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Noise

The goal of this chapter is to determine whether the Proposed Actions would result in a significant adverse impact on the environment at existing noise-sensitive receptors and whether noise levels at any new receptors within the Project Area would exceed applicable New York City noise criteria.

Introduction

The Applicants, 760 12th LLC and 801 11th Ave., LLC, are seeking zoning map amendments, zoning text amendments, and zoning special permits (collectively, the Proposed Actions) to facilitate the development of two buildings (collectively, the Proposed Projects): a 44-story, mixed-use residential and commercial building at 629 West 54th Street (Manhattan Block 1102, Lot 11) and a 38-story, mixed-use residential and commercial building at 801 Eleventh Avenue (Manhattan Block 1103, Lot 36). The building at 629 West 54th Street would contain up to approximately 617 dwelling units (DUs) and 113,990 gsf of commercial auto dealership space. The building at 801 Eleventh Avenue would contain 477 DUs and 85,760 gsf of commercial auto dealership space. In total, the Proposed Projects would contain approximately 1,179,321 gsf including approximately 939,934 gsf of residential floor area and 199,750 gsf of commercial floor area across the two development sites. The Proposed Actions include zoning changes and special permits to facilitate a transfer of floor area from Piers 59, 60, 61, 81, 83, 98 and/or the Chelsea Piers headhouse (the "Granting Sites") within Hudson River Park to the development sites. In addition to the Proposed Actions, the Board of Directors of Hudson River Park Trust must approve the sale of the floor area from the Granting Sites, which requires a Signification Action process pursuant to the Hudson River Park Act.

Within the Project Area, there are two development sites—(1) the property at 629 West 54th Street (Manhattan Block 1102, Lot 11, a.k.a. 629 West 54th Street) owned by 760 12th LLC ("Development Site 1") and (2) the property at 801 Eleventh Avenue (Manhattan Block 1103, Lot 36) owned by 801 11th Ave., LLC ("Development Site 2"). Refer to **Figure 13-1** for the location of the Project Area and development sites.

Additionally, as described in **Chapter 1, Project Description**, for the purpose of environmental analysis two reasonable worst-case development scenarios (RWCDSs) were analyzed to provide a conservative baseline in analyzing the Proposed Actions' potential impacts. One scenario is the Maximum Commercial Scenario which assumes that the commercial space of the Proposed Projects would be developed as office and retail uses instead of auto dealership use. The second scenario is the Maximum Residential Scenario which would maximize the residential floor area that could be developed on each Development Site.

Per the *2021 City Environmental Quality Review (CEQR) Technical Manual*, a noise analysis is appropriate if an action would generate mobile or stationary sources of noise or would be located in an area with high ambient noise levels. The purpose of the noise assessment under CEQR is to determine if:

- The Proposed Actions would result in a significant adverse environmental impact by significantly increasing sound levels from mobile and stationary sources at existing sensitive noise receptors adjacent to the Project Area, including residential and commercial land uses; and
- New noise receptors introduced at the development sites would be in an acceptable ambient sound level environment.

The noise assessment includes the following:

- Background on metrics used to describe noise;
- The methodology and criteria used to assess potential impacts;
- An assessment of the potential for the Proposed Actions to significantly affect existing receptors due to the introduction of new mobile or stationary sources;
- Results from ambient sound level monitoring in the project area; and
- An evaluation of the ambient sound levels at new receptor locations.

This noise analysis considers two receptor types when evaluating noise: existing and new receptor(s). Since the Proposed Actions would introduce new buildings with residential and commercial spaces, these are considered "new receptors." The analysis also considers "existing receptors," which are the current noise-sensitive uses such as commercial and residential properties surrounding the Project Area. The following describes the results of the noise assessment for these two types of receptors.

Principal Conclusions

The Proposed Actions would not result in significant adverse impacts with respect to noise. A noise assessment was conducted to determine whether the Proposed Actions would significantly increase sound levels from mobile and stationary sources at existing noise receptors within the vicinity of the Project Area, and if the new noise receptors that would be introduced by the Proposed Actions would be in an acceptable ambient sound level environment.

Predicted With-Action L_{eq} noise levels at the six analyzed receptor sites would range from 66.5 to 77.8 dBA. With-Action sound levels are expected to increase by up to 0.5 dBA over No-Action levels. Since noise increases at all locations are less than 3 dBA, the Proposed Actions would not result in a doubling of noise PCEs. Therefore, the Proposed Actions would not result in a significant adverse noise impact due to mobile sources.

The Proposed Actions are not anticipated to introduce any substantial stationary source noise generators. The design and specifications for the building's mechanical equipment would incorporate sufficient noise reduction devices that would comply with applicable noise regulations and standards, including the standards contained in the revised New York City Noise Control Code.

Based on the highest predicted L10 sound levels, a minimum outdoor-to-indoor window/wall sound attenuation of 37 dBA is required for the western façade facing Twelfth Avenue, on the southern façade facing West 54th Street within 50 feet of Twelfth Avenue and on the northern façade facing West 55th Street within 50 feet of Twelfth Avenue, 28 dBA window/wall attenuation is required on the remaining southern façade facing West 54th Street and on the eastern façade facing Eleventh Avenue within 50 feet of West 54th Street, and 31 dBA window/wall attenuation is required on the remaining northern façade facing West 55th Street and on the eastern façade facing Eleventh Avenue within 50 feet of West 55th Street; and at Development Site 2, a minimum outdoor-to-indoor window/wall sound attenuation of 31 dBA is required on northern façade facing West 56tth Street, on the western façade facing Twelfth Avenue within 50 feet of West 56th Street, on the eastern façade facing Eleventh Avenue, and on the southern façade facing West 55th Street within 50 feet within Eleventh Ave, and 28 dBA window/wall attenuation on the remaining southern facing West 55th Street and on the western façade facing Twelfth Avenue within 50 feet of West 55th Street. To implement the attenuation requirements described above, an (E)-Designation (E-869) for noise would be applied to the development sites specifying the appropriate amount of window/wall attenuation and the need for alternate means of ventilation. With the implementation of the attenuation requirements described above, no significant adverse noise impacts related to building attenuation would occur as a result of the Proposed Actions.

