86.7 83.3 85.1 79.5 80.5 79.8 78.2 76.4 75.1 74.2 76.3 72.4 71.4 70.3 68.4 65.6 61.3 54.2 44.2
12.5 Hz 16 Hz 20 Hz 25 Hz 31.5 Hz 40 Hz 50 Hz 63 Hz 80 Hz 100 Hz 125 Hz 160 Hz 200 Hz 250 Hz 315 Hz 400 Hz 500 Hz 630 Hz 800 Hz 1 KHz 1.25 KHz 1.6 KHz 2 KHz 2.5 KHz 3.15 KHz 4 KHz 5 KHz 6.3 KHz 8 KHz 10 KHz 12.5 KHz 16 KHz 20 KHz


LCeq - 6/16/2016 5:05:04 PM
dB
70
60
50
40
30
20
10
0
53.2 56.6 58.3 61.2 64.0 67.9 68.3 69.1 70.3 69.4 67.2 65.3 65.8 63.8 65.3 64.0 64.3 64.7 66.3 66.2 63.9 62.2 59.5 56.6 54.8 52.2 49.8 47.8 46.0 42.5 36.1 29.4 20.6
12.5 Hz 16 Hz 20 Hz 25 Hz 31.5 Hz 40 Hz 50 Hz 63 Hz 80 Hz 100 Hz 125 Hz 160 Hz 200 Hz 250 Hz 315 Hz 400 Hz 500 Hz 630 Hz 800 Hz 1 KHz 1.25 KHz 1.6 KHz 2 KHz 2.5 KHz 3.15 KHz 4 KHz 5 KHz 6.3 KHz 8 KHz 10 KHz 12.5 KHz 16 KHz 20 KHz


LAFmax - 6/16/2016 5:05:04 PM
dB
0
20
40
60
80
26.0 29.9 33.5 36.1 45.7 56.6 59.1 64.2 68.1 75.3 71.1 72.4 78.6 86.3 85.3 82.7 83.2 80.6 78.7 82.5 77.3 81.6 69.4 73.0 81.7 79.6 77.3 76.2 74.3 71.8 67.4 60.4 50.4
12.5 Hz 20 Hz 31.5 Hz 50 Hz 80 Hz 125 Hz 200 Hz 315 Hz 500 Hz 800 Hz 1.25 KHz 2 KHz 3.15 KHz 5 KHz 8 KHz 12.5 KHz 20 KHz
16 Hz 25 Hz 40 Hz 63 Hz 100 Hz 160 Hz 250 Hz 400 Hz 630 Hz 1 KHz 1.6 KHz 2.5 KHz 4 KHz 6.3 KHz 10 KHz 16 KHz


LAeq - 6/16/2016 5:05:04 PM
dB
0
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50
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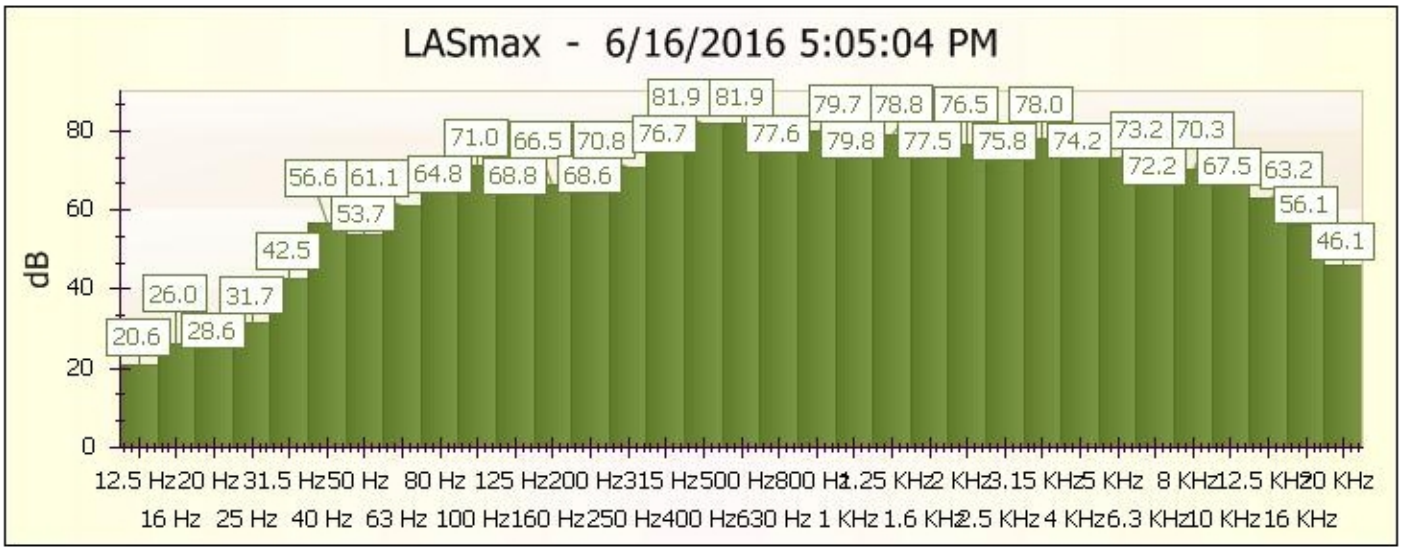
70
1.0 8.4 14.0 20.9 27.6 35.3 39.4 43.7 48.3 51.3 50.6 52.0 54.9 57.2 56.7 59.2 61.1 62.8 66.2 65.5 63.3 64.5 58.2 60.9 56.5 54.0 51.6 47.9 49.7 44.4 38.0 31.3 22.5
12.5 Hz 20 Hz 31.5 Hz 50 Hz 80 Hz 125 Hz 200 Hz 315 Hz 500 Hz 800 Hz 1.25 KHz 2 KHz 3.15 KHz 5 KHz 8 KHz 12.5 KHz 20 KHz
16 Hz 25 Hz 40 Hz 63 Hz 100 Hz 160 Hz 250 Hz 400 Hz 630 Hz 1 KHz 1.6 KHz 2.5 KHz 4 KHz 6.3 KHz 10 KHz 16 KHz


LASmax - 6/16/2016 5:05:04 PM
dB
0
20
40
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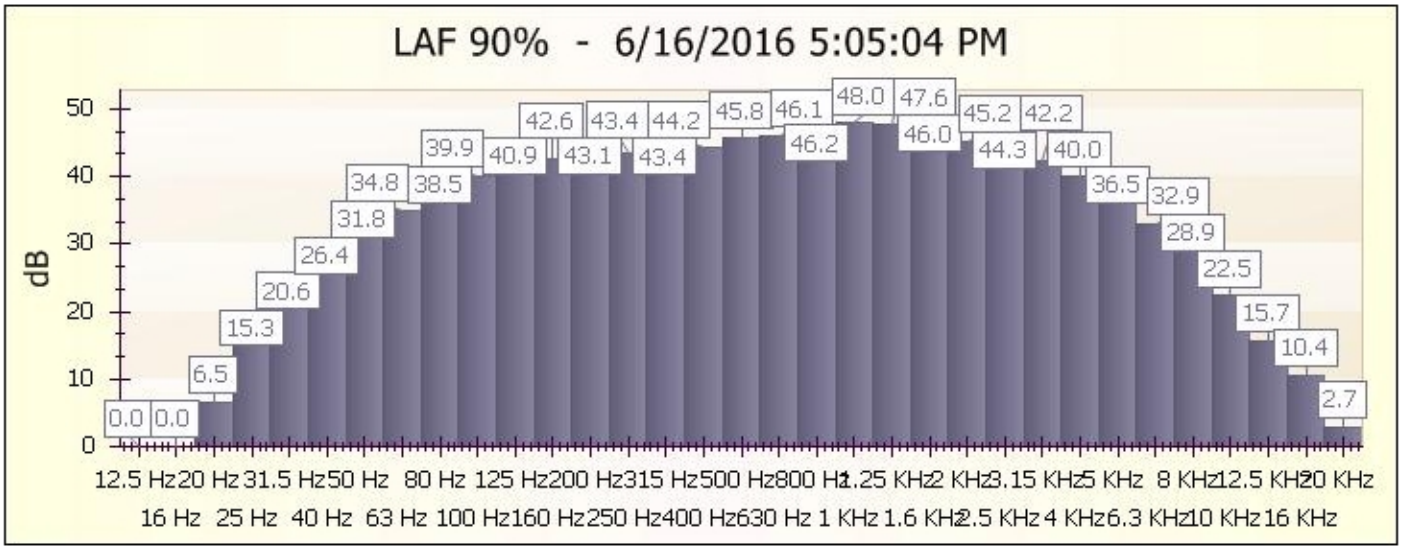
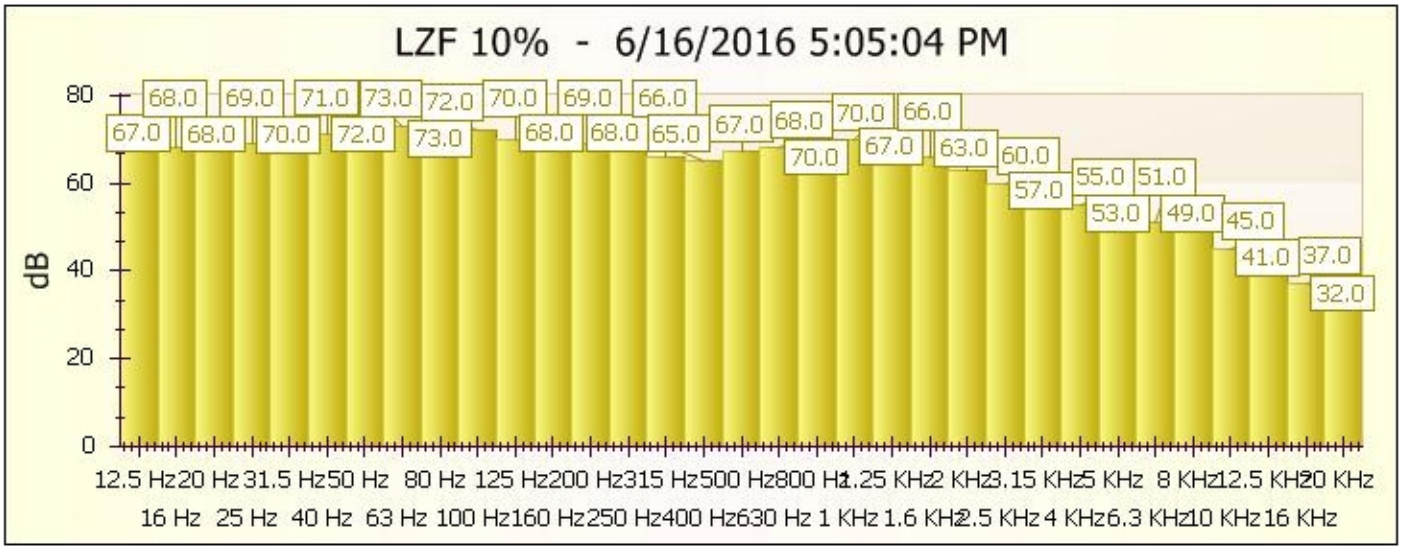
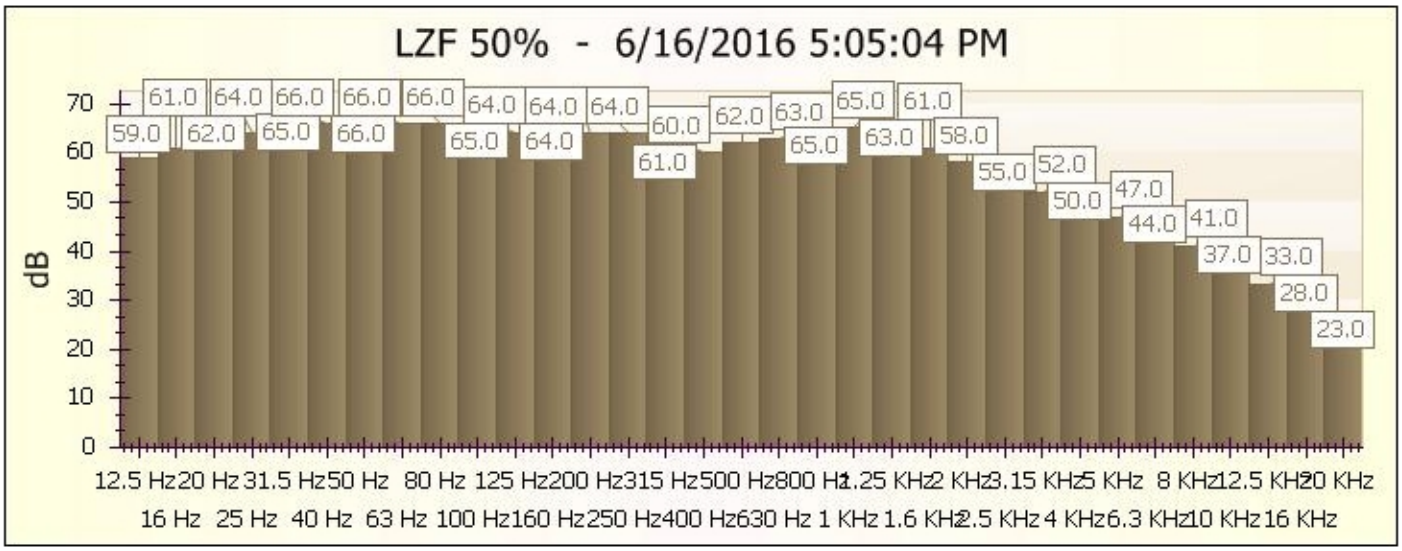
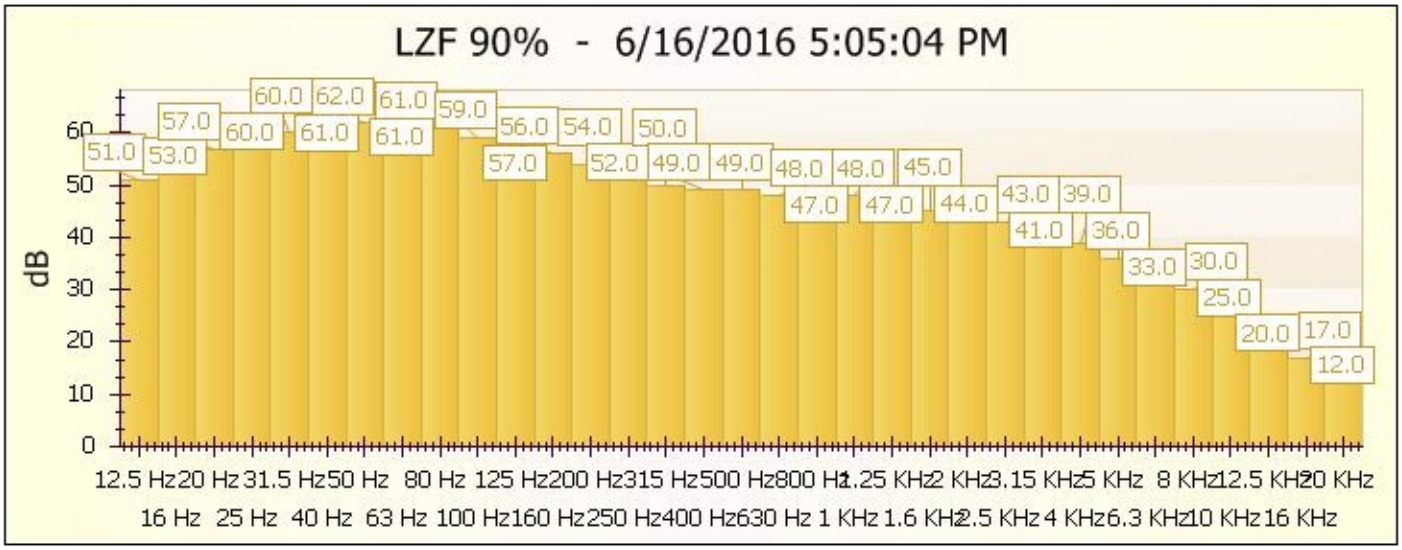
80
20.6 26.0 28.6 31.7 42.5 53.7 56.6 61.1 64.8 68.8 68.6 71.0 66.5 70.8 76.7 81.9 81.9 77.6 79.7 79.8 78.8 77.5 76.5 75.8 78.0 74.2 73.2 72.2 70.3 67.5 63.2 56.1 46.1
12.5 Hz 20 Hz 31.5 Hz 50 Hz 80 Hz 125 Hz 200 Hz 315 Hz 500 Hz 800 Hz 1.25 KHz 2 KHz 3.15 KHz 5 KHz 8 KHz 12.5 KHz 20 KHz
16 Hz 25 Hz 40 Hz 63 Hz 100 Hz 160 Hz 250 Hz 400 Hz 630 Hz 1 KHz 1.6 KHz 2.5 KHz 4 KHz 6.3 KHz 10 KHz 16 KHz


LAF 90% - 6/16/2016 5:05:04 PM
dB
0.0 0.0 6.5 15.3 20.6 26.4 31.8 34.8 38.5 39.9 40.9 43.1 43.4 42.6 43.4 44.2 45.8 46.1 46.2 48.0 47.6 46.0 45.2 44.3 42.2 40.0 36.5 32.9 28.9 22.5 15.7 10.4 2.7
12.5 Hz 16 Hz 20 Hz 25 Hz 31.5 Hz 40 Hz 50 Hz 63 Hz 80 Hz 100 Hz 125 Hz 160 Hz 200 Hz 250 Hz 315 Hz 400 Hz 500 Hz 630 Hz 800 Hz 1 KHz 1.25 KHz 1.6 KHz 2 KHz 2.5 KHz 3.15 KHz 4 KHz 5 KHz 6.3 KHz 8 KHz 10 KHz 12.5 KHz 16 KHz 20 KHz


LZF 10% - 6/16/2016 5:05:04 PM
dB
67.0 68.0 70.0 72.0 73.0 68.0 68.0 65.0 67.0 68.0 70.0 70.0 67.0 66.0 63.0 60.0 57.0 55.0 53.0 51.0 49.0 45.0 41.0 37.0 32.0
68.0 69.0 71.0 73.0 72.0 70.0 69.0 66.0
12.5 Hz 16 Hz 20 Hz 25 Hz 31.5 Hz 40 Hz 50 Hz 63 Hz 80 Hz 100 Hz 125 Hz 160 Hz 200 Hz 250 Hz 315 Hz 400 Hz 500 Hz 630 Hz 800 Hz 1 KHz 1.25 KHz 1.6 KHz 2 KHz 2.5 KHz 3.15 KHz 4 KHz 5 KHz 6.3 KHz 8 KHz 10 KHz 12.5 KHz 16 KHz 20 KHz


LZF 50% - 6/16/2016 5:05:04 PM
dB
59.0 62.0 65.0 66.0 65.0 64.0 61.0 62.0 63.0 65.0 63.0 58.0 55.0 52.0 50.0 47.0 44.0 41.0 37.0 33.0 28.0 23.0
61.0 64.0 66.0 66.0 66.0 64.0 64.0 64.0 60.0
12.5 Hz 16 Hz 20 Hz 25 Hz 31.5 Hz 40 Hz 50 Hz 63 Hz 80 Hz 100 Hz 125 Hz 160 Hz 200 Hz 250 Hz 315 Hz 400 Hz 500 Hz 630 Hz 800 Hz 1 KHz 1.25 KHz 1.6 KHz 2 KHz 2.5 KHz 3.15 KHz 4 KHz 5 KHz 6.3 KHz 8 KHz 10 KHz 12.5 KHz 16 KHz 20 KHz


LZF 90% - 6/16/2016 5:05:04 PM
dB
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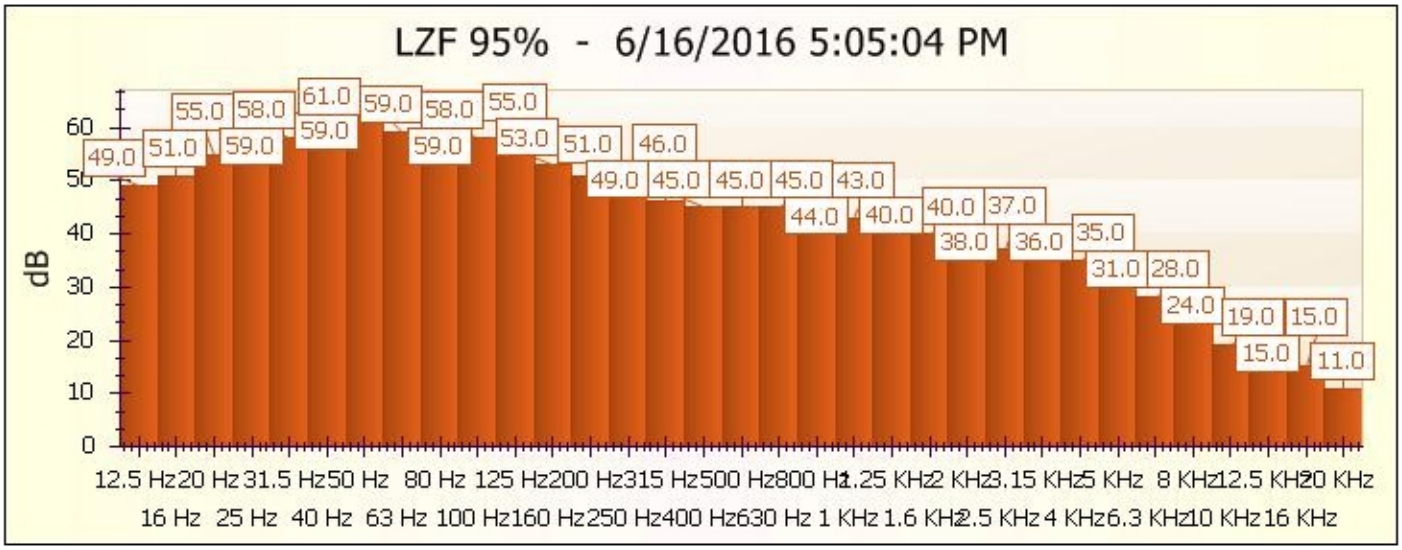
51.0 53.0 57.0 60.0 60.0 61.0 62.0 61.0 61.0 59.0 57.0 56.0 54.0 52.0 50.0 49.0 49.0 48.0 47.0 48.0 47.0 45.0 44.0 43.0 41.0 39.0 36.0 33.0 30.0 25.0 20.0 17.0 12.0
12.5 Hz 16 Hz 20 Hz 25 Hz 31.5 Hz 40 Hz 50 Hz 63 Hz 80 Hz 100 Hz 125 Hz 160 Hz 200 Hz 250 Hz 315 Hz 400 Hz 500 Hz 630 Hz 800 Hz 1 KHz 1.25 KHz 1.6 KHz 2 KHz 2.5 KHz 3.15 KHz 4 KHz 5 KHz 6.3 KHz 8 KHz 10 KHz 12.5 KHz 16 KHz 20 KHz


LZF 95% - 6/16/2016 5:05:04 PM
dB
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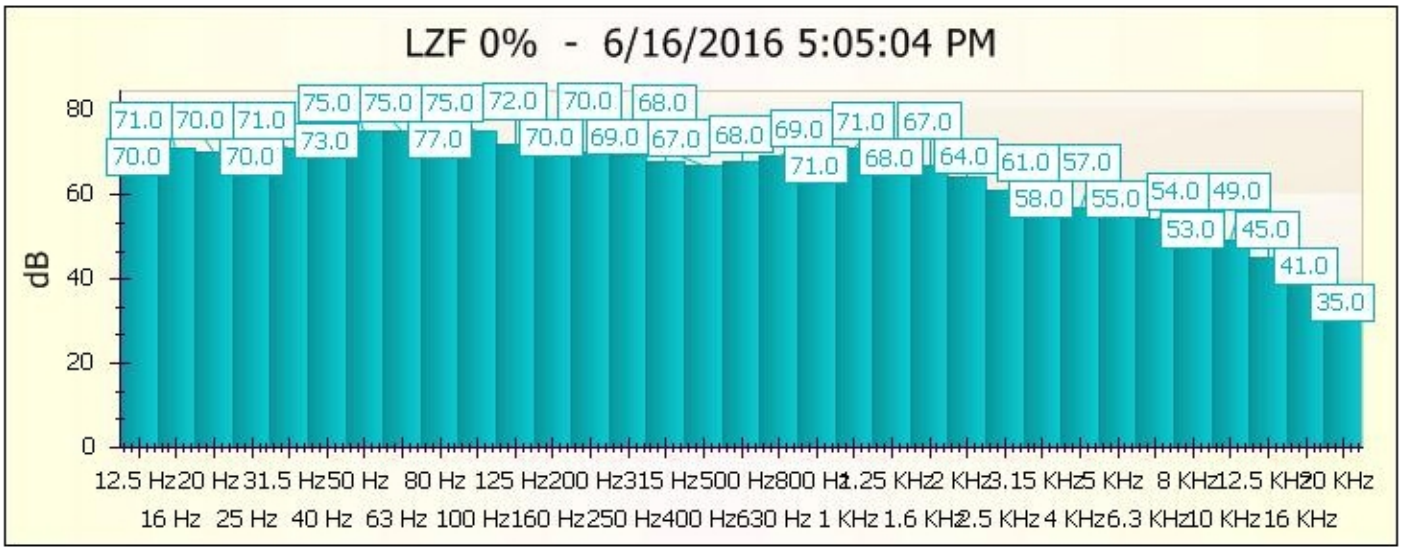
49.0 51.0 55.0 59.0 58.0 59.0 61.0 59.0 59.0 58.0 55.0 53.0 51.0 49.0 46.0 45.0 45.0 45.0 44.0 43.0 40.0 40.0 38.0 37.0 36.0 35.0 31.0 28.0 24.0 19.0 15.0 15.0 11.0
12.5 Hz 16 Hz 20 Hz 25 Hz 31.5 Hz 40 Hz 50 Hz 63 Hz 80 Hz 100 Hz 125 Hz 160 Hz 200 Hz 250 Hz 315 Hz 400 Hz 500 Hz 630 Hz 800 Hz 1 KHz 1.25 KHz 1.6 KHz 2 KHz 2.5 KHz 3.15 KHz 4 KHz 5 KHz 6.3 KHz 8 KHz 10 KHz 12.5 KHz 16 KHz 20 KHz


LZF 0% - 6/16/2016 5:05:04 PM
dB
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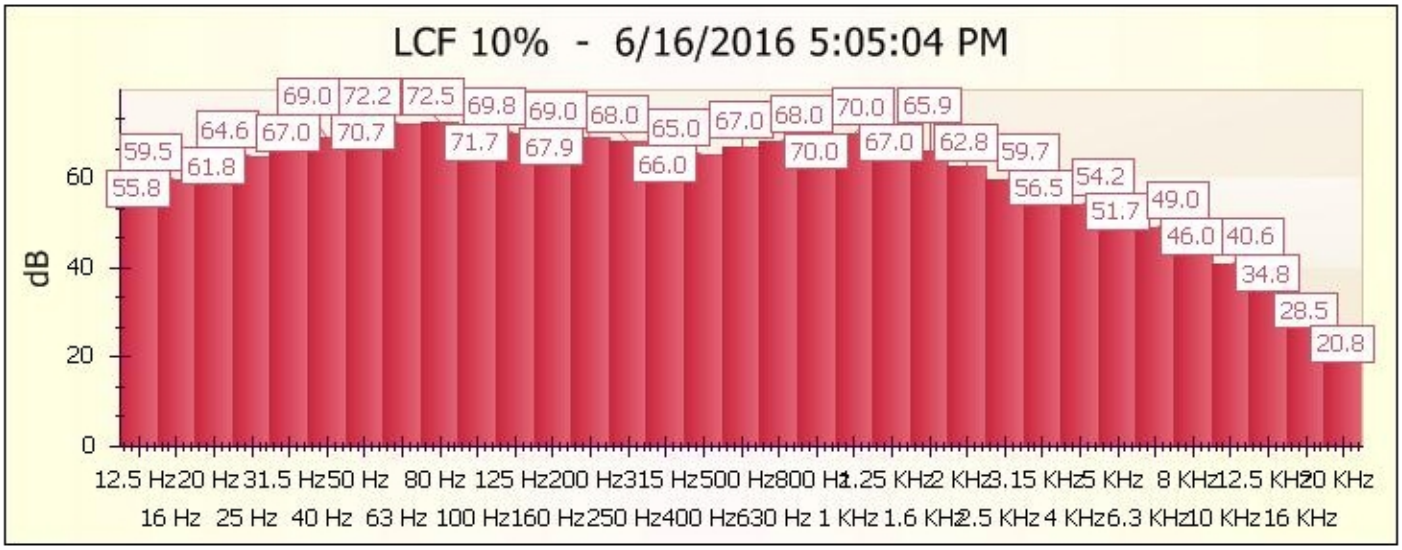
70.0 71.0 70.0 71.0 70.0 73.0 75.0 75.0 77.0 75.0 72.0 70.0 70.0 69.0 68.0 67.0 68.0 69.0 71.0 71.0 68.0 67.0 64.0 61.0 58.0 57.0 55.0 54.0 53.0 49.0 45.0 41.0 35.0
12.5 Hz 16 Hz 20 Hz 25 Hz 31.5 Hz 40 Hz 50 Hz 63 Hz 80 Hz 100 Hz 125 Hz 160 Hz 200 Hz 250 Hz 315 Hz 400 Hz 500 Hz 630 Hz 800 Hz 1 KHz 1.25 KHz 1.6 KHz 2 KHz 2.5 KHz 3.15 KHz 4 KHz 5 KHz 6.3 KHz 8 KHz 10 KHz 12.5 KHz 16 KHz 20 KHz


LCF 10% - 6/16/2016 5:05:04 PM
dB
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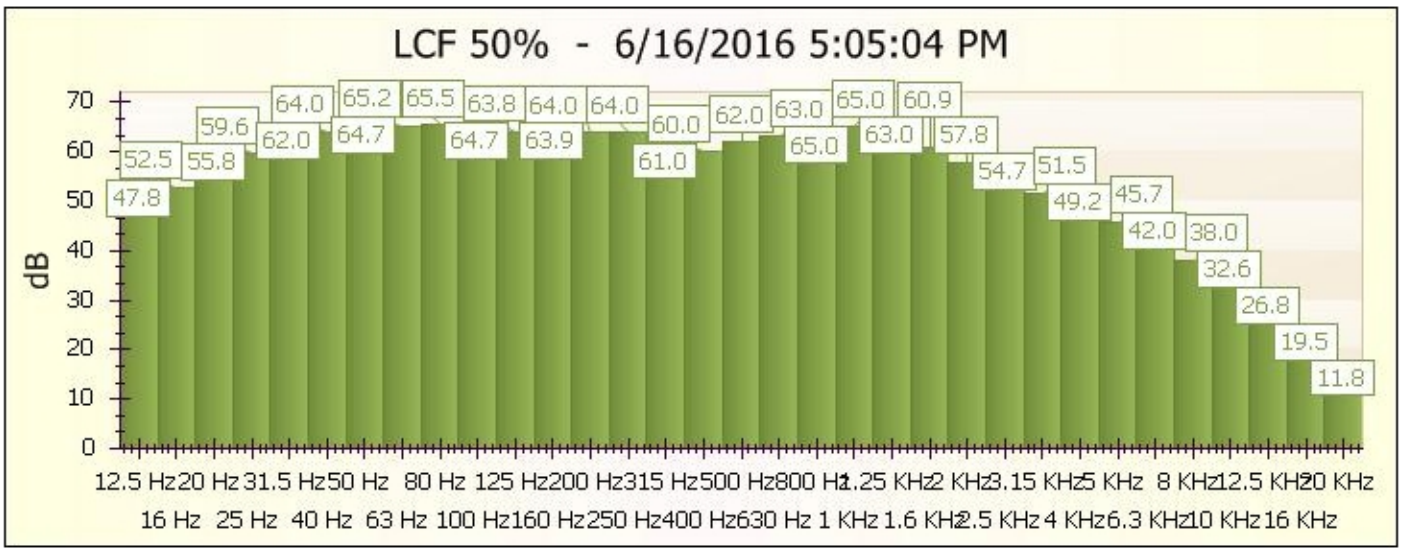
59.5 64.6 67.0 69.0 72.2 72.5 69.8 69.0 68.0 65.0 67.0 68.0 70.0 65.9
55.8 61.8 70.7 71.7 67.9 66.0 70.0 67.0 62.8 59.7 56.5 54.2 51.7 49.0 46.0 40.6 34.8 28.5 20.8
12.5 Hz 16 Hz 20 Hz 25 Hz 31.5 Hz 40 Hz 50 Hz 63 Hz 80 Hz 100 Hz 125 Hz 160 Hz 200 Hz 250 Hz 315 Hz 400 Hz 500 Hz 630 Hz 800 Hz 1 KHz 1.25 KHz 1.6 KHz 2 KHz 2.5 KHz 3.15 KHz 4 KHz 5 KHz 6.3 KHz 8 KHz 10 KHz 12.5 KHz 16 KHz 20 KHz


LCF 50% - 6/16/2016 5:05:04 PM
dB
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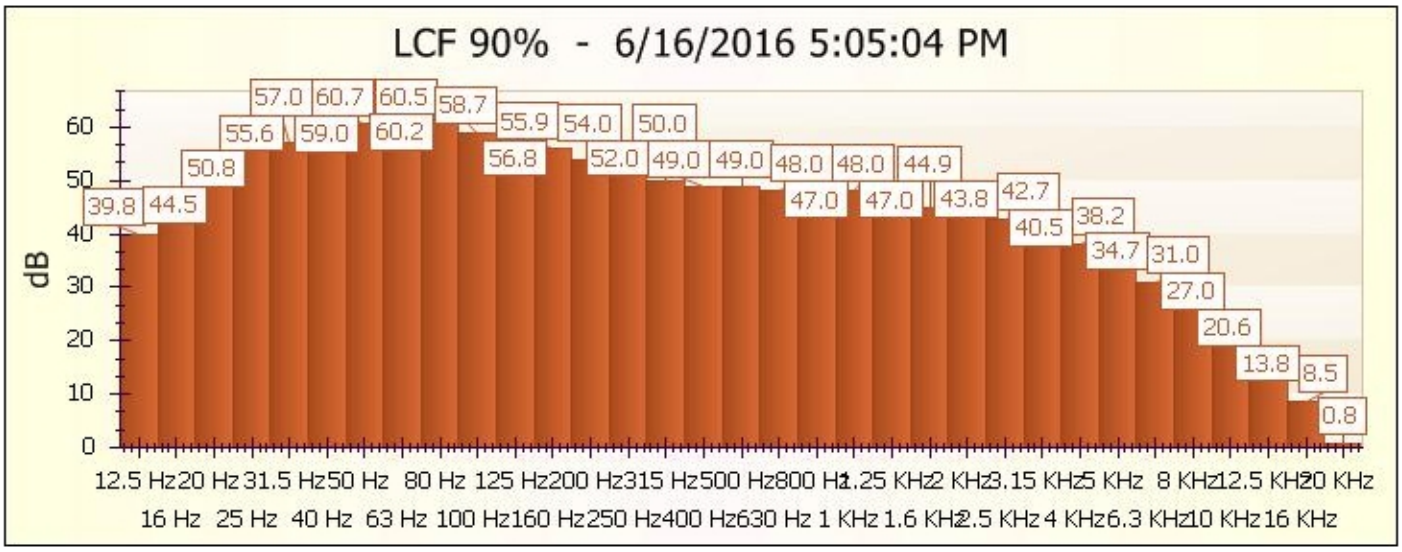
52.5 59.6 62.0 64.0 65.2 65.5 63.8 64.0 64.0 60.0 62.0 63.0 65.0 60.9
47.8 55.8 64.7 64.7 63.9 61.0 65.0 63.0 57.8 54.7 51.5 49.2 45.7 42.0 38.0 32.6 26.8 19.5 11.8
12.5 Hz 16 Hz 20 Hz 25 Hz 31.5 Hz 40 Hz 50 Hz 63 Hz 80 Hz 100 Hz 125 Hz 160 Hz 200 Hz 250 Hz 315 Hz 400 Hz 500 Hz 630 Hz 800 Hz 1 KHz 1.25 KHz 1.6 KHz 2 KHz 2.5 KHz 3.15 KHz 4 KHz 5 KHz 6.3 KHz 8 KHz 10 KHz 12.5 KHz 16 KHz 20 KHz


LCF 90% - 6/16/2016 5:05:04 PM
dB
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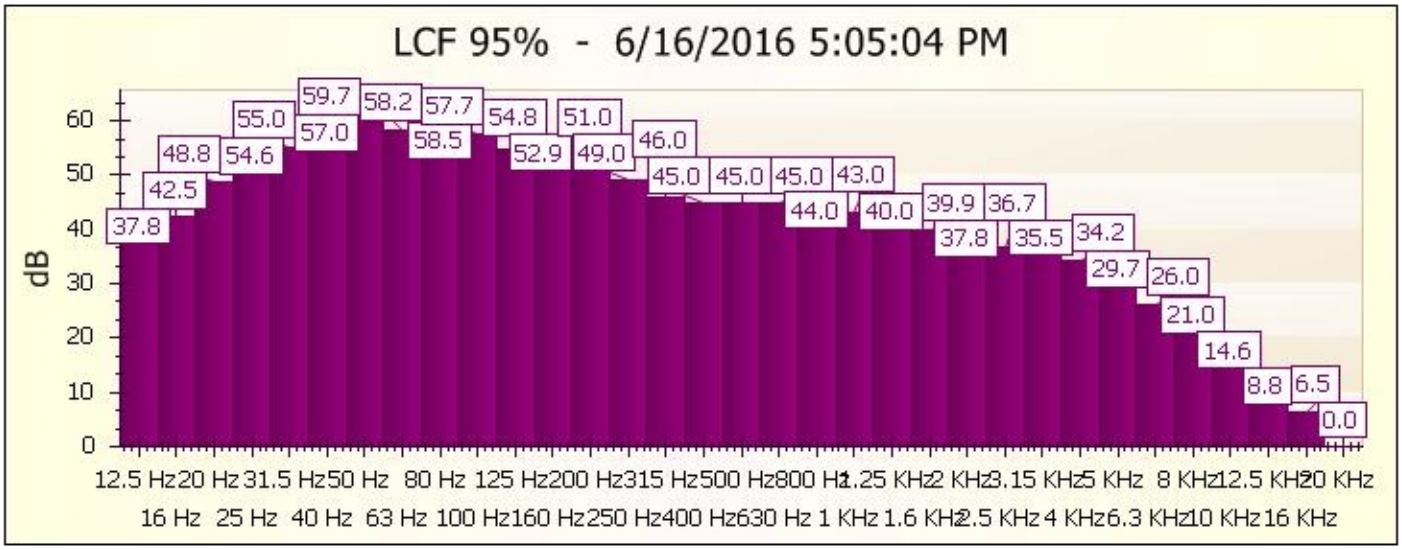
57.0 60.7 60.5 58.7 55.9 54.0 50.0
39.8 44.5 50.8 55.6 59.0 60.2 56.8 52.0 49.0 49.0 48.0 48.0 44.9 42.7 38.2 34.7 31.0 27.0 20.6 13.8 8.5 0.8
47.0 47.0 43.8 40.5
12.5 Hz 16 Hz 20 Hz 25 Hz 31.5 Hz 40 Hz 50 Hz 63 Hz 80 Hz 100 Hz 125 Hz 160 Hz 200 Hz 250 Hz 315 Hz 400 Hz 500 Hz 630 Hz 800 Hz 1 KHz 1.25 KHz 1.6 KHz 2 KHz 2.5 KHz 3.15 KHz 4 KHz 5 KHz 6.3 KHz 8 KHz 10 KHz 12.5 KHz 16 KHz 20 KHz


