

August 23, 2022

Mr. John Walsh
Principal
Comstock Industrial, LLC
330 Carter Street
New Canaan, CT 06480

Re: Sound Study of Comstock Industrial Park, Cranston, RI

Ref: 4770

Dear Mr. Walsh:

Tech Environmental, Inc. (Tech) is pleased to provide this letter report summarizing the results of an acoustic modeling study of the proposed Comstock Industrial Park (herein referred to as the "Project") on Comstock Parkway (Parcel: 36-46-0 0), in Cranston, Rhode Island. The goal of this work was to determine if the proposed Project will comply with the City of Cranston Code of Ordinances, Title 8, Chapter 8.20 Noise Control (Cranston Noise Code) and Title 17, Chapter 17.36 Industrial Uses (Cranston Zoning Code), and to determine the effect of traffic sound level mitigation measures incorporated into the Project design.

This letter report summarizes the modeling analyses performed for this study. Section 1.0 introduces the common measures of environmental sound. Section 2.0 presents the applicable noise regulations. Section 3.0 provides a description of the project and the design goals, and Section 4.0 presents the acoustic modeling approach and results. The study concludes that the proposed Project will generate continuous sound levels that fully comply with the City of Cranston's Noise Code and Zoning Code, and the Project design includes mitigation that will lessen the impacts of traffic sound levels at the nearest neighborhood property lines. Lastly, the simultaneous operation of the Project's continuous sound sources and the impacts from traffic will be less than those limits presented the City of Cranston Noise Code.

1.0 Common Measures of Environmental Sound

Noise is defined as "unwanted sound", which implies sound pressure levels that are annoying or disrupt activities that people are engaged in. The human sense of hearing is subjective and highly variable between individuals. Noise regulations and guidelines set quantitative limits to the sound pressure level (measured with sound analyzers and predicted with computer models) to protect people from sound exposures that most would judge to be annoying or disruptive.

The loudness of a sound is dependent on the radiated energy of the sound source and the propagation and attenuation characteristics of the air. The standard unit of sound pressure level (L_p) is the decibel (dB). A property of the decibel scale is that the sound pressure levels of two separate sounds are not directly additive. For example, if a sound of 40 dB is added to another sound of 40 dB, the total is only a 3 dB increase, not a doubling to 80 dB. For broadband sounds, a 3 dB change is the minimum change perceptible to the human ear. Table 1 presents the perceived change in loudness of different changes in sound pressure levels.

TABLE 1
SUBJECTIVE EFFECT OF CHANGES IN SOUND PRESSURE LEVELS

Change in Sound Pressure Level	Perceived Change in Loudness
3 dB	Just perceptible
5 dB	Noticeable
10 dB	Twice (or half) as loud

The acoustic environment in a suburban commercial/residential area, such as that surrounding Comstock Parkway in Cranston, primarily results from motor vehicle traffic on Interstate I-295 and local roadways. Typical sound levels associated with various activities and environments are presented in Table 2.¹

TABLE 2
COMMON SOUND LEVELS

Sound Level (dBA)	Common Indoor Sounds	Common Outdoor Sounds
110	Rock Band	Jet Takeoff at 1000'
100	Inside NYC Subway Train	Chain Saw at 3'
90	Food Blender at 3'	Impact Hammer (Hoe Ram) at 50'
80	Garbage Disposal at 3'	Diesel Truck at 100'
70	Vacuum Cleaner at 10'	Lawn Mower at 100'
60	Normal Speech at 3'	Auto (40 mph) at 100'
50	Dishwasher in Next Room	Busy Suburban Area at night
40	Empty Conference Room	Quiet Suburban Area at night
25	Empty Concert Hall	Rural Area at night

¹ U.S. DOT, FHWA, Noise Fundamentals Training Document, Highway Noise Fundamentals, September, 1980.

2.0 Noise Regulations

This section presents the noise regulations applicable to the proposed Project.

2.1 State of Rhode Island

The State of Rhode Island does not have applicable quantitative noise regulations.

2.2 City of Cranston Noise Code

The City of Cranston Code of Ordinances regulates noise emitted from any person under Chapter 8.20 Health and Safety - Noise Control, Section F. Chapter 8.20(F)(1) states that, “*It shall be unlawful for any person to emit or cause to be emitted any noise which leaves the premises on which it originates, crosses a property line, and enters onto any other premises in excess of the sound pressure levels during the time periods presented in Table A*”. A copy of Table A is presented below.

TABLE A

**CITY OF CRANSTON CODE OF ORDINANCES, TITLE 8, CHAPTER 8.20
MAXIMUM ALLOWABLE NOISE SOUND PRESSURE LEVELS FOR SPECIFIC PREMISES**

Type of Premises	Location Where Noise is Measured	Time Period	Maximum Allowable Sound Pressure Level
Residential premises	Property line	7:00 a.m. to 10:00 p.m.	55 dB(A)
Residential premises	Property line	10:00 p.m. to 7:00 a.m.	50 dB(A)
Commercial premises	Property line	7:00 a.m. to 10:00 p.m.	65 dB(A)
Commercial premises	Property line	10:00 p.m. to 7:00 a.m.	60 dB(A)
Industrial premises	Property line	7:00 a.m. to 10:00 p.m.	80 dB(A)
Industrial premises	Property line	10:00 p.m. to 7:00 a.m.	75 dB(A)
Public premises	Property line or anywhere on public premises	7:00 a.m. to 10:00 p.m.	75 dB(A)
Public premises	Property line or anywhere on public premises	10:00 p.m. to 7:00 a.m.	70 dB(A)