Noise Background

Noise is defined as unwanted or excessive sound. Sound becomes unwanted when it interferes with normal activities such as sleep, work, or recreation. How people perceive sound depends on several measurable physical characteristics. These factors include:

- **Level:** Sound level is based on the amplitude of sound pressure fluctuations and is often equated to perceived loudness.
- **Frequency:** Sounds comprise acoustic energy distributed over a variety of frequencies. Acoustic frequencies, commonly referred to as tone or pitch, are typically measured in Hertz (Hz). Pure tones have energy concentrated in a narrow frequency range and can be more audible to humans than broadband sounds.
- **Sound levels** are most often measured on a logarithmic scale of decibels (dB). The decibel scale compresses the audible acoustic pressure levels which can vary from the threshold of hearing (0 dB) to the threshold of pain (120 dB). Because sound levels are measured in dB, the addition of two sound levels is not linear. Adding two equal sound levels results in a 3 dB increase in the overall level.

Research indicates the following general relationships between sound level and human perception:

- A 3-dB increase is a doubling of acoustic energy and is the threshold of perceptibility to the average person.
- A 10-dB increase is a tenfold increase in acoustic energy and is perceived as a doubling in loudness to the average person.

Audible sound comprises acoustic energy over a range of frequencies typically from 20 to 20,000 Hz; however, the sensitivity of the human ear varies over this range. Humans are most sensitive to sounds with frequencies between 200 and 10,000 Hz. To account for this phenomenon in perception, a frequency filter known as A-weighting (dBA) is used to evaluate environmental noise levels. **Table 13-1** presents a list of common outdoor and indoor sound levels.

Table 13-1 Common Indoor and Outdoor Sound Levels

	Sound Pressure		Sound Level	
Outdoor Sound Levels	**μPa**		**dBA**	**Indoor Sound Levels**
	6,324,555	-	110	Rock Band at 5 m
Jet Over-Flight at 300 m		-	105	
	2,000,000	-	100	Inside New York Subway Train
Gas Lawn Mower at 1 m		-	95	
	632,456	-	90	Food Blender at 1 m
Diesel Truck at 15 m		-	85	
Noisy Urban Area—Daytime	200,000	-	80	Garbage Disposal at 1 m
		-	75	Shouting at 1 m
Gas Lawn Mower at 30 m	63,246	-	70	Vacuum Cleaner at 3 m
Suburban Commercial Area		-	65	Normal Speech at 1 m
	20,000	-	60	
Quiet Urban Area—Daytime		-	55	Quiet Conversation at 1 m
	6,325	-	50	Dishwasher Next Room
Quiet Urban Area—Nighttime		-	45	
	2,000	-	40	Empty Theater or Library
Quiet Suburb—Nighttime		-	35	
	632	-	30	Quiet Bedroom at Night
Quiet Rural Area—Nighttime		-	25	Empty Concert Hall
Rustling Leaves	200	-	20	
		-	15	Broadcast and Recording Studios
	63	-	10	
		-	5	
Reference Pressure Level	20	-	0	Threshold of Hearing

μPA MicroPascals describe pressure; the pressure level is what sound level monitors measure
dBA A-weighted decibels describe pressure logarithmically with respect to 20 μPa (the reference pressure level)
Source: Highway Noise Fundamentals, Federal Highway Administration, September 1980

Because sound levels change over time, a variety of sound level metrics can be used to describe environmental noise. The following is a list of sound level descriptors that are used in the noise analysis:

› L_{10} is the sound level which is exceeded for 10 percent of a given time period. Therefore, it represents the higher end of the range of sound levels over the period. This sound level metric is commonly used in the *CEQR Technical Manual* to evaluate acceptable thresholds for noise exposure for new receptors that would be introduced by a proposed development.

- L_{eq} is the continuous equivalent A-weighted sound level. The L_{eq} is a single value that is equivalent in sound energy to the fluctuating levels over a period of time. Therefore, the L_{eq} considers how loud noise events are during the period, how long they last, and how many times they occur. L_{eq} is commonly used to describe environmental noise and relates well to human annoyance. L_{eq} must be qualified in terms of a time period to have meaning. The normal representation for the time period is placing it in parentheses in terms of hours (e.g., $L_{eq(1)}$ refers to a 1-hour measurement and $L_{eq(24)}$ refers to a 24-hour measurement). For this analysis, L_{eq} is understood to represent an hourly sound level metric, unless otherwise noted. In accordance with the *CEQR Technical Manual*, the L_{eq} sound level is used to assess the potential for significant increases in noise due to a proposed development at existing receptors in the study area.
- L_{max} (maximum sound level) is the highest exponential-time-average sound level, in decibels, that occurs during a stated time period. The standardized time periods are 1 second for L_{max}, slow, and 0.125 second for L_{max}, fast.
- L_{min} (minimum sound level) is the lowest exponential-time-average sound level, in decibels, that occurs during a stated time period. The standardized time periods are 1 second for L_{min}, slow, and 0.125 second for L_{min}, fast.