LCF 95% - 6/16/2016 5:05:04 PM
dB
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37.8
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48.8
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55.0
57.0
59.7
58.2
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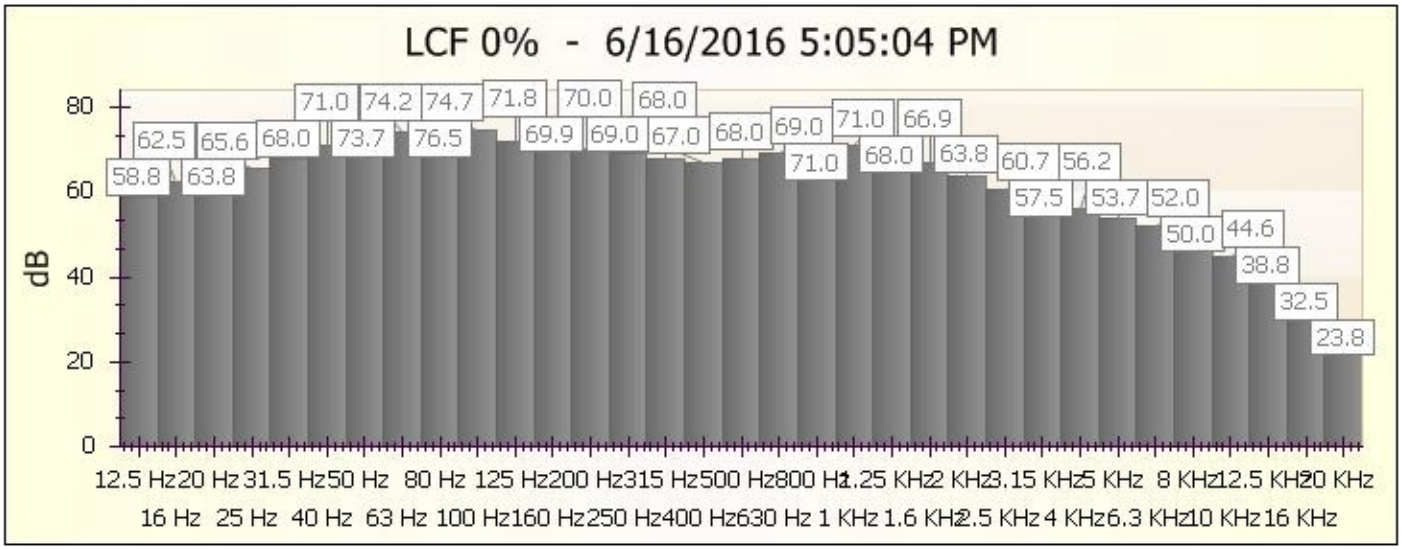
57.7
54.8
52.9
51.0
49.0
46.0
45.0
45.0
45.0
44.0
43.0
40.0
39.9
37.8
36.7
35.5
34.2
29.7
26.0
21.0
14.6
8.8
6.5
0.0
12.5 Hz 16 Hz
20 Hz 25 Hz
31.5 Hz 40 Hz
50 Hz 63 Hz
80 Hz 100 Hz
125 Hz 160 Hz
200 Hz 250 Hz
315 Hz 400 Hz
500 Hz 630 Hz
800 Hz 1 KHz
1.25 KHz 1.6 KHz
2 KHz 2.5 KHz
3.15 KHz 4 KHz
5 KHz 6.3 KHz
8 KHz 10 KHz
12.5 KHz 16 KHz
20 KHz


LCF 0% - 6/16/2016 5:05:04 PM
dB
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58.8
62.5
63.8
65.6
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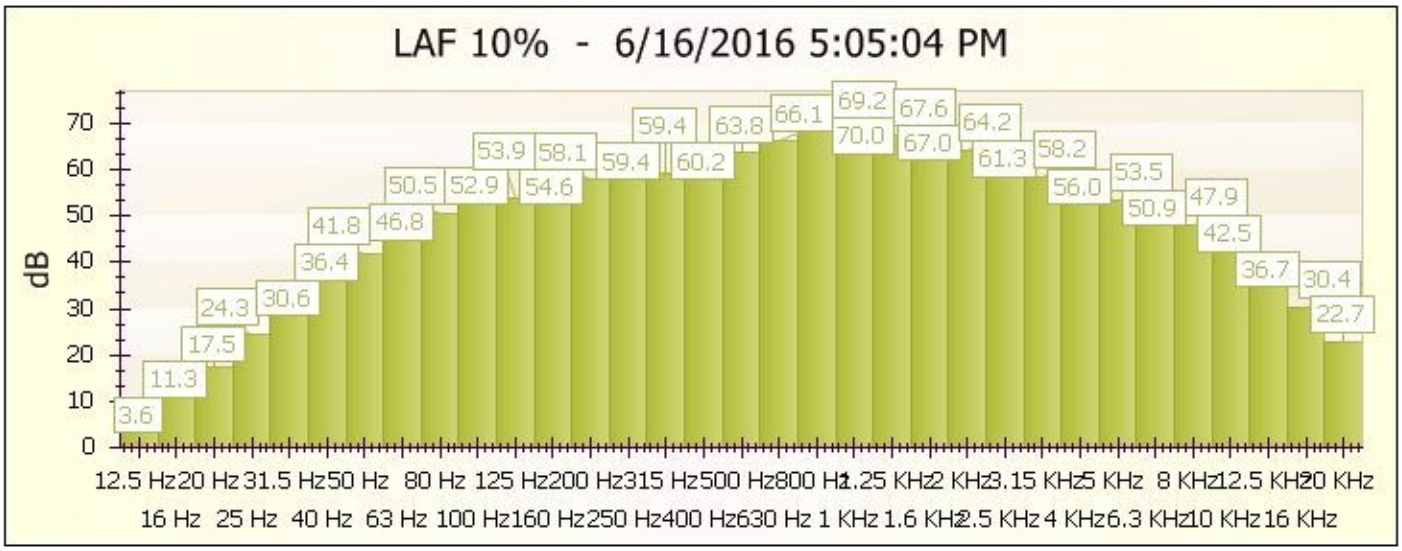
73.7
74.2
76.5
74.7
71.8
69.9
70.0
69.0
67.0
68.0
68.0
69.0
71.0
71.0
66.9
68.0
63.8
60.7
56.2
57.5
53.7
52.0
50.0
44.6
38.8
32.5
23.8
12.5 Hz 16 Hz
20 Hz 25 Hz
31.5 Hz 40 Hz
50 Hz 63 Hz
80 Hz 100 Hz
125 Hz 160 Hz
200 Hz 250 Hz
315 Hz 400 Hz
500 Hz 630 Hz
800 Hz 1 KHz
1.25 KHz 1.6 KHz
2 KHz 2.5 KHz
3.15 KHz 4 KHz
5 KHz 6.3 KHz
8 KHz 10 KHz
12.5 KHz 16 KHz
20 KHz


LAF 10% - 6/16/2016 5:05:04 PM
dB
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3.6
11.3
17.5
24.3
30.6
36.4
41.8
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53.9
58.1
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63.8
66.1
69.2
70.0
67.6
67.0
64.2
61.3
58.2
56.0
53.5
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47.9
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36.7
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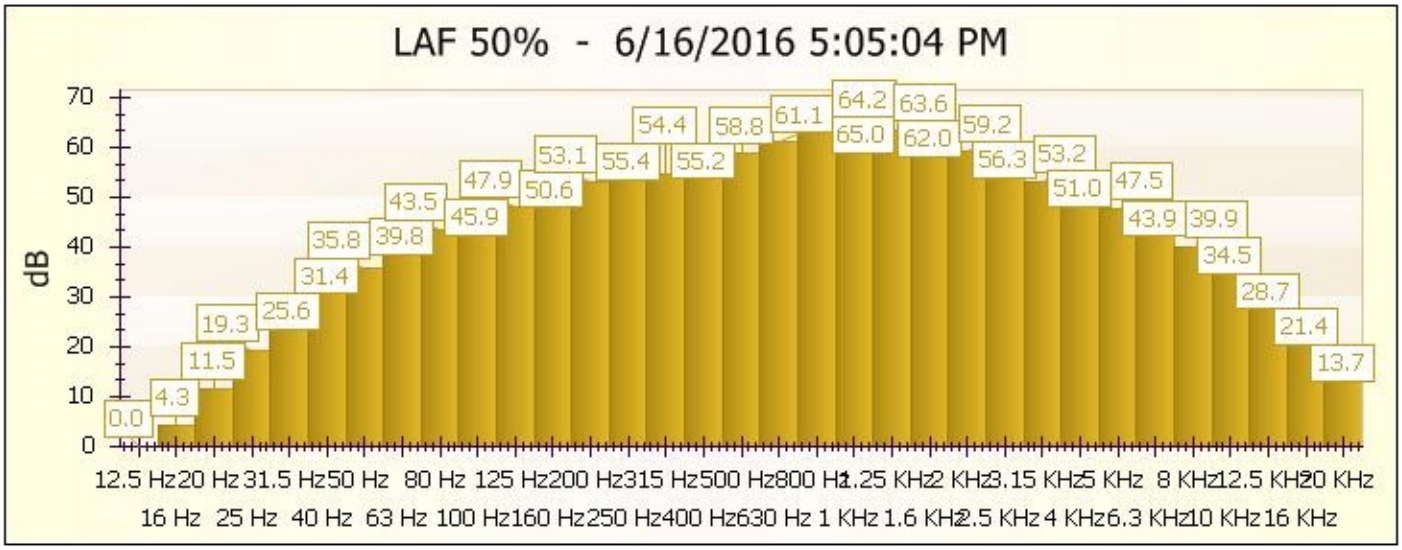
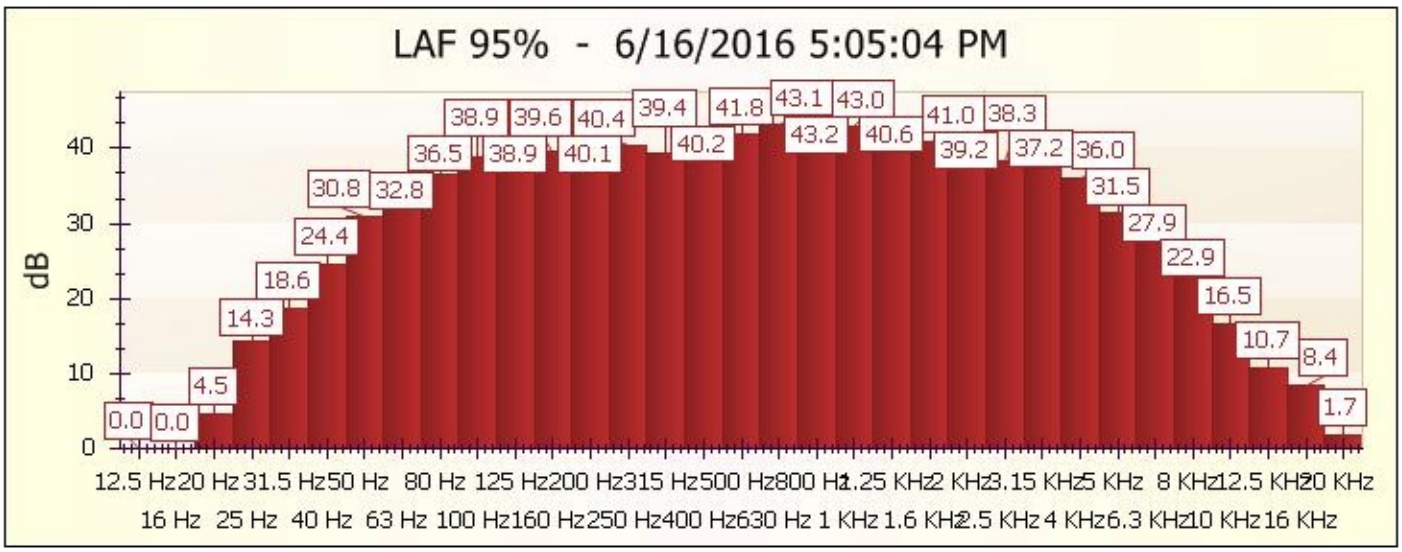
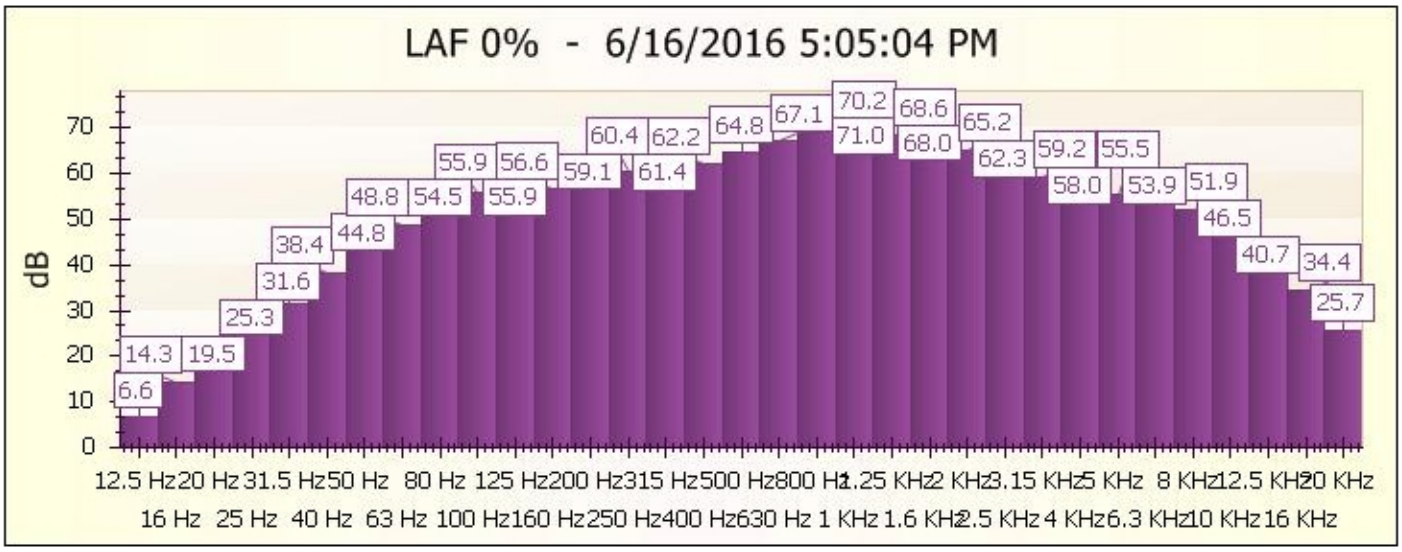
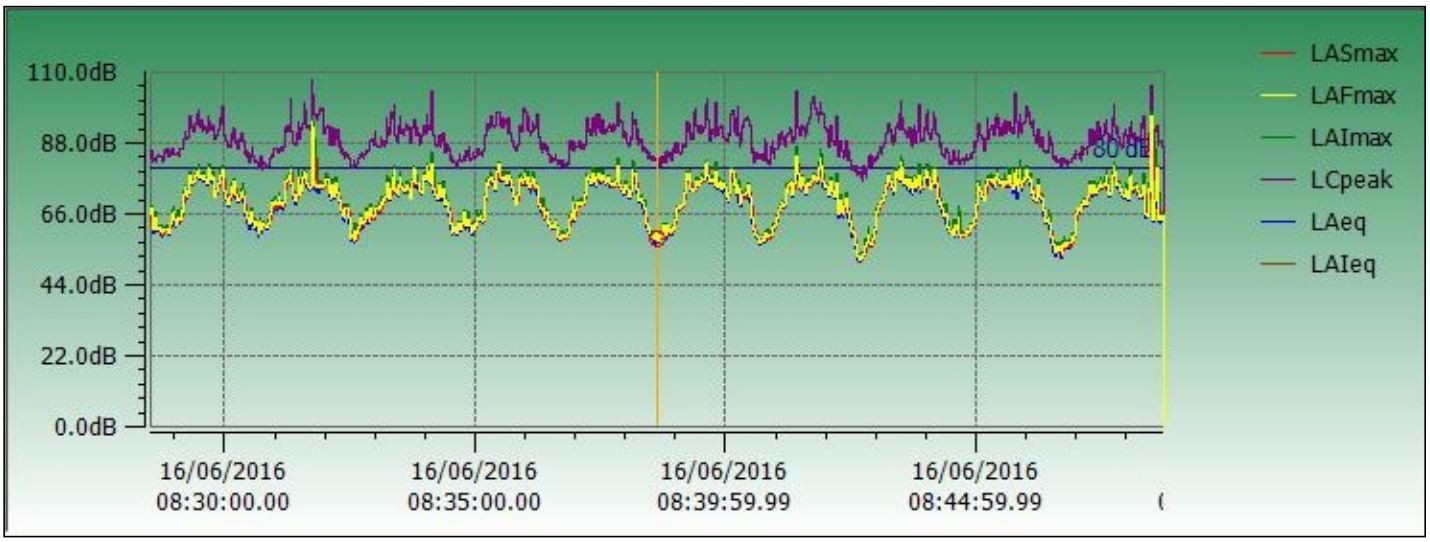
22.7
12.5 Hz 16 Hz
20 Hz 25 Hz
31.5 Hz 40 Hz
50 Hz 63 Hz
80 Hz 100 Hz
125 Hz 160 Hz
200 Hz 250 Hz
315 Hz 400 Hz
500 Hz 630 Hz
800 Hz 1 KHz
1.25 KHz 1.6 KHz
2 KHz 2.5 KHz
3.15 KHz 4 KHz
5 KHz 6.3 KHz
8 KHz 10 KHz
12.5 KHz 16 KHz
20 KHz

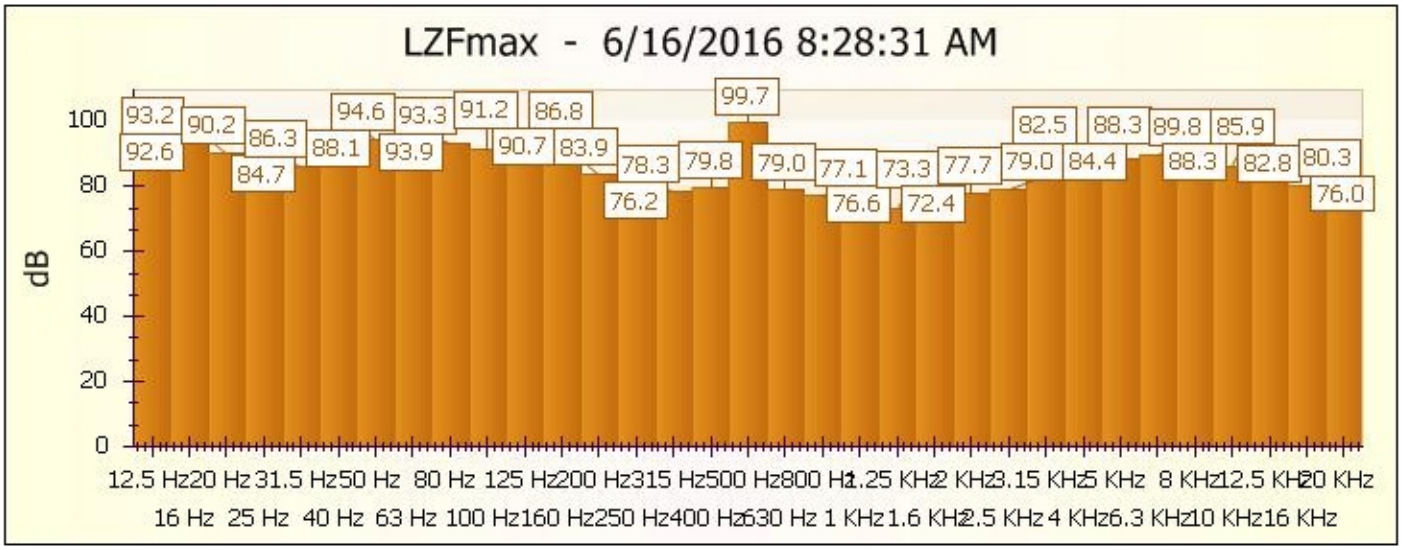

LAF 50% - 6/16/2016 5:05:04 PM
dB
0.0 4.3 11.5 19.3 25.6 31.4 35.8 39.8 43.5 45.9 47.9 50.6 53.1 55.4 54.4 55.2 58.8 61.1 64.2 65.0 63.6 62.0 59.2 56.3 53.2 51.0 47.5 43.9 39.9 34.5 28.7 21.4 13.7
12.5 Hz 16 Hz 20 Hz 25 Hz 31.5 Hz 40 Hz 50 Hz 63 Hz 80 Hz 100 Hz 125 Hz 160 Hz 200 Hz 250 Hz 315 Hz 400 Hz 500 Hz 630 Hz 800 Hz 1 KHz 1.25 KHz 1.6 KHz 2 KHz 2.5 KHz 3.15 KHz 4 KHz 5 KHz 6.3 KHz 8 KHz 10 KHz 12.5 KHz 16 KHz 20 KHz


LAF 95% - 6/16/2016 5:05:04 PM
dB
0.0 0.0 4.5 14.3 18.6 24.4 30.8 32.8 36.5 38.9 38.9 39.6 40.1 40.4 39.4 40.2 41.8 43.2 43.1 43.0 40.6 41.0 39.2 38.3 37.2 36.0 31.5 27.9 22.9 16.5 10.7 8.4 1.7
12.5 Hz 16 Hz 20 Hz 25 Hz 31.5 Hz 40 Hz 50 Hz 63 Hz 80 Hz 100 Hz 125 Hz 160 Hz 200 Hz 250 Hz 315 Hz 400 Hz 500 Hz 630 Hz 800 Hz 1 KHz 1.25 KHz 1.6 KHz 2 KHz 2.5 KHz 3.15 KHz 4 KHz 5 KHz 6.3 KHz 8 KHz 10 KHz 12.5 KHz 16 KHz 20 KHz


LAF 0% - 6/16/2016 5:05:04 PM
dB
6.6 14.3 19.5 25.3 31.6 38.4 44.8 48.8 54.5 55.9 55.9 56.6 59.1 60.4 61.4 62.2 64.8 67.1 70.2 71.0 68.6 68.0 65.2 62.3 59.2 58.0 55.5 53.9 51.9 46.5 40.7 34.4 25.7
12.5 Hz 16 Hz 20 Hz 25 Hz 31.5 Hz 40 Hz 50 Hz 63 Hz 80 Hz 100 Hz 125 Hz 160 Hz 200 Hz 250 Hz 315 Hz 400 Hz 500 Hz 630 Hz 800 Hz 1 KHz 1.25 KHz 1.6 KHz 2 KHz 2.5 KHz 3.15 KHz 4 KHz 5 KHz 6.3 KHz 8 KHz 10 KHz 12.5 KHz 16 KHz 20 KHz

Instrument Model	CEL-633C		
Overload	No	Evening Start	19
Battery Low	No	Night Start	23
Duration	00:20:14 HH:MM:SS	Day Penalty	0.000000000
End Date & Time	6/16/2016 8:48:45 AM	Evening Penalty	5.000000000
Pause Duration	00:00:01 HH:MM:SS	Night Penalty	10.000000000
Response	Random	LAF 10%	76.5 dB
Run Number	7	LAF 50%	71.5 dB
Serial Number	5044657	LAF 90%	59.5 dB
Site	Unallocated	LAF 95%	58 dB
Location	Unallocated	LAF variable%	77 dB
Person	Unallocated	LCpeak	107.4 dB
Process	Unallocated	LCpeak with Time	107.4 dB (6/16/2016 8:31:45 AM)
Result	Cumulative	Start Date & Time	6/16/2016 8:28:31 AM
LAFmax	96.2 dB	LAE	104.3 dB
LAFmax with Time	96.2 dB (6/16/2016 8:48:30 AM)	LAeq	73.4 dB
LAFmin	50.7 dB	LAleq	75.9 dB
LAFmin with Time	50.7 dB (6/16/2016 8:42:40 AM)	LCeq	80.1 dB
LAImax	97.7 dB	LCeq-LAeq	6.7 dB
LAImax with Time	97.7 dB (6/16/2016 8:48:30 AM)	Lepd(Projected)	73.4 dB
LAImin	51.1 dB	Lex8h(Projected)	73.4 dB
LAImin with Time	51.1 dB (6/16/2016 8:42:40 AM)	LZeq	81.4 dB
LDN	0	Lepd	59.6 dB
LDEN	0	Lex8h	59.6 dB
CNEL	0		
Day Start	7		
Notes			




LZFmax - 6/16/2016 8:28:31 AM
dB
0
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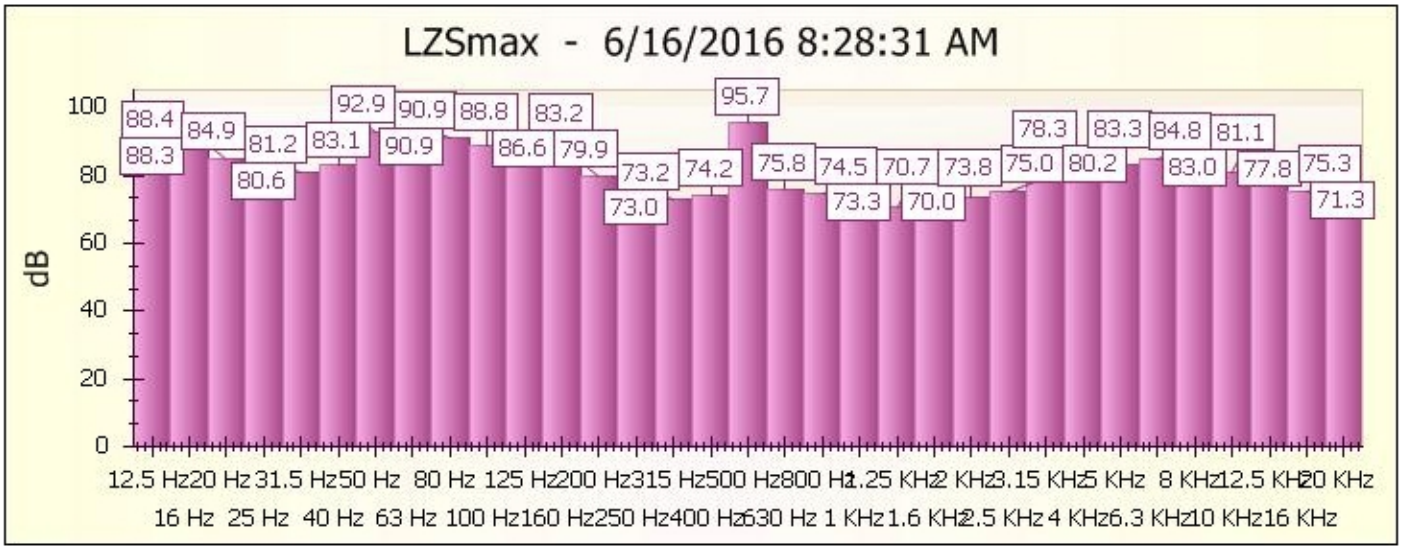
93.2 90.2 86.3 94.6 93.3 91.2 86.8 99.7 82.5 88.3 89.8 85.9
92.6 84.7 88.1 93.9 90.7 83.9 78.3 79.8 79.0 77.1 73.3 77.7 79.0 84.4 88.3 82.8 80.3
76.2 76.6 72.4 76.0
12.5 Hz 20 Hz 31.5 Hz 50 Hz 80 Hz 125 Hz 200 Hz 315 Hz 500 Hz 800 Hz 1.25 KHz 2 KHz 3.15 KHz 5 KHz 8 KHz 12.5 KHz 20 KHz
16 Hz 25 Hz 40 Hz 63 Hz 100 Hz 160 Hz 250 Hz 400 Hz 630 Hz 1 KHz 1.6 KHz 2.5 KHz 4 KHz 6.3 KHz 10 KHz 16 KHz


LZSmax - 6/16/2016 8:28:31 AM
dB
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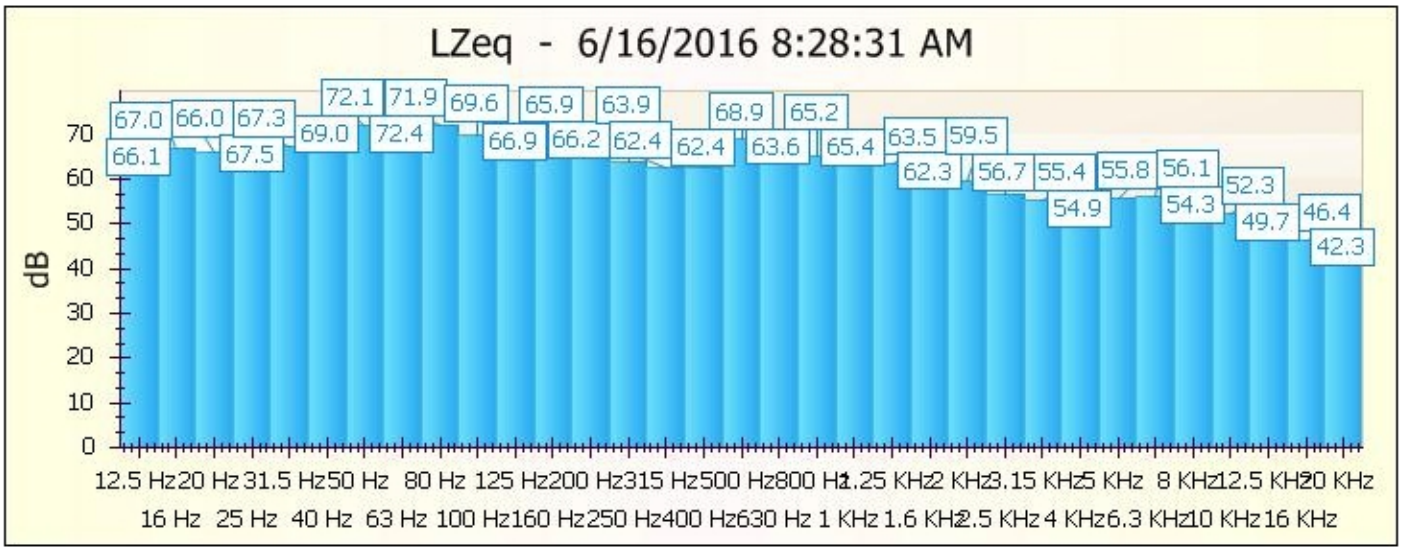
88.4 84.9 81.2 92.9 90.9 88.8 83.2 95.7 78.3 83.3 84.8 81.1
88.3 80.6 83.1 90.9 86.6 79.9 73.2 74.2 75.8 74.5 70.7 73.8 75.0 80.2 83.0 77.8 75.3
73.0 73.3 70.0 71.3
12.5 Hz 20 Hz 31.5 Hz 50 Hz 80 Hz 125 Hz 200 Hz 315 Hz 500 Hz 800 Hz 1.25 KHz 2 KHz 3.15 KHz 5 KHz 8 KHz 12.5 KHz 20 KHz
16 Hz 25 Hz 40 Hz 63 Hz 100 Hz 160 Hz 250 Hz 400 Hz 630 Hz 1 KHz 1.6 KHz 2.5 KHz 4 KHz 6.3 KHz 10 KHz 16 KHz


LZeq - 6/16/2016 8:28:31 AM
dB
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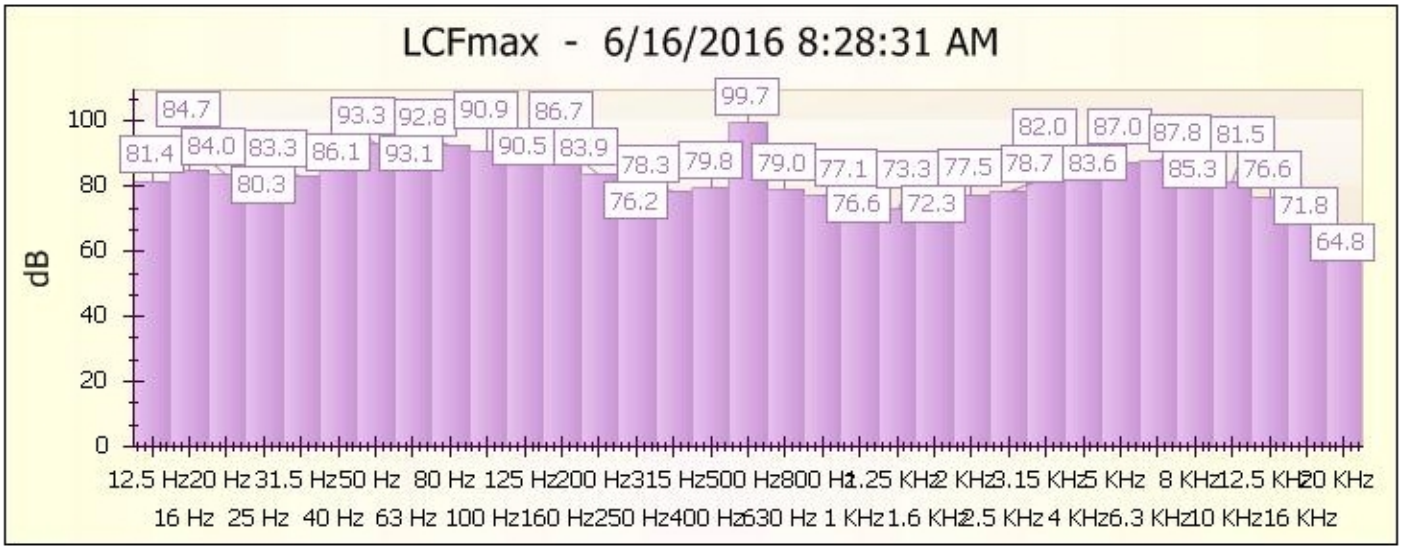
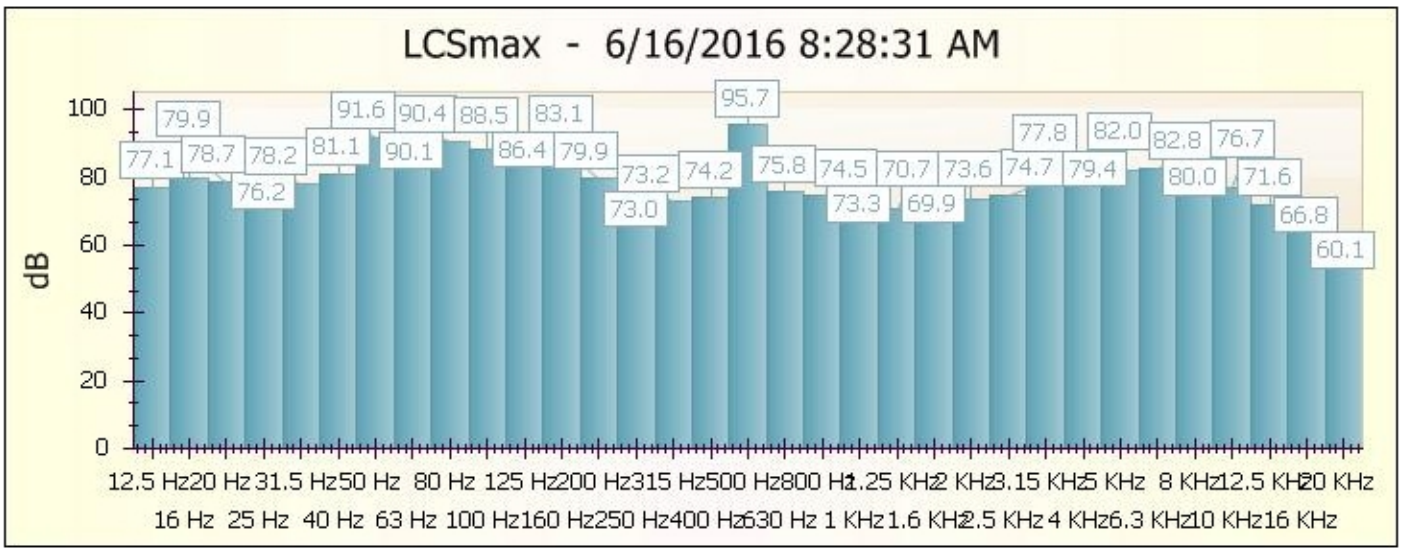
70
67.0 66.0 67.3 72.1 71.9 69.6 65.9 63.9 68.9 65.2
66.1 67.5 69.0 72.4 66.9 66.2 62.4 62.4 63.6 65.4 63.5 59.5
62.3 56.7 55.4 55.8 56.1 52.3 46.4
54.9 54.3 49.7 42.3
12.5 Hz 20 Hz 31.5 Hz 50 Hz 80 Hz 125 Hz 200 Hz 315 Hz 500 Hz 800 Hz 1.25 KHz 2 KHz 3.15 KHz 5 KHz 8 KHz 12.5 KHz 20 KHz
16 Hz 25 Hz 40 Hz 63 Hz 100 Hz 160 Hz 250 Hz 400 Hz 630 Hz 1 KHz 1.6 KHz 2.5 KHz 4 KHz 6.3 KHz 10 KHz 16 KHz