The Cranston Noise Code defines "residential premises" as, “*where single or multiple dwelling units exist and shall include schools*”, defines “commercial premises” as, “*any premises where offices, clinics, kennels, shopping and service establishments exist*”, defines “industrial premises” as, “*any premises where manufacturing, processing or fabrication of goods or products takes place*” and defines “public premises” as those, “*owned or controlled by any public governmental entity and shall include streets, alleys, parks and waterways.*” Furthermore, Chapter 8.20(F)(1) states that the maximum allowable sound

pressure levels presented in Table A, “*shall not apply to sounds emitted from... any motor vehicles designed for and operated on public streets, alleys, highways or freeways.*”

The City of Cranston Code of Ordinances also regulates noise emitted from motor vehicles under Chapter 8.20 Noise Control, Section I. Chapter 8.20(I) states that, “*no person shall operate nor shall the owner permit the operation of any motor vehicle or combination of motor vehicles at any time or place when such operation exceeds the noise sound pressure levels for the category of motor vehicle and for the designated time period specified in Table B.*” A copy of Table B is presented below.

TABLE B
CITY OF CRANSTON CODE OF ORDINANCES, TITLE 8, CHAPTER 8.20
MAXIMUM ALLOWABLE NOISE SOUND PRESSURE LEVELS FOR MOTOR VEHICLES

Type of Vehicle	Time Period	Maximum Allowable Sound Pressure Level	Measurement Distance From Motor Vehicle
Motor vehicle weighing less than 10,000 pounds, Manufacturer's Gross Vehicle Weight	At any time	80 dB(A)	25 feet
Motor vehicle weighing more than 10,000 pounds, Manufacturer's Gross Vehicle Weight	7:00 a.m. to 10:00 p.m.	88 dB(A)	25 feet
Motor vehicle weighing more than 10,000 pounds, Manufacturer's Gross Vehicle Weight	10:00 p.m. to 7:00 a.m.	80 dB(A)	25 feet

2.3 City of Cranston Zoning Code

The City of Cranston Code of Ordinances also regulates octave band noise emitted from industrial uses under Chapter 17.36 Zoning - Industrial Uses, Section G. Chapter 17.36(G) states that, “*in C-5 and M-1 districts, industrial noise shall be measured from any property line... the sound pressure level of noise shall not exceed the values given in Tables 1...*” The Project is in an M-1 zoning district. Chapter 17.36(G)(1) Table 1 lists the maximum allowable octave band sound pressure levels for continuous sounds from a facility between the hours of 11:00 p.m. and 7:00 a.m. A copy of Table 1 is presented below.

TABLE 1
CITY OF CRANSTON CODE OF ORDINANCES, TITLE 17, CHAPTER 17.36
MAXIMUM PERMISSIBLE SOUND-PRESSURE LEVELS AT SPECIFIED POINTS OF
MEASUREMENT FOR NOISE RADIATED CONTINUOUSLY FROM A FACILITY BETWEEN
THE HOURS OF 11:00 PM AND 7:00 AM

<i>Frequency Band (Cycles per second)</i>	<i>Sound Pressure Level Decibels</i>
20 – 75	75
75 – 150	70
150 – 300	62
300 – 600	55
600 – 1200	49
1200 – 2400	43
2400 – 4800	37
4800 – 10000	35

3.0 Project Description & Design Goals

This section presents a description of the Project and the surrounding neighborhood, and the design goals for the Project.

3.1 Surrounding Neighborhood

The proposed Project site is located in the western portion of the city of Cranston, Rhode Island along the east side of Comstock Parkway across from Western Industrial Drive. Cranston is part of the Providence metropolitan area. The area around the site is predominantly commercial and industrial and is bounded between Comstock Parkway immediately to the west, Plainfield Pike (Route 14) approximately 1,300' to the north, and Scituate Avenue (Route 12) approximately 420' to the south. Interstate 295 is 1,600' to 1,700' to the east of the site's western boundary.

The Project parcel is approximately seventeen (17) acres of currently undeveloped, wooded land zoned M-1 industrial use. The adjacent properties immediately to the north and east of the project site are zoned either M-1 or M-2 while the properties across Comstock Parkway are zoned M-2. All the adjacent properties to the north, east, and west of the site are currently occupied by commercial and industrial businesses. The properties located immediately adjacent to the southern boundaries of the site are zoned M-1 at Comstock Parkway (HarborOne Bank) and transition eastward to B-2 for the homes off Sweet Pea Drive and Sweet Corn Drive and then to A-80 for the home lots directly off Scituate Avenue.

Distances from the Project site's main entrance drive to the nearest residential structure is approximately 380 feet. By contrast, Comstock Parkway is less than sixty (60) feet from the nearest residence at the western end of Sweet Pea Drive and less than two hundred (200) feet from the nearest residence on Sweet

Corn Drive. Similarly, Scituate Avenue is only one hundred (100) feet from the nearest residence on the eastern end of Sweet Pea Drive and one hundred and twenty (120) feet from the homes directly off Scituate Avenue. Consequently, most of the homes to the south of the project site currently experience sound impacts from these existing traffic arteries.

3.2 Proposed Project

The proposed Project consists of two (2) buildings: 1) a 199,180 square foot warehouse with fifty-six (56) loading bays and 2) a 70,000 square foot office/warehouse with thirteen (13) loading bays. The remainder of the site would provide for forty-two (42) trailer storage spaces and two hundred and seventeen (217) employee and customer parking spaces. And it is our understanding that the Project is proposed to operate during both daytime and nighttime hours.