Noise Standards and Impact Criteria

Noise Exposure Guidelines

The *CEQR Technical Manual* provides noise exposure guidelines for assessing ambient noise conditions at residential, community facility and commercial receptors, as shown in **Table 13-2**.

Impact Criteria

The determination of significant adverse noise impacts in this analysis is based on both absolute noise level limits and relative impact criteria. According to the *CEQR Technical Manual*, for the purposes of determining a significant impact during daytime hours, it is reasonable to consider a L_{eq} noise level of 65 dBA as an absolute noise level that should not be significantly exceeded.

If mobile or stationary sources associated with the Proposed Project would increase L_{eq} sound levels by 3 dB or more and absolute levels would exceed 65 dBA L_{eq}, the Proposed Project would cause a significant adverse impact. Additionally, if No-Action condition noise levels are 60 dBA L_{eq} or less, a 5-dB increase would be considered a significant adverse noise impact.

Table 13-2 Noise Exposure Guidelines for Use in City Environmental Impact Review[1]

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	Airport[3] Exposure
1. Outdoor area requiring serenity and quiet[2]		L10 ≤ 55 dBA	DNL ≤ 60 dBA		60 dBA < DNL ≤ 65 dBA		65 dBA <DNL ≤ 75 dBA		75 dBA ≤ DNL
2. Hospital, nursing home		L10 ≤ 55 dBA		55 <L10≤ 65 dBA		65<L10≤80 dBA		L10>80dBA	
3. Residence, residential hotel, or motel	7 AM to 10 PM	L10 ≤ 65dBA		65 <L10≤ 70 dBA		70<L10≤80 dBA		L10>80dBA	
	10 PM to 7 AM	L10 ≤ 55dBA		55 <L10≤ 70 dBA		70<L10≤80 dBA		L10>80dBA	
4. School, museum, library, courthouse of worship, transient hotel or motel, public meeting room, auditorium, outpatient 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	

Source: Table 19-2, 2021 CEQR Technical Manual.

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 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 Federal Aviation Administration–approved differential nonlinearity (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 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).

The *CEQR Technical Manual* also provides noise exposure guidelines for assessing ambient sound levels, as shown in **Table 13-3**. Noise exposure is classified into four categories: acceptable, marginally acceptable, marginally unacceptable, and clearly unacceptable.

Table 13-3 Required Attenuation Values to Achieve Acceptable Interior Noise Levels

	Marginally Unacceptable				Clearly Unacceptable
Vehicular Traffic	$70<L_{10}\leq73$	$73<L_{10}\leq76$	$76<L_{10}\leq78$	$78<L_{10}\leq80$	$80<L_{10}$
Attenuation	(I) 28 dBA	(II) 31 dBA	(III) 33 dBA	(IV) 35 dBA	See note [B]

Notes:

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

[B] The required attenuation value is the difference between L_{build} and $L_{interior}$, using the appropriate noise descriptor

Where: L_{build} is the projected noise level under the build condition rounded up to the whole number

$L_{interior}$ is the designed interior noise level (45 dB(A) for vehicular noise, 40 dB(A) for aircraft and train noise)

Source: New York City Department of Environmental Protection (*2021 CEQR Technical Manual,* Table 19-3)

Assessment Methodology

General Methodology

This noise analysis considers two receptor types when evaluating noise for a proposed development: existing and new receptor(s). Since the Proposed Actions would introduce new residential, commercial office on the development sites, these are considered "new receptors."

For the new receptors that would be introduced by the Proposed Actions, the With-Action condition noise levels are compared to the values contained in the Noise Exposure Guidelines. The descriptor used to assess the mobile noise sources is dependent upon the source of noise. For example, if a new receptor is exposed to aircraft noise, DNL is used, while L_{eq} or L_{10} is used to evaluate noise from other sources. Since the Proposed Actions would not introduce new receptors within an existing 65 dB(A) DNL contour of an airport (i.e., LaGuardia Airport), noise impact analysis from aircraft noise is not warranted.

New noise receptors that would be introduced by the Proposed Actions are evaluated under With-Action noise conditions to determine if receptors would be in an acceptable ambient sound level environment. The noise exposure guidelines for acceptable ambient conditions depend on the type of land use; for residential use and community facility uses (see **Table 13-2**), the goal is to maintain interior noise levels of 45 dBA(L_{10}) or lower. It is generally assumed that without specific information on a building's window and wall construction, the outdoor-to-indoor noise reduction of the building is 25 decibels. As shown in **Table 13-2**, exterior ambient sound levels exceeding 70 dBA (L_{10}) or 65 dBA (L_{dn}) are considered Marginally Unacceptable. Exterior sound levels exceeding 80 dBA (L_{10}) or 75 dBA (L_{dn}) are considered Clearly Unacceptable. If there would be Marginally Unacceptable or Clearly Unacceptable ambient noise conditions, there is a need to provide window/wall sound attenuation that is sufficient to reduce interior sound levels to acceptable levels.

Since the Proposed Actions would introduce residential and commercial spaces, the highest L_{10} sound level among all of the peak transportation periods (i.e., weekday morning, midday, afternoon,

and Saturday midday) is used to evaluate whether the Proposed Actions would introduce new receptors into an acceptable noise environment.