LCFmax - 6/16/2016 8:28:31 AM
dB
0
20
40
60
80
100
84.7
81.4
84.0
83.3
80.3
86.1
93.3
93.1
92.8
90.9
90.5
86.7
83.9
78.3
76.2
79.8
99.7
79.0
77.1
76.6
73.3
72.3
77.5
82.0
78.7
83.6
87.0
85.3
87.8
81.5
76.6
71.8
64.8
12.5 Hz 16 Hz
20 Hz 25 Hz
31.5 Hz 40 Hz
50 Hz 63 Hz
80 Hz 100 Hz
125 Hz 160 Hz
200 Hz 250 Hz
315 Hz 400 Hz
500 Hz 630 Hz
800 Hz 1 KHz
1.25 KHz 1.6 KHz
2 KHz 2.5 KHz
3.15 KHz 4 KHz
5 KHz 6.3 KHz
8 KHz 10 KHz
12.5 KHz 16 KHz
20 KHz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dB
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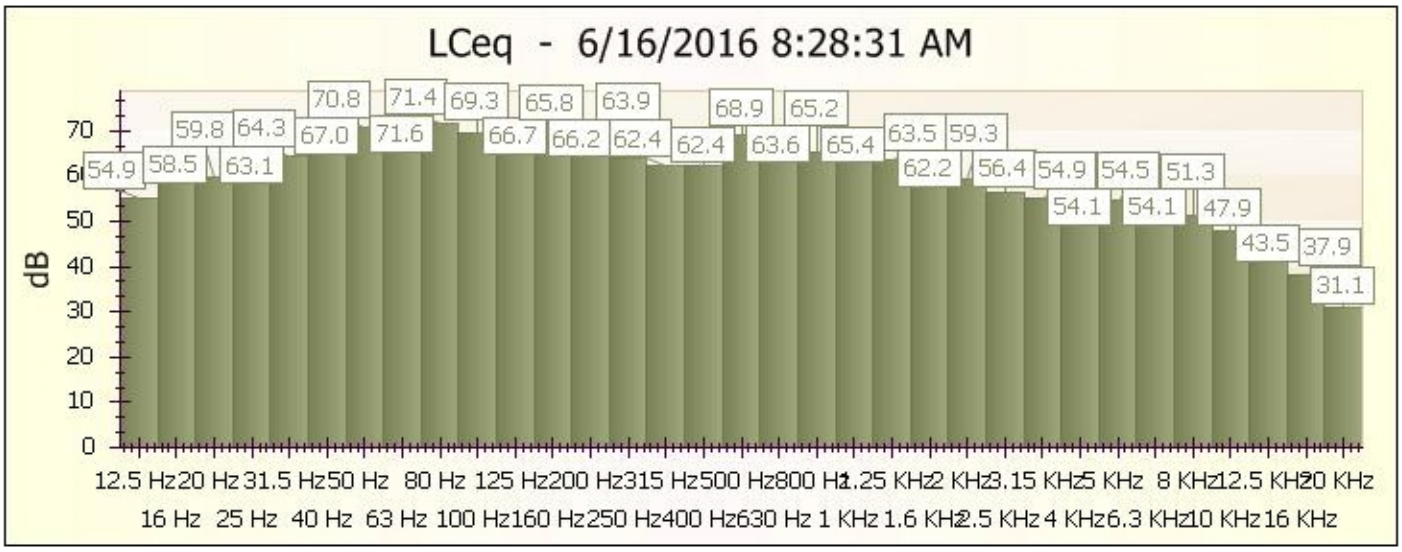
20
40
60
80
100
79.9
77.1
78.7
78.2
76.2
81.1
91.6
90.1
90.4
88.5
86.4
83.1
79.9
73.2
73.0
74.2
95.7
75.8
74.5
73.3
70.7
69.9
73.6
77.8
74.7
82.0
79.4
82.8
80.0
76.7
71.6
66.8
60.1
12.5 Hz 16 Hz
20 Hz 25 Hz
31.5 Hz 40 Hz
50 Hz 63 Hz
80 Hz 100 Hz
125 Hz 160 Hz
200 Hz 250 Hz
315 Hz 400 Hz
500 Hz 630 Hz
800 Hz 1 KHz
1.25 KHz 1.6 KHz
2 KHz 2.5 KHz
3.15 KHz 4 KHz
5 KHz 6.3 KHz
8 KHz 10 KHz
12.5 KHz 16 KHz
20 KHz


LCeq - 6/16/2016 8:28:31 AM
dB
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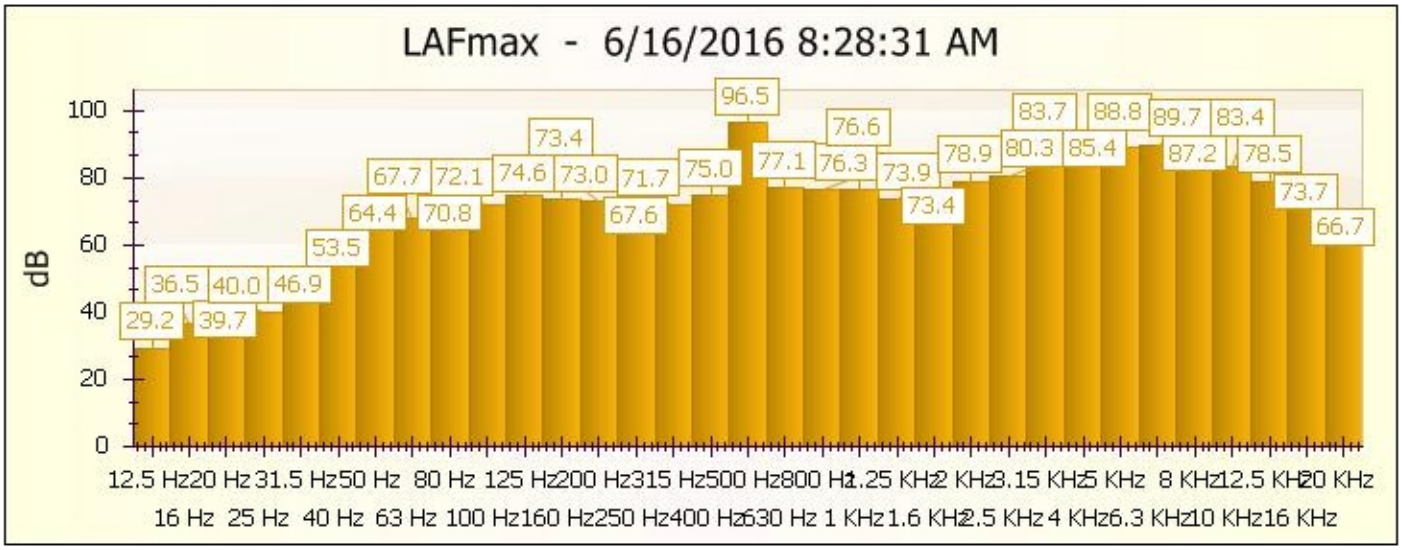
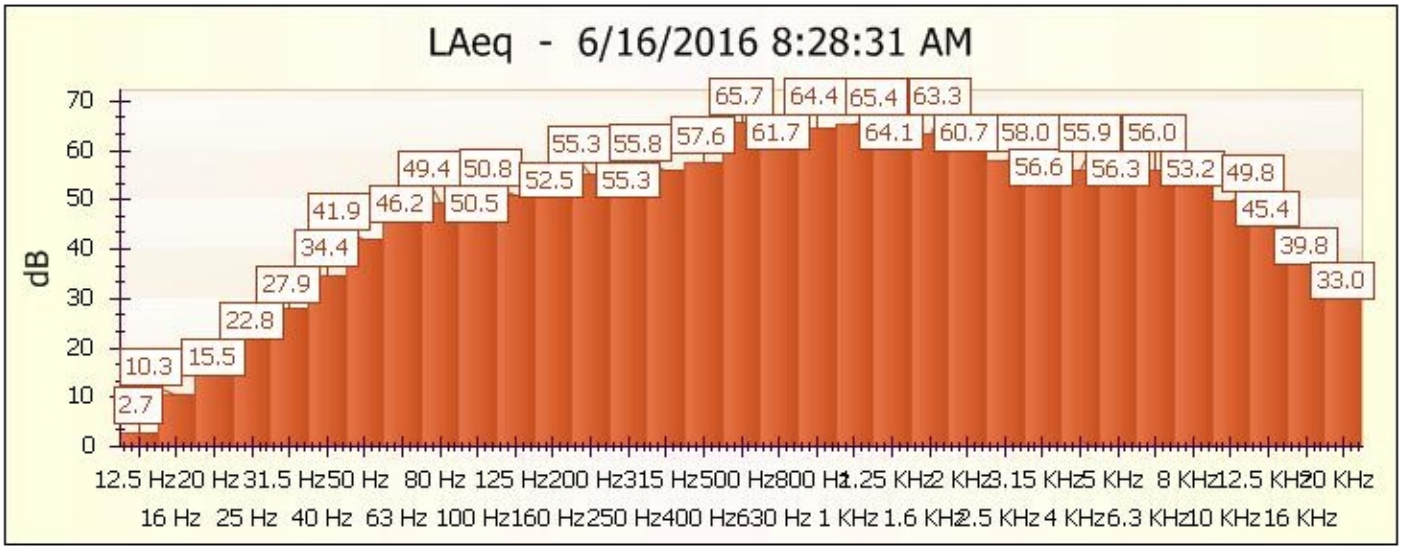
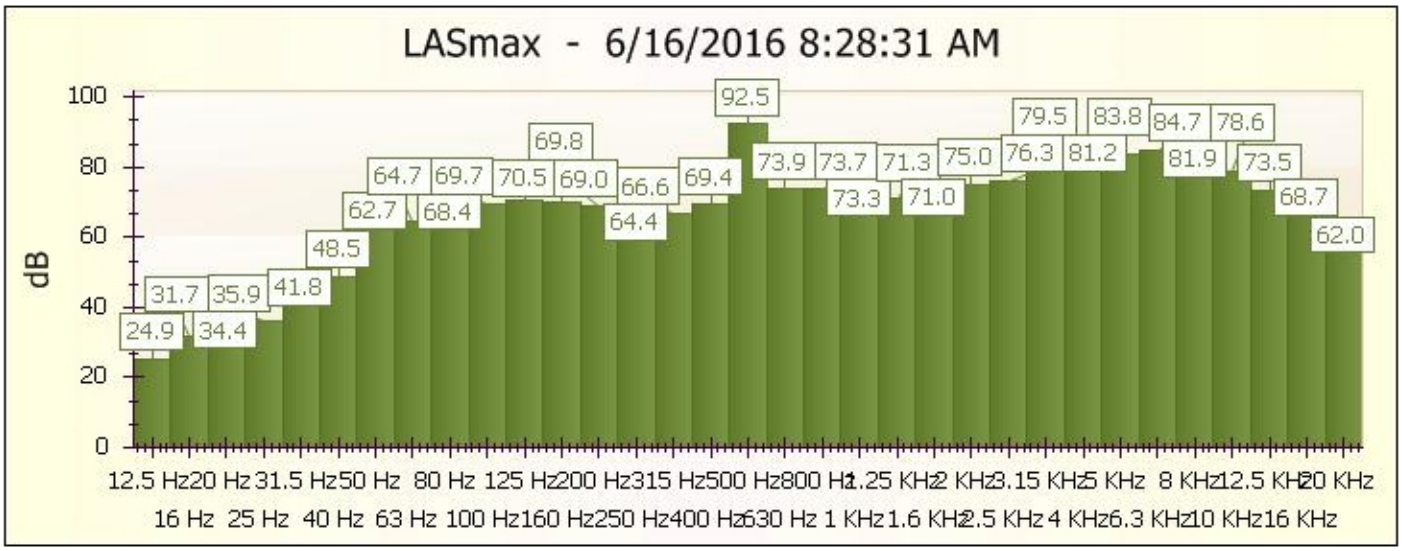
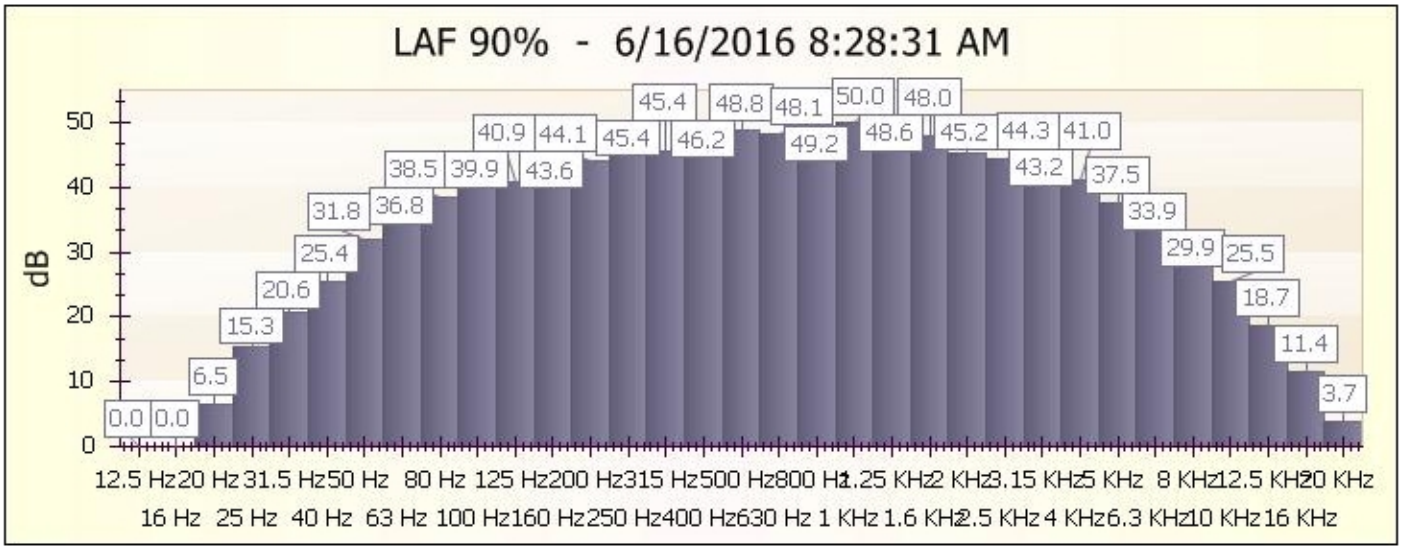
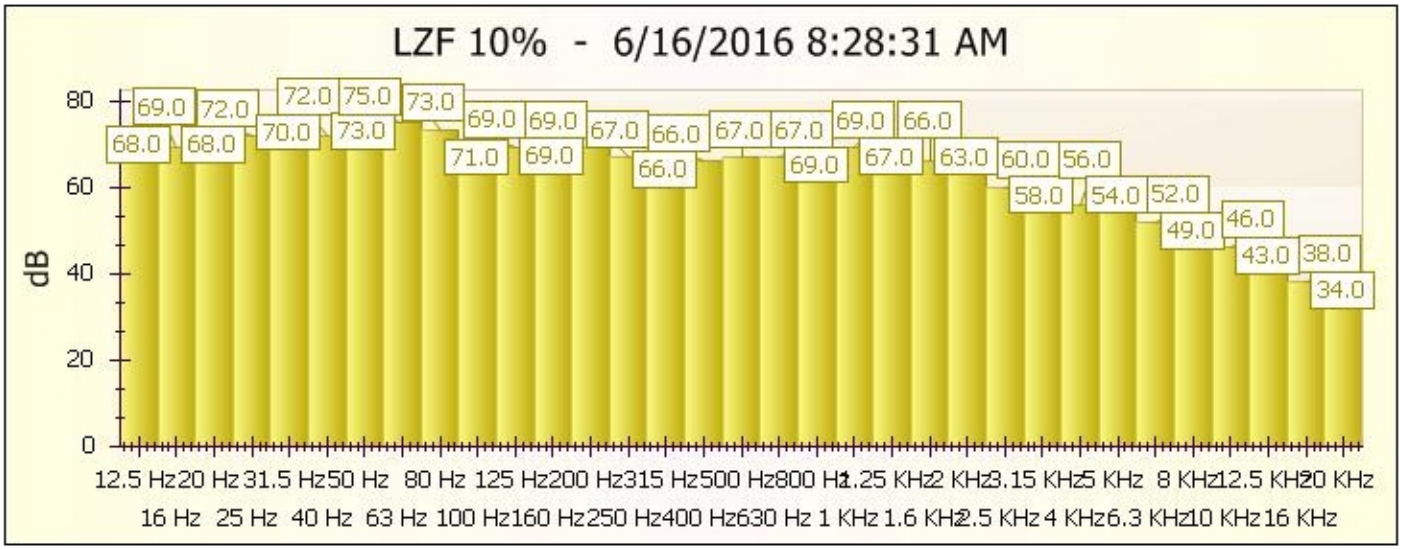
10
20
30
40
50
70
54.9
58.5
63.1
59.8
64.3
67.0
70.8
71.6
71.4
69.3
66.7
65.8
66.2
63.9
62.4
62.4
68.9
63.6
65.2
65.4
63.5
62.2
59.3
56.4
54.9
54.1
54.5
54.1
51.3
47.9
43.5
37.9
31.1
12.5 Hz 16 Hz
20 Hz 25 Hz
31.5 Hz 40 Hz
50 Hz 63 Hz
80 Hz 100 Hz
125 Hz 160 Hz
200 Hz 250 Hz
315 Hz 400 Hz
500 Hz 630 Hz
800 Hz 1 KHz
1.25 KHz 1.6 KHz
2 KHz 2.5 KHz
3.15 KHz 4 KHz
5 KHz 6.3 KHz
8 KHz 10 KHz
12.5 KHz 16 KHz
20 KHz

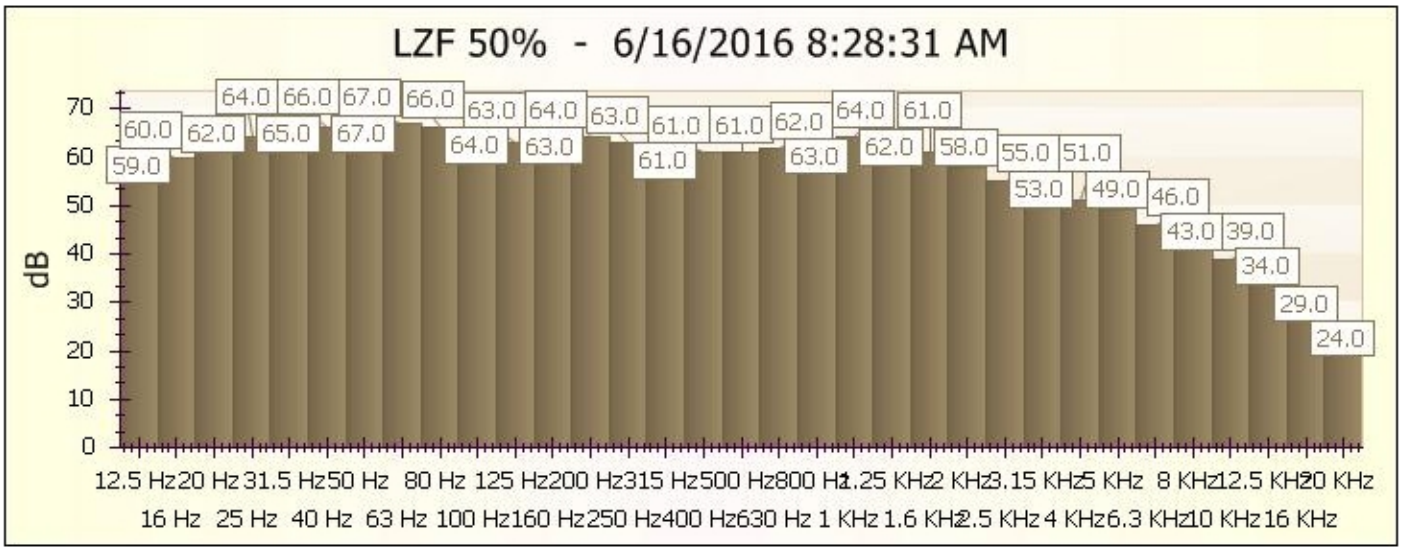

LAFmax - 6/16/2016 8:28:31 AM
dB
12.5 Hz 16 Hz 20 Hz 25 Hz 31.5 Hz 40 Hz 50 Hz 63 Hz 80 Hz 100 Hz 125 Hz 160 Hz 200 Hz 250 Hz 315 Hz 400 Hz 500 Hz 630 Hz 800 Hz 1 KHz 1.25 KHz 1.6 KHz 2 KHz 2.5 KHz 3.15 KHz 4 KHz 5 KHz 6.3 KHz 8 KHz 10 KHz 12.5 KHz 16 KHz 20 KHz
29.2 36.5 39.7 40.0 46.9 53.5 64.4 67.7 70.8 72.1 73.4 74.6 73.0 71.7 67.6 75.0 96.5 77.1 76.6 76.3 73.9 73.4 78.9 83.7 80.3 88.8 85.4 89.7 87.2 83.4 78.5 73.7 66.7

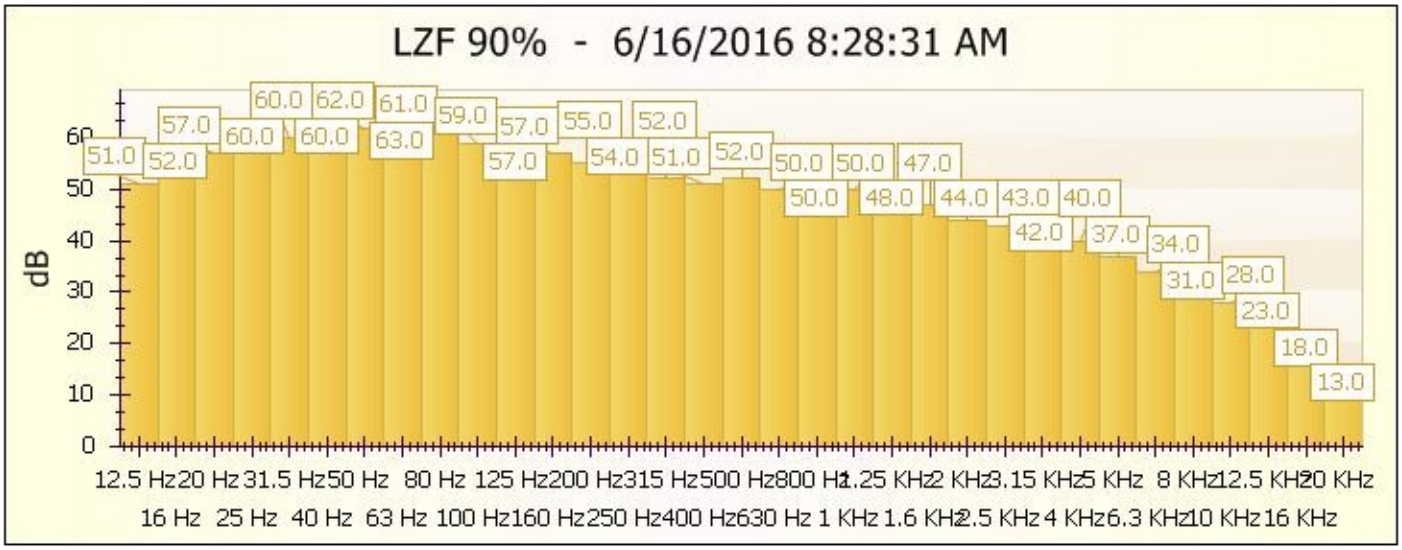

LAeq - 6/16/2016 8:28:31 AM
dB
12.5 Hz 16 Hz 20 Hz 25 Hz 31.5 Hz 40 Hz 50 Hz 63 Hz 80 Hz 100 Hz 125 Hz 160 Hz 200 Hz 250 Hz 315 Hz 400 Hz 500 Hz 630 Hz 800 Hz 1 KHz 1.25 KHz 1.6 KHz 2 KHz 2.5 KHz 3.15 KHz 4 KHz 5 KHz 6.3 KHz 8 KHz 10 KHz 12.5 KHz 16 KHz 20 KHz
2.7 10.3 15.5 22.8 27.9 34.4 41.9 46.2 49.4 50.5 50.8 52.5 55.3 55.8 57.6 61.7 65.7 64.4 65.4 63.3 64.1 60.7 58.0 56.6 55.9 56.3 56.0 53.2 49.8 45.4 39.8 33.0


LASmax - 6/16/2016 8:28:31 AM
dB
12.5 Hz 16 Hz 20 Hz 25 Hz 31.5 Hz 40 Hz 50 Hz 63 Hz 80 Hz 100 Hz 125 Hz 160 Hz 200 Hz 250 Hz 315 Hz 400 Hz 500 Hz 630 Hz 800 Hz 1 KHz 1.25 KHz 1.6 KHz 2 KHz 2.5 KHz 3.15 KHz 4 KHz 5 KHz 6.3 KHz 8 KHz 10 KHz 12.5 KHz 16 KHz 20 KHz
24.9 31.7 34.4 35.9 41.8 48.5 62.7 64.7 68.4 69.7 69.8 70.5 69.0 66.6 64.4 69.4 92.5 73.9 73.7 73.3 71.3 71.0 75.0 79.5 76.3 83.8 81.2 84.7 81.9 78.6 73.5 68.7 62.0


LAF 90% - 6/16/2016 8:28:31 AM
dB
0.0 0.0 6.5 15.3 20.6 25.4 31.8 36.8 38.5 39.9 43.6 40.9 44.1 45.4 45.4 46.2 48.8 48.1 49.2 50.0 48.0 48.6 45.2 44.3 41.0 43.2 37.5 33.9 29.9 25.5 18.7 11.4 3.7
12.5 Hz 16 Hz 20 Hz 25 Hz 31.5 Hz 40 Hz 50 Hz 63 Hz 80 Hz 100 Hz 125 Hz 160 Hz 200 Hz 250 Hz 315 Hz 400 Hz 500 Hz 630 Hz 800 Hz 1 KHz 1.25 KHz 1.6 KHz 2 KHz 2.5 KHz 3.15 KHz 4 KHz 5 KHz 6.3 KHz 8 KHz 10 KHz 12.5 KHz 16 KHz 20 KHz


LZF 10% - 6/16/2016 8:28:31 AM
dB
68.0 69.0 68.0 72.0 70.0 72.0 73.0 75.0 73.0 71.0 69.0 69.0 69.0 67.0 66.0 66.0 67.0 67.0 69.0 66.0 67.0 63.0 60.0 58.0 56.0 54.0 52.0 49.0 46.0 43.0 38.0 34.0
12.5 Hz 16 Hz 20 Hz 25 Hz 31.5 Hz 40 Hz 50 Hz 63 Hz 80 Hz 100 Hz 125 Hz 160 Hz 200 Hz 250 Hz 315 Hz 400 Hz 500 Hz 630 Hz 800 Hz 1 KHz 1.25 KHz 1.6 KHz 2 KHz 2.5 KHz 3.15 KHz 4 KHz 5 KHz 6.3 KHz 8 KHz 10 KHz 12.5 KHz 16 KHz 20 KHz


LZF 50% - 6/16/2016 8:28:31 AM
dB
59.0 60.0 62.0 64.0 65.0 66.0 67.0 67.0 66.0 64.0 63.0 63.0 64.0 63.0 61.0 61.0 62.0 63.0 64.0 61.0 62.0 58.0 55.0 53.0 51.0 49.0 46.0 43.0 39.0 34.0 29.0 24.0
12.5 Hz 16 Hz 20 Hz 25 Hz 31.5 Hz 40 Hz 50 Hz 63 Hz 80 Hz 100 Hz 125 Hz 160 Hz 200 Hz 250 Hz 315 Hz 400 Hz 500 Hz 630 Hz 800 Hz 1 KHz 1.25 KHz 1.6 KHz 2 KHz 2.5 KHz 3.15 KHz 4 KHz 5 KHz 6.3 KHz 8 KHz 10 KHz 12.5 KHz 16 KHz 20 KHz


LZF 90% - 6/16/2016 8:28:31 AM
dB
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10
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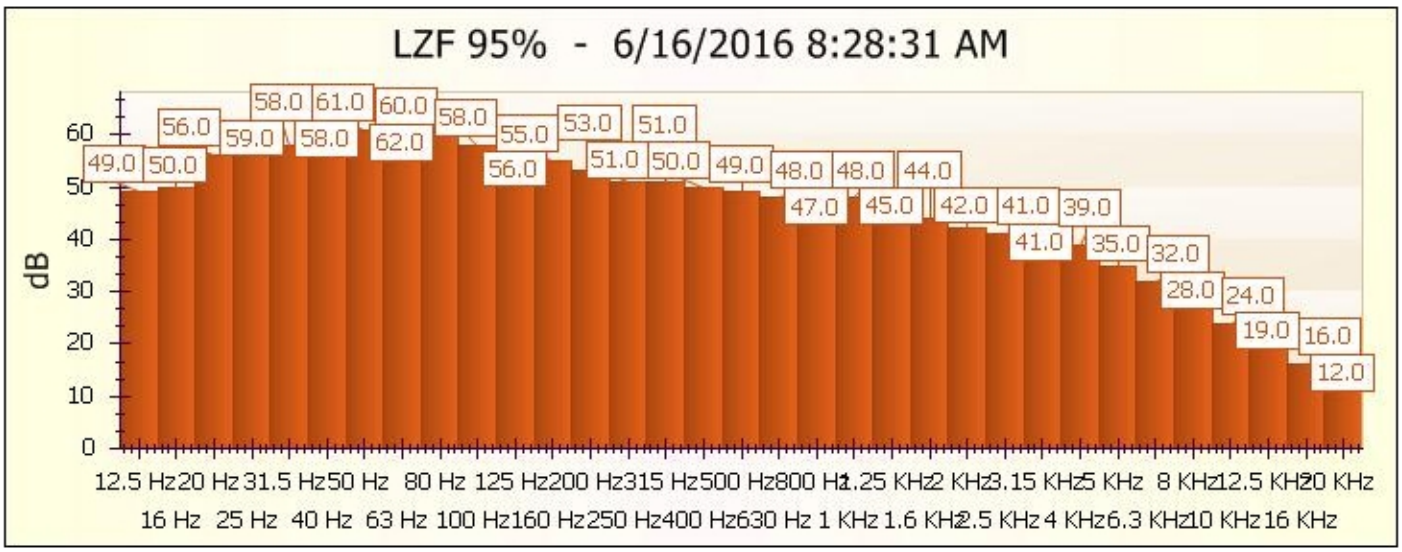
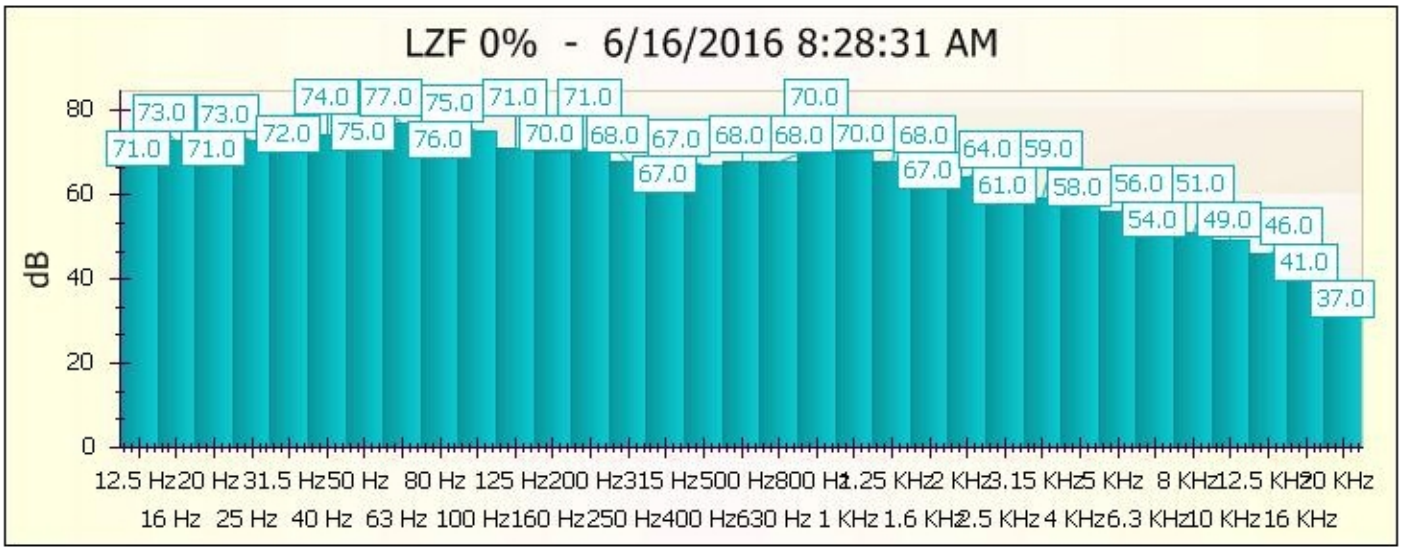
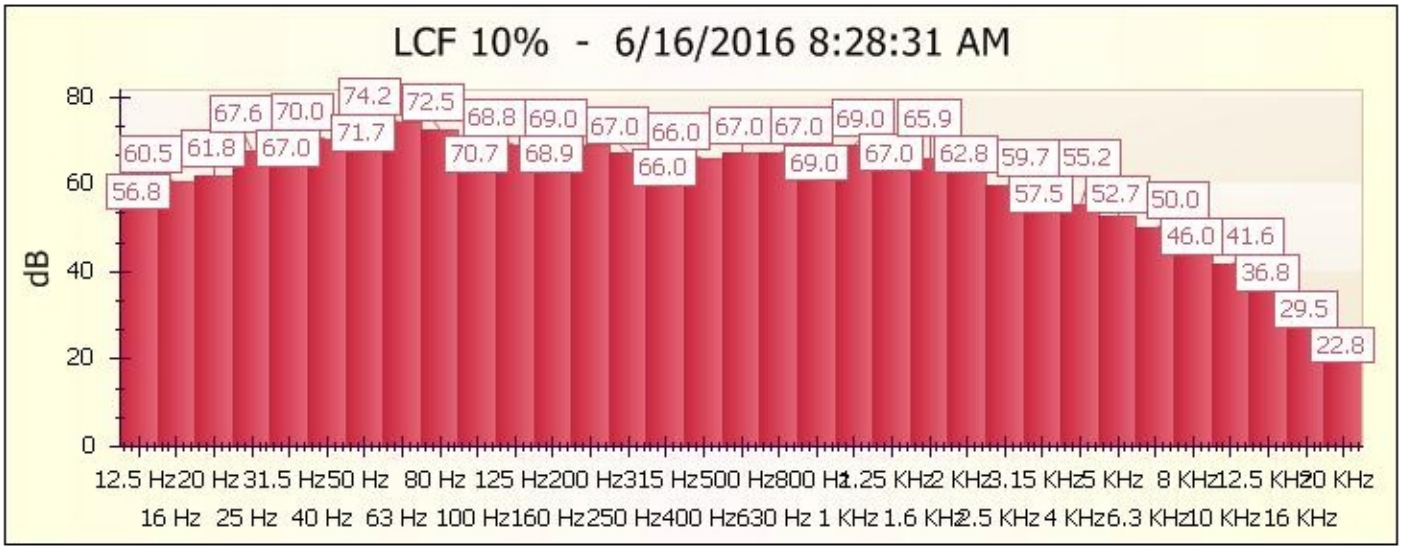
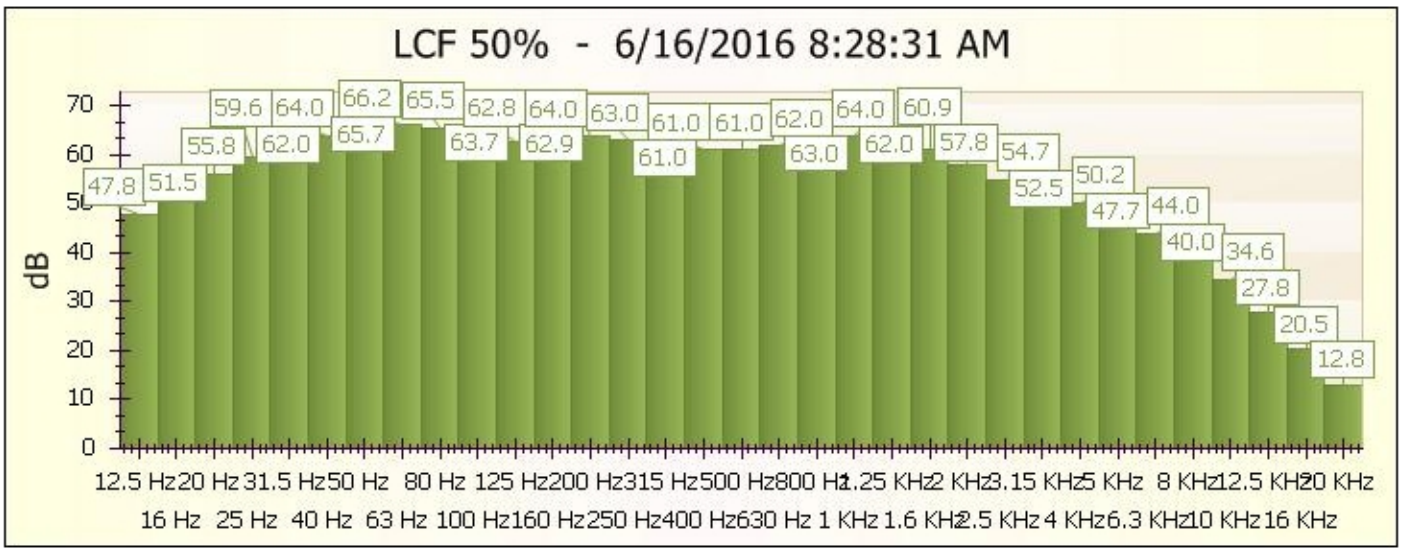
40
50
60
51.0 52.0 57.0 60.0 60.0 60.0 62.0 61.0 63.0 59.0 57.0 57.0 55.0 54.0 52.0 51.0 52.0 50.0 50.0 47.0 50.0 48.0 44.0 43.0 40.0 42.0 37.0 34.0 31.0 28.0 23.0 18.0 13.0
12.5 Hz 20 Hz 31.5 Hz 50 Hz 80 Hz 125 Hz 200 Hz 315 Hz 500 Hz 800 Hz 1.25 KHz 2 KHz 3.15 KHz 5 KHz 8 KHz 12.5 KHz 20 KHz
16 Hz 25 Hz 40 Hz 63 Hz 100 Hz 160 Hz 250 Hz 400 Hz 630 Hz 1 KHz 1.6 KHz 2.5 KHz 4 KHz 6.3 KHz 10 KHz 16 KHz