3.3 Project Design Goals

Table 3 presents the premises bordering the proposed Project and the applicable limit at each location for sound sources emitted from the Project as prescribed by the Cranston Noise Code Chapter 8.20(F). The property line impacts of industrial sources should also comply with the octave band limits from the Cranston Zoning Code Chapter 17.36(G). The property line locations are illustrated in Figure 1. These primary design goals are consistent with the applicable regulations in Section 2.2 and Section 2.3.

A secondary design goal for the Project is for all truck traffic to comply with the sound pressure levels prescribed by the Cranston Noise Code Chapter 8.20(I). Those sound limits for trucks coming to and from the Project (i.e., weighing more than 10,000 pounds) is eighty-eight (88) dBA at twenty-five (25) feet between 7:00 a.m. to 10:00 p.m. (i.e., daytime), and is eighty (80) dBA at twenty-five (25) feet between 10:00 p.m. to 7:00 a.m. (i.e., nighttime). The daytime limit would be achieved by a properly operated heavy truck cruising at a speed of fifty (50) miles per hour or less. And the nighttime limit would be achieved by a properly operated heavy truck cruising at a speed of fifteen (15) miles per hour or less.²

Lastly, it should be acknowledged that although the Project is proposed in an industrial zone with adjoining industrial uses, the Project abuts a land use which should be given consideration in the Project design. Those locations include residential single family uses on Situate Avenue, residential condominiums on Sweet Pea Drive and Sweet Corn Drive, a childcare facility at 210 Comstock Parkway and a place of business (i.e., a bank) at 200 Comstock Parkway. A tertiary design goal for the Project is to minimize the potential sound impacts at those locations, although not required beyond state and/or local regulations.

² Per the Federal Highway Administration (FHWA) Traffic Noise Model (TNM) Technical Manual, Final Report, U.S. Department of Transportation, FHWA-PD-96-010, DOT-VNTSC-FHWA-98-2, February 1998, Figure 11, page 34.

TABLE 3
PRIMARY DESIGN GOALS FOR THE COMSTOCK INDUSTRIAL PARK

ID	Property Line	Direction	Type of Premises	Cranston Noise Code Limit*
1	1025 Scituate Avenue	South	Residential	50 dBA
2	1039 Scituate Avenue	South	Residential	50 dBA
3	10-12 Sweet Pea Drive	South	Residential	50 dBA
4	14-16 Sweet Pea Drive	South	Residential	50 dBA
5	10-12 Sweet Corn Drive	South	Residential	50 dBA
6	5-7 Sweet Corn Drive	South	Residential	50 dBA
7	210 Comstock Parkway	West	Residential	50 dBA
8	200 Comstock Parkway	West	Commercial	60 dBA
9	West Property Line	West	Public	70 dBA
10	140 Comstock Parkway	North	Industrial	75 dBA
11	11 Amflex Drive	North	Industrial	75 dBA
12	15 Amflex Drive	North	Industrial	75 dBA
13	21 Amflex Drive	North	Industrial	75 dBA
14	25 Amflex Drive	North	Industrial	75 dBA
15	37 Amflex Drive	East	Industrial	75 dBA

* Design goals include compliance with octave band limits from Cranston Zoning Code Chapter 17.36(G) Table 1.