The analysis also considers "existing receptors" that are the current noise-sensitive land uses, such as residential, community facility, commercial offices, and institutional properties surrounding the Project Area. Noise impact at the existing sensitive receptors is assessed according to the relative increase between No-Action condition and With-Action condition sound levels. Noise impact is assessed according to the increase in the L_{eq} sound level in accordance with the *CEQR Technical Manual*. If mobile or stationary sources associated with the Proposed Actions would increase L_{eq} sound levels by 3 dB, or more, and absolute levels would exceed 65 dBA L_{eq}, the Proposed Actions would cause a significant adverse impact. Additionally, if No-Action condition noise levels are 60 dBA L_{eq} or less, an increase of 5 dB or more would be considered a significant adverse noise impact.

Mobile Sources

As described in **Chapter 10, Transportation**, a detailed traffic analysis has been conducted at multiple nearby intersections to evaluate Existing, No-Action, and With-Action condition traffic volumes near the Project Area during the weekday AM and PM peak periods; Other peak periods (i.e., the weekday midday and Saturday midday) and other intersections screened out as a result of the Level 2 Traffic Screening. Proportional modeling has been conducted for the peak periods at the following roadway sections, which are located immediately adjacent to the existing and new receptors:

- Twelfth Avenue and West 55th Street
- Twelfth Avenue and West 56th Street

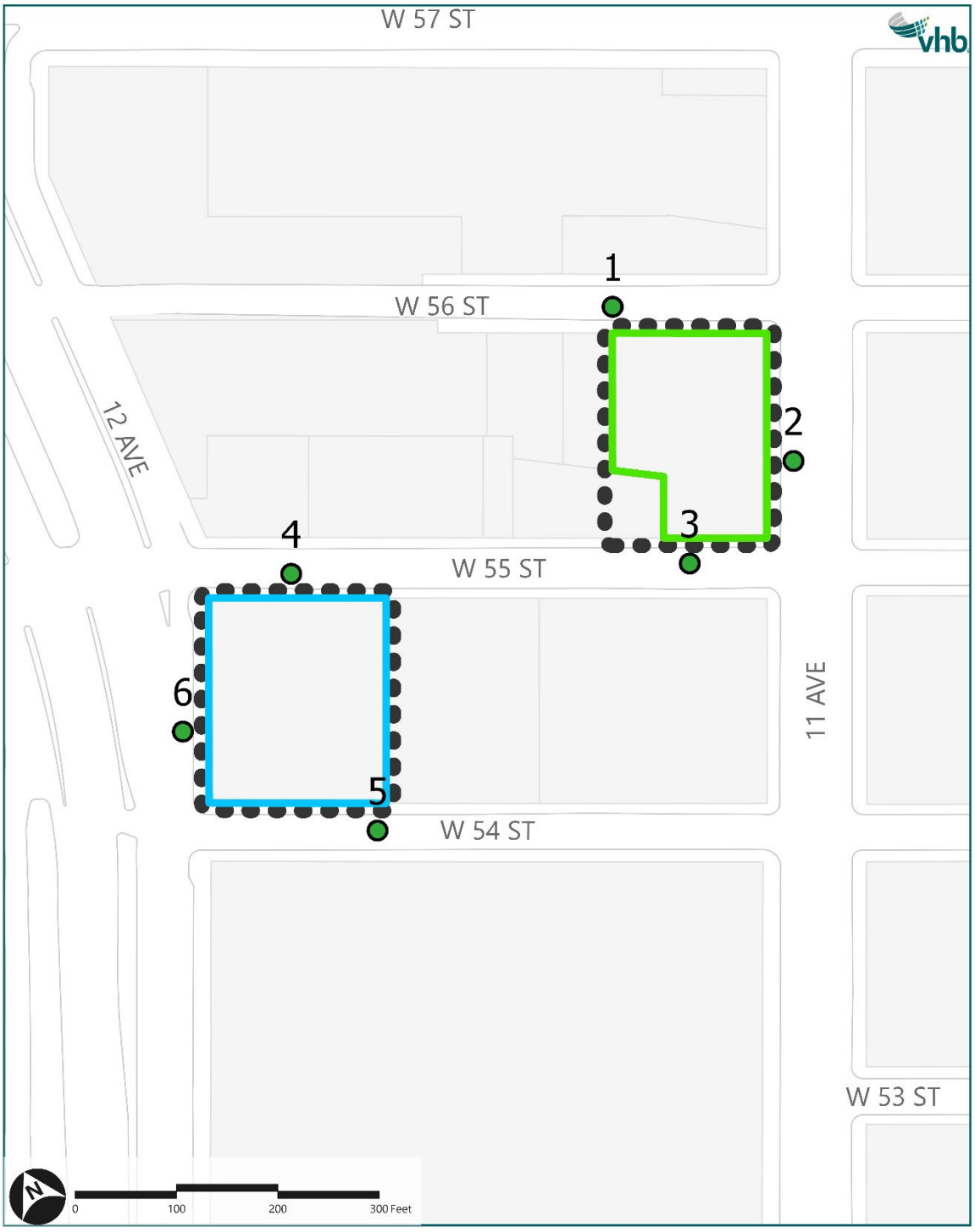
If the Proposed Actions would result in a doubling or more of passenger car equivalents (PCEs), it would result in a 3 dBA or greater increase in noise levels. If PCEs would not double due to the Proposed Actions, there would not be a significant adverse vehicular noise impact, and no further mobile source noise analysis is warranted. The *CEQR Technical Manual* describes the process to determine PCEs. Vehicle classes are defined to have the following PCEs:

- Each automobile or light truck: 1 noise PCE
- Each medium truck: 13 noise PCEs
- Each bus: 18 noise PCEs
- Each heavy truck: 47 noise PCEs

Future With-Action noise increases are calculated using the following equation:

$$With\ Action\ L_{eq}\ Increase = 10 * \log\left(\frac{With\ Action\ PCE}{No\ Action\ PCE}\right)$$

Figure 13-1 Noise Monitoring Locations



Proposed Project
- Project Area
- Development Site 1
- Development Site 2
- Noise Measurement Location

Source: VHB, 2025

Stationary Sources

The Proposed Actions are not anticipated to introduce any substantial stationary source noise generators, such as unenclosed cooling or ventilation equipment, loudspeaker systems, stationary diesel engines, or other similar types of uses. The Proposed Actions would not introduce new active open spaces such as athletic fields and other sports facilities, which are considered stationary sources that generate noise.

The design and specifications for mechanical equipment—such as heating, ventilation, and air conditioning—would incorporate sufficient noise reduction to comply with applicable noise regulations and standards, including the standards contained in the revised NYC Noise Control Code, Subchapter 5, §24-227, the New York City Department of Building Code. This would ensure that mechanical equipment does not result in any significant increase in noise levels, either by itself or cumulatively with other project-related noise sources.

The potential for noise impacts have been assessed for existing and new receptors in the following sections.

Existing Condition

Development Site 1 is bounded by West 55th Street to the north, Twelfth Avenue to the west, West 54th Street to the south, and commercial office properties, along with Eleventh Avenue to the east. Development Site 2 is bounded by West 56th Street to the north, Eleventh Avenue to the east, West 55th Street to the south, and a mix of public and private properties, along with Twelfth Avenue to the west.

To characterize existing conditions, noise measurements were conducted at six locations around the Project Area, as shown in **Figure 13-1**. Measurements were conducted on October 29, 2024 (Tuesday), February 26, 2025 (Wednesday) and November 16, 2024 (Saturday), which were dates approved by the New York City Department of Transportation for traffic counts and similar data collection efforts and were not subject to any blackout period.

Vehicular traffic was the dominant source of noise at all measurement locations. Consequently, 20-minute spot measurements were taken at six locations along local roadways during the four weekday periods that reflect peak hours of trip generation: AM weekday (7:00–9:00 AM), midday (MD) weekday (12:00 PM–2:00 PM), PM weekday (4:00–6:00 PM), and Saturday midday (12:00 PM–2:00 PM). An additional 24- hour noise measurement was taken at the northwest corner of the rooftop at the location of West 55th Street and 12th Avenue to capture noise from DSNY trucks ingress or egress along the corridor and any embarking and disembarking activities at the Manhattan Cruise Terminal which is located west of 12th Avenue. It is concluded that the noise measurements at street level are more conservative.

Measurements were conducted using Type I sound level meters at a height of 5 feet above ground level and followed the procedures outlined in the *CEQR Technical Manual*, which include documenting significant sources of sound and conducting spot counts of traffic by vehicle classification. The noise monitors were placed with a minimum of 5 feet between the microphone and nearby reflecting surfaces. Data collected included A-weighted overall and one-third octave band sound levels including minimum (L_{min}), maximum (L_{max}), statistics (L_{xx}), and equivalent continuous noise levels (L_{eq}). Atmospheric conditions including air temperature, wind speed, wind

direction, relative humidity, and precipitation were obtained from a nearby weather station. The atmospheric conditions were within acceptable ranges and did not influence the measurement results.

Table 13-4 presents the measured L_{eq}, L_{10}, L_{50}, and L_{90} sound level during each peak period at each measurement location, where vehicular traffic is the predominant noise source. Existing sound levels ranged from 66.3 to 77.9 dBA (L_{eq}) and from 68.4 to 81.2 dBA (L_{10}). Observed noise events during AM peak period included DSNY sweepers passing by measurement location 1 and 2 at close distance, which produced relatively high levels of sound for short durations. However, such events are common characteristics of the noise environment within the Project Area due to its proximity to the DSNY Manhattan Garage, the contributions from such noise events were retained in the measurement data, adding a level of conservatism to the assessment.