LZF 95% - 6/16/2016 8:28:31 AM
dB
0
10
20
30
40
50
60
49.0 50.0 56.0 59.0 58.0 61.0 62.0 60.0 58.0 56.0 55.0 53.0 51.0 51.0 50.0 49.0 48.0 48.0 44.0 47.0 45.0 42.0 41.0 39.0 41.0 35.0 32.0 28.0 24.0 19.0 16.0 12.0
12.5 Hz 20 Hz 31.5 Hz 50 Hz 80 Hz 125 Hz 200 Hz 315 Hz 500 Hz 800 Hz 1.25 KHz 2 KHz 3.15 KHz 5 KHz 8 KHz 12.5 KHz 20 KHz
16 Hz 25 Hz 40 Hz 63 Hz 100 Hz 160 Hz 250 Hz 400 Hz 630 Hz 1 KHz 1.6 KHz 2.5 KHz 4 KHz 6.3 KHz 10 KHz 16 KHz


LZF 0% - 6/16/2016 8:28:31 AM
dB
0
20
40
60
80
71.0 73.0 71.0 73.0 72.0 74.0 75.0 77.0 76.0 75.0 71.0 70.0 71.0 68.0 67.0 67.0 68.0 70.0 68.0 68.0 70.0 67.0 68.0 64.0 61.0 59.0 58.0 56.0 54.0 51.0 49.0 46.0 41.0 37.0
12.5 Hz 20 Hz 31.5 Hz 50 Hz 80 Hz 125 Hz 200 Hz 315 Hz 500 Hz 800 Hz 1.25 KHz 2 KHz 3.15 KHz 5 KHz 8 KHz 12.5 KHz 20 KHz
16 Hz 25 Hz 40 Hz 63 Hz 100 Hz 160 Hz 250 Hz 400 Hz 630 Hz 1 KHz 1.6 KHz 2.5 KHz 4 KHz 6.3 KHz 10 KHz 16 KHz


LCF 10% - 6/16/2016 8:28:31 AM
dB
0
20
40
60
80
56.8
60.5
61.8
67.6
67.0
70.0
71.7
74.2
72.5
70.7
68.8
68.9
69.0
67.0
66.0
66.0
67.0
67.0
69.0
69.0
65.9
67.0
62.8
59.7
57.5
55.2
52.7
50.0
46.0
41.6
36.8
29.5
22.8
12.5 Hz 16 Hz
20 Hz 25 Hz
31.5 Hz 40 Hz
50 Hz 63 Hz
80 Hz 100 Hz
125 Hz 160 Hz
200 Hz 250 Hz
315 Hz 400 Hz
500 Hz 630 Hz
800 Hz 1 KHz
1.25 KHz 1.6 KHz
2 KHz 2.5 KHz
3.15 KHz 4 KHz
5 KHz 6.3 KHz
8 KHz 10 KHz
12.5 KHz 16 KHz
20 KHz


LCF 50% - 6/16/2016 8:28:31 AM
dB
0
10
20
30
40
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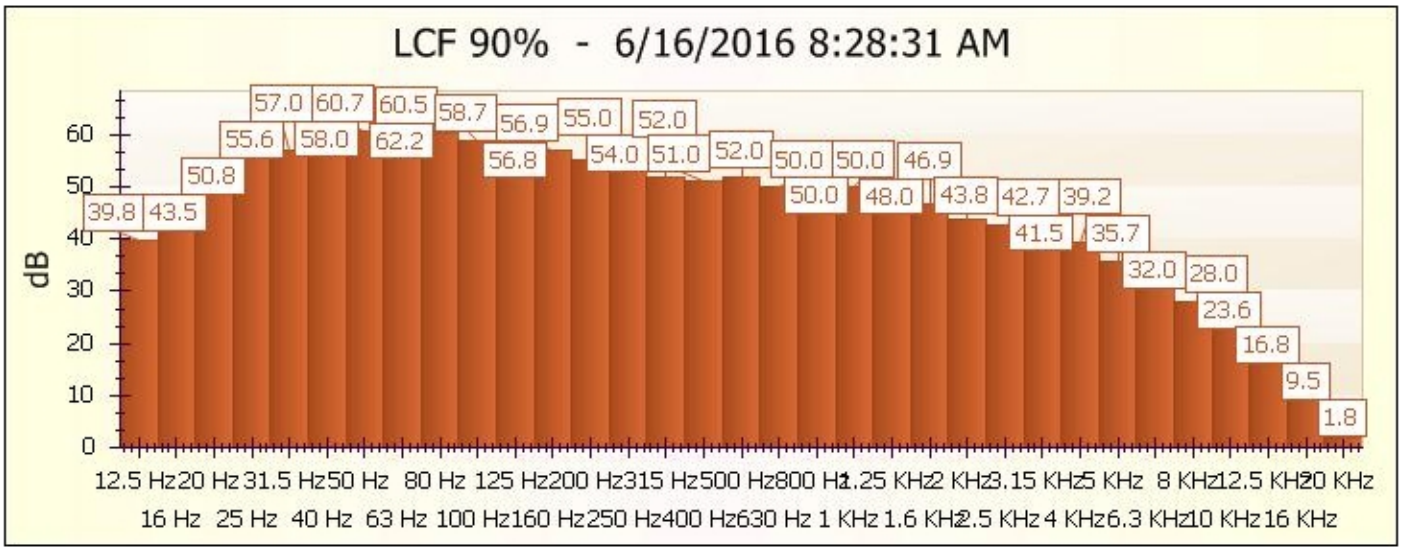
60
70
47.8
51.5
55.8
59.6
62.0
64.0
65.7
66.2
65.5
63.7
62.8
62.9
64.0
63.0
61.0
61.0
61.0
62.0
63.0
64.0
62.0
60.9
57.8
54.7
52.5
50.2
47.7
44.0
40.0
34.6
27.8
20.5
12.8
12.5 Hz 16 Hz
20 Hz 25 Hz
31.5 Hz 40 Hz
50 Hz 63 Hz
80 Hz 100 Hz
125 Hz 160 Hz
200 Hz 250 Hz
315 Hz 400 Hz
500 Hz 630 Hz
800 Hz 1 KHz
1.25 KHz 1.6 KHz
2 KHz 2.5 KHz
3.15 KHz 4 KHz
5 KHz 6.3 KHz
8 KHz 10 KHz
12.5 KHz 16 KHz
20 KHz


LCF 90% - 6/16/2016 8:28:31 AM
dB
0
10
20
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40
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60
39.8
43.5
50.8
55.6
58.0
57.0
60.7
62.2
60.5
58.7
56.8
56.9
55.0
54.0
52.0
51.0
52.0
50.0
50.0
50.0
48.0
46.9
43.8
42.7
41.5
39.2
35.7
32.0
28.0
23.6
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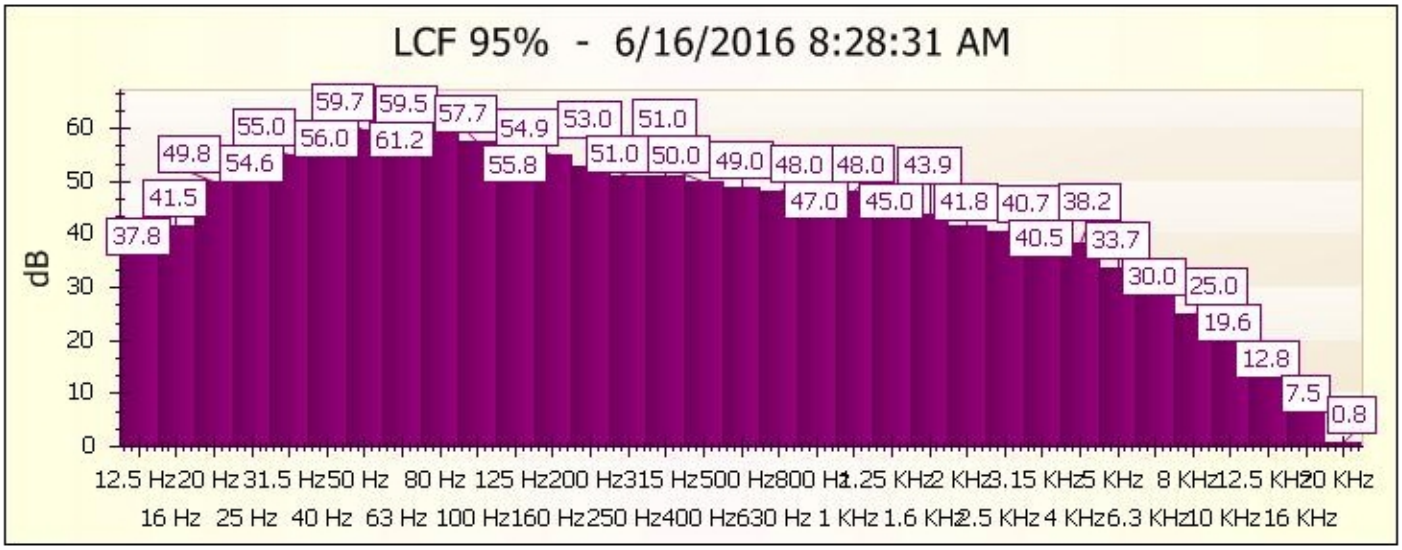
12.5 Hz 16 Hz
20 Hz 25 Hz
31.5 Hz 40 Hz
50 Hz 63 Hz
80 Hz 100 Hz
125 Hz 160 Hz
200 Hz 250 Hz
315 Hz 400 Hz
500 Hz 630 Hz
800 Hz 1 KHz
1.25 KHz 1.6 KHz
2 KHz 2.5 KHz
3.15 KHz 4 KHz
5 KHz 6.3 KHz
8 KHz 10 KHz
12.5 KHz 16 KHz
20 KHz


LCF 95% - 6/16/2016 8:28:31 AM
dB
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37.8
41.5
49.8
54.6
55.0
56.0
59.7
61.2
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57.7
55.8
54.9
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51.0
51.0
50.0
49.0
48.0
48.0
43.9
47.0
45.0
41.8
40.7
38.2
40.5
33.7
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25.0
19.6
12.8
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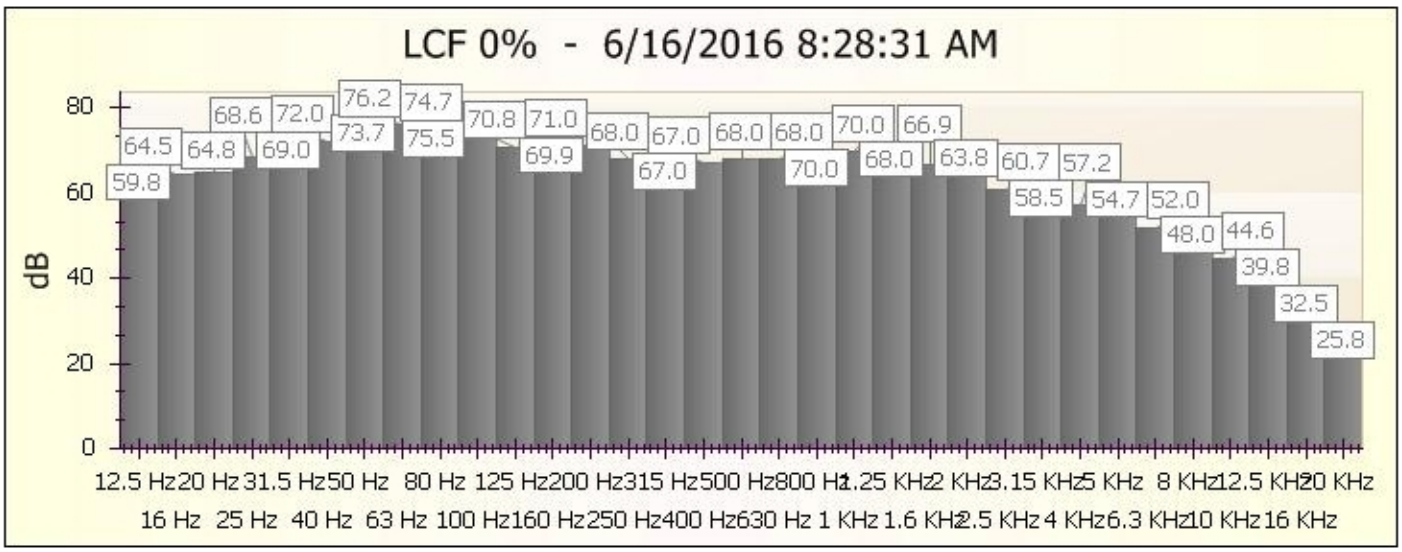
0.8
12.5 Hz 16 Hz
20 Hz 25 Hz
31.5 Hz 40 Hz
50 Hz 63 Hz
80 Hz 100 Hz
125 Hz 160 Hz
200 Hz 250 Hz
315 Hz 400 Hz
500 Hz 630 Hz
800 Hz 1 KHz
1.25 KHz 1.6 KHz
2 KHz 2.5 KHz
3.15 KHz 4 KHz
5 KHz 6.3 KHz
8 KHz 10 KHz
12.5 KHz 16 KHz
20 KHz


LCF 0% - 6/16/2016 8:28:31 AM
dB
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80
59.8
64.5
64.8
68.6
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72.0
73.7
76.2
75.5
74.7
70.8
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71.0
68.0
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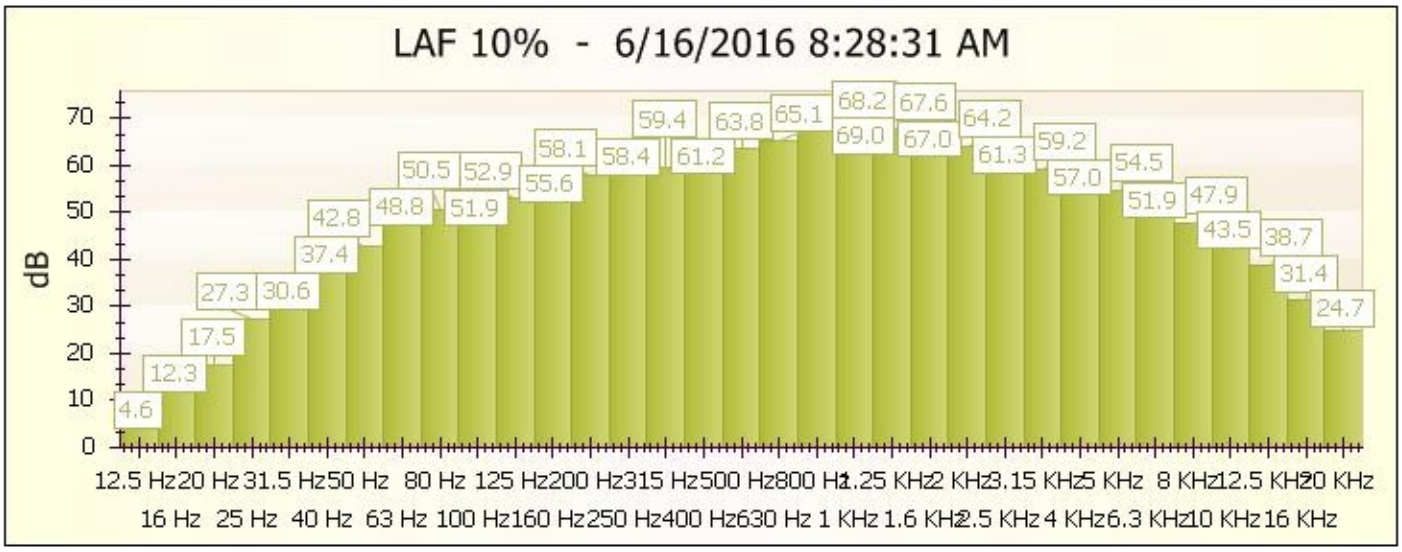
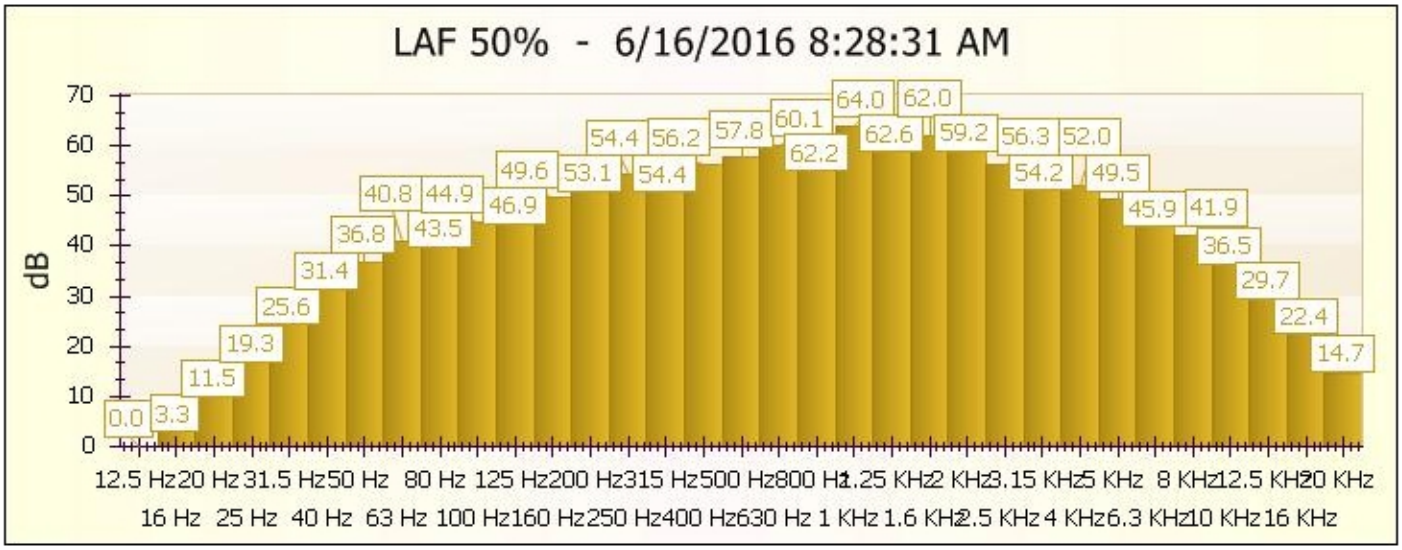
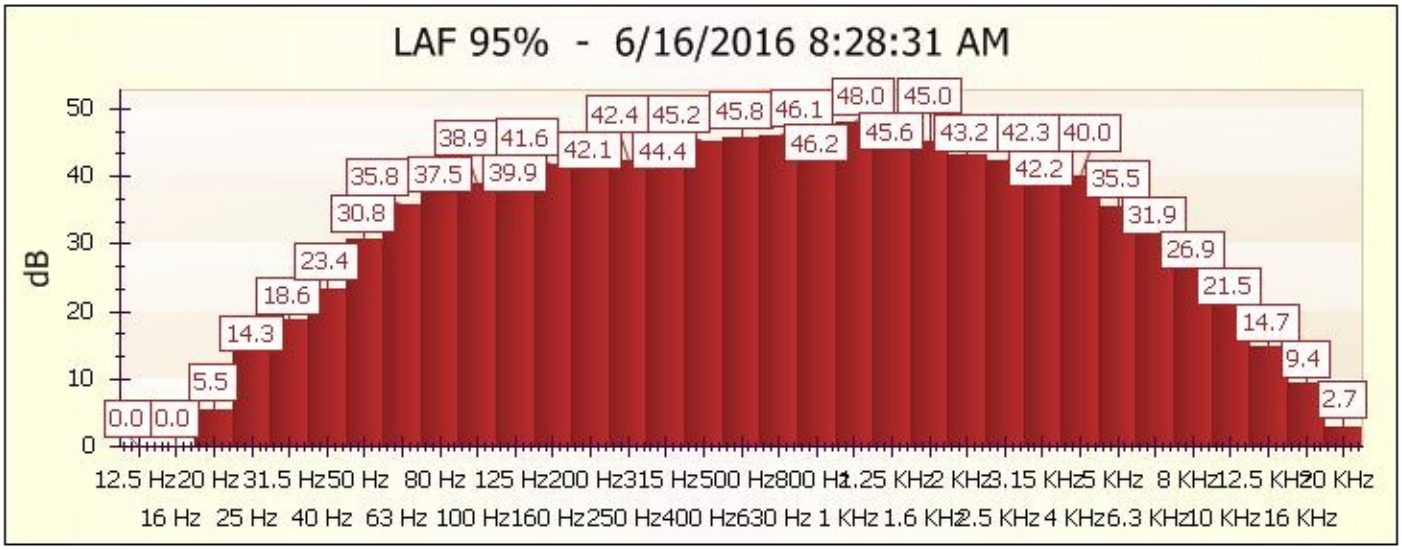
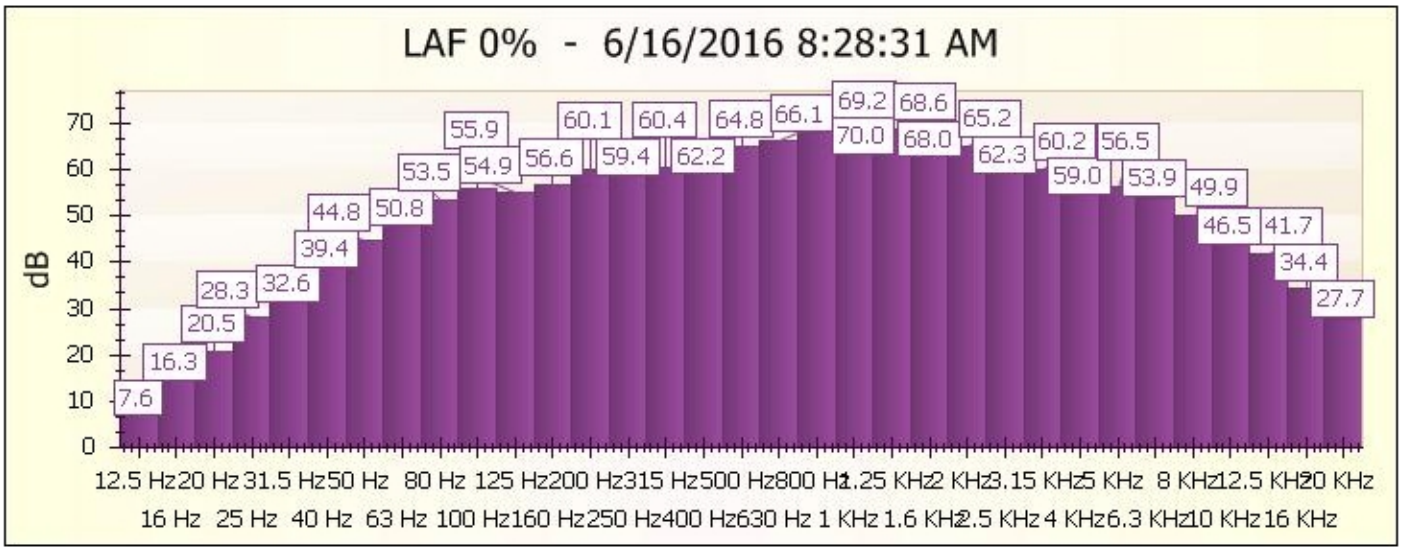
68.0
66.9
68.0
63.8
60.7
58.5
57.2
54.7
52.0
48.0
44.6
39.8
32.5
25.8
12.5 Hz 16 Hz
20 Hz 25 Hz
31.5 Hz 40 Hz
50 Hz 63 Hz
80 Hz 100 Hz
125 Hz 160 Hz
200 Hz 250 Hz
315 Hz 400 Hz
500 Hz 630 Hz
800 Hz 1 KHz
1.25 KHz 1.6 KHz
2 KHz 2.5 KHz
3.15 KHz 4 KHz
5 KHz 6.3 KHz
8 KHz 10 KHz
12.5 KHz 16 KHz
20 KHz

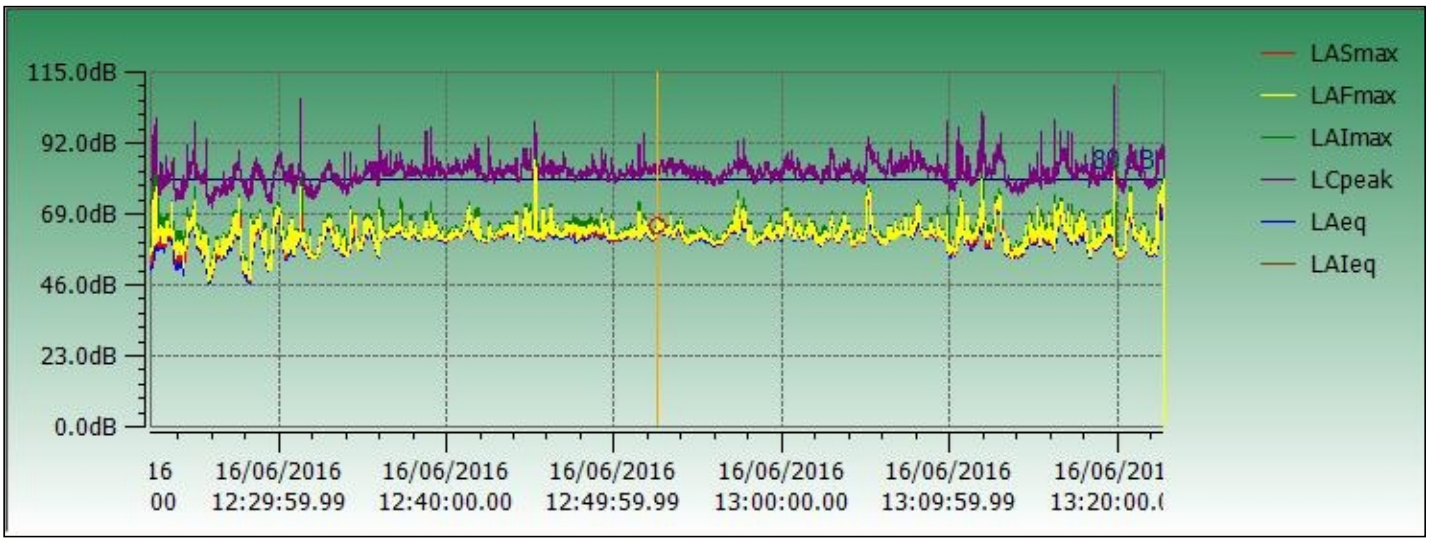

LAF 10% - 6/16/2016 8:28:31 AM
dB
0
10
20
30
40
50
60
70
4.6
12.3
17.5
27.3
30.6
37.4
42.8
48.8
50.5
51.9
52.9
55.6
58.1
58.4
59.4
61.2
63.8
65.1
68.2
69.0
67.6
67.0
64.2
61.3
59.2
57.0
54.5
51.9
47.9
43.5
38.7
31.4
24.7
12.5 Hz 16 Hz
20 Hz 25 Hz
31.5 Hz 40 Hz
50 Hz 63 Hz
80 Hz 100 Hz
125 Hz 160 Hz
200 Hz 250 Hz
315 Hz 400 Hz
500 Hz 630 Hz
800 Hz 1 KHz
1.25 KHz 1.6 KHz
2 KHz 2.5 KHz
3.15 KHz 4 KHz
5 KHz 6.3 KHz
8 KHz 10 KHz
12.5 KHz 16 KHz
20 KHz

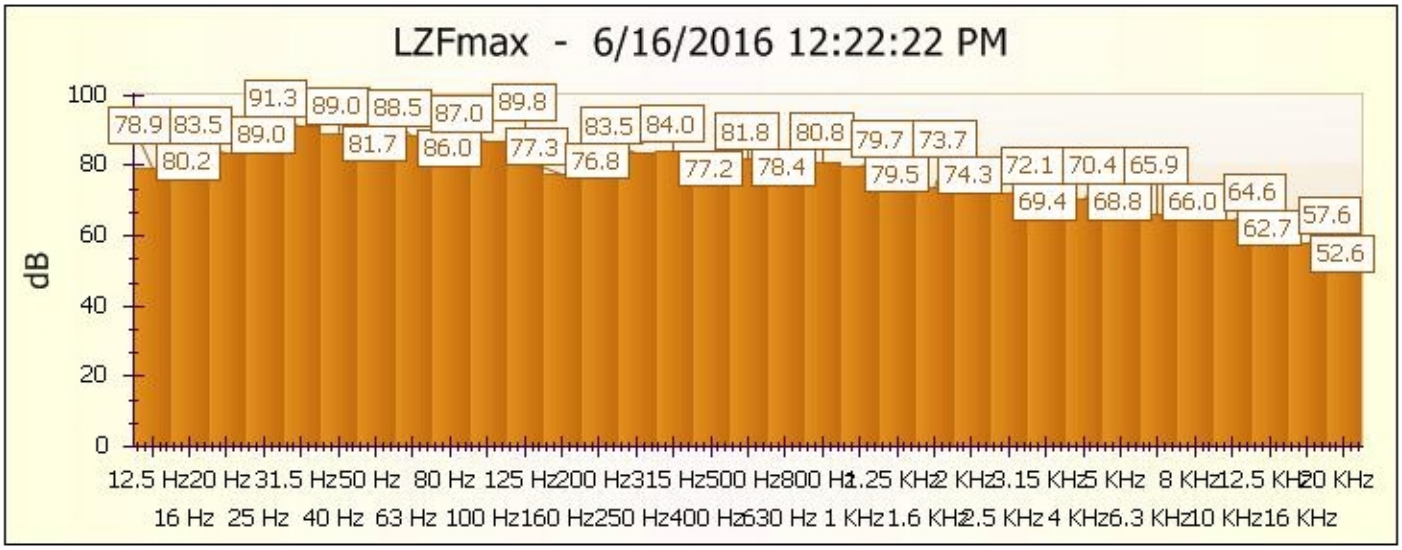

LAF 50% - 6/16/2016 8:28:31 AM
dB
0.0 3.3 11.5 19.3 25.6 31.4 36.8 40.8 44.9 43.5 46.9 49.6 53.1 54.4 54.4 56.2 57.8 60.1 62.2 64.0 62.6 62.0 59.2 56.3 54.2 52.0 49.5 45.9 41.9 36.5 29.7 22.4 14.7
12.5 Hz 16 Hz 20 Hz 25 Hz 31.5 Hz 40 Hz 50 Hz 63 Hz 80 Hz 100 Hz 125 Hz 160 Hz 200 Hz 250 Hz 315 Hz 400 Hz 500 Hz 630 Hz 800 Hz 1 KHz 1.25 KHz 1.6 KHz 2 KHz 2.5 KHz 3.15 KHz 4 KHz 5 KHz 6.3 KHz 8 KHz 10 KHz 12.5 KHz 16 KHz 20 KHz

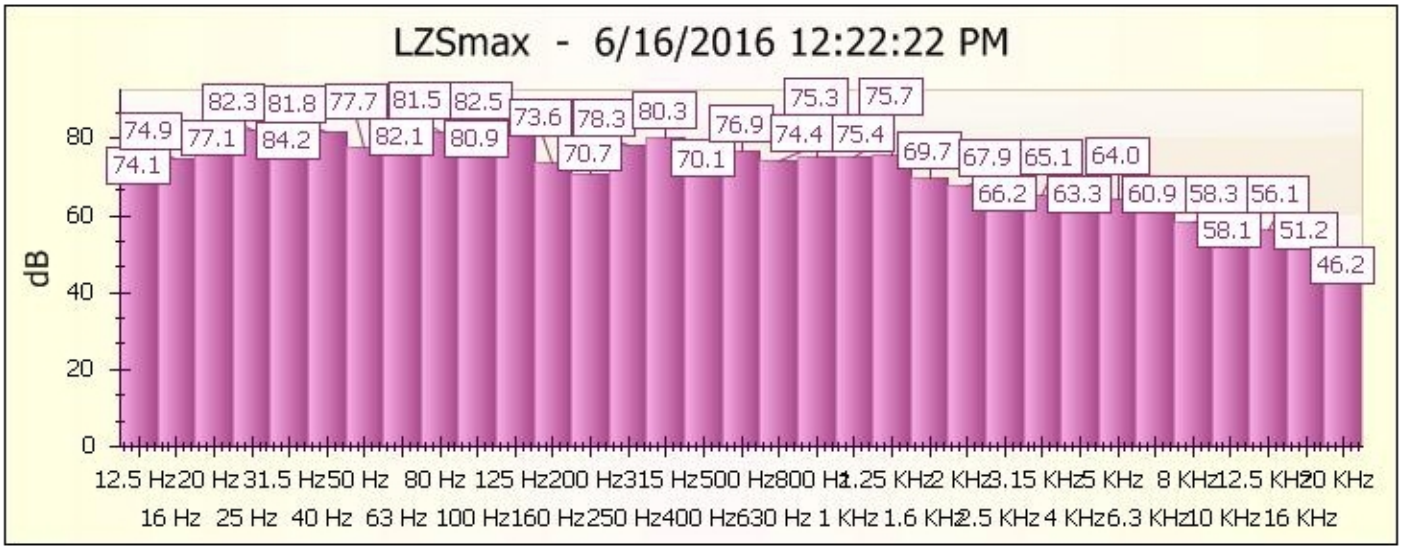

LAF 95% - 6/16/2016 8:28:31 AM
dB
0.0 0.0 5.5 14.3 18.6 23.4 30.8 35.8 37.5 39.9 38.9 41.6 42.1 44.4 42.4 45.2 45.8 46.1 46.2 48.0 45.0 45.6 43.2 42.3 42.2 40.0 35.5 31.9 26.9 21.5 14.7 9.4 2.7
12.5 Hz 16 Hz 20 Hz 25 Hz 31.5 Hz 40 Hz 50 Hz 63 Hz 80 Hz 100 Hz 125 Hz 160 Hz 200 Hz 250 Hz 315 Hz 400 Hz 500 Hz 630 Hz 800 Hz 1 KHz 1.25 KHz 1.6 KHz 2 KHz 2.5 KHz 3.15 KHz 4 KHz 5 KHz 6.3 KHz 8 KHz 10 KHz 12.5 KHz 16 KHz 20 KHz

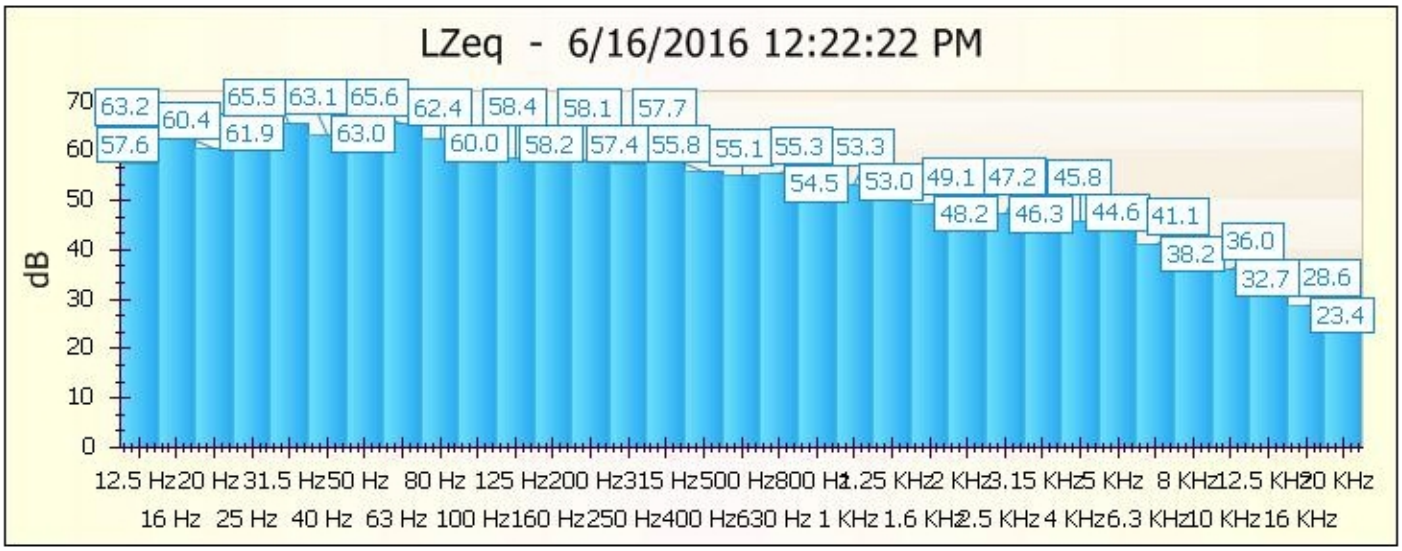

LAF 0% - 6/16/2016 8:28:31 AM
dB
7.6 16.3 20.5 28.3 32.6 39.4 44.8 50.8 53.5 54.9 55.9 56.6 60.1 59.4 60.4 62.2 64.8 66.1 70.0 69.2 68.6 68.0 65.2 62.3 60.2 59.0 56.5 53.9 49.9 46.5 41.7 34.4 27.7
12.5 Hz 16 Hz 20 Hz 25 Hz 31.5 Hz 40 Hz 50 Hz 63 Hz 80 Hz 100 Hz 125 Hz 160 Hz 200 Hz 250 Hz 315 Hz 400 Hz 500 Hz 630 Hz 800 Hz 1 KHz 1.25 KHz 1.6 KHz 2 KHz 2.5 KHz 3.15 KHz 4 KHz 5 KHz 6.3 KHz 8 KHz 10 KHz 12.5 KHz 16 KHz 20 KHz