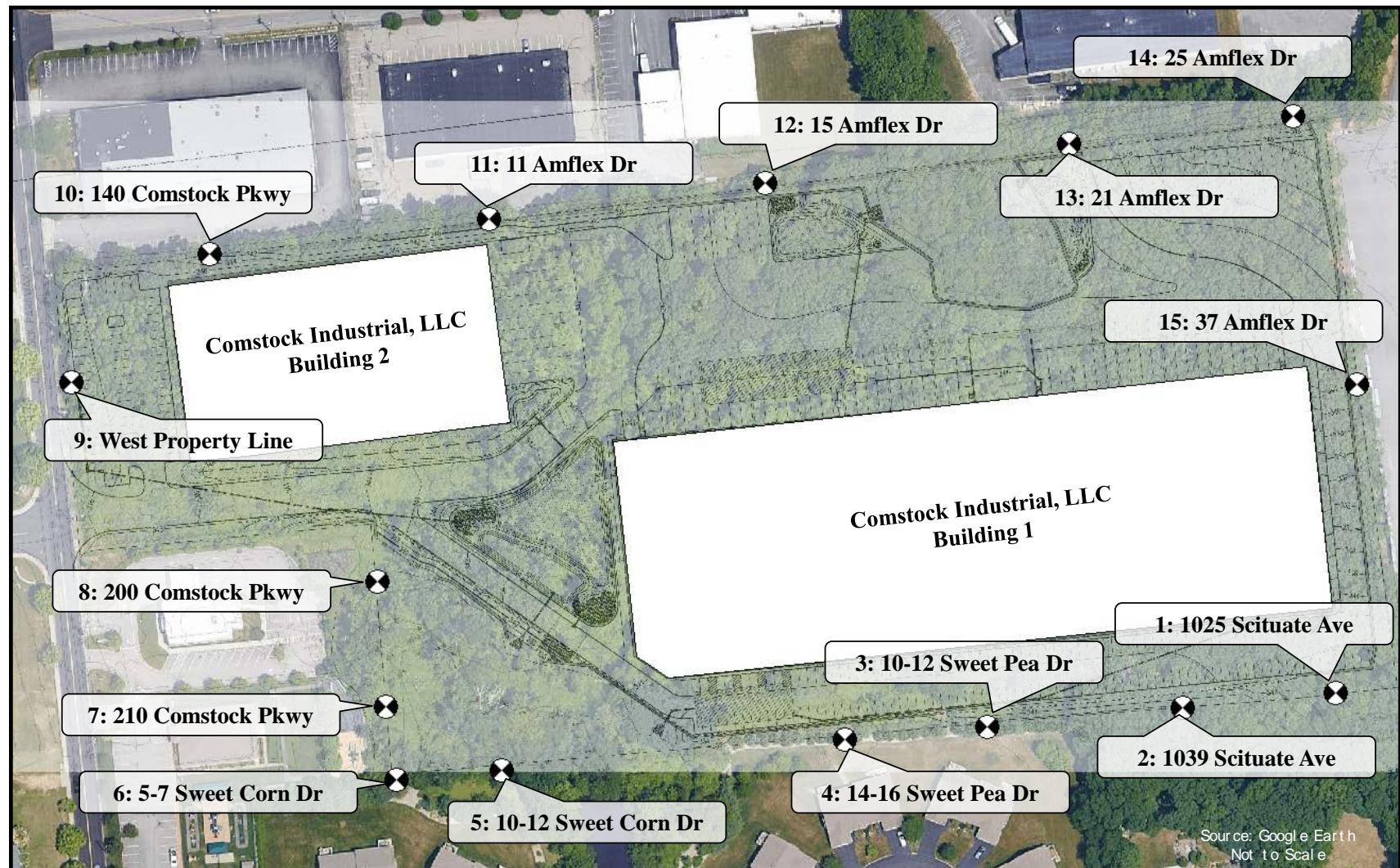


Figure 1

Modeled Property Line Locations
Comstock Industrial Park, Cranston, Rhode Island



3.4 Project Design Features

The parking area and drive on the south side of Building 1 is intended only for customer and warehouse employee parking. Primary truck traffic in and out of the development site would be restricted to the north side of the building and would not utilize this parking area. Thus, no significant sound impacts are anticipated from this area of the project site.

The proposed placement of the building on the site is key to minimizing potential sound impacts to neighboring properties. The position of the larger warehouse building (Building 1) near the south side of the site and to the eastern corner will provide effective shielding from truck sounds for the residential properties to the south and southeast. Because the loading bays of Building 1 would be on the north side of the building, the building's height (35 feet) and length (760 feet) will provide a substantial degree of shielding from truck movements to and from the bays.

Landscape planting considerations that will benefit residential properties to the south include existing trees and new plantings. A significant amount of tree and shrub foliage is continuous and dense and is proposed to remain between the development and the homes to the south. The density and heights of the existing trees are sufficient to fully obscure the line-of-site from the back yards of those homes to the Project site. This significant plant buffer will remain in place and will also be supplemented on the Project site with additional plantings to replace some trees and shrubs lost to the land clearing and grading necessary for construction. New evergreen plantings will ensure the continuity of the existing buffer as well as to add to areas which would otherwise become more open once the Project is in place. These plantings are strategically located to block views to the south and will fill in any gaps in existing foliage. Plantings along the entrance drive from Comstock Parkway will create new line-of-site screening along the southern boundary to obscure views of vehicles coming into and leaving the development.

Lastly, a solid screen wall is incorporated into the landscaping and civil plans along most of the southern property boundary. This wall is intended to block lights and sounds from employee vehicles arriving and departing from the parking area along the south side of Building 1. The portion of the wall which extends along the main entrance drive will also help block sound and lights for vehicles entering and leaving the property.

4.0 Modeling Assumptions and Results

This section describes the modeling approach and assumptions included in our acoustic modeling analysis and predicted sound levels at the nearest property lines to the proposed Project.

4.1 CadnaA Acoustic Model

Future sound level impacts from the proposed Project, and the resulting improvement from mitigation measures, were calculated with the CadnaA acoustic model. CadnaA is a sophisticated 3-D model for sound propagation and attenuation based on International Standard ISO 9613.³ Absorption of sound assumed standard conditions and is significant at large distances and at high frequencies. ISO 9613 was used to calculate propagation and attenuation of sound energy by hemispherical divergence with distance, surface reflection, ground, and shielding effects by barriers, buildings, and ground topography.

The predicted sound levels are conservative because:

1. The model assumes a ground-based temperature inversion, such as may occur on a clear, calm night when sound propagation is at a maximum. This worst-case condition is infrequent.
2. The model assumes that all sound sources are operating simultaneously (a worst-case condition not likely to occur).

4.2 Modeling Assumptions

Future sound level impacts from the proposed Project continuous sound sources were calculated with the CadnaA acoustic model. The assumptions in our continuous sources acoustic modeling analysis are as follows:

1. The location of the proposed Project and associated grading was based on site plans by Alfred Benesch & Company.⁴ The plans show two (2) buildings: Building 1) a 199,180 SF warehouse with fifty-six (56) loading bays on the eastern side of the parcel and Building 2) a 70,000 SF office/warehouse with thirteen (13) loading bays on the western side of the parcel. The remainder of the site includes forty-two (42) trailer storage spaces and two hundred and seventeen (217) employee and customer parking spaces.
2. The primary sources of continuous operational sounds from the Project are rooftop-mounted warehouse heating, ventilation, and air conditioning (HVAC) equipment, and warehouse exhaust fans on top of the buildings. The analysis includes eight (8) HVAC units and sixteen (16) exhaust fans on the rooftop of Building 1, and four (4) HVAC units and eight (8) exhaust fans on the rooftop of Building 2. The locations of the continuous operational sound sources are illustrated in Figure 2. The sound power levels for the sources, including octave bands, utilized in the acoustic model are included in the attached Appendix A.

³ International Standard, ISO 9613-2, Acoustics – Attenuation of Sound During Propagation Outdoors, -- Part 2 General Method of Calculation.