Table 13-4 Ambient Sound Level Measurements

Site	Monitoring Location	Period	Duration	L_{eq}	L_{min}	L_{max}	L_{10}	L_{50}	L_{90}
1	West 56th Street near Eleventh Avenue	AM	20 mins	73.1	60.0	93.1	75.8	67.7	63.4
		MD	20 mins	69.9	58.7	88.4	72.4	67.5	63.6
		PM	20 mins	73.8	60.2	94.3	73.8	66.8	62.7
		Saturday	20 mins	67.5	59.0	84.7	70.4	64.9	59.7
2	Eleventh Avenue between West 55th Street and West 56th Street	AM	20 mins	71.7	67.1	84.4	73.8	70.7	69.2
		MD	20 mins	71.1	60.8	85.7	75.1	67.5	63.3
		PM	20 mins	69.3	58.6	82.1	72.1	66.9	61.7
		Saturday	20 mins	69.0	58.6	82.9	71.7	65.9	58.2
3	West 55th Street near Eleventh Avenue	AM	20 mins	69.1	57.4	86.3	71.7	65.3	59.9
		MD	20 mins	70.1	59.4	86.5	71.5	66.4	61.5
		PM	20 mins	71.6	60.4	91.8	70.5	66.3	62.9
		Saturday	20 mins	68.2	64.9	83.4	70.1	66.8	59.5
4	West 55th Street near Twelfth Avenue	AM	20 mins	72.1	60.0	89.4	73.2	66.8	63.3
		MD	20 mins	69.0	61.0	81.3	71.1	67.8	64.5
		PM	20 mins	71.3	61.0	90.7	72.5	68.4	64.7
		Saturday	20 mins	69.7	61.8	89.2	71.4	68.4	63.8
5	West 54th Street near 12th Avenue	AM	20 mins	69.1	58.8	87.0	71.0	66.0	62.3
		MD	20 mins	66.6	57.6	84.9	68.4	64.4	61.0
		PM	20 mins	67.1	58.9	79.1	69.5	65.8	62.0
		Saturday	20 mins	66.3	55.7	79.9	69.3	65.3	61.0
6	Twelfth Avenue between West 54th Street and West 55th Street	AM	20 mins	76.7	61.5	88.0	80.7	73.9	64.3
		MD	20 mins	76.7	58.2	86.9	80.6	73.8	60.7
		PM	20 mins	77.9	57.3	86.0	81.2	78.0	60.9
		Saturday	20 mins	76.9	59.7	86.9	80.8	75.6	63.1

Source: Measurements conducted by VHB on October 29, 2024 (Tuesday), February 26, 2025 (Wednesday) and November 16, 2024 (Saturday).

Existing noise measurements were adjusted based on the difference between the vehicle counts conducted during noise measurement and the existing vehicle counts collected and summarized in **Chapter 10, Transportation**.

Table 13-7 presents the existing PCE values at the study area intersections and the vehicle counts conducted during noise measurement, and the adjustment.

Table 13-5 Existing Condition and Measurement Noise PCEs

Site #	Intersection	Period	Measurement PCEs	Existing PCEs	Adjustment (dBA)
1	West 56th Street near 11th Avenue	AM	1,362	1,020	-1.3
		MD	768	768	0.0
		PM	1,140	536	-3.3
		Saturday	357	357	0.0
2	11th Avenue between West 55th Street and West 56th Street	AM	3,957	3,957	0.0
		MD	3,354	3,354	0.0
		PM	2,916	2,916	0.0
		Saturday	2,184	2,184	0.0
3	West 55th Street near 11th Avenue	AM	1,356	1,397	0.1
		MD	1,056	1,056	0.0
		PM	852	1,109	1.1
		Saturday	243	243	0.0
4	West 55th Street near 12th Avenue	AM	1,254	1,565	1.0
		MD	792	792	0.0
		PM	1,062	1,530	1.6
		Saturday	276	276	0.0
5	West 54th Street near 12th Avenue	AM	612	612	0.0
		MD	477	477	0.0
		PM	297	297	0.0
		Saturday	300	300	0.0
6	12th Avenue between West 54th Street and West 55th Street	AM	10,353	10,112	-0.1
		MD	9,009	9,009	0.0
		PM	8,982	8,630	-0.2
		Saturday	6,822	6,822	0.0

Source: VHB, 2025

As shown in **Table 13-8,** the predicted existing L_{eq} noise levels would range from 66.3 to 77.7 dBA and L_{10} levels would range from 68.4 to 81.0 dBA.

Table 13-6 Predicted Existing Condition Noise Levels Compared to Measurement Noise Levels

Site #	Intersection	Period	Measurement L_{eq} (dBA)	Measurement L_{10} (dBA)	Change (dBA)	Existing L_{eq} (dBA)	Existing L_{10} (dBA)
1	West 56th Street near 11th Avenue	AM	73.1	75.8	-1.3	71.8	74.5
		MD	69.9	72.4	0.0	69.9	72.4
		PM	73.8	73.8	-3.3	70.5	70.5
		Saturday	67.5	70.4	0.0	67.5	70.4
2	11th Avenue between West 55th Street and West 56th Street	AM	71.7	73.8	0.0	71.7	73.8
		MD	71.1	75.1	0.0	71.1	75.1
		PM	69.3	72.1	0.0	69.3	72.1
		Saturday	69.0	71.7	0.0	69.0	71.7
3	West 55th Street near 11th Avenue	AM	69.1	71.7	0.1	69.2	71.8
		MD	70.1	71.5	0.0	70.1	71.5
		PM	71.6	70.5	1.1	72.7	71.6
		Saturday	68.2	70.1	0.0	68.2	70.1
4	West 55th Street near 12th Avenue	AM	72.1	73.2	1.0	73.1	74.2
		MD	69.0	71.1	0.0	69.0	71.1
		PM	71.3	72.5	1.6	72.9	74.1
		Saturday	69.7	71.4	0.0	69.7	71.4
5	West 54th Street near 12th Avenue	AM	69.1	71.0	0.0	69.1	71.0
		MD	66.6	68.4	0.0	66.6	68.4
		PM	67.1	69.5	0.0	67.1	69.5
		Saturday	66.3	69.3	0.0	66.3	69.3
6	12th Avenue between West 54th Street and West 55th Street	AM	76.7	80.7	-0.1	76.6	80.6
		MD	76.7	80.6	0.0	76.7	80.6
		PM	77.9	81.2	-0.2	77.7	81.0
		Saturday	76.9	80.8	0.0	76.9	80.8

Source: VHB, 2025

No-Action Condition

A mobile source screening analysis (see **Table 13-4**) has been conducted for both existing and new receptors at corresponding roadway segments based on proportional noise modeling to determine the existing and No-Action noise levels as well as noise increases at all monitored locations. Existing noise PCEs have been computed based on the existing vehicle counts collected and summarized in **Chapter 10, Transportation**. No-Action noise levels have been computed based on the sound increment between the No-Action PCEs and the Existing PCEs.