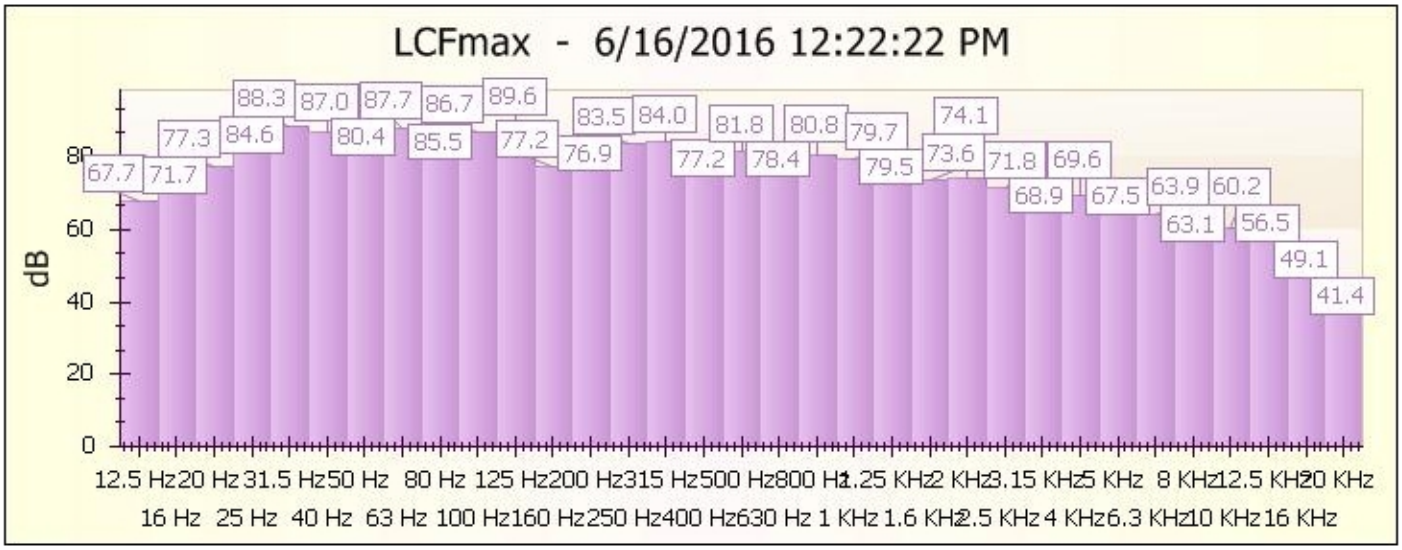
Instrument Model	CEL-633C		
Overload	No	Evening Start	19
Battery Low	No	Night Start	23
Duration	01:00:24 HH:MM:SS	Day Penalty	0.000000000
End Date & Time	6/16/2016 1:22:46 PM	Evening Penalty	5.000000000
Pause Duration	00:00:01 HH:MM:SS	Night Penalty	10.000000000
Response	Random	LAF 10%	65 dB
Run Number	11	LAF 50%	61.5 dB
Serial Number	5044657	LAF 90%	56.5 dB
Site	Unallocated	LAF 95%	55 dB
Location	Unallocated	LAF variable%	66.5 dB
Person	Unallocated	LCpeak	110.5 dB
Process	Unallocated	LCpeak with Time	110.5 dB (6/16/2016 1:19:46 PM)
Result	Cumulative	Start Date & Time	6/16/2016 12:22:22 PM
LAFmax	86.6 dB	LAE	98.5 dB
LAFmax with Time	86.6 dB (6/16/2016 12:45:18 PM)	LAeq	62.9 dB
LAFmin	44.8 dB	LAleq	65.4 dB
LAFmin with Time	44.8 dB (6/16/2016 12:25:47 PM)	LCeq	72.3 dB
LAImax	87.4 dB	LCeq-LAeq	9.4 dB
LAImax with Time	87.4 dB (6/16/2016 12:45:18 PM)	Lepd(Projected)	62.9 dB
LAImin	46.8 dB	Lex8h(Projected)	62.9 dB
LAImin with Time	46.8 dB (6/16/2016 12:28:12 PM)	LZeq	74.2 dB
LDN	0	Lepd	53.9 dB
LDEN	0	Lex8h	53.9 dB
CNEL	0		
Day Start	7		
Notes			

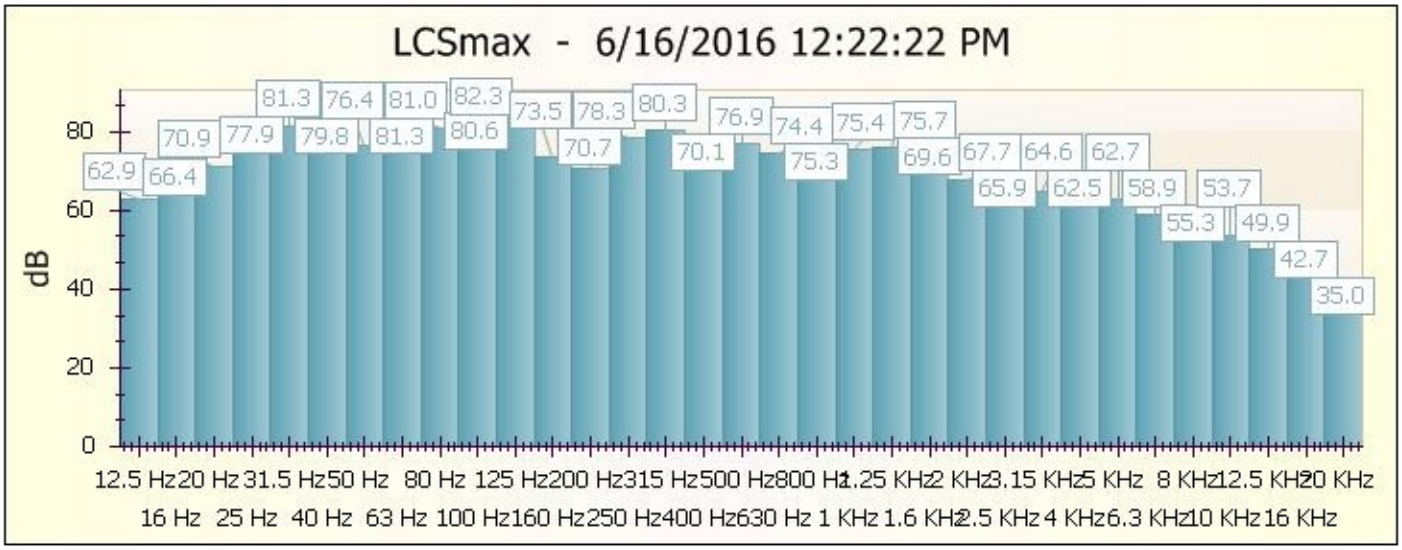


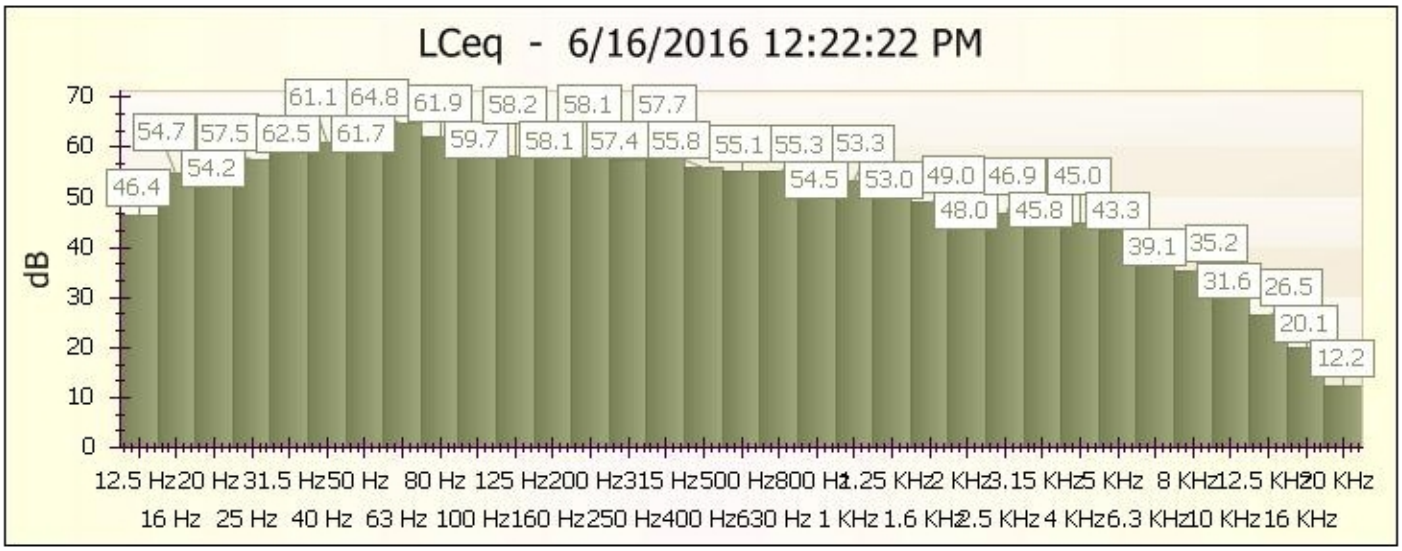

LZFmax - 6/16/2016 12:22:22 PM
dB
100
80
60
40
20
0
78.9 83.5 91.3 89.0 88.5 87.0 89.8 83.5 84.0 81.8 80.8 79.7 73.7 72.1 70.4 65.9 64.6 57.6
80.2 89.0 81.7 86.0 77.3 76.8 77.2 78.4 79.5 74.3 69.4 68.8 66.0 62.7 52.6
12.5 Hz 20 Hz 31.5 Hz 50 Hz 80 Hz 125 Hz 200 Hz 315 Hz 500 Hz 800 Hz 1.25 KHz 2 KHz 3.15 KHz 5 KHz 8 KHz 12.5 KHz 20 KHz
16 Hz 25 Hz 40 Hz 63 Hz 100 Hz 160 Hz 250 Hz 400 Hz 630 Hz 1 KHz 1.6 KHz 2.5 KHz 4 KHz 6.3 KHz 10 KHz 16 KHz

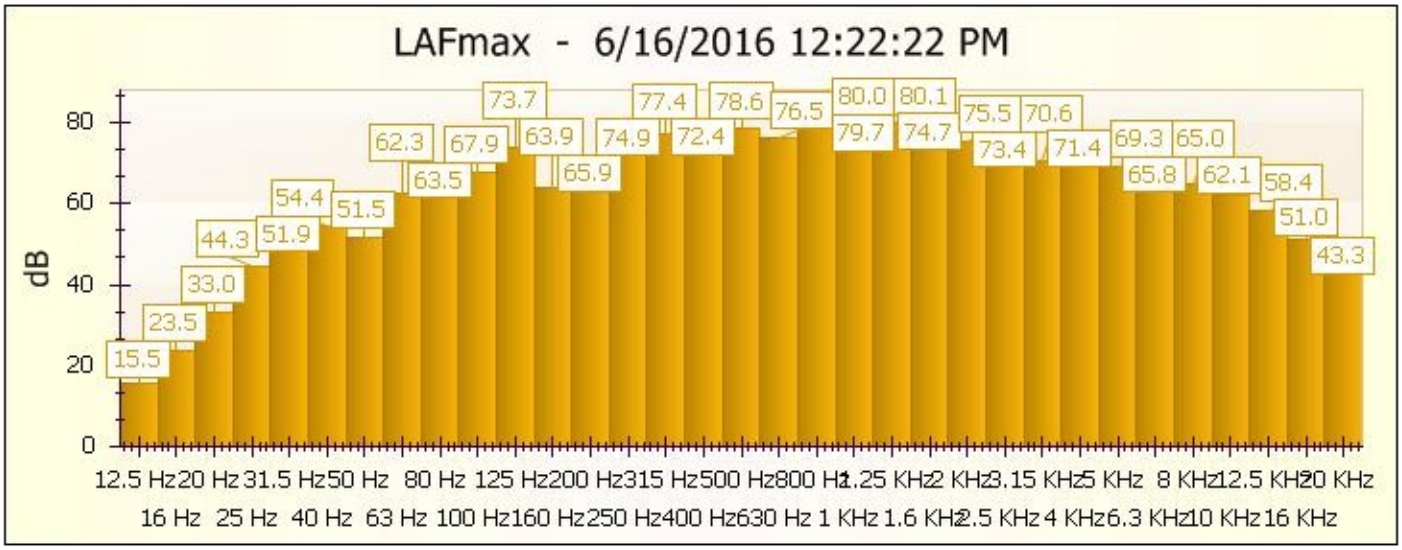

LZSmax - 6/16/2016 12:22:22 PM
dB
80
60
40
20
0
74.9 82.3 81.8 77.7 81.5 82.5 73.6 78.3 80.3 76.9 75.3 75.7 69.7 67.9 65.1 64.0 58.3 56.1
74.1 77.1 84.2 82.1 80.9 70.7 70.1 74.4 75.4 66.2 63.3 60.9 58.1 51.2 46.2
12.5 Hz 20 Hz 31.5 Hz 50 Hz 80 Hz 125 Hz 200 Hz 315 Hz 500 Hz 800 Hz 1.25 KHz 2 KHz 3.15 KHz 5 KHz 8 KHz 12.5 KHz 20 KHz
16 Hz 25 Hz 40 Hz 63 Hz 100 Hz 160 Hz 250 Hz 400 Hz 630 Hz 1 KHz 1.6 KHz 2.5 KHz 4 KHz 6.3 KHz 10 KHz 16 KHz

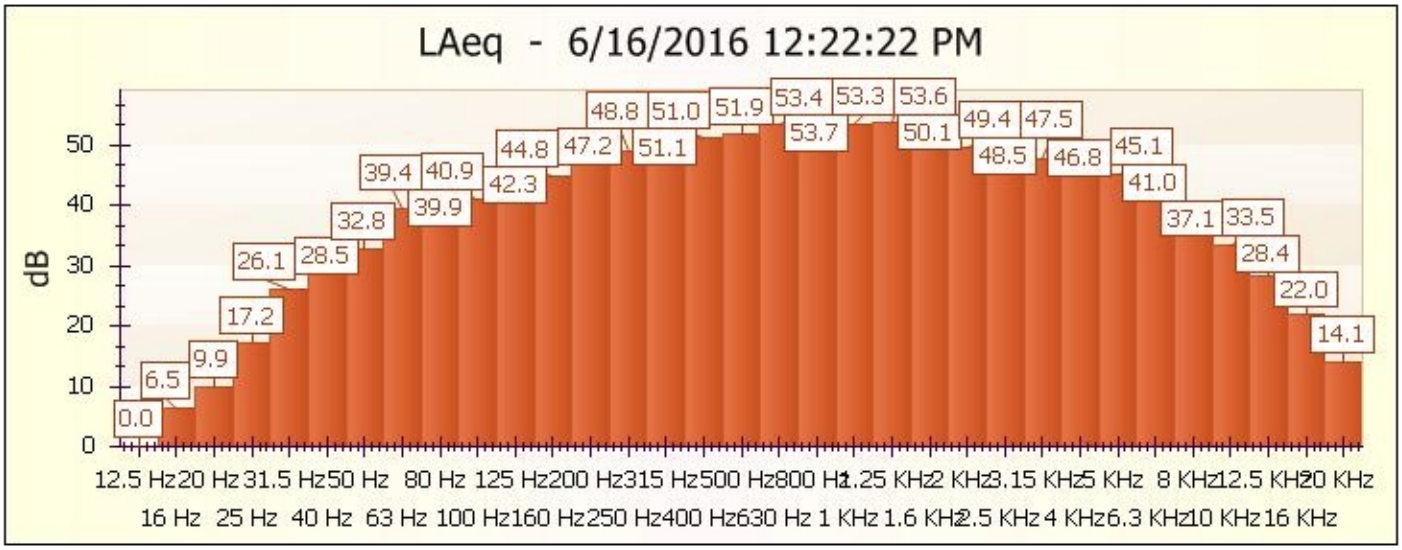

LZeq - 6/16/2016 12:22:22 PM
dB
70
60
50
40
30
20
10
0
63.2 65.5 63.1 65.6 62.4 58.4 58.1 57.7 55.1 55.3 53.3 49.1 47.2 45.8 44.6 41.1 36.0 28.6
60.4 61.9 63.0 60.0 58.2 57.4 55.8 54.5 53.0 48.2 46.3 38.2 32.7 23.4
57.6
12.5 Hz 20 Hz 31.5 Hz 50 Hz 80 Hz 125 Hz 200 Hz 315 Hz 500 Hz 800 Hz 1.25 KHz 2 KHz 3.15 KHz 5 KHz 8 KHz 12.5 KHz 20 KHz
16 Hz 25 Hz 40 Hz 63 Hz 100 Hz 160 Hz 250 Hz 400 Hz 630 Hz 1 KHz 1.6 KHz 2.5 KHz 4 KHz 6.3 KHz 10 KHz 16 KHz

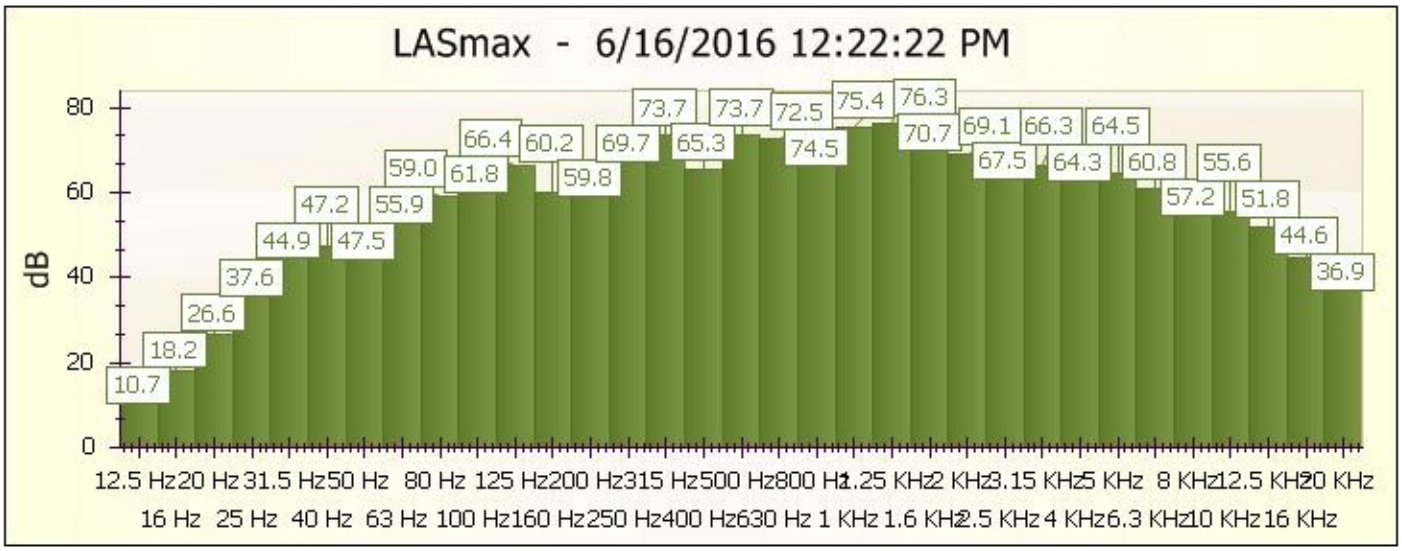

LCFmax - 6/16/2016 12:22:22 PM
dB
0
20
40
60
80
67.7 71.7 77.3 84.6 88.3 87.0 87.7 86.7 89.6 80.4 85.5 77.2 76.9 83.5 84.0 77.2 78.4 81.8 80.8 79.7 79.5 74.1 73.6 71.8 69.6 68.9 67.5 63.9 60.2 63.1 56.5 49.1 41.4
12.5 Hz 16 Hz
20 Hz 25 Hz
31.5 Hz 40 Hz
50 Hz 63 Hz
80 Hz 100 Hz
125 Hz 160 Hz
200 Hz 250 Hz
315 Hz 400 Hz
500 Hz 630 Hz
800 Hz 1 KHz
1.25 KHz 1.6 KHz
2 KHz 2.5 KHz
3.15 KHz 4 KHz
5 KHz 6.3 KHz
8 KHz 10 KHz
12.5 KHz 16 KHz
20 KHz

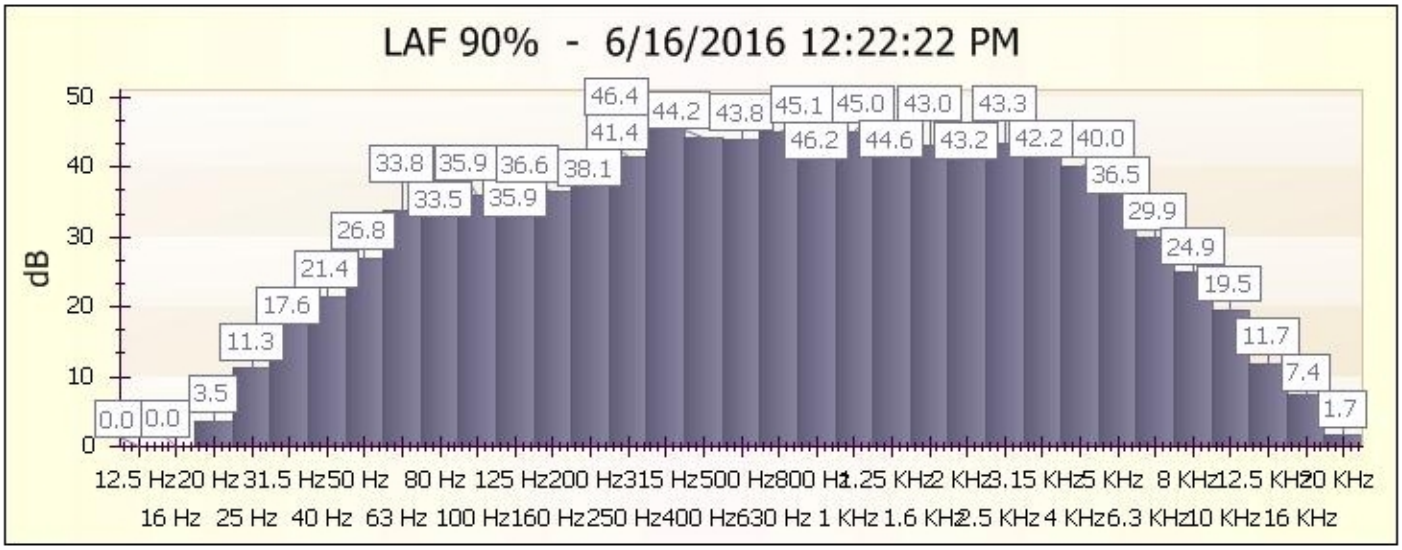

LCSmax - 6/16/2016 12:22:22 PM
dB
0
20
40
60
80
62.9 66.4 70.9 77.9 81.3 76.4 79.8 81.0 81.3 82.3 80.6 73.5 70.7 78.3 80.3 70.1 76.9 74.4 75.3 75.4 75.7 69.6 67.7 65.9 64.6 62.5 62.7 58.9 53.7 55.3 49.9 42.7 35.0
12.5 Hz 16 Hz
20 Hz 25 Hz
31.5 Hz 40 Hz
50 Hz 63 Hz
80 Hz 100 Hz
125 Hz 160 Hz
200 Hz 250 Hz
315 Hz 400 Hz
500 Hz 630 Hz
800 Hz 1 KHz
1.25 KHz 1.6 KHz
2 KHz 2.5 KHz
3.15 KHz 4 KHz
5 KHz 6.3 KHz
8 KHz 10 KHz
12.5 KHz 16 KHz
20 KHz

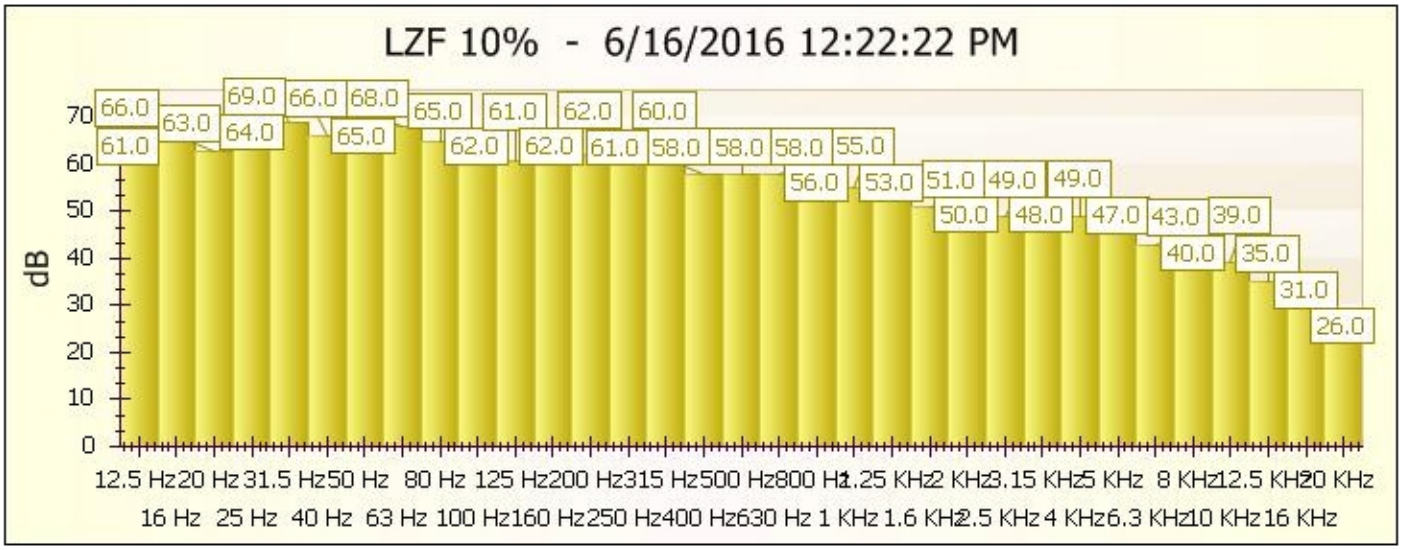

LCeq - 6/16/2016 12:22:22 PM
dB
0
10
20
30
40
50
60
70
46.4 54.7 57.5 62.5 61.7 54.2 61.1 64.8 61.9 59.7 58.2 58.1 57.7 58.1 57.4 55.8 55.1 55.3 53.3 54.5 53.0 49.0 48.0 46.9 45.8 45.0 43.3 39.1 35.2 31.6 26.5 20.1 12.2
12.5 Hz 16 Hz
20 Hz 25 Hz
31.5 Hz 40 Hz
50 Hz 63 Hz
80 Hz 100 Hz
125 Hz 160 Hz
200 Hz 250 Hz
315 Hz 400 Hz
500 Hz 630 Hz
800 Hz 1 KHz
1.25 KHz 1.6 KHz
2 KHz 2.5 KHz
3.15 KHz 4 KHz
5 KHz 6.3 KHz
8 KHz 10 KHz
12.5 KHz 16 KHz
20 KHz

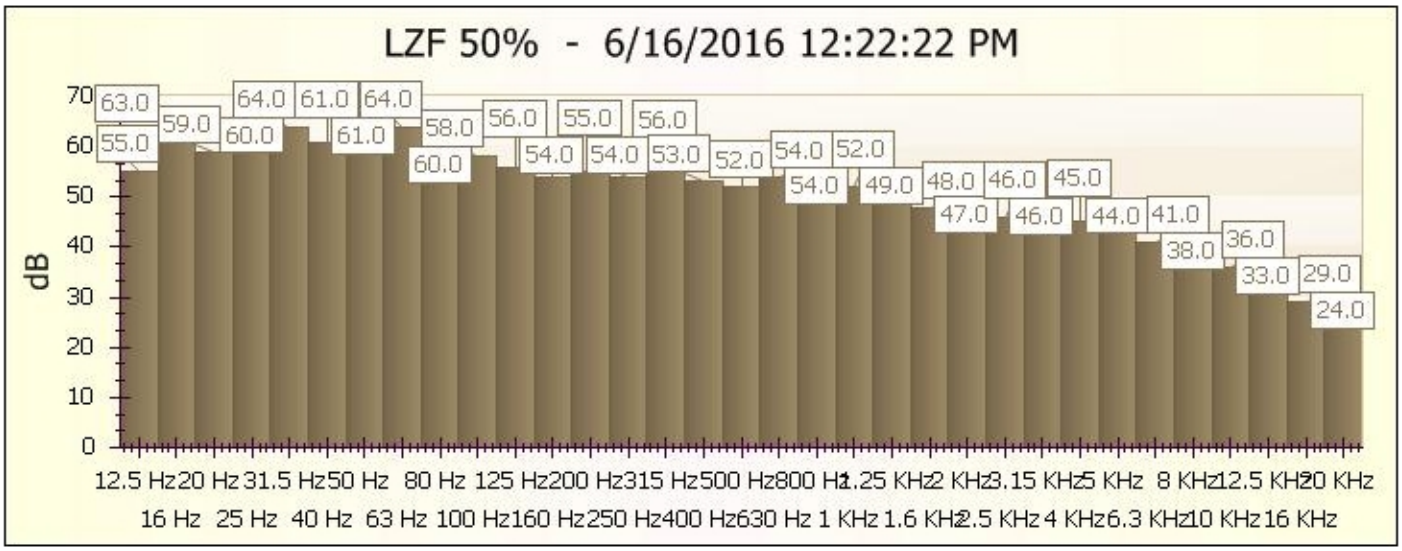

LAFmax - 6/16/2016 12:22:22 PM
dB
0
20
40
60
80
12.5 Hz 20 Hz 31.5 Hz 50 Hz 80 Hz 125 Hz 200 Hz 315 Hz 500 Hz 800 Hz 1.25 KHz 2 KHz 3.15 KHz 5 KHz 8 KHz 12.5 KH 20 KHz
16 Hz 25 Hz 40 Hz 63 Hz 100 Hz 160 Hz 250 Hz 400 Hz 630 Hz 1 KHz 1.6 KHz 2.5 KHz 4 KHz 6.3 KHz 10 KHz 16 KHz
15.5 23.5 33.0 44.3 51.9 54.4 51.5 62.3 63.5 67.9 73.7 63.9 65.9 74.9 77.4 72.4 78.6 76.5 80.0 79.7 80.1 74.7 75.5 73.4 70.6 71.4 69.3 65.8 65.0 62.1 58.4 51.0 43.3

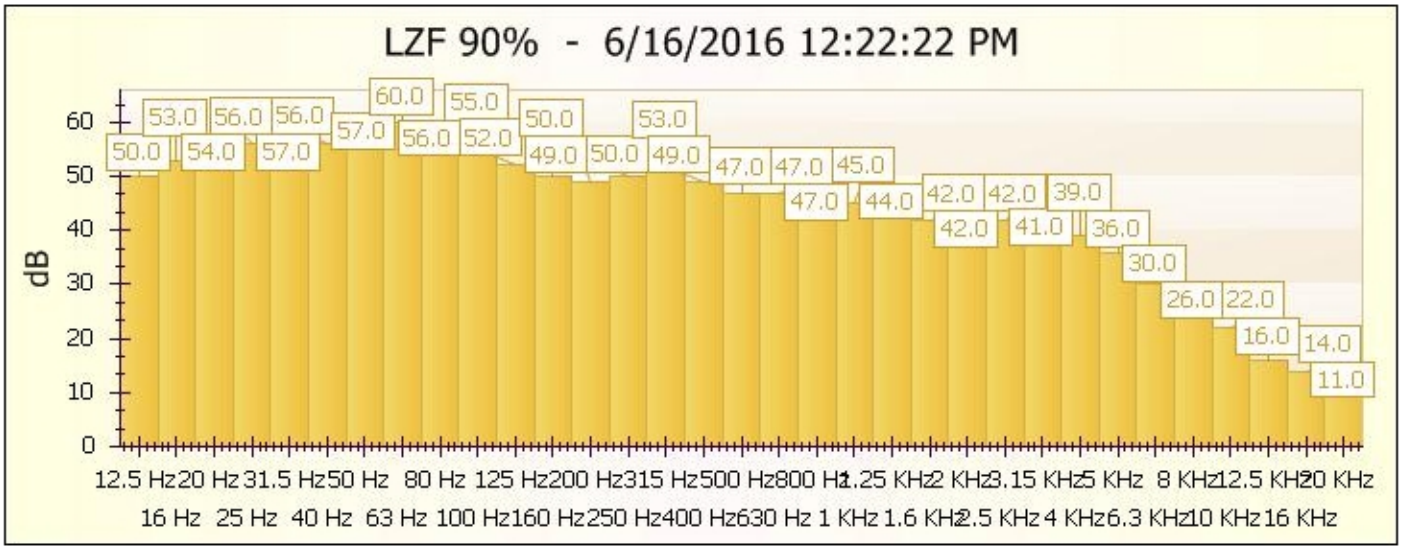

LAeq - 6/16/2016 12:22:22 PM
dB
0
10
20
30
40
50
12.5 Hz 20 Hz 31.5 Hz 50 Hz 80 Hz 125 Hz 200 Hz 315 Hz 500 Hz 800 Hz 1.25 KHz 2 KHz 3.15 KHz 5 KHz 8 KHz 12.5 KH 20 KHz
16 Hz 25 Hz 40 Hz 63 Hz 100 Hz 160 Hz 250 Hz 400 Hz 630 Hz 1 KHz 1.6 KHz 2.5 KHz 4 KHz 6.3 KHz 10 KHz 16 KHz
0.0 6.5 9.9 17.2 26.1 28.5 32.8 39.4 39.9 40.9 42.3 44.8 47.2 48.8 51.0 51.1 51.9 53.4 53.7 53.3 53.6 50.1 49.4 48.5 47.5 46.8 45.1 41.0 37.1 33.5 28.4 22.0 14.1

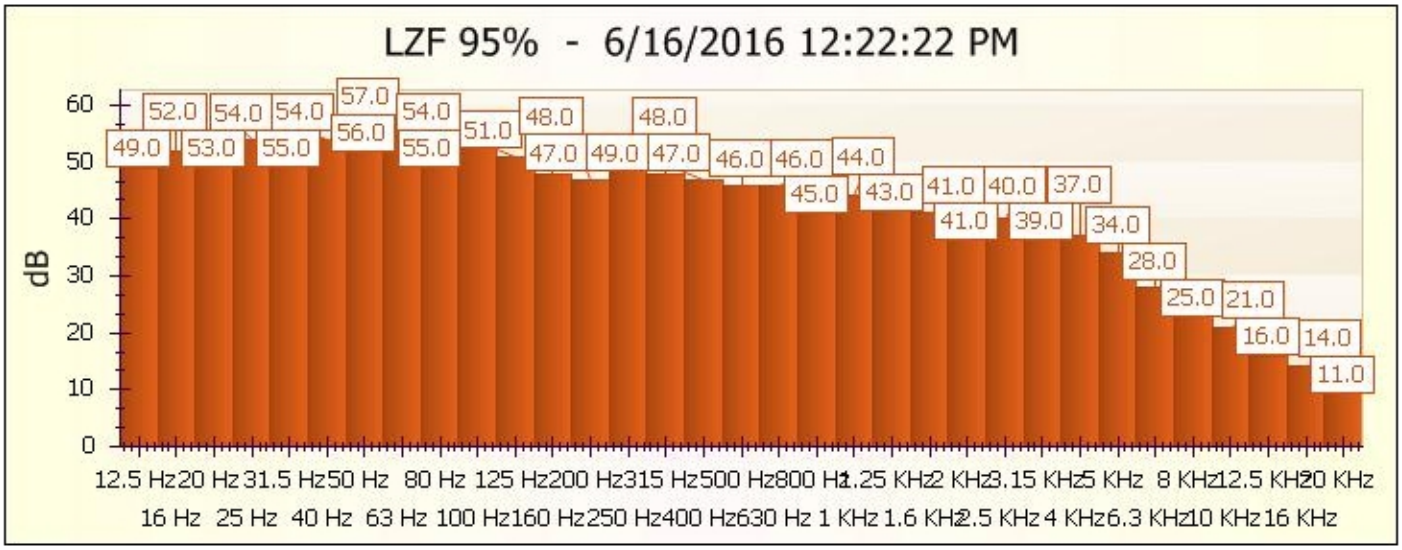

LASmax - 6/16/2016 12:22:22 PM
dB
0
20
40
60
80
12.5 Hz 20 Hz 31.5 Hz 50 Hz 80 Hz 125 Hz 200 Hz 315 Hz 500 Hz 800 Hz 1.25 KHz 2 KHz 3.15 KHz 5 KHz 8 KHz 12.5 KH 20 KHz
16 Hz 25 Hz 40 Hz 63 Hz 100 Hz 160 Hz 250 Hz 400 Hz 630 Hz 1 KHz 1.6 KHz 2.5 KHz 4 KHz 6.3 KHz 10 KHz 16 KHz
10.7 18.2 26.6 37.6 44.9 47.5 47.2 55.9 59.0 61.8 66.4 60.2 59.8 69.7 73.7 65.3 73.7 72.5 74.5 75.4 76.3 70.7 69.1 67.5 66.3 64.3 64.5 60.8 55.6 57.2 51.8 44.6 36.9

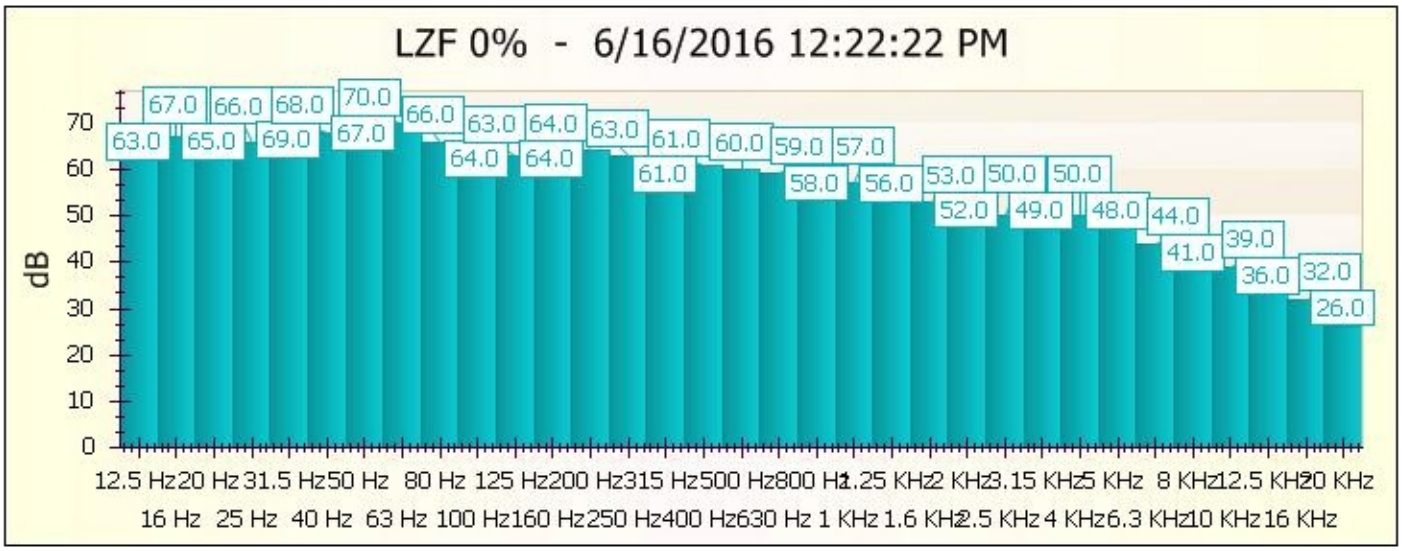

LAF 90% - 6/16/2016 12:22:22 PM
dB
0.0 0.0 3.5 11.3 17.6 21.4 26.8 33.8 33.5 35.9 35.9 36.6 38.1 41.4 46.4 44.2 43.8 45.1 46.2 45.0 44.6 43.0 43.2 43.3 42.2 40.0 36.5 29.9 24.9 19.5 11.7 7.4 1.7
12.5 Hz 16 Hz 20 Hz 25 Hz 31.5 Hz 40 Hz 50 Hz 63 Hz 80 Hz 100 Hz 125 Hz 160 Hz 200 Hz 250 Hz 315 Hz 400 Hz 500 Hz 630 Hz 800 Hz 1 KHz 1.25 KHz 1.6 KHz 2 KHz 2.5 KHz 3.15 KHz 4 KHz 5 KHz 6.3 KHz 8 KHz 10 KHz 12.5 KHz 16 KHz 20 KHz