⁴ Overall Grading & Drainage Plan, Comstock Industrial Park, Comstock Parkway, Cranston, RI, Alfred Benesch & Company, Revised July 8, 2022.

The results of mitigation measures designed to reduce Project traffic sound level impacts were calculated with the CadnaA acoustic model. The assumptions in our acoustic modeling analysis for the Project traffic mitigation improvements analysis are as follows:

1. The proposed placement of the building on the site is key to minimizing potential sound impacts to neighboring properties. The position of the larger warehouse building (Building 1) near the south side of the site and to the eastern corner will provide very effective shielding for the residential properties to the south and southeast. Because the loading bays of Building 1 would be on the north side of the building, the building's height (35') and length (760') will provide a substantial degree of shielding from truck movements to and from the bays.
2. The parking area and drive on the south side of Building 1 is intended only for customer and warehouse employee parking. Primary truck traffic in and out of the development site would be restricted to the north side of the building and would not utilize this southerly parking area. Thus, no significant sound impacts are expected from this area of the project site.
3. A solid 6-foot-tall screen wall is incorporated into the landscaping and civil plans along most of the southern property boundary. This wall is intended to block lights and sounds from employee vehicles arriving and departing from the parking area along the south side of Building 1. The portion of the wall that extends along the main entrance drive will also help block sound and lights from vehicles entering and leaving the property.
4. The analysis of unmitigated Project traffic sound level impacts is illustrated in Figure 3. That analysis includes unrestricted truck traffic around the perimeter of Building 1, and along the southern property line near land uses on Situate Avenue, Sweet Pead Drive and Sweet Corn Drive. The sound power levels for the sources, including octave bands, utilized in the acoustic model are included in the attached Appendix A. The modeled sound levels for truck traffic follow the Cranston Noise Code, Section I (i.e., Table B).
5. The analysis of mitigated Project traffic sound level impacts is illustrated in Figure 4. That analysis includes truck traffic restricted to the north of Building 1 and the installation of a solid 6-foot-tall screen wall along most of the southern property boundary. The sound power levels for the sources, including octave bands, utilized in the acoustic model are included in the attached Appendix A. The modeled sound levels for truck traffic follow the Cranston Noise Code, Section I (i.e., Table B).
6. The analysis of unmitigated Project traffic sound level impacts and the analysis of mitigated Project traffic sound level impacts each assume eleven (11) truck trip ends per hour coming to and going from the Project (i.e., 5.5 round trips per hour). This is a conservative approach given the traffic impact analysis conducted for the Project predicts that the truck traffic activity between the hours of 10:00 pm and 7:00 am would range from zero (0) to ten (10) truck trip ends per hour and would be an average of two (2) truck trip ends per hour (i.e., one round trip per hour).