Table 13-7 presents the No-Action and existing PCE values at the study area intersections. No-Action sound levels are expected to increase by up to 0.5 dBA over existing sound levels.

Table 13-7 No-Action and Existing Condition Noise PCEs

Site #	Intersection	Period	Existing PCEs	No-Action PCEs	Sound Increase (No-Action minus Existing) (dBA)
1	West 56th Street near Eleventh Avenue	AM	1,020	1,022	0.0
		MD	768	778	0.1
		PM	536	536	0.0
		Saturday	357	361	0.1
2	Eleventh Avenue between West 55th Street and West 56th Street	AM	3,957	4,007	0.1
		MD	3,354	3,396	0.1
		PM	2,916	2,953	0.1
		Saturday	2,184	2,211	0.1
3	West 55th Street near Eleventh Avenue	AM	1,397	1,553	0.5
		MD	1,056	1,069	0.1
		PM	1,109	1,138	0.1
		Saturday	243	246	0.1
4	West 55th Street near Twelfth Avenue	AM	1,565	1,740	0.5
		MD	792	802	0.1
		PM	1,530	1,570	0.1
		Saturday	276	279	0.1
5	West 54th Street near Twelfth Avenue	AM	612	620	0.1
		MD	477	483	0.1
		PM	297	301	0.1
		Saturday	300	304	0.1
6	Twelfth Avenue between West 54th Street and West 55th Street	AM	10,112	10,273	0.1
		MD	9,009	9,122	0.1
		PM	8,630	8,774	0.1
		Saturday	6,822	6,908	0.1

Source: VHB, 2025

As shown in **Table 13-8,** the predicted No-Action L_{eq} noise levels including the increase in mobile sources would range from 66.4 to 77.8 dBA and L_{10} levels would range from 68.5 to 81.1 dBA.

Table 13-8 Predicted No-Action Noise Levels Compared to Existing Condition Noise Levels

Site #	Intersection	Period	Existing L_{eq} (dBA)	Existing L_{10} (dBA)	Change (dBA)	No-Action L_{eq} (dBA)	No-Action L_{10} (dBA)
1	West 56th Street near Eleventh Avenue	AM	71.8	74.5	0.0	71.9	74.6
		MD	69.9	72.4	0.1	70.0	72.5
		PM	70.5	70.5	0.0	70.5	70.5
		Saturday	67.5	70.4	0.1	67.6	70.5
2	Eleventh Avenue between West 55th Street and West 56th Street	AM	71.7	73.8	0.1	71.8	73.9
		MD	71.1	75.1	0.1	71.2	75.2
		PM	69.3	72.1	0.1	69.4	72.2
		Saturday	69.0	71.7	0.1	69.1	71.8
3	West 55th Street near Eleventh Avenue	AM	69.2	71.8	0.5	69.7	72.3
		MD	70.1	71.5	0.1	70.2	71.6
		PM	72.7	71.6	0.1	72.9	71.8
		Saturday	68.2	70.1	0.1	68.3	70.2
4	West 55th Street near Twelfth Avenue	AM	73.1	74.2	0.5	73.5	74.6
		MD	69.0	71.1	0.1	69.1	71.2
		PM	72.9	74.1	0.1	73.0	74.2
		Saturday	69.7	71.4	0.1	69.8	71.5
5	West 54th Street near Twelfth Avenue	AM	69.1	71.0	0.1	69.2	71.1
		MD	66.6	68.4	0.1	66.7	68.5
		PM	67.1	69.5	0.1	67.2	69.6
		Saturday	66.3	69.3	0.1	66.4	69.4
6	Twelfth Avenue between West 54th Street and West 55th Street	AM	76.6	80.6	0.1	76.7	80.7
		MD	76.7	80.6	0.1	76.8	80.7
		PM	77.7	81.0	0.1	77.8	81.1
		Saturday	76.9	80.8	0.1	77.0	80.9

Source: VHB, 2025

With-Action Condition

As described in **Chapter 1, Project Description**, the Proposed Actions would facilitate two, new mixed-use buildings: a 42-story, mixed use residential and commercial building on Development Site 1 and a 38-story, mixed-use residential and commercial building on Development Site 2 (the Proposed Projects). The proposed building on Development Site 1 would include 617 residential dwelling units (DUs) and 113,990 square feet (sf) of commercial auto dealership space, and the proposed building on Development Site 2 would include 477 residential DUs and 85,760 sf of

commercial auto dealership space. For the purpose of environmental analysis, two reasonable worst-case development scenarios (RWCDSs) were analyzed to provide a conservative baseline in analyzing the Proposed Actions' potential impacts. As described in **Chapter 1**, one scenario is the Maximum Commercial Scenario which assumes that the commercial space would be developed as office and retail uses instead of auto dealership use. The second scenario is the Maximum Residential Scenario which would maximize the residential development for the site.

Under the Maximum Commercial Scenario, it is assumed that Development Site 1 would contain 617 DUs, 65,364 gsf of office space and 48,626 gsf of retail space (assumed to be destination retail). Development Site 2 would contain 477 DUs, 47,350 gsf of office space, and 38,410 gsf of retail space (assumed to be local retail).