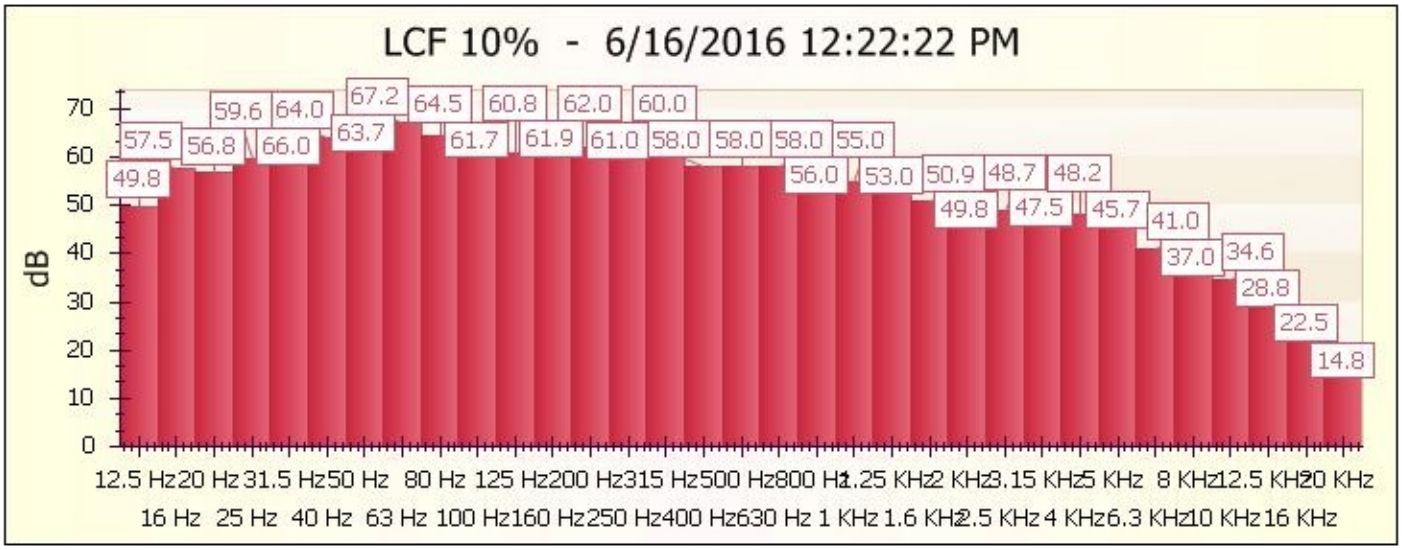

LZF 10% - 6/16/2016 12:22:22 PM
dB
66.0 63.0 61.0 69.0 64.0 66.0 65.0 68.0 65.0 62.0 61.0 62.0 62.0 60.0 61.0 58.0 58.0 58.0 56.0 55.0 53.0 51.0 50.0 49.0 48.0 49.0 47.0 43.0 40.0 39.0 35.0 31.0 26.0
12.5 Hz 16 Hz 20 Hz 25 Hz 31.5 Hz 40 Hz 50 Hz 63 Hz 80 Hz 100 Hz 125 Hz 160 Hz 200 Hz 250 Hz 315 Hz 400 Hz 500 Hz 630 Hz 800 Hz 1 KHz 1.25 KHz 1.6 KHz 2 KHz 2.5 KHz 3.15 KHz 4 KHz 5 KHz 6.3 KHz 8 KHz 10 KHz 12.5 KHz 16 KHz 20 KHz

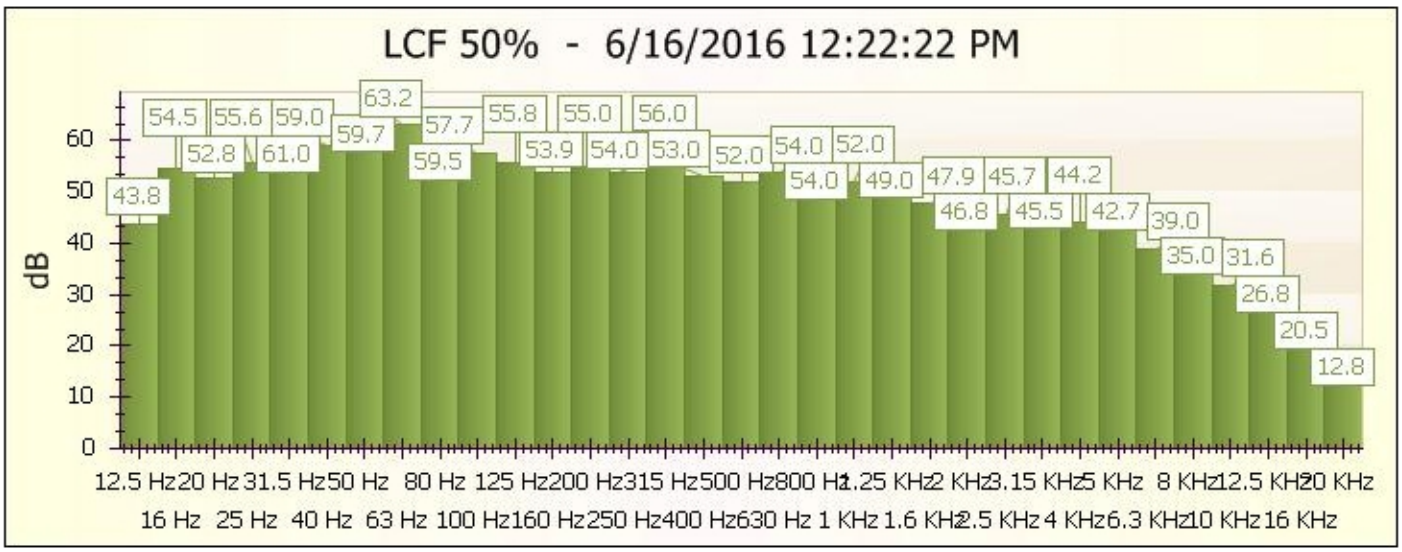

LZF 50% - 6/16/2016 12:22:22 PM
dB
63.0 59.0 55.0 64.0 60.0 61.0 64.0 61.0 58.0 60.0 56.0 55.0 54.0 56.0 54.0 54.0 53.0 52.0 54.0 52.0 54.0 49.0 48.0 47.0 46.0 46.0 45.0 44.0 41.0 38.0 36.0 33.0 29.0 24.0
12.5 Hz 16 Hz 20 Hz 25 Hz 31.5 Hz 40 Hz 50 Hz 63 Hz 80 Hz 100 Hz 125 Hz 160 Hz 200 Hz 250 Hz 315 Hz 400 Hz 500 Hz 630 Hz 800 Hz 1 KHz 1.25 KHz 1.6 KHz 2 KHz 2.5 KHz 3.15 KHz 4 KHz 5 KHz 6.3 KHz 8 KHz 10 KHz 12.5 KHz 16 KHz 20 KHz

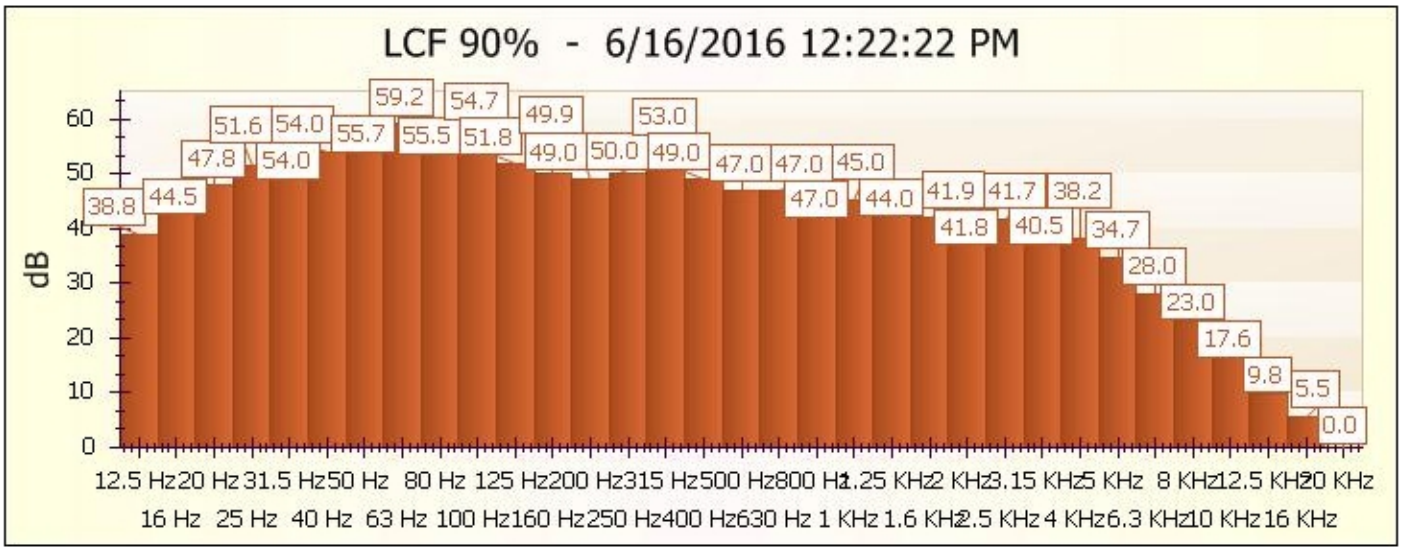

LZF 90% - 6/16/2016 12:22:22 PM
dB
60
50
40
30
20
10
0
53.0 56.0 56.0 60.0 55.0 50.0 53.0
50.0 54.0 57.0 57.0 56.0 52.0 49.0 50.0 49.0 47.0 47.0 45.0
47.0 44.0 42.0 42.0 39.0
42.0 41.0 36.0
30.0
26.0 22.0
16.0 14.0
11.0
12.5 Hz 20 Hz 31.5 Hz 50 Hz 80 Hz 125 Hz 200 Hz 315 Hz 500 Hz 800 Hz 1.25 KHz 2 KHz 3.15 KHz 5 KHz 8 KHz 12.5 KHz 20 KHz
16 Hz 25 Hz 40 Hz 63 Hz 100 Hz 160 Hz 250 Hz 400 Hz 630 Hz 1 KHz 1.6 KHz 2.5 KHz 4 KHz 6.3 KHz 10 KHz 16 KHz

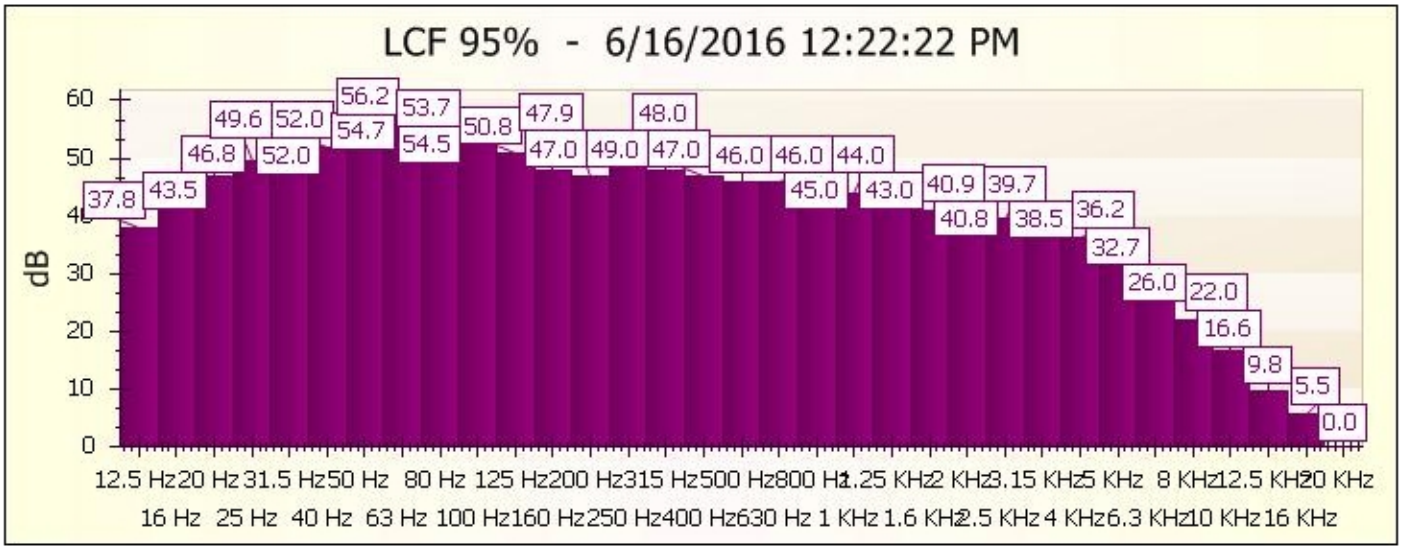

LZF 95% - 6/16/2016 12:22:22 PM
dB
60
50
40
30
20
10
0
52.0 54.0 54.0 57.0 54.0 51.0 48.0 48.0
49.0 53.0 55.0 56.0 55.0 47.0 49.0 47.0 46.0 46.0 44.0
45.0 43.0 41.0 40.0 37.0
41.0 39.0 34.0
28.0
25.0 21.0
16.0 14.0
11.0
12.5 Hz 20 Hz 31.5 Hz 50 Hz 80 Hz 125 Hz 200 Hz 315 Hz 500 Hz 800 Hz 1.25 KHz 2 KHz 3.15 KHz 5 KHz 8 KHz 12.5 KHz 20 KHz
16 Hz 25 Hz 40 Hz 63 Hz 100 Hz 160 Hz 250 Hz 400 Hz 630 Hz 1 KHz 1.6 KHz 2.5 KHz 4 KHz 6.3 KHz 10 KHz 16 KHz

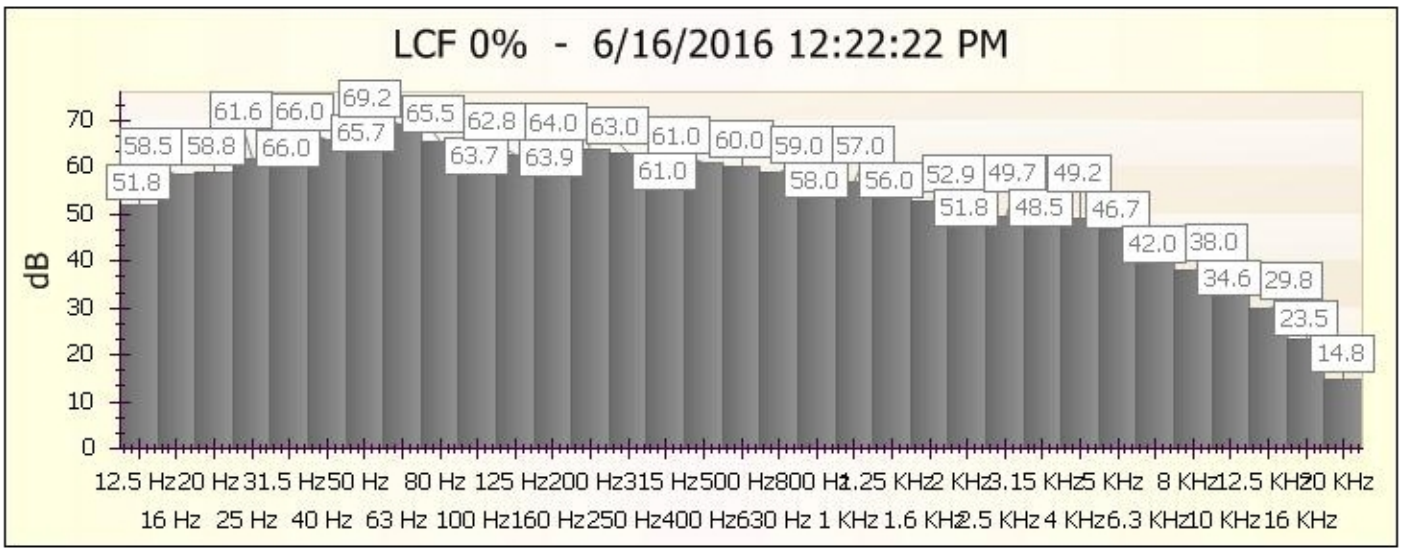

LZF 0% - 6/16/2016 12:22:22 PM
dB
70
60
50
40
30
20
10
0
67.0 66.0 68.0 70.0 66.0 63.0 64.0 63.0 61.0 60.0 59.0 57.0
63.0 65.0 69.0 67.0 64.0 64.0 61.0 58.0 56.0 53.0 50.0 50.0
52.0 49.0 48.0 44.0 39.0
41.0 36.0 32.0
26.0
12.5 Hz 20 Hz 31.5 Hz 50 Hz 80 Hz 125 Hz 200 Hz 315 Hz 500 Hz 800 Hz 1.25 KHz 2 KHz 3.15 KHz 5 KHz 8 KHz 12.5 KHz 20 KHz
16 Hz 25 Hz 40 Hz 63 Hz 100 Hz 160 Hz 250 Hz 400 Hz 630 Hz 1 KHz 1.6 KHz 2.5 KHz 4 KHz 6.3 KHz 10 KHz 16 KHz

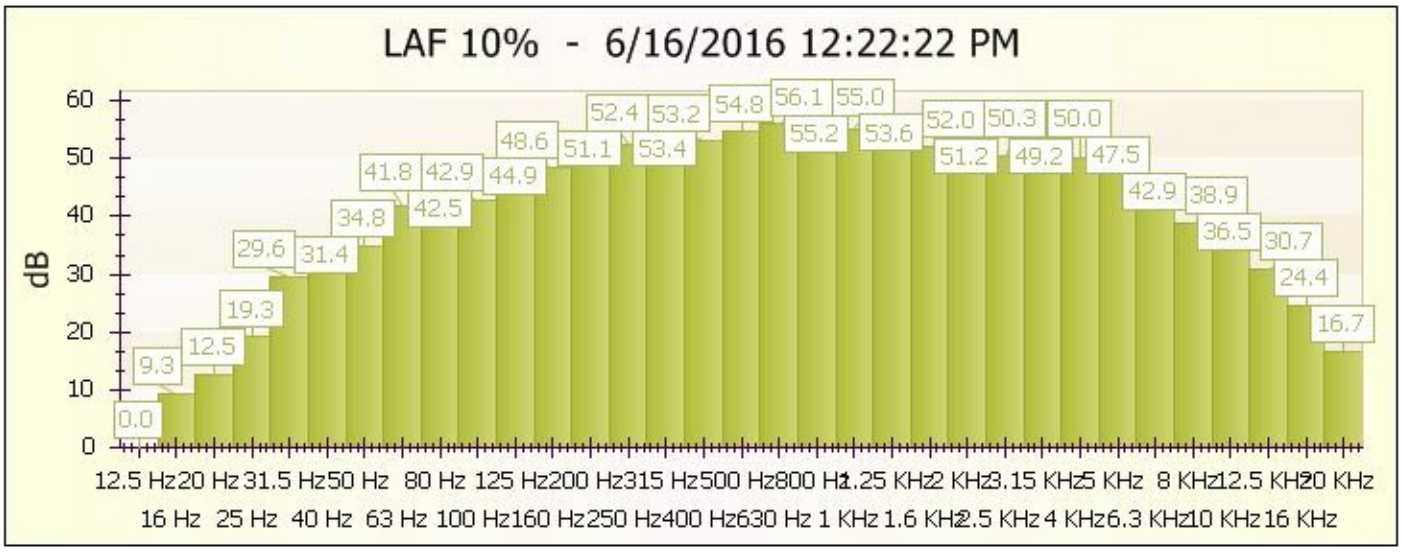

LCF 10% - 6/16/2016 12:22:22 PM
dB
0
10
20
30
40
50
60
70
49.8
57.5
56.8
59.6
64.0
66.0
67.2
63.7
64.5
61.7
60.8
61.9
62.0
61.0
60.0
58.0
58.0
58.0
55.0
56.0
53.0
50.9
49.8
48.7
47.5
48.2
45.7
41.0
37.0
34.6
28.8
22.5
14.8
12.5 Hz 16 Hz
20 Hz 25 Hz
31.5 Hz 40 Hz
50 Hz 63 Hz
80 Hz 100 Hz
125 Hz 160 Hz
200 Hz 250 Hz
315 Hz 400 Hz
500 Hz 630 Hz
800 Hz 1 KHz
1.25 KHz 1.6 KHz
2 KHz 2.5 KHz
3.15 KHz 4 KHz
5 KHz 6.3 KHz
8 KHz 10 KHz
12.5 KHz 16 KHz
20 KHz

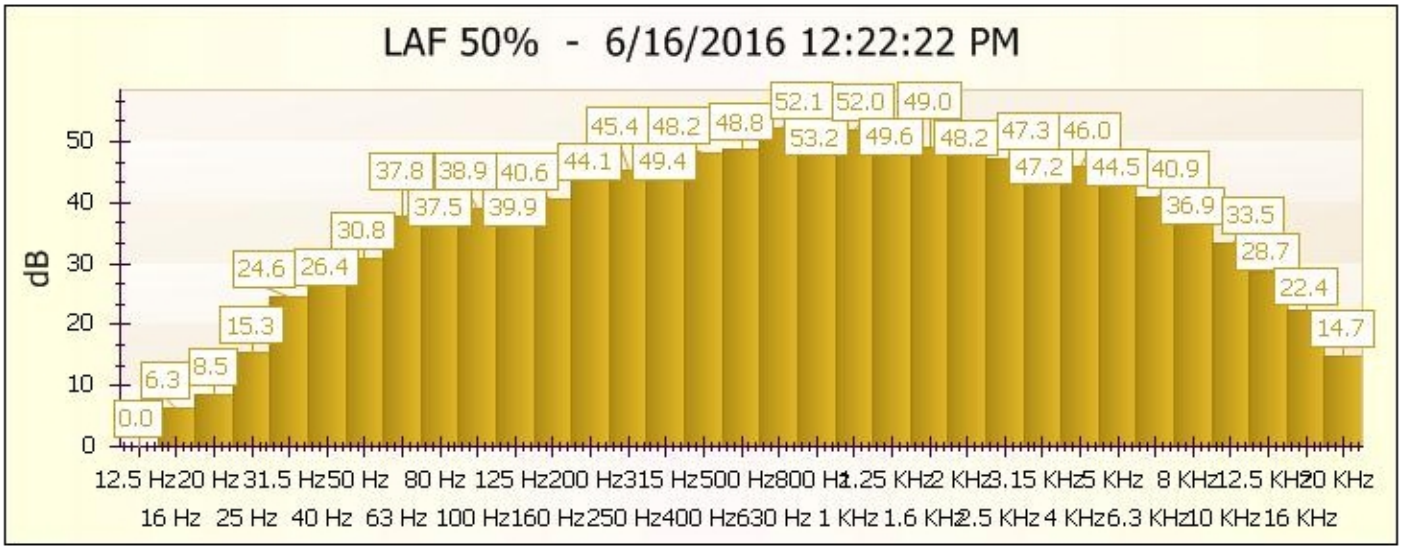

LCF 50% - 6/16/2016 12:22:22 PM
dB
0
10
20
30
40
50
60
43.8
54.5
52.8
55.6
59.0
61.0
63.2
59.7
57.7
59.5
55.8
53.9
55.0
54.0
56.0
53.0
52.0
54.0
52.0
54.0
49.0
47.9
46.8
45.7
45.5
44.2
42.7
39.0
35.0
31.6
26.8
20.5
12.8
12.5 Hz 16 Hz
20 Hz 25 Hz
31.5 Hz 40 Hz
50 Hz 63 Hz
80 Hz 100 Hz
125 Hz 160 Hz
200 Hz 250 Hz
315 Hz 400 Hz
500 Hz 630 Hz
800 Hz 1 KHz
1.25 KHz 1.6 KHz
2 KHz 2.5 KHz
3.15 KHz 4 KHz
5 KHz 6.3 KHz
8 KHz 10 KHz
12.5 KHz 16 KHz
20 KHz

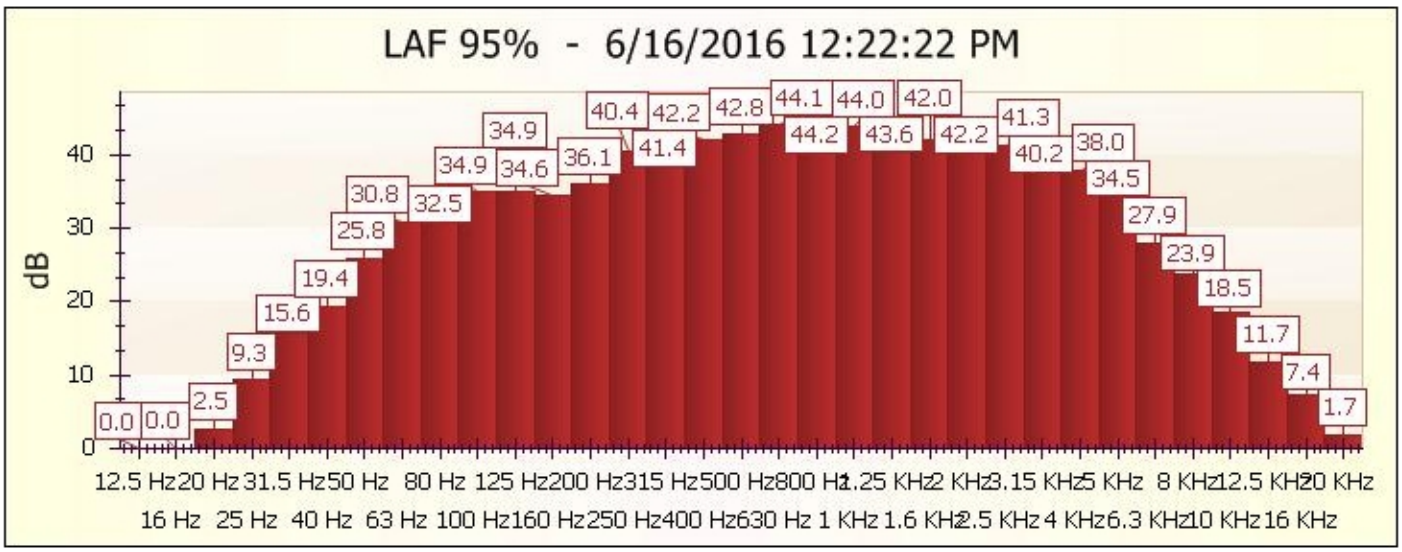

LCF 90% - 6/16/2016 12:22:22 PM
dB
0
10
20
30
40
50
60
38.8
44.5
47.8
51.6
54.0
54.0
59.2
55.7
54.7
55.5
51.8
49.9
49.0
53.0
50.0
49.0
47.0
47.0
45.0
47.0
44.0
41.9
41.8
41.7
40.5
38.2
34.7
28.0
23.0
17.6
9.8
5.5
0.0
12.5 Hz 16 Hz
20 Hz 25 Hz
31.5 Hz 40 Hz
50 Hz 63 Hz
80 Hz 100 Hz
125 Hz 160 Hz
200 Hz 250 Hz
315 Hz 400 Hz
500 Hz 630 Hz
800 Hz 1 KHz
1.25 KHz 1.6 KHz
2 KHz 2.5 KHz
3.15 KHz 4 KHz
5 KHz 6.3 KHz
8 KHz 10 KHz
12.5 KHz 16 KHz
20 KHz

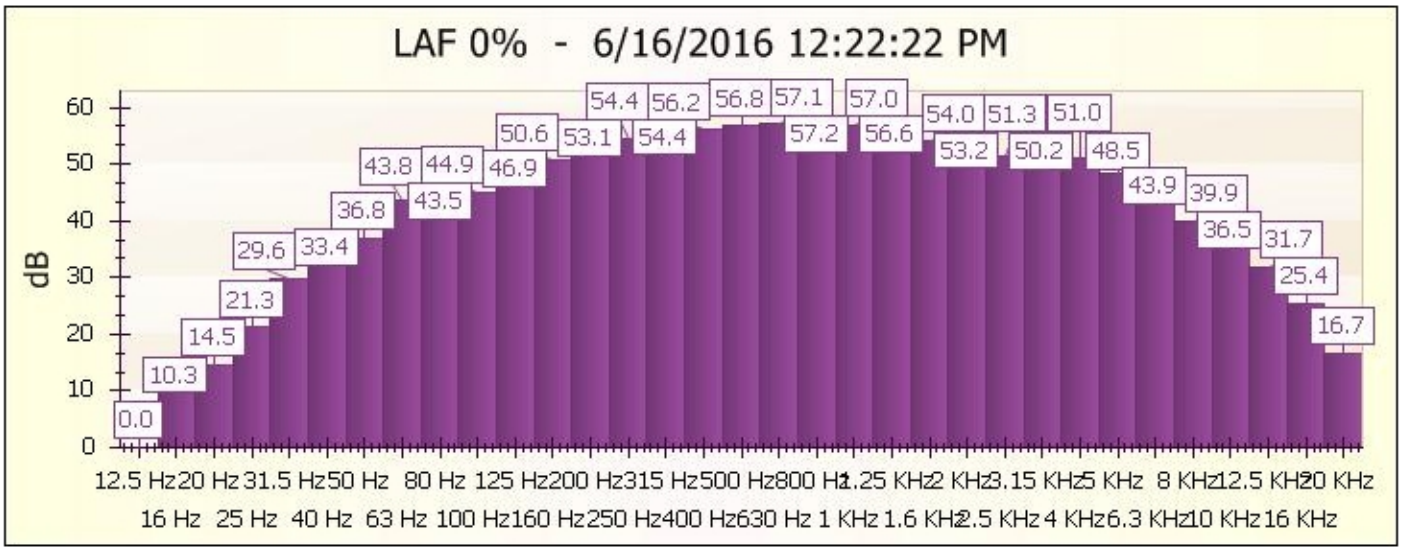

LCF 95% - 6/16/2016 12:22:22 PM
dB
0
10
20
30
40
50
60
37.8
43.5
46.8
49.6
52.0
52.0
54.7
56.2
54.5
53.7
50.8
47.9
47.0
49.0
47.0
48.0
46.0
46.0
45.0
44.0
43.0
40.9
40.8
39.7
38.5
36.2
32.7
26.0
22.0
16.6
9.8
5.5
0.0
12.5 Hz 16 Hz
20 Hz 25 Hz
31.5 Hz 40 Hz
50 Hz 63 Hz
80 Hz 100 Hz
125 Hz 160 Hz
200 Hz 250 Hz
315 Hz 400 Hz
500 Hz 630 Hz
800 Hz 1 KHz
1.25 KHz 1.6 KHz
2 KHz 2.5 KHz
3.15 KHz 4 KHz
5 KHz 6.3 KHz
8 KHz 10 KHz
12.5 KHz 16 KHz
20 KHz


LCF 0% - 6/16/2016 12:22:22 PM
dB
0
10
20
30
40
50
60
70
51.8
58.5
58.8
61.6
66.0
66.0
65.7
69.2
65.5
63.7
62.8
63.9
64.0
63.0
61.0
61.0
60.0
59.0
58.0
57.0
56.0
52.9
51.8
49.7
48.5
49.2
46.7
42.0
38.0
34.6
29.8
23.5
14.8
12.5 Hz 16 Hz
20 Hz 25 Hz
31.5 Hz 40 Hz
50 Hz 63 Hz
80 Hz 100 Hz
125 Hz 160 Hz
200 Hz 250 Hz
315 Hz 400 Hz
500 Hz 630 Hz
800 Hz 1 KHz
1.25 KHz 1.6 KHz
2 KHz 2.5 KHz
3.15 KHz 4 KHz
5 KHz 6.3 KHz
8 KHz 10 KHz
12.5 KHz 16 KHz
20 KHz

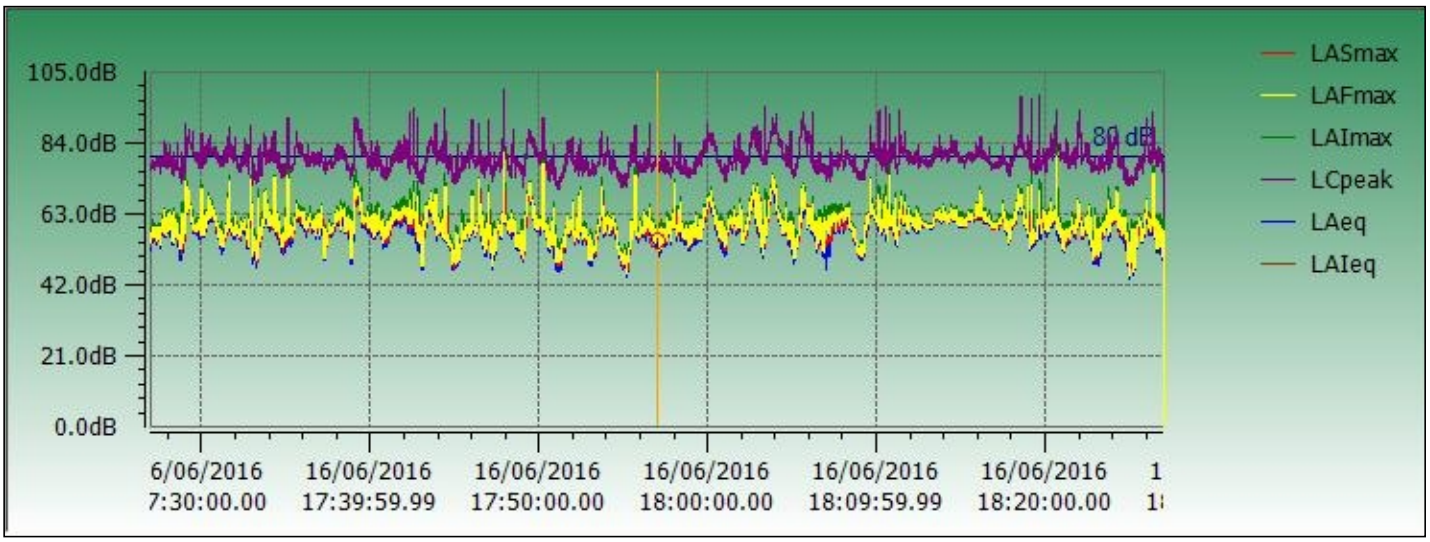

LAF 10% - 6/16/2016 12:22:22 PM
dB
0
10
20
30
40
50
60
0.0
9.3
12.5
19.3
29.6
31.4
34.8
41.8
42.9
42.5
44.9
48.6
51.1
52.4
53.2
53.4
54.8
56.1
55.0
55.2
53.6
52.0
50.3
50.0
51.2
49.2
47.5
42.9
38.9
36.5
30.7
24.4
16.7
12.5 Hz 16 Hz
20 Hz 25 Hz
31.5 Hz 40 Hz
50 Hz 63 Hz
80 Hz 100 Hz
125 Hz 160 Hz
200 Hz 250 Hz
315 Hz 400 Hz
500 Hz 630 Hz
800 Hz 1 KHz
1.25 KHz 1.6 KHz
2 KHz 2.5 KHz
3.15 KHz 4 KHz
5 KHz 6.3 KHz
8 KHz 10 KHz
12.5 KHz 16 KHz
20 KHz