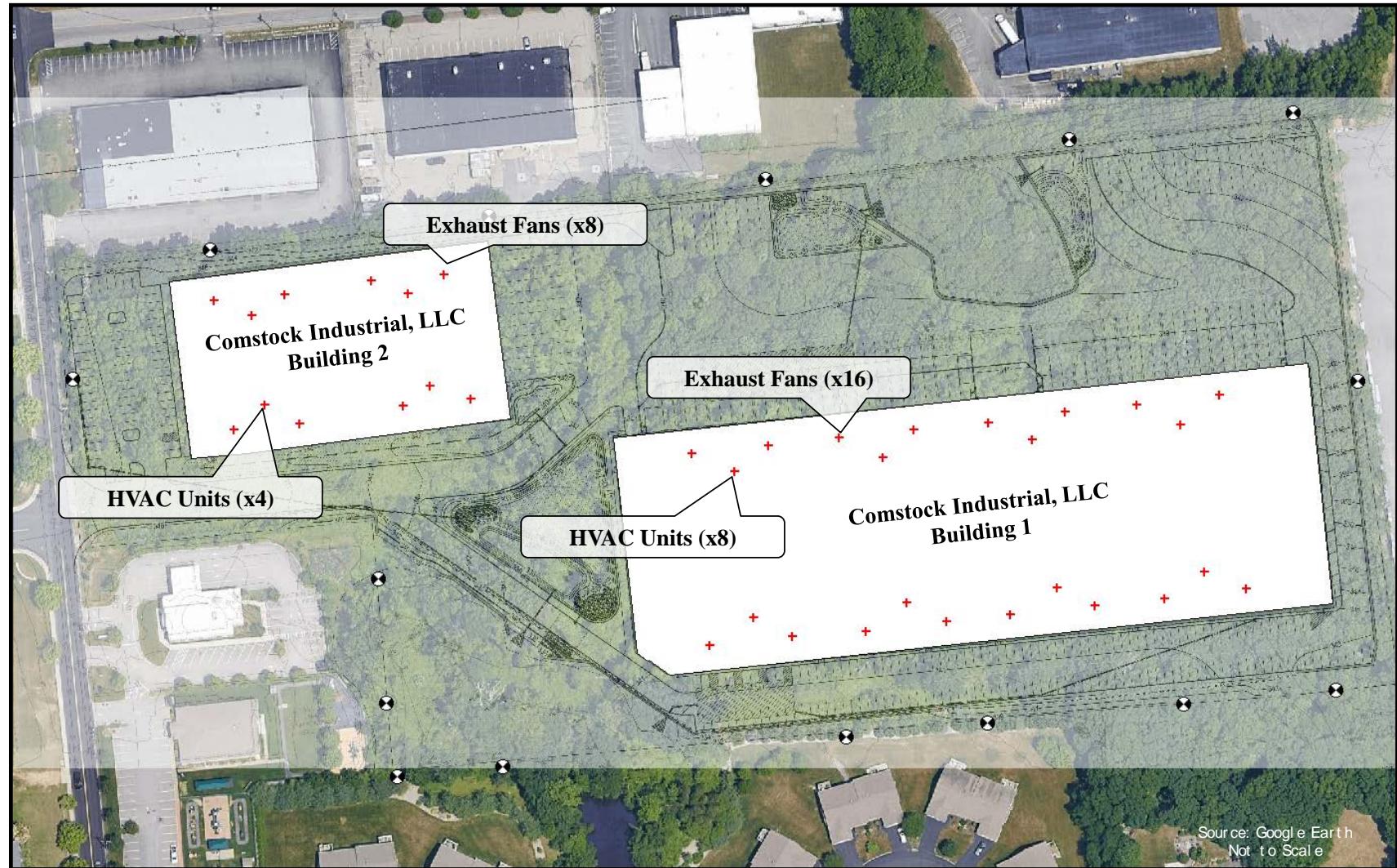


Figure 2

Modeled Project Continuous Operational Sounds
Comstock Industrial Park, Cranston, Rhode Island



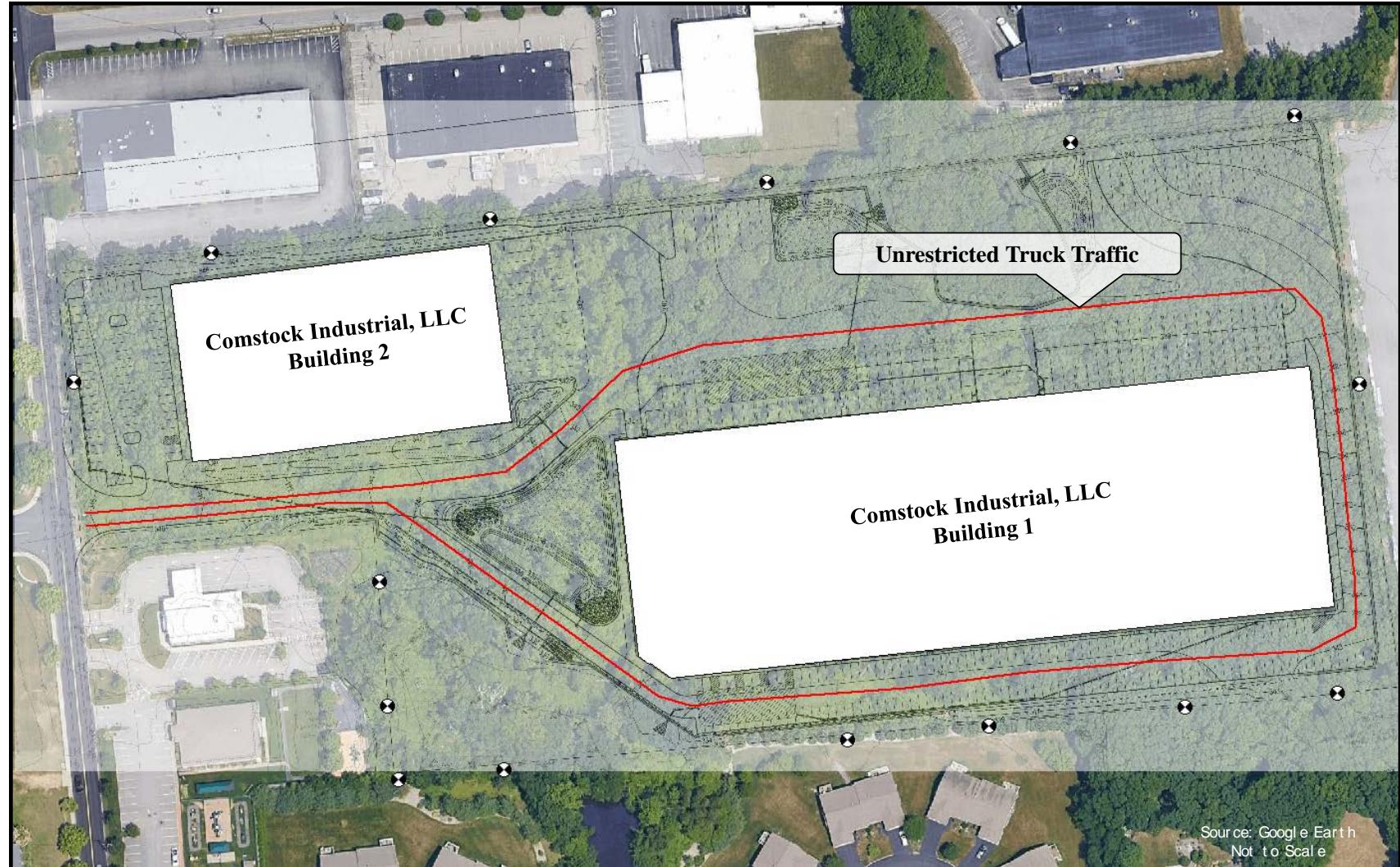


Figure 3

Modeled Project Traffic Impacts Without Mitigation
Comstock Industrial Park, Cranston, Rhode Island



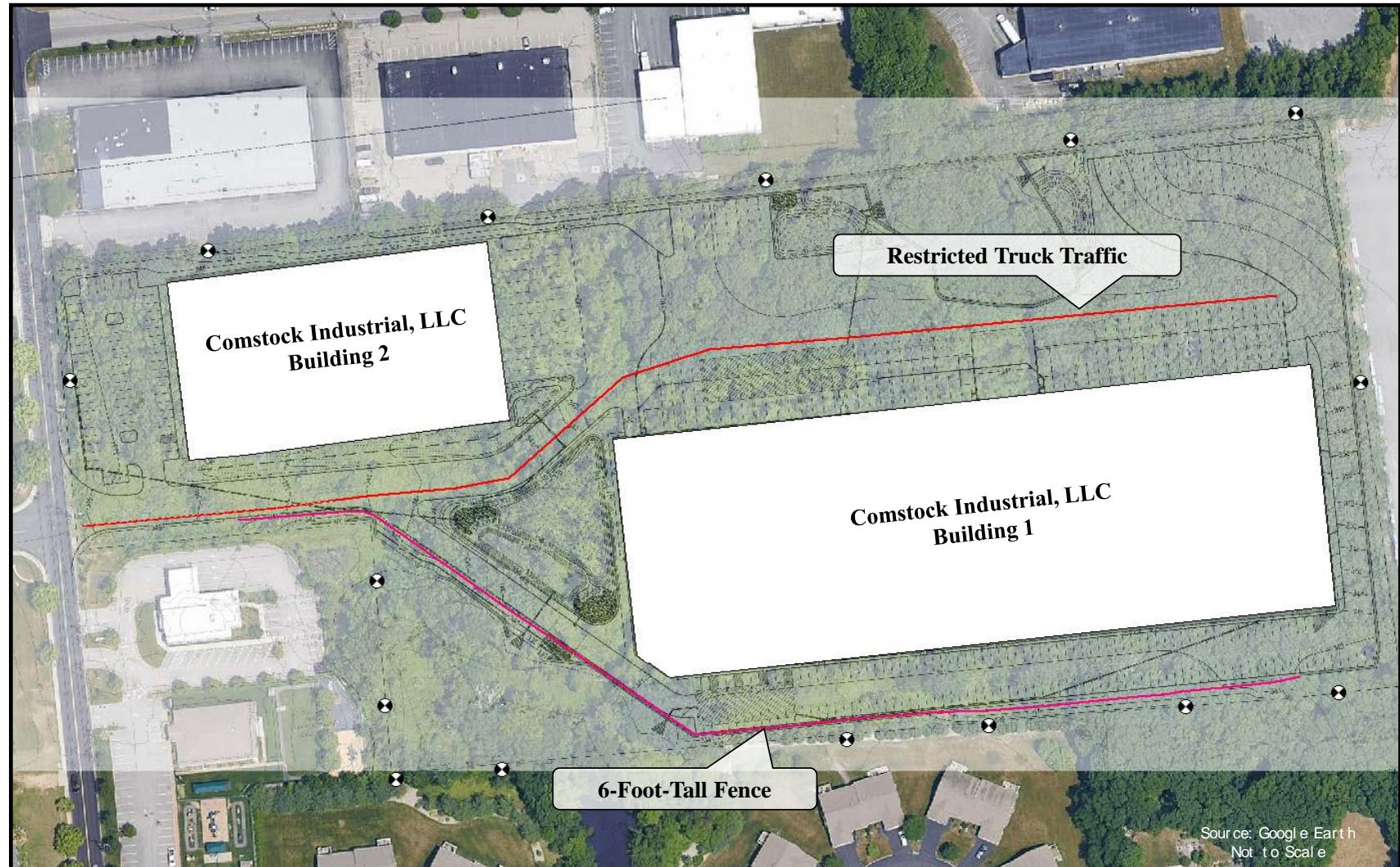


Figure 4

Modeled Project Traffic Impacts With Mitigation
Comstock Industrial Park, Cranston, Rhode Island



4.3 Future Sound Levels

Sound levels were predicted for the simultaneous operation of the Project's continuous sound sources. The locations of the sound sources are illustrated in Figure 2. Table 4 summarizes the modeling results and that the Project continuous sound sources would result in sound level impacts that range from 21 dBA to 34 dBA at the nearest property lines. The predicted sound level impacts of the Project's continuous sound sources comply with the facility design goals for each location (see Section 3.3), including compliance with octave band limits from Cranston Zoning Code Chapter 17.36(G) Table 1. The sound level impacts of the Project at locations further away would be even less. Table 4 confirms that the proposed Project will fully comply with the City of Cranston Noise Code.

TABLE 4

PREDICTED SOUND LEVELS FROM CONTINUOUS SOURCES AT THE COMSTOCK INDUSTRIAL PARK

ID	Property Line	Type of Premises	Cranston Noise Code Limit	Predicted Sound Level	Complies with Octave Band Limits? *
1	1025 Scituate Avenue	Residential	50 dBA	28 dBA	Yes
2	1039 Scituate Avenue	Residential	50 dBA	28 dBA	Yes
3	10-12 Sweet Pea Drive	Residential	50 dBA	28 dBA	Yes
4	14-16 Sweet Pea Drive	Residential	50 dBA	27 dBA	Yes
5	10-12 Sweet Corn Drive	Residential	50 dBA	33 dBA	Yes
6	5-7 Sweet Corn Drive	Residential	50 dBA	34 dBA	Yes
7	210 Comstock Parkway	Residential	50 dBA	31 dBA	Yes
8	200 Comstock Parkway	Commercial	60 dBA	31 dBA	Yes
9	West Property Line	Public	70 dBA	28 dBA	Yes
10	140 Comstock Parkway	Industrial	75 dBA	26 dBA	Yes
11	11 Amflex Drive	Industrial	75 dBA	29 dBA	Yes
12	15 Amflex Drive	Industrial	75 dBA	32 dBA	Yes
13	21 Amflex Drive	Industrial	75 dBA	31 dBA	Yes
14	25 Amflex Drive	Industrial	75 dBA	31 dBA	Yes
15	37 Amflex Drive	Industrial	75 dBA	21 dBA	Yes

* Design goals include compliance with octave band limits from Cranston Zoning Code Chapter 17.36(G) Table 1.