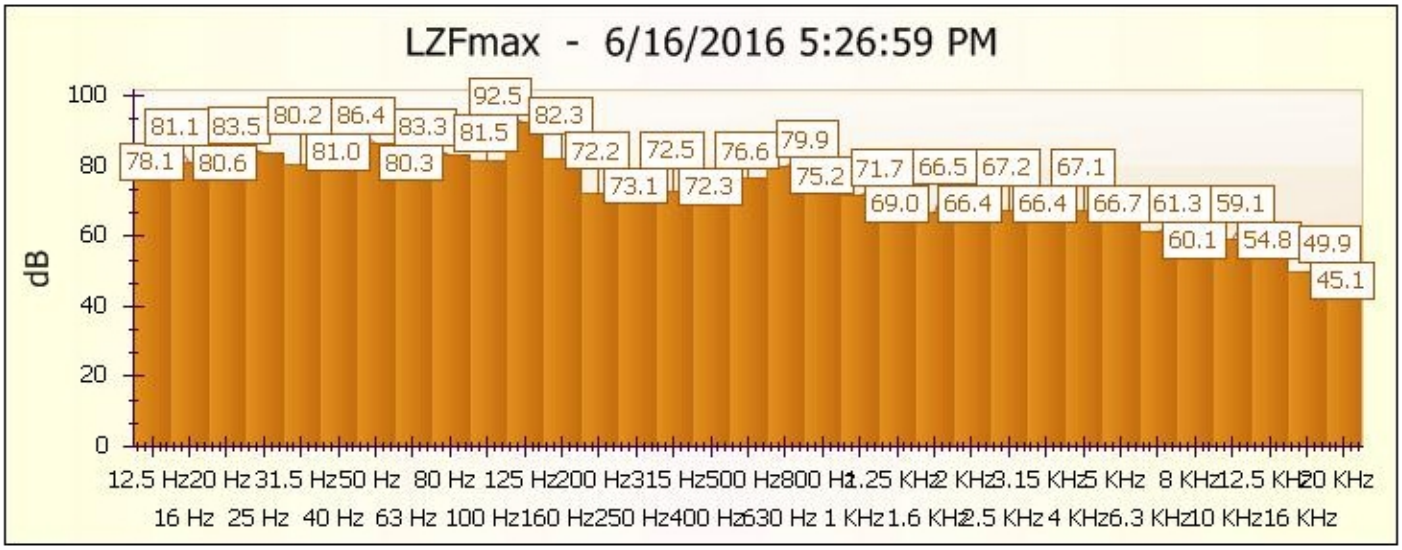

LAF 50% - 6/16/2016 12:22:22 PM
dB
0 10 20 30 40 50
0.0 6.3 8.5 15.3 24.6 26.4 30.8 37.5 37.8 38.9 39.9 40.6 44.1 45.4 48.2 48.8 49.4 52.1 52.0 49.0 53.2 49.6 48.2 47.3 46.0 47.2 44.5 40.9 36.9 33.5 28.7 22.4 14.7
12.5 Hz 16 Hz 20 Hz 25 Hz 31.5 Hz 40 Hz 50 Hz 63 Hz 80 Hz 100 Hz 125 Hz 160 Hz 200 Hz 250 Hz 315 Hz 400 Hz 500 Hz 630 Hz 800 Hz 1 KHz 1.25 KHz 1.6 KHz 2 KHz 2.5 KHz 3.15 KHz 4 KHz 5 KHz 6.3 KHz 8 KHz 10 KHz 12.5 KHz 16 KHz 20 KHz

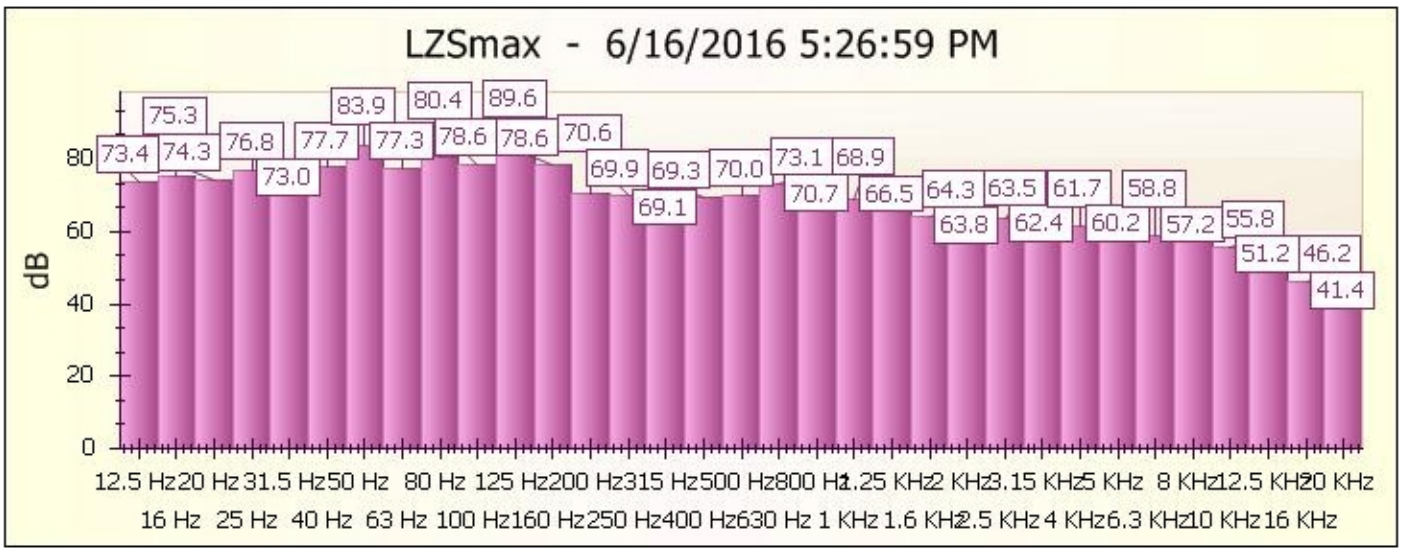

LAF 95% - 6/16/2016 12:22:22 PM
dB
0 10 20 30 40
0.0 0.0 2.5 9.3 15.6 19.4 25.8 30.8 32.5 34.9 34.6 34.9 36.1 40.4 41.4 42.2 42.8 44.1 44.2 44.0 43.6 42.0 42.2 41.3 40.2 38.0 34.5 27.9 23.9 18.5 11.7 7.4 1.7
12.5 Hz 16 Hz 20 Hz 25 Hz 31.5 Hz 40 Hz 50 Hz 63 Hz 80 Hz 100 Hz 125 Hz 160 Hz 200 Hz 250 Hz 315 Hz 400 Hz 500 Hz 630 Hz 800 Hz 1 KHz 1.25 KHz 1.6 KHz 2 KHz 2.5 KHz 3.15 KHz 4 KHz 5 KHz 6.3 KHz 8 KHz 10 KHz 12.5 KHz 16 KHz 20 KHz

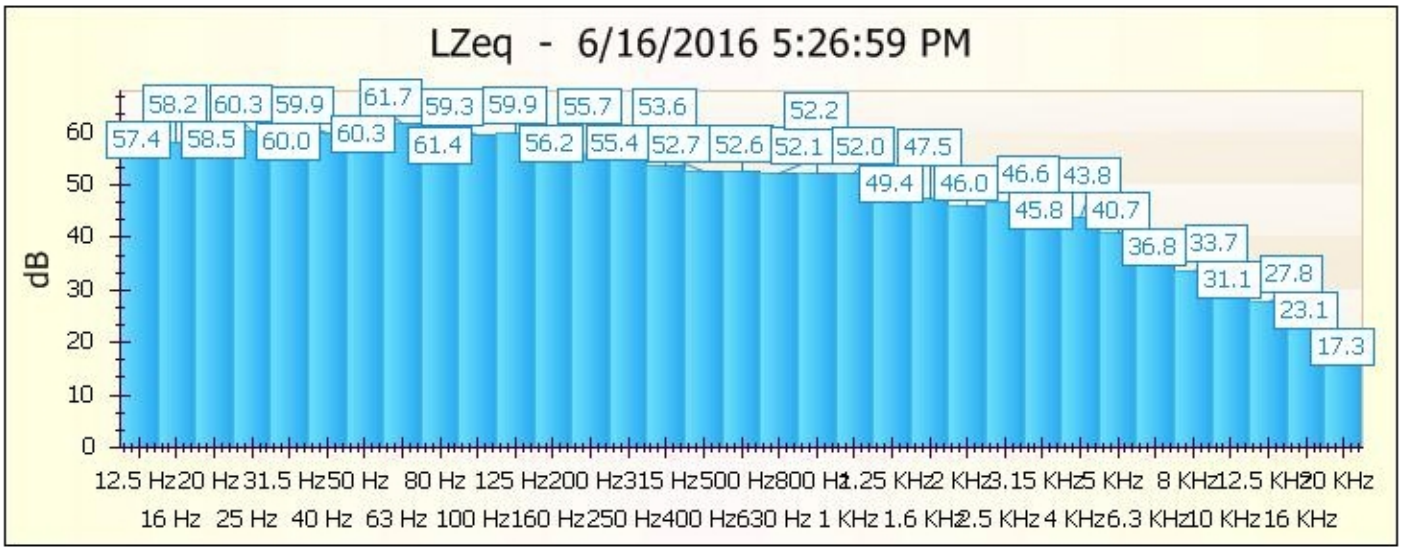

LAF 0% - 6/16/2016 12:22:22 PM
dB
0 10 20 30 40 50 60
0.0 10.3 14.5 21.3 29.6 33.4 36.8 43.5 43.8 44.9 46.9 50.6 53.1 54.4 54.4 56.2 56.8 57.1 57.2 57.0 56.6 54.0 53.2 51.3 50.2 51.0 48.5 43.9 39.9 36.5 31.7 25.4 16.7
12.5 Hz 16 Hz 20 Hz 25 Hz 31.5 Hz 40 Hz 50 Hz 63 Hz 80 Hz 100 Hz 125 Hz 160 Hz 200 Hz 250 Hz 315 Hz 400 Hz 500 Hz 630 Hz 800 Hz 1 KHz 1.25 KHz 1.6 KHz 2 KHz 2.5 KHz 3.15 KHz 4 KHz 5 KHz 6.3 KHz 8 KHz 10 KHz 12.5 KHz 16 KHz 20 KHz

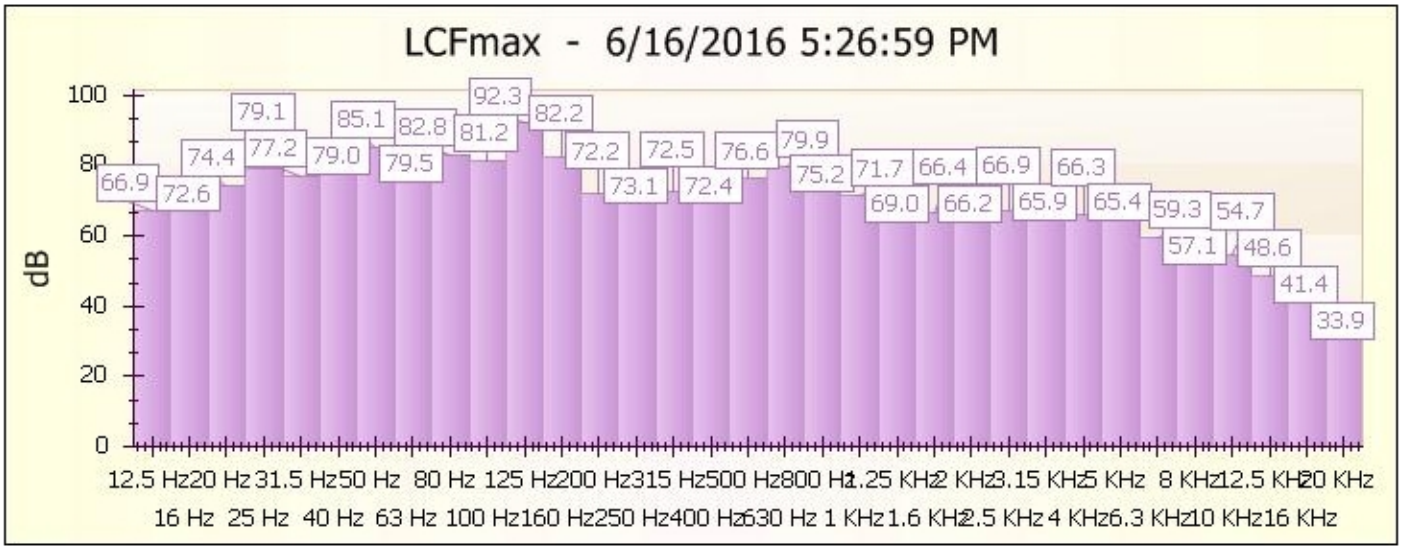
Instrument Model	CEL-633C		
Overload	No	Evening Start	19
Battery Low	No	Night Start	23
Duration	01:00:04 HH:MM:SS	Day Penalty	0.000000000
End Date & Time	6/16/2016 6:27:03 PM	Evening Penalty	5.000000000
Pause Duration	00:00:01 HH:MM:SS	Night Penalty	10.000000000
Response	Random	LAF 10%	63 dB
Run Number	13	LAF 50%	58.5 dB
Serial Number	5044657	LAF 90%	53 dB
Site	Unallocated	LAF 95%	51 dB
Location	Unallocated	LAF variable%	65.5 dB
Person	Unallocated	LCpeak	100.1 dB
Process	Unallocated	LCpeak with Time	100.1 dB (6/16/2016 5:47:54 PM)
Result	Cumulative	Start Date & Time	6/16/2016 5:26:59 PM
LAFmax	81.3 dB	LAE	96.1 dB
LAFmax with Time	81.3 dB (6/16/2016 5:47:55 PM)	LAeq	60.5 dB
LAFmin	42.3 dB	LAleq	62.8 dB
LAFmin with Time	42.3 dB (6/16/2016 6:25:00 PM)	LCeq	69.7 dB
LAImax	83 dB	LCeq-LAeq	9.2 dB
LAImax with Time	83.0 dB (6/16/2016 6:20:40 PM)	Lepd(Projected)	60.5 dB
LAImin	45 dB	Lex8h(Projected)	60.5 dB
LAImin with Time	45.0 dB (6/16/2016 6:25:03 PM)	LZeq	71.5 dB
LDN	0	Lepd	51.5 dB
LDEN	0	Lex8h	51.5 dB
CNEL	0		
Day Start	7		
Notes			

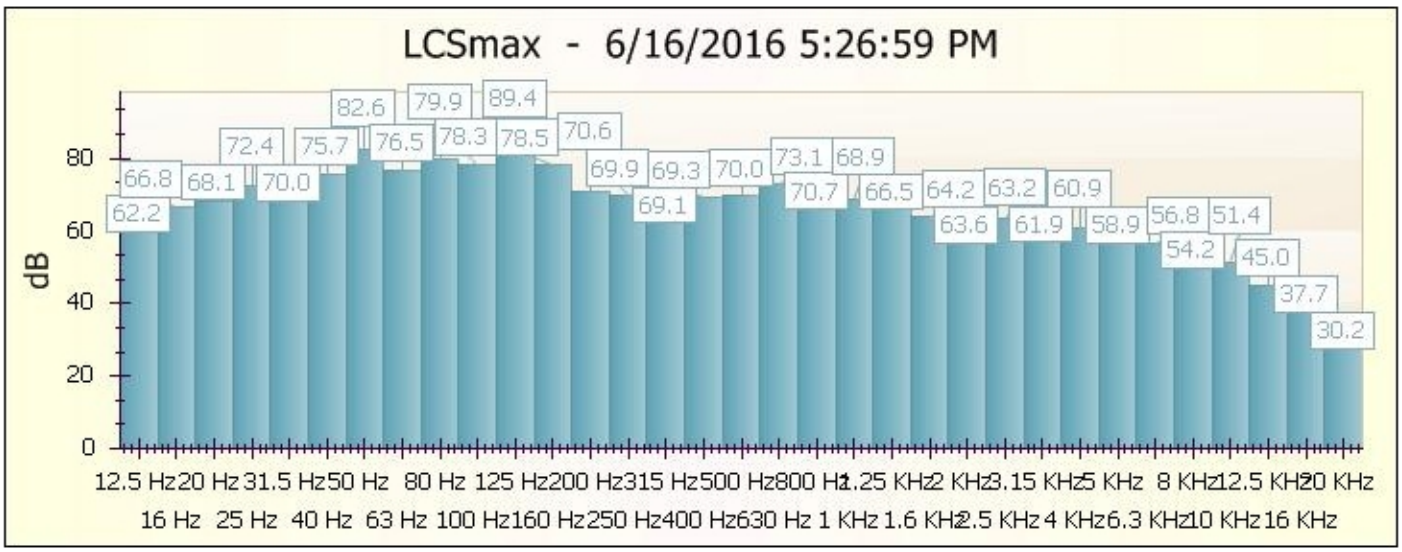


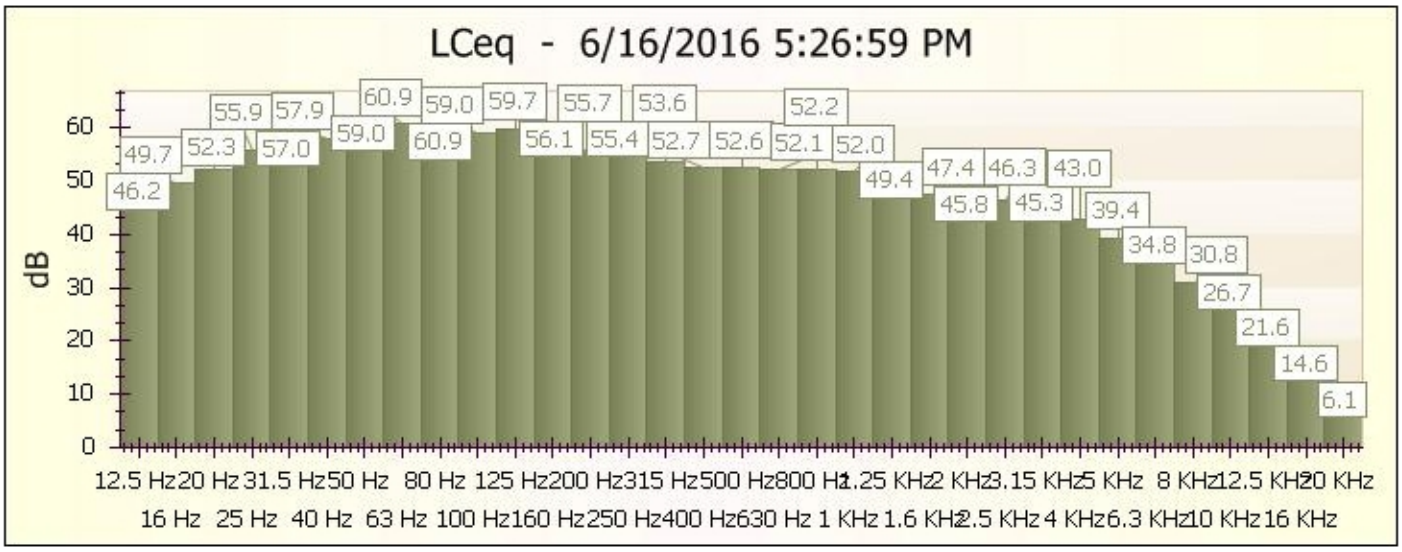

LZFmax - 6/16/2016 5:26:59 PM
dB
100
80
60
40
20
0
78.1 81.1 83.5 80.2 86.4 83.3 92.5 82.3 72.2 72.5 76.6 79.9 71.7 66.5 67.2 67.1
80.6 81.0 80.3 81.5 73.1 72.3 75.2 69.0 66.4 66.4 66.7 61.3 59.1
60.1 54.8 49.9
45.1
12.5 Hz 20 Hz 31.5 Hz 50 Hz 80 Hz 125 Hz 200 Hz 315 Hz 500 Hz 800 Hz 1.25 KHz 2 KHz 3.15 KHz 5 KHz 8 KHz 12.5 KHz 20 KHz
16 Hz 25 Hz 40 Hz 63 Hz 100 Hz 160 Hz 250 Hz 400 Hz 630 Hz 1 KHz 1.6 KHz 2.5 KHz 4 KHz 6.3 KHz 10 KHz 16 KHz

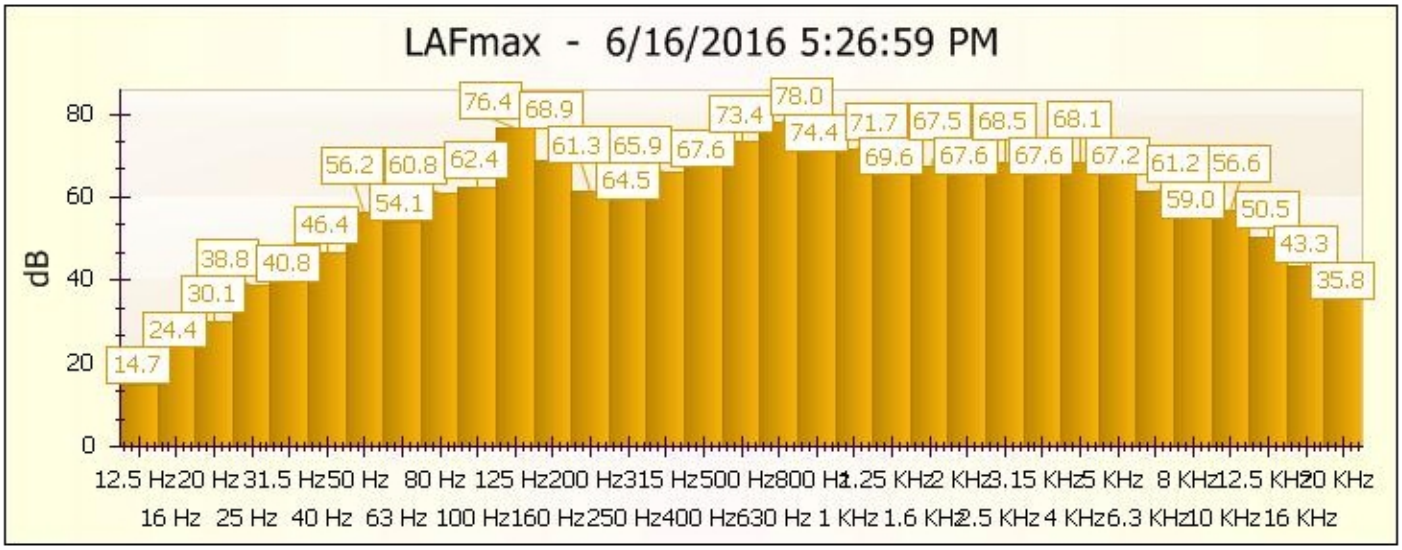

LZSmax - 6/16/2016 5:26:59 PM
dB
80
60
40
20
0
73.4 75.3 74.3 76.8 73.0 77.7 83.9 77.3 80.4 78.6 89.6 78.6 70.6 69.9 69.3 70.0 69.1 73.1 70.7 68.9 66.5 64.3 63.8 63.5 62.4 61.7 60.2 58.8 57.2 55.8 51.2 46.2 41.4
12.5 Hz 20 Hz 31.5 Hz 50 Hz 80 Hz 125 Hz 200 Hz 315 Hz 500 Hz 800 Hz 1.25 KHz 2 KHz 3.15 KHz 5 KHz 8 KHz 12.5 KHz 20 KHz
16 Hz 25 Hz 40 Hz 63 Hz 100 Hz 160 Hz 250 Hz 400 Hz 630 Hz 1 KHz 1.6 KHz 2.5 KHz 4 KHz 6.3 KHz 10 KHz 16 KHz

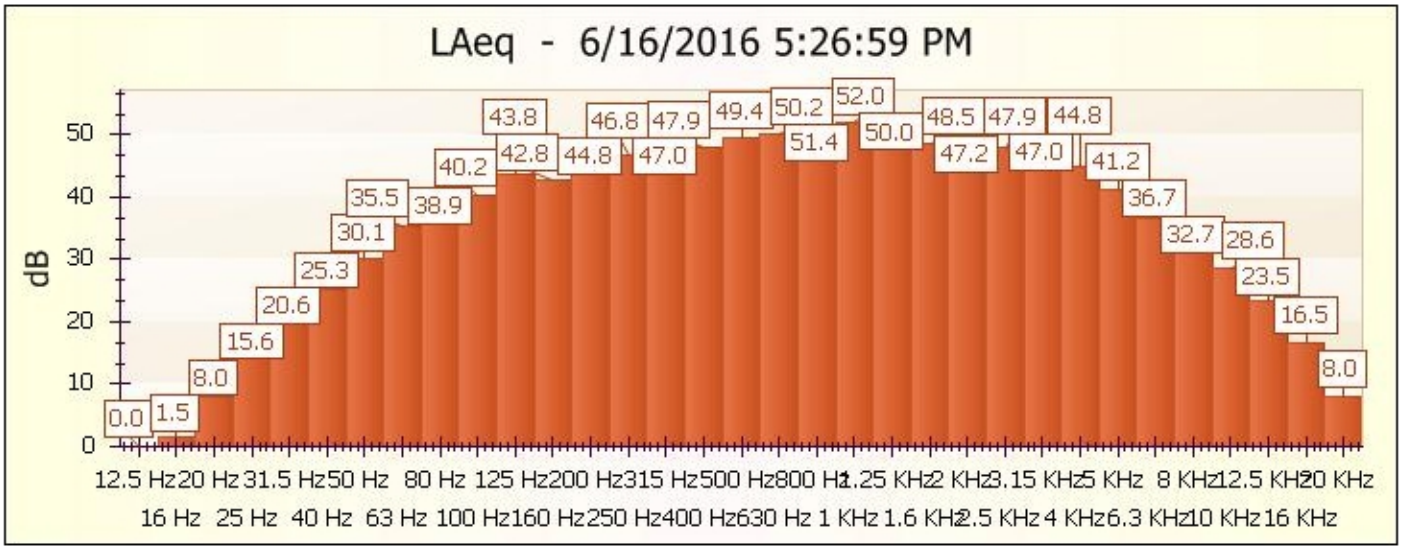

LZeq - 6/16/2016 5:26:59 PM
dB
60
50
40
30
20
10
0
57.4 58.2 58.5 60.3 60.0 59.9 60.3 61.7 61.4 59.3 59.9 56.2 55.7 55.4 53.6 52.7 52.6 52.2 52.1 52.0 49.4 47.5 46.0 46.6 45.8 43.8 40.7 36.8 33.7 31.1 27.8 23.1 17.3
12.5 Hz 20 Hz 31.5 Hz 50 Hz 80 Hz 125 Hz 200 Hz 315 Hz 500 Hz 800 Hz 1.25 KHz 2 KHz 3.15 KHz 5 KHz 8 KHz 12.5 KHz 20 KHz
16 Hz 25 Hz 40 Hz 63 Hz 100 Hz 160 Hz 250 Hz 400 Hz 630 Hz 1 KHz 1.6 KHz 2.5 KHz 4 KHz 6.3 KHz 10 KHz 16 KHz

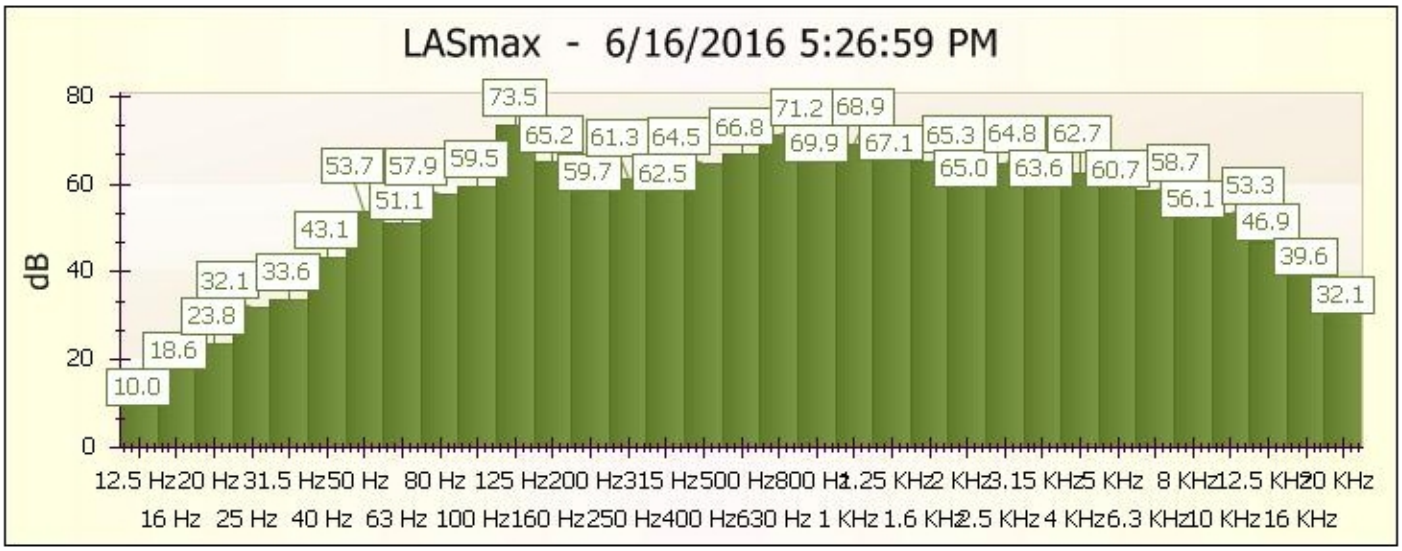

LCFmax - 6/16/2016 5:26:59 PM
dB
100
80
60
40
20
0
66.9 72.6 74.4 77.2 79.1 79.0 85.1 79.5 82.8 81.2 92.3 82.2 72.2 73.1 72.5 72.4 76.6 79.9 75.2 71.7 69.0 66.4 66.2 66.9 65.9 66.3 65.4 59.3 57.1 54.7 48.6 41.4 33.9
12.5 Hz 16 Hz 20 Hz 25 Hz 31.5 Hz 40 Hz 50 Hz 63 Hz 80 Hz 100 Hz 125 Hz 160 Hz 200 Hz 250 Hz 315 Hz 400 Hz 500 Hz 630 Hz 800 Hz 1 KHz 1.25 KHz 1.6 KHz 2 KHz 2.5 KHz 3.15 KHz 4 KHz 5 KHz 6.3 KHz 8 KHz 10 KHz 12.5 KHz 16 KHz 20 KHz

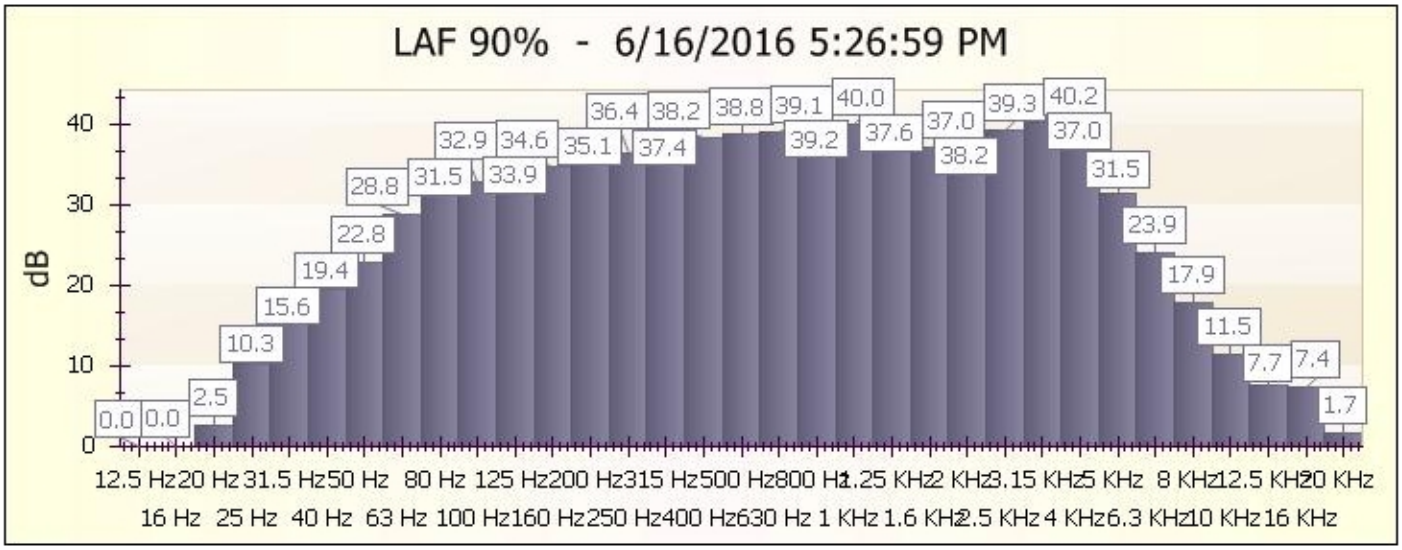

LCSmax - 6/16/2016 5:26:59 PM
dB
80
60
40
20
0
62.2 66.8 68.1 72.4 70.0 75.7 82.6 76.5 79.9 78.3 89.4 78.5 70.6 69.9 69.3 69.1 70.0 73.1 70.7 68.9 66.5 64.2 63.6 63.2 61.9 60.9 58.9 56.8 54.2 51.4 45.0 37.7 30.2
12.5 Hz 16 Hz 20 Hz 25 Hz 31.5 Hz 40 Hz 50 Hz 63 Hz 80 Hz 100 Hz 125 Hz 160 Hz 200 Hz 250 Hz 315 Hz 400 Hz 500 Hz 630 Hz 800 Hz 1 KHz 1.25 KHz 1.6 KHz 2 KHz 2.5 KHz 3.15 KHz 4 KHz 5 KHz 6.3 KHz 8 KHz 10 KHz 12.5 KHz 16 KHz 20 KHz

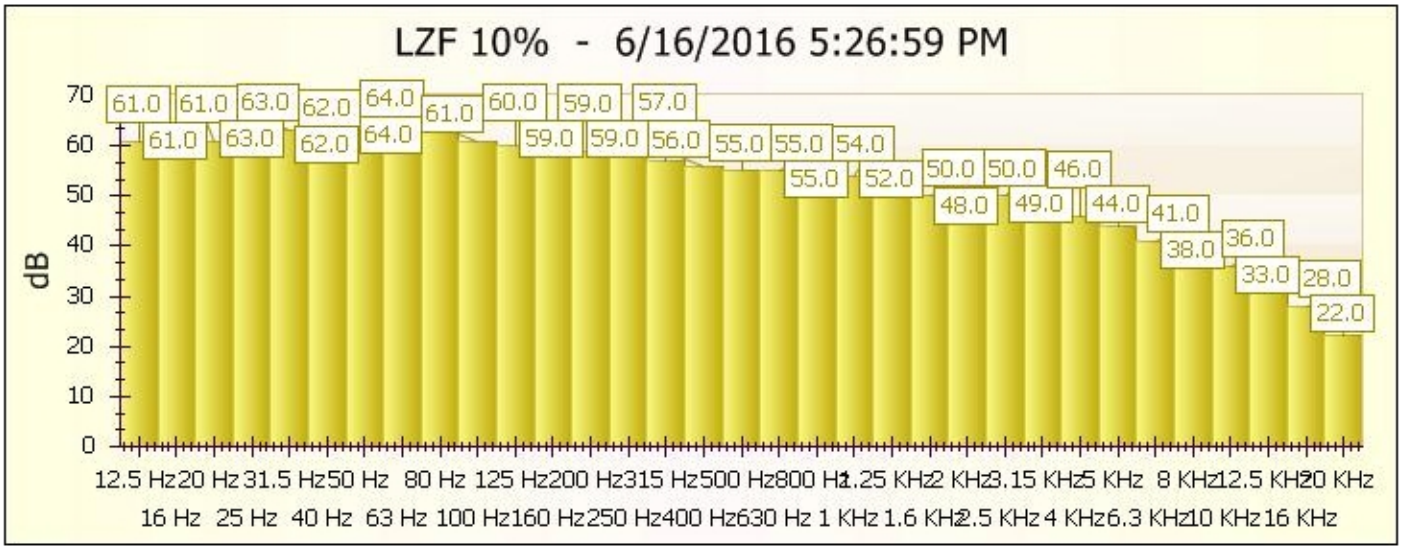

LCeq - 6/16/2016 5:26:59 PM
dB
60
50
40
30
20
10
0
46.2 49.7 52.3 55.9 57.0 57.9 59.0 60.9 60.9 59.0 59.7 56.1 55.7 55.4 53.6 52.7 52.6 52.2 52.1 52.0 49.4 47.4 45.8 46.3 45.3 43.0 39.4 34.8 30.8 26.7 21.6 14.6 6.1
12.5 Hz 16 Hz 20 Hz 25 Hz 31.5 Hz 40 Hz 50 Hz 63 Hz 80 Hz 100 Hz 125 Hz 160 Hz 200 Hz 250 Hz 315 Hz 400 Hz 500 Hz 630 Hz 800 Hz 1 KHz 1.25 KHz 1.6 KHz 2 KHz 2.5 KHz 3.15 KHz 4 KHz 5 KHz 6.3 KHz 8 KHz 10 KHz 12.5 KHz 16 KHz 20 KHz

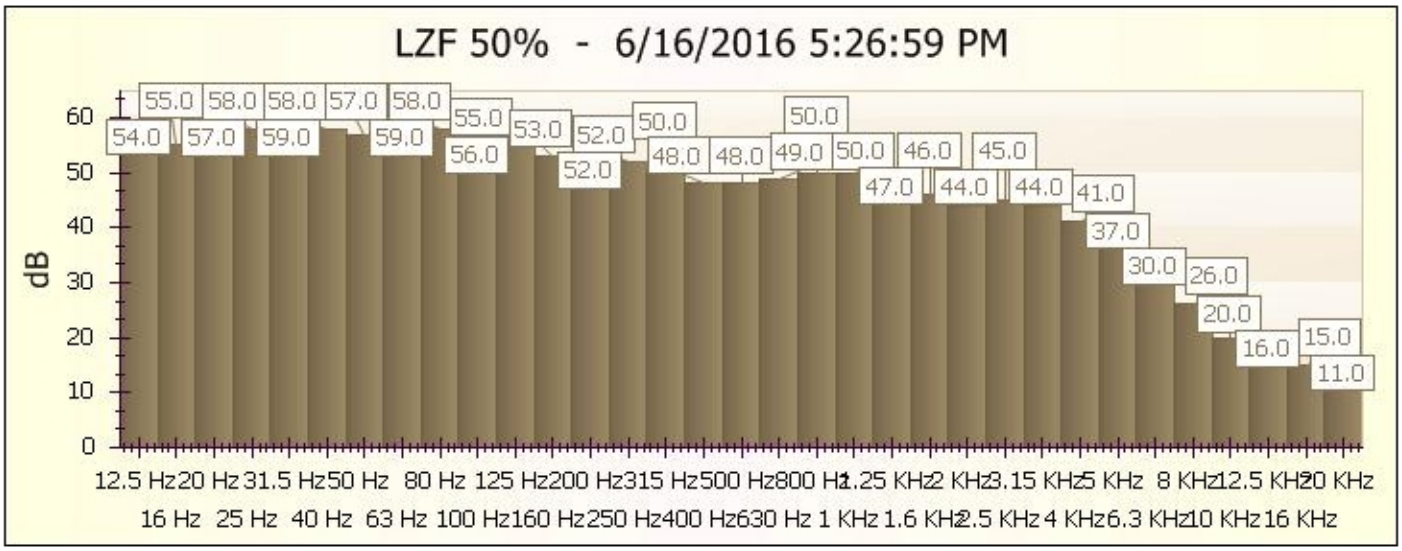

LAFmax - 6/16/2016 5:26:59 PM
dB
0
20
40
60
80
14.7
24.4
30.1
38.8
40.8
46.4
54.1
56.2
60.8
62.4
76.4
68.9
61.3
65.9
64.5
67.6
73.4
78.0
74.4
71.7
67.5
68.5
68.1
69.6
67.6
67.6
67.2
61.2
56.6
59.0
50.5
43.3
35.8
12.5 Hz 20 Hz 31.5 Hz 50 Hz 80 Hz 125 Hz 200 Hz 315 Hz 500 Hz 800 Hz 1.25 KHz 2 KHz 3.15 KHz 5 KHz 8 KHz 12.5 KHz 20 KHz
16 Hz 25 Hz 40 Hz 63 Hz 100 Hz 160 Hz 250 Hz 400 Hz 630 Hz 1 KHz 1.6 KHz 2.5 KHz 4 KHz 6.3 KHz 10 KHz 16 KHz

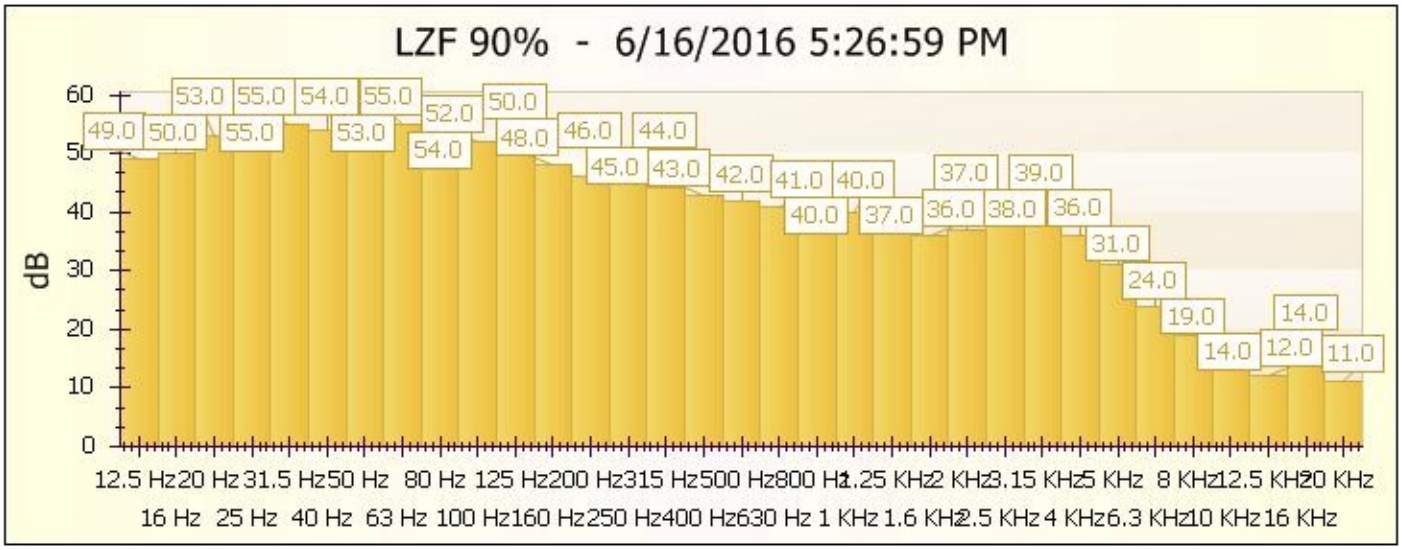

LAeq - 6/16/2016 5:26:59 PM
dB
0
10
20
30
40
50
0.0
1.5
8.0
15.6
20.6
25.3
30.1
35.5
38.9
40.2
42.8
43.8
44.8
46.8
47.0
47.9
49.4
50.2
51.4
52.0
50.0
48.5
47.2
47.9
47.0
44.8
41.2
36.7
32.7
28.6
23.5
16.5
8.0
12.5 Hz 20 Hz 31.5 Hz 50 Hz 80 Hz 125 Hz 200 Hz 315 Hz 500 Hz 800 Hz 1.25 KHz 2 KHz 3.15 KHz 5 KHz 8 KHz 12.5 KHz 20 KHz
16 Hz 25 Hz 40 Hz 63 Hz 100 Hz 160 Hz 250 Hz 400 Hz 630 Hz 1 KHz 1.6 KHz 2.5 KHz 4 KHz 6.3 KHz 10 KHz 16 KHz

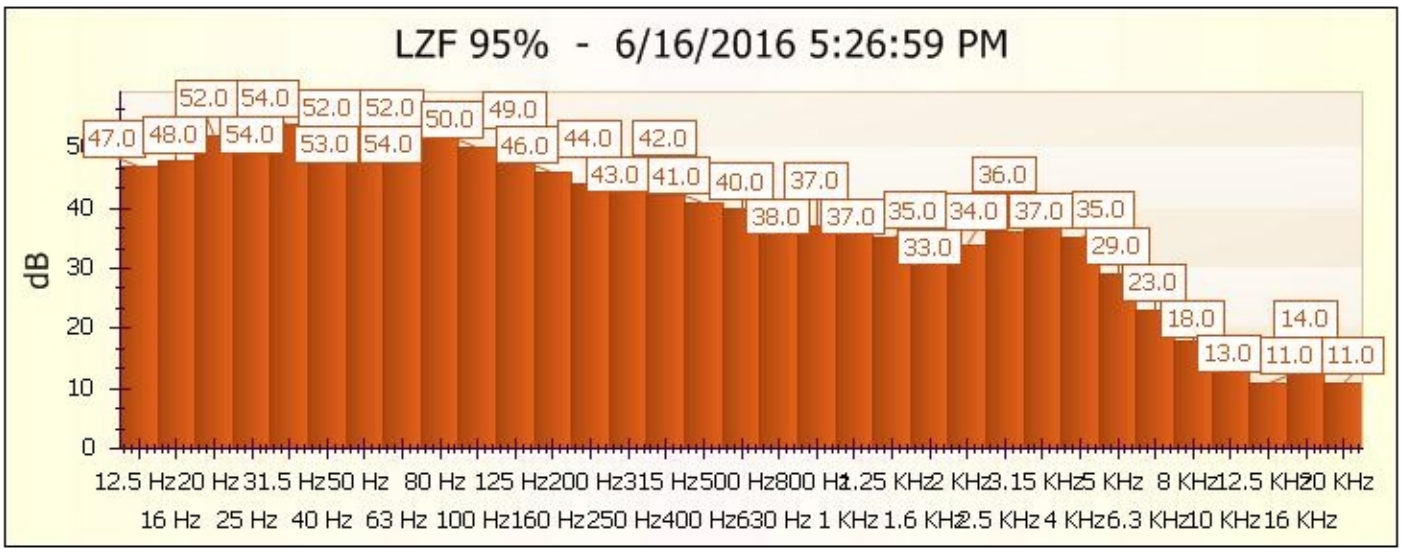

LASmax - 6/16/2016 5:26:59 PM
dB
0
20
40
60
80
10.0
18.6
23.8
32.1
33.6
43.1
51.1
53.7
57.9
59.5
73.5
65.2
61.3
64.5
59.7
62.5
66.8
71.2
68.9
69.9
67.1
65.3
64.8
62.7
65.0
63.6
60.7
58.7
56.1
53.3
46.9
39.6
32.1
12.5 Hz 20 Hz 31.5 Hz 50 Hz 80 Hz 125 Hz 200 Hz 315 Hz 500 Hz 800 Hz 1.25 KHz 2 KHz 3.15 KHz 5 KHz 8 KHz 12.5 KHz 20 KHz
16 Hz 25 Hz 40 Hz 63 Hz 100 Hz 160 Hz 250 Hz 400 Hz 630 Hz 1 KHz 1.6 KHz 2.5 KHz 4 KHz 6.3 KHz 10 KHz 16 KHz


LAF 90% - 6/16/2016 5:26:59 PM
dB
0.0 0.0 2.5 10.3 15.6 19.4 22.8 28.8 31.5 32.9 33.9 34.6 35.1 36.4 37.4 38.2 38.8 39.1 39.2 40.0 37.6 37.0 38.2 39.3 40.2 37.0 31.5 23.9 17.9 11.5 7.7 7.4 1.7
12.5 Hz 16 Hz 20 Hz 25 Hz 31.5 Hz 40 Hz 50 Hz 63 Hz 80 Hz 100 Hz 125 Hz 160 Hz 200 Hz 250 Hz 315 Hz 400 Hz 500 Hz 630 Hz 800 Hz 1 KHz 1.25 KHz 1.6 KHz 2 KHz 2.5 KHz 3.15 KHz 4 KHz 5 KHz 6.3 KHz 8 KHz 10 KHz 12.5 KHz 16 KHz 20 KHz


LZF 10% - 6/16/2016 5:26:59 PM
dB
61.0 61.0 63.0 62.0 64.0 61.0 60.0 59.0 57.0 61.0 63.0 62.0 64.0 59.0 59.0 56.0 55.0 55.0 54.0 55.0 52.0 50.0 50.0 46.0 48.0 49.0 44.0 41.0 38.0 36.0 33.0 28.0 22.0
12.5 Hz 16 Hz 20 Hz 25 Hz 31.5 Hz 40 Hz 50 Hz 63 Hz 80 Hz 100 Hz 125 Hz 160 Hz 200 Hz 250 Hz 315 Hz 400 Hz 500 Hz 630 Hz 800 Hz 1 KHz 1.25 KHz 1.6 KHz 2 KHz 2.5 KHz 3.15 KHz 4 KHz 5 KHz 6.3 KHz 8 KHz 10 KHz 12.5 KHz 16 KHz 20 KHz


LZF 50% - 6/16/2016 5:26:59 PM
dB
55.0 58.0 58.0 57.0 58.0 54.0 57.0 59.0 59.0 55.0 56.0 53.0 52.0 52.0 50.0 48.0 48.0 50.0 49.0 50.0 46.0 47.0 45.0 44.0 44.0 41.0 37.0 30.0 26.0 20.0 16.0 15.0 11.0
12.5 Hz 16 Hz 20 Hz 25 Hz 31.5 Hz 40 Hz 50 Hz 63 Hz 80 Hz 100 Hz 125 Hz 160 Hz 200 Hz 250 Hz 315 Hz 400 Hz 500 Hz 630 Hz 800 Hz 1 KHz 1.25 KHz 1.6 KHz 2 KHz 2.5 KHz 3.15 KHz 4 KHz 5 KHz 6.3 KHz 8 KHz 10 KHz 12.5 KHz 16 KHz 20 KHz


LZF 90% - 6/16/2016 5:26:59 PM
dB
0
10
20
30
40
50
60
49.0 50.0 55.0 53.0 54.0 48.0 45.0 43.0 42.0 41.0 40.0 40.0 37.0 36.0 38.0 36.0 31.0 24.0 19.0 14.0 12.0 11.0
53.0 55.0 54.0 55.0 52.0 50.0 46.0 44.0 37.0 39.0 14.0
12.5 Hz 16 Hz 20 Hz 25 Hz 31.5 Hz 40 Hz 50 Hz 63 Hz 80 Hz 100 Hz 125 Hz 160 Hz 200 Hz 250 Hz 315 Hz 400 Hz 500 Hz 630 Hz 800 Hz 1 KHz 1.25 KHz 1.6 KHz 2 KHz 2.5 KHz 3.15 KHz 4 KHz 5 KHz 6.3 KHz 8 KHz 10 KHz 12.5 KHz 16 KHz 20 KHz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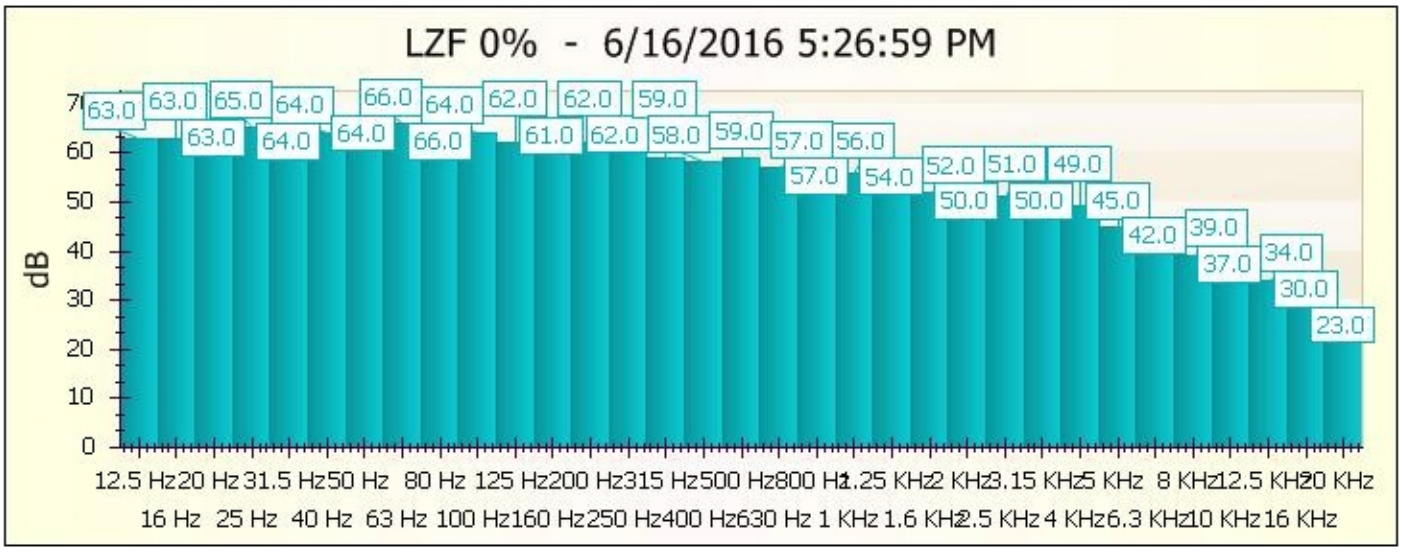
52.0 54.0 52.0 52.0 50.0 49.0 44.0 42.0 36.0 14.0
12.5 Hz 16 Hz 20 Hz 25 Hz 31.5 Hz 40 Hz 50 Hz 63 Hz 80 Hz 100 Hz 125 Hz 160 Hz 200 Hz 250 Hz 315 Hz 400 Hz 500 Hz 630 Hz 800 Hz 1 KHz 1.25 KHz 1.6 KHz 2 KHz 2.5 KHz 3.15 KHz 4 KHz 5 KHz 6.3 KHz 8 KHz 10 KHz 12.5 KHz 16 KHz 20 KHz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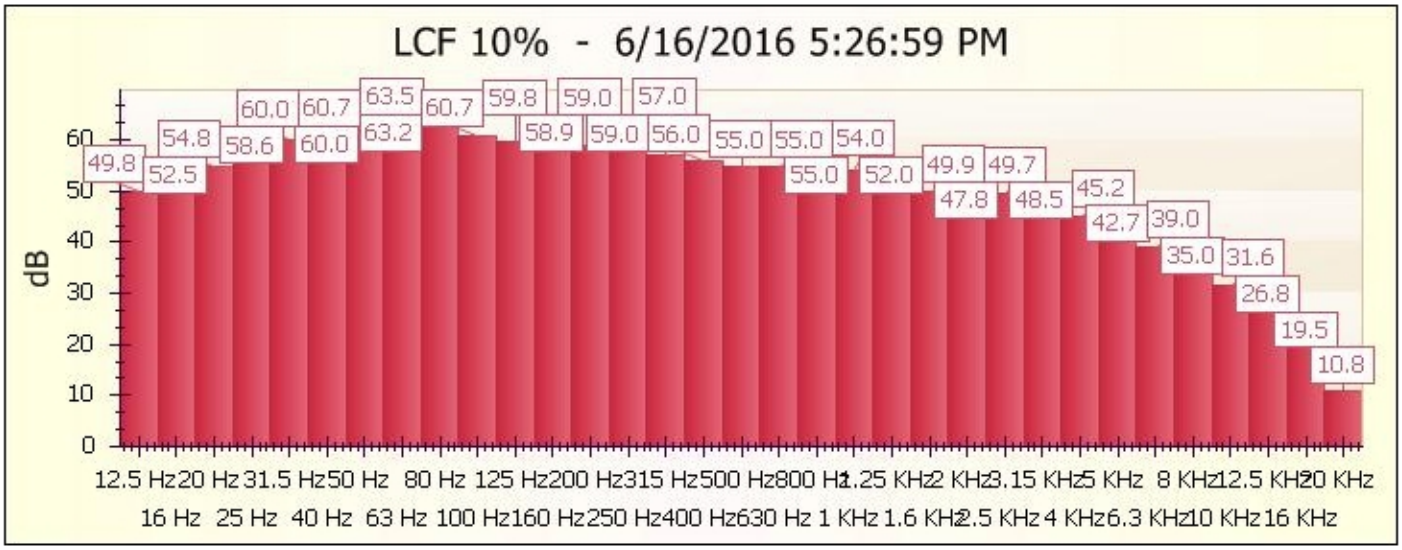
12.5 Hz 16 Hz 20 Hz 25 Hz 31.5 Hz 40 Hz 50 Hz 63 Hz 80 Hz 100 Hz 125 Hz 160 Hz 200 Hz 250 Hz 315 Hz 400 Hz 500 Hz 630 Hz 800 Hz 1 KHz 1.25 KHz 1.6 KHz 2 KHz 2.5 KHz 3.15 KHz 4 KHz 5 KHz 6.3 KHz 8 KHz 10 KHz 12.5 KHz 16 KHz 20 KHz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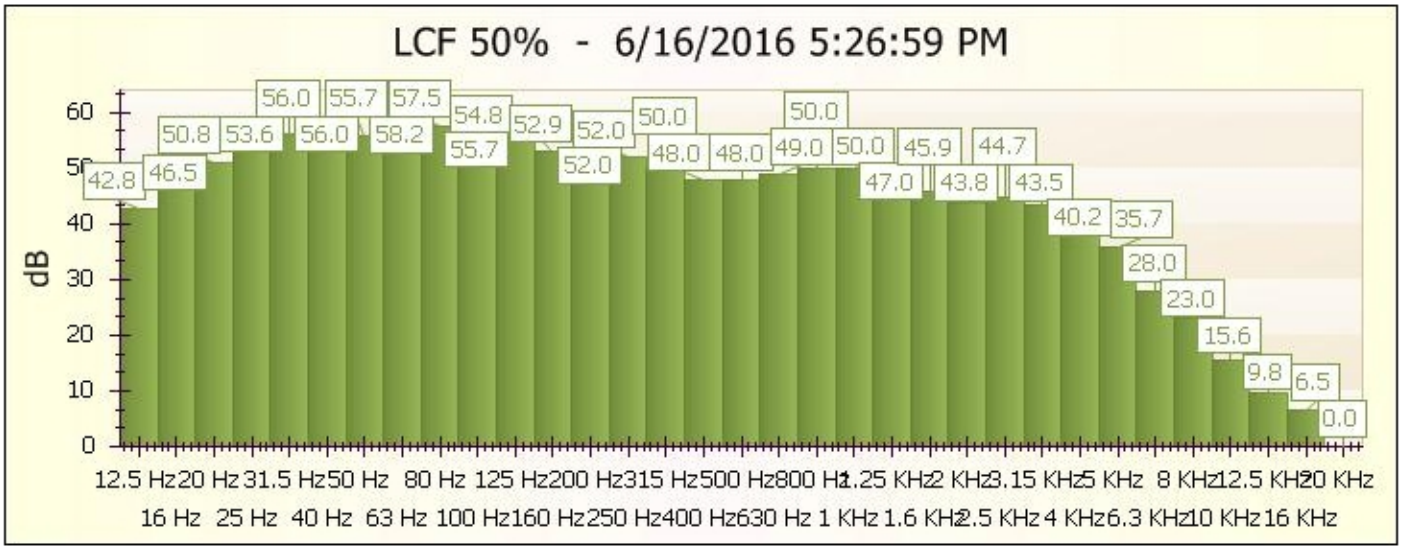
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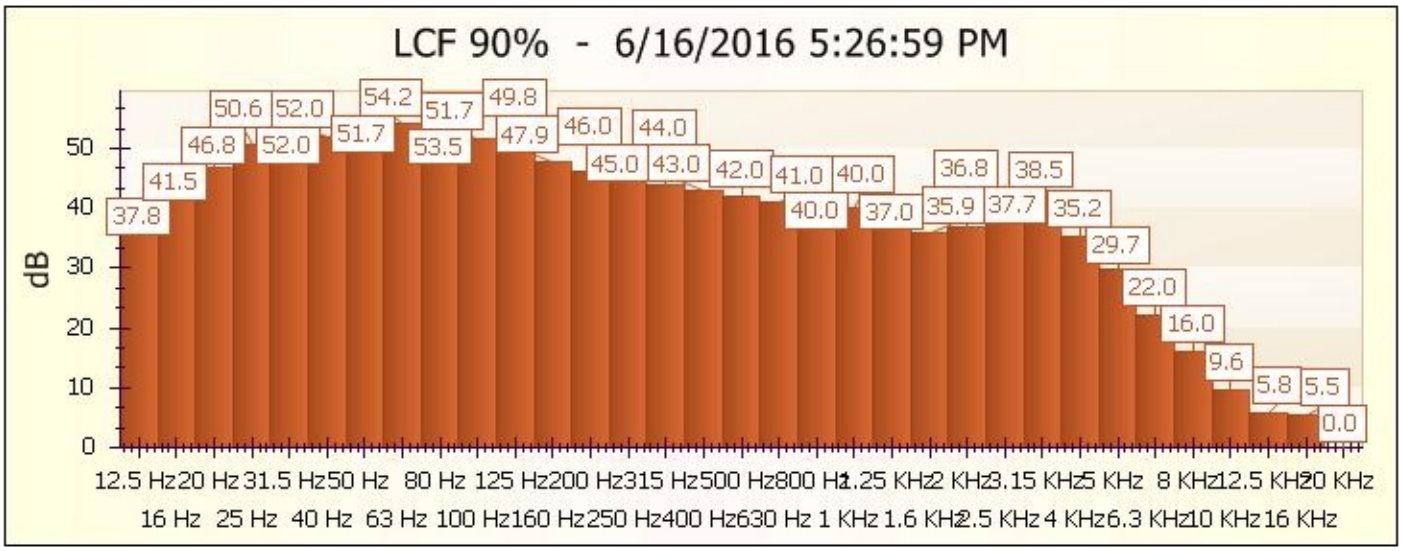
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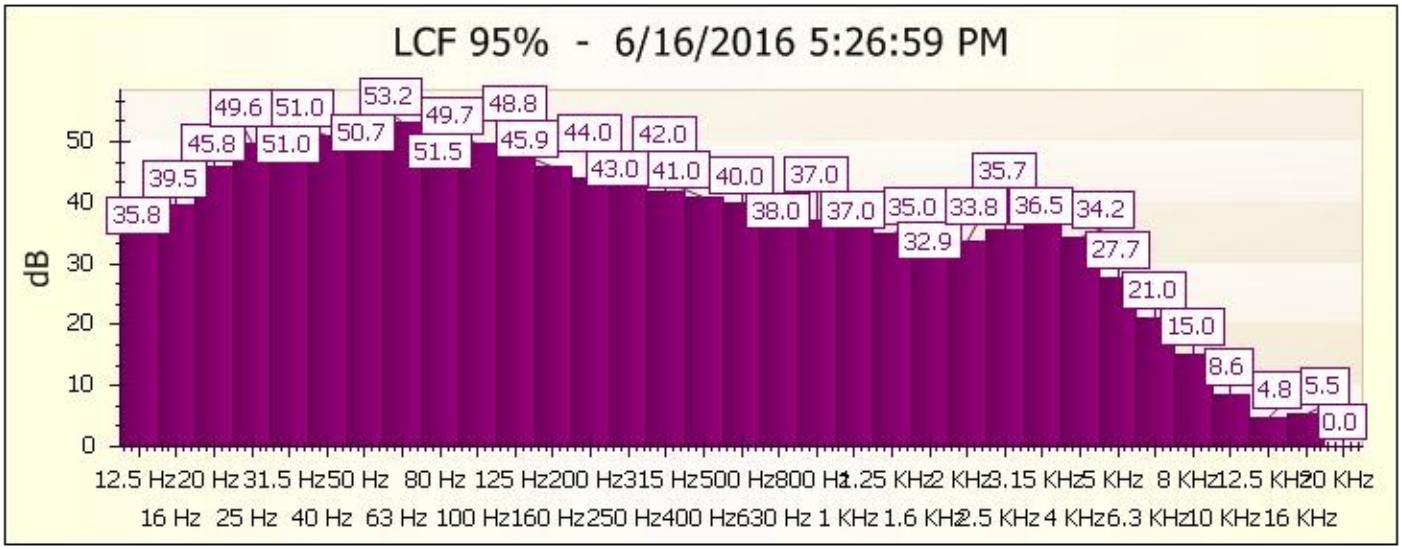
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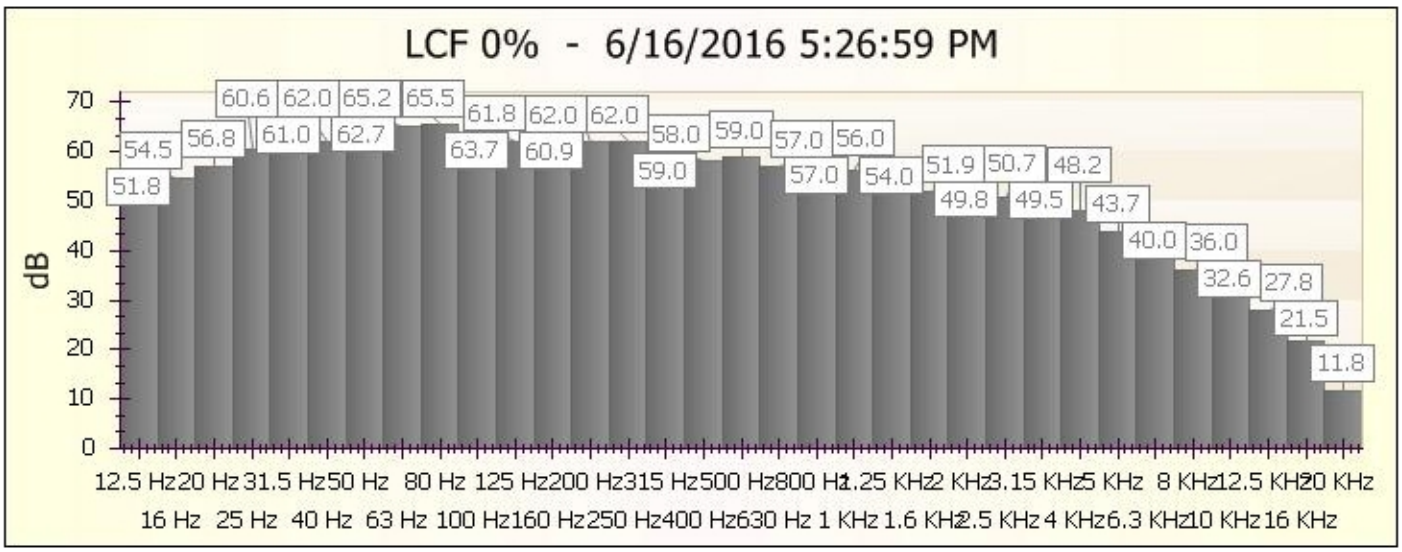
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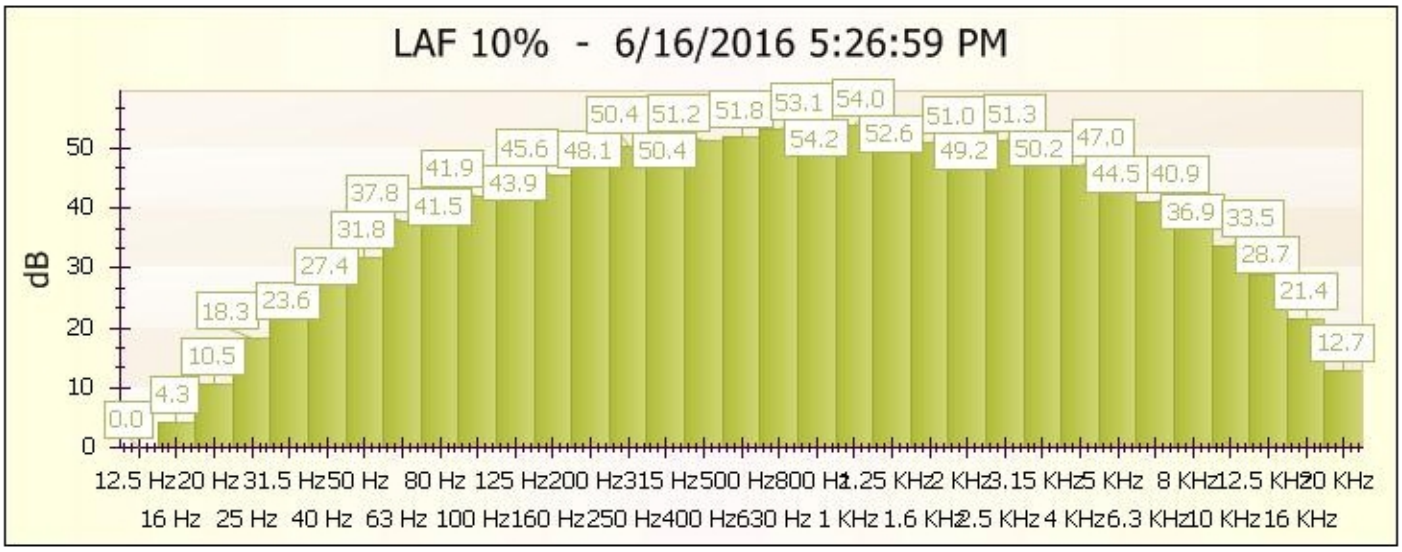
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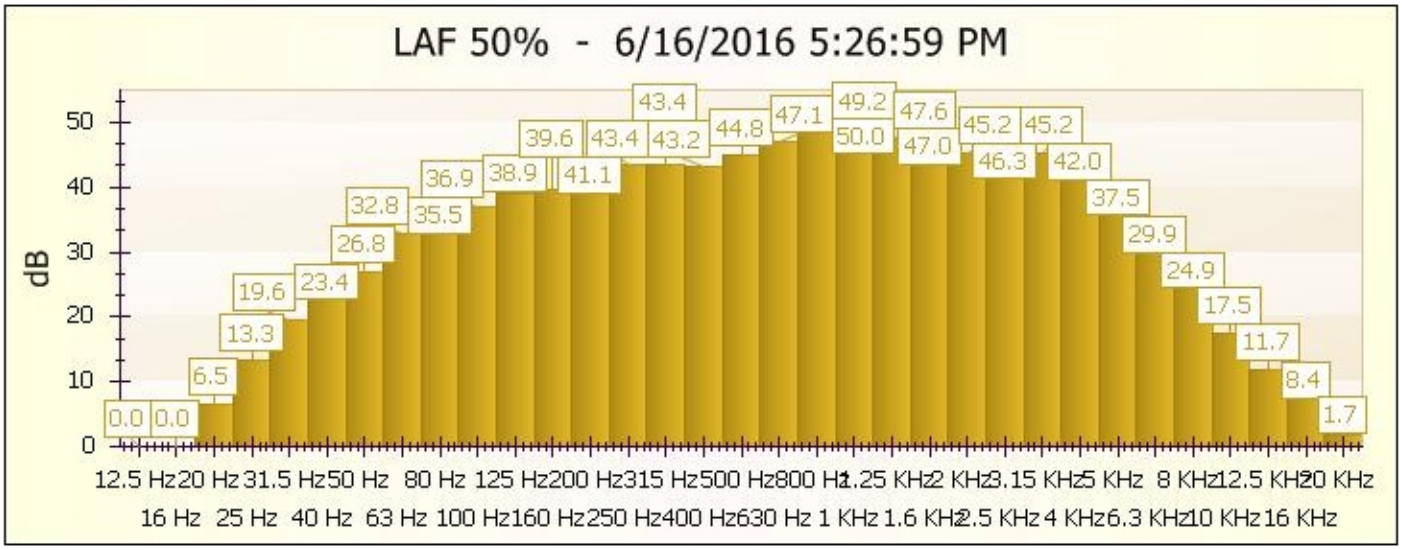
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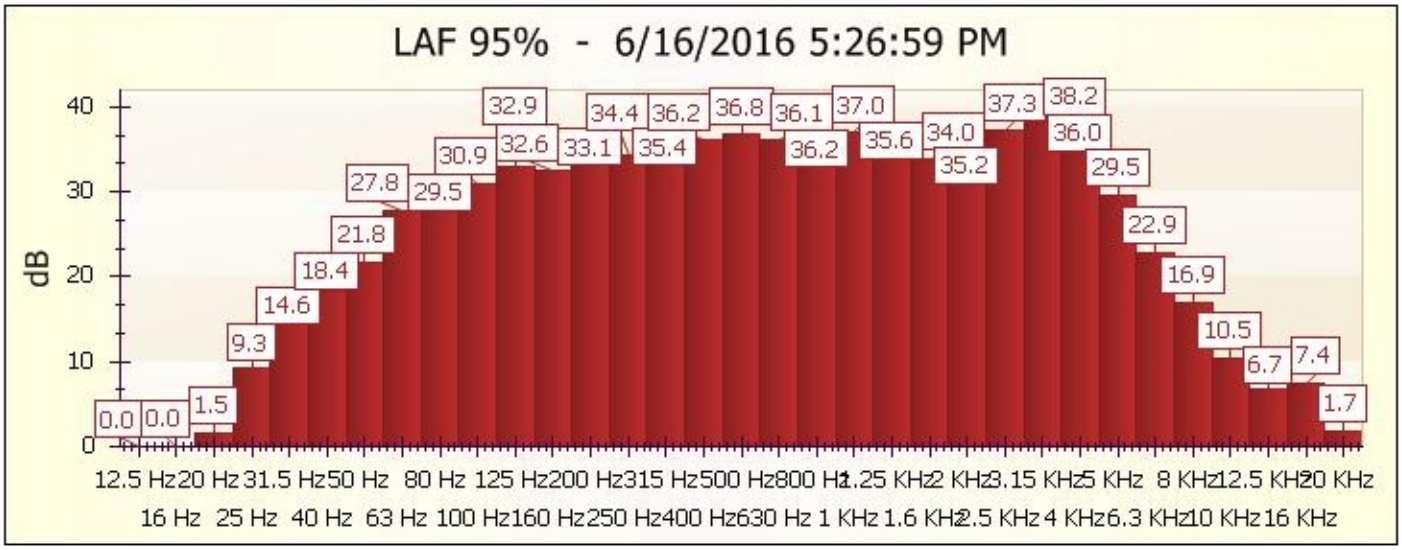
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12.5 Hz 20 Hz 31.5 Hz 50 Hz 80 Hz 125 Hz 200 Hz 315 Hz 500 Hz 800 Hz 1.25 KHz 2 KHz 3.15 KHz 5 KHz 8 KHz 12.5 KHz 20 KHz
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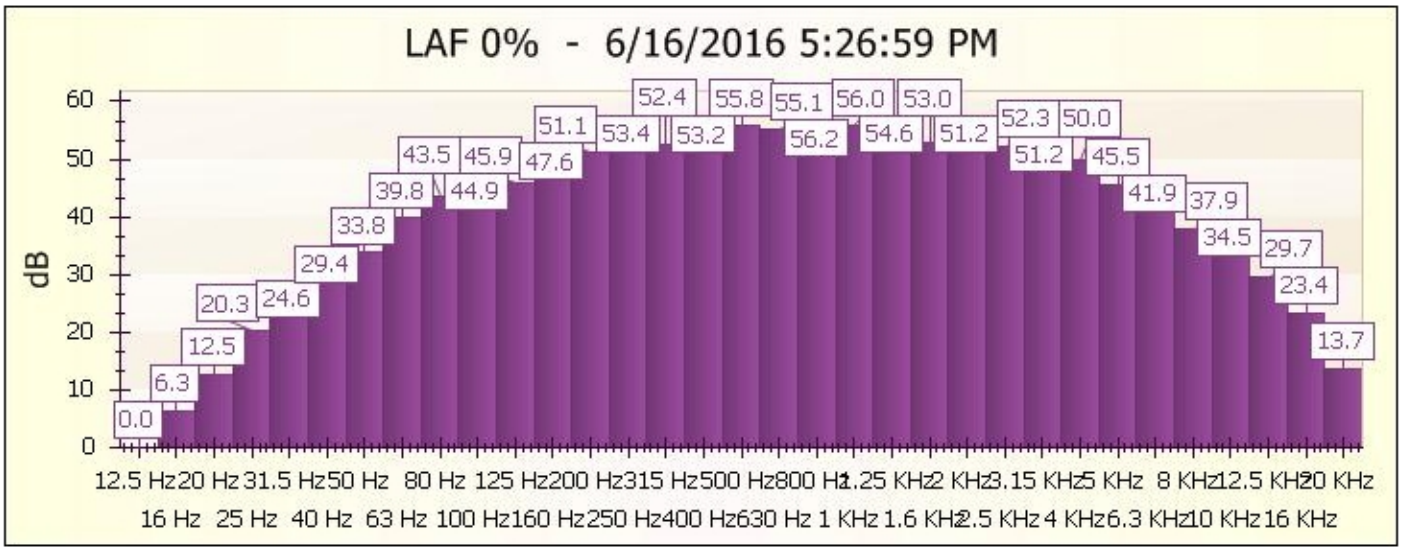
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16 Hz 25 Hz 40 Hz 63 Hz 100 Hz 160 Hz 250 Hz 400 Hz 630 Hz 1 KHz 1.6 KHz 2.5 KHz 4 KHz 6.3 KHz 10 KHz 16 KHz

167-17 Northern Blvd
Queens, NY
5/10/16
Frank U

S/n - EOV46557

location 1 168th
location 2 northern

~~location~~
Start 8:28
Stop 8:48

car	lt truck	hvy truck	bus
246	406	23	17

location 1
Start 9:10
Stop 10:17

car	lt truck	hvy truck	bus
14	22	0	0

location 2
Start 1200
Stop 1230

car	lt truck	hvy truck	bus
330	25	12	

location 1
Start 1222
Stop 122

car	lt truck	hvy truck	bus
18	11	0	0

location 2
Start 505
Stop 525

car	lt truck	hvy truck	bus
329	436	24	22

location 1
Start 550
Stop 607

car	lt truck	hvy truck	bus
6	11	0	0