Sound levels were also predicted for Project traffic sound level impacts with and without the mitigation improvements incorporated into the Project design (see Section 3.4). The locations of the sound sources without mitigation are illustrated in Figure 3. The locations of the sound sources with mitigation are illustrated in Figure 4. Those mitigation improvements include truck traffic restricted to the north of

Building 1 and the installation of a solid 6-foot-tall screen wall along most of the southern property boundary. Table 5 summarizes the modeling results and that the Project traffic mitigation improvements will lessen the sound level impacts of traffic by 4 dBA to 35 dBA at the nearest neighborhood property lines. Those improvements represent a noticeable to substantial improvement at each neighborhood property line.

TABLE 5

**PREDICTED NEIGHBORHOOD IMPROVEMENTS WITH MITIGATION
AT THE COMSTOCK INDUSTRIAL PARK**

ID	Property Line	Current Property Use	Mitigation Improvement	Perceived Improvement
1	1025 Scituate Avenue	Single Family	Less 33 dBA	1/8 th as Loud
2	1039 Scituate Avenue	Single Family	Less 35 dBA	1/8 th as Loud
3	10-12 Sweet Pea Drive	Condominiums	Less 35 dBA	1/8 th as Loud
4	14-16 Sweet Pea Drive	Condominiums	Less 31 dBA	1/8 th as Loud
5	10-12 Sweet Corn Drive	Condominiums	Less 7 dBA	Noticeable
6	5-7 Sweet Corn Drive	Condominiums	Less 5 dBA	Noticeable
7	210 Comstock Parkway	Childcare	Less 7 dBA	Noticeable
8	200 Comstock Parkway	Bank	Less 7 dBA	Noticeable

Sound levels were also predicted for the simultaneous operation of the Project's continuous sound sources and the Project truck traffic sound level impacts with mitigation improvements, per the request of the City of Cranston Principal Planner, and with input from the City's peer review consultant and the City of Cranston Solicitor. The locations of the continuous sound sources are illustrated in Figure 2 and the locations of the traffic sound sources with mitigation are illustrated in Figure 4. Table 6 summarizes the modeling results and that the Project continuous sound sources and the mitigated truck traffic would result in sound level impacts that range from 27 dBA to 46 dBA at the nearest property lines. The City of Cranston Principal Planner also requested that these predicted impacts be compared to the limits presented as Table A of the City of Cranston Noise Code. Although Tech does not concur that the Table A limits are applicable to truck traffic impacts, those nighttime limits have also been presented in Table 6, and the predicted sound level impacts are less than those limits at all locations. The sound level impacts of the Project at locations further away would be even less.

TABLE 6

**PREDICTED SOUND LEVELS FROM CONTINUOUS SOURCES AND
MITIGATED TRUCK TRAFFIC AT THE COMSTOCK INDUSTRIAL PARK**

ID	Property Line	Type of Premises	Cranston Noise Code Limit	Predicted Sound Level
1	1025 Scituate Avenue	Residential	50 dBA	28 dBA
2	1039 Scituate Avenue	Residential	50 dBA	28 dBA
3	10-12 Sweet Pea Drive	Residential	50 dBA	29 dBA
4	14-16 Sweet Pea Drive	Residential	50 dBA	28 dBA
5	10-12 Sweet Corn Drive	Residential	50 dBA	42 dBA
6	5-7 Sweet Corn Drive	Residential	50 dBA	43 dBA
7	210 Comstock Parkway	Residential	50 dBA	42 dBA
8	200 Comstock Parkway	Commercial	60 dBA	46 dBA
9	West Property Line	Public	70 dBA	42 dBA
10	140 Comstock Parkway	Industrial	75 dBA	27 dBA
11	11 Amflex Drive	Industrial	75 dBA	43 dBA
12	15 Amflex Drive	Industrial	75 dBA	46 dBA
13	21 Amflex Drive	Industrial	75 dBA	46 dBA
14	25 Amflex Drive	Industrial	75 dBA	43 dBA
15	37 Amflex Drive	Industrial	75 dBA	41 dBA

In conclusion, the proposed Project will comply with the City of Cranston Noise Code and the City of Cranston Zoning Code, and the Project design includes mitigation that will lessen the impacts of traffic sound levels at the nearest neighborhood property lines. Lastly, the simultaneous operation of the Project's continuous sound sources and the Project traffic sound level impacts with mitigation improvements will be less than those limits presented as Table A of the City of Cranston Noise Code. If you have any questions, please call me at 781-890-2220.

Sincerely,

TECH ENVIRONMENTAL, INC.



Marc C. Wallace, QEP, INCE
Vice President

4770/Sound Study for Comstock Industrial Park

APPENDIX A – REFERENCE SOUND POWER LEVELS (L_w , dB)

Sound Source	31 Hz	63 Hz	125 Hz	250 Hz	500 Hz	1K Hz	2K Hz	4K Hz	8K Hz	Total (dBA)
HVAC Units	26	42	58	71	76	79	72	68	60	81
Exhaust Fans	86	78	70	61	56	54	50	44	37	61
Truck Traffic ⁵	78	87	96	100	100	101	100	98	93	106

⁵ Truck traffic is modeled as a “moving point source” with an intermittent emission of 106 dBA traveling at 15 miles per hour (mph) and 5.5 times per hour. 106 dBA (sound power level) is equivalent to 80 dBA at 25 feet (sound pressure level).