Under the Maximum Residential Scenario, it is assumed that Development Site 1 would contain 701 DUs and 50,118 gsf of auto dealership space. Development Site 2 would contain 541 DUs and 38,441 gsf of auto dealership space.

As described in **Chapter 10, Transportation**, the results of the travel demand analysis showed that the Maximum Commercial Scenario would generate more vehicle trips than the Maximum Residential Scenario; therefore, the Maximum Commercial Scenario was used for the With-Action condition analysis to provide for a conservative analysis.

Similar to the No-Action condition, the With-Action noise levels (under the Maximum Commercial Scenario) have been computed for both existing and new receptors at corresponding roadway segments based on proportional noise modeling to determine the With-Action and No-Action noise levels as well as noise increases at six monitored locations as shown in **Table 13-9**. Existing noise PCEs have been computed based on the existing vehicle counts collected and summarized in **Chapter 10, Transportation**. With-Action noise levels have been computed based on the sound increment between the With-Action PCEs and the No-Action PCEs.

Table 13-9 presents the With-Action and No-Action PCE values at the study area intersections. As shown in **Table 13-10**, the predicted With-Action L_{eq} noise levels, including the increase in mobile sources, would range from 66.5 to 77.9 dBA and L_{10} levels would range from 68.9 to 81.1 dBA. As shown in **Table 13-10**, With-Action sound levels are expected to increase by up to 0.7 dBA over No-Action levels. Since noise increases at all locations are less than 3 dBA, significant adverse mobile source noise impacts from mobile sources due to the Proposed Actions are not predicted to occur.

Table 13-9 With-Action and No-Action Condition Noise PCEs

Site #	Intersection	Period	No-Action PCEs	With-Action PCEs	Sound Increase (With-Action minus No-Action) (dBA)
1	West 56th Street near Eleventh Avenue	AM	1,022	1,068	0.2
		MD	778	799	0.1
		PM	536	570	0.3
		Saturday	361	375	0.2
2	Eleventh Avenue between West 55th Street and West 56th Street	AM	4,007	4,067	0.1
		MD	3,396	3,439	0.1
		PM	2,953	2,971	0.0
		Saturday	2,211	2,228	0.0
3	West 55th Street near Eleventh Avenue	AM	1,553	1,827	0.7
		MD	1,069	1,161	0.4
		PM	1,138	1,261	0.4
		Saturday	246	268	0.4
4	West 55th Street near Twelfth Avenue	AM	1,740	2,033	0.7
		MD	802	893	0.5
		PM	1,570	1,727	0.4
		Saturday	279	302	0.3
5	West 54th Street near Twelfth Avenue	AM	620	673	0.4
		MD	483	531	0.4
		PM	301	319	0.3
		Saturday	304	312	0.1
6	Twelfth Avenue between West 54th Street and West 55th Street	AM	10,273	10,432	0.1
		MD	9,122	9,202	0.0
		PM	8,774	8,858	0.0
		Saturday	6,908	6,929	0.0

Source: VHB, 2025

Table 13-10 Predicted With-Action Noise Levels Compared to No-Action Noise Levels

Site #	Intersection	Period	No-Action L_{eq} (dBA)	No-Action L_{10} (dBA)	Change (dBA)	With-Action L_{eq} (dBA)	With-Action L_{10} (dBA)
1	West 56th Street near Eleventh Avenue	AM	71.9	74.6	0.2	72.0	74.7
		MD	70.0	72.5	0.1	70.1	72.6
		PM	70.5	70.5	0.3	70.8	70.8
		Saturday	67.6	70.5	0.2	67.7	70.6
2	Eleventh Avenue between West 55th Street and West 56th Street	AM	71.8	73.9	0.1	71.8	73.9
		MD	71.2	75.2	0.1	71.2	75.2
		PM	69.4	72.2	0.0	69.4	72.2
		Saturday	69.1	71.8	0.0	69.1	71.8
3	West 55th Street near Eleventh Avenue	AM	69.7	72.3	0.7	70.4	73.0
		MD	70.2	71.6	0.4	70.5	71.9
		PM	72.9	71.8	0.4	73.3	72.2
		Saturday	68.3	70.2	0.4	68.6	70.5
4	West 55th Street near Twelfth Avenue	AM	73.5	74.6	0.7	74.2	75.3
		MD	69.1	71.2	0.5	69.5	71.6
		PM	73.0	74.2	0.4	73.4	74.6
		Saturday	69.8	71.5	0.3	70.1	71.8
5	West 54th Street near Twelfth Avenue	AM	69.2	71.1	0.4	69.5	71.4
		MD	66.7	68.5	0.4	67.1	68.9
		PM	67.2	69.6	0.3	67.4	69.8
		Saturday	66.4	69.4	0.1	66.5	69.5
6	Twelfth Avenue between West 54th Street and West 55th Street	AM	76.7	80.7	0.1	76.7	80.7
		MD	76.8	80.7	0.0	76.8	80.7
		PM	77.8	81.1	0.0	77.9	81.1
		Saturday	77.0	80.9	0.0	77.0	80.9

Source: VHB, 2025

Acceptability Assessment

The analysis presents the results of ambient noise monitoring that was conducted within the vicinity of the Project Area and the assessment of whether new receptors would be in a high ambient noise environment.

The *CEQR Technical Manual* provides noise exposure guidelines for assessing ambient sound levels, as shown in **Table 13-3**. Based on these noise exposure guidelines, noise impact has been assessed to determine the level of acceptability for new sensitive receptors at the development sites.

With-Action noise conditions at new sensitive receptors are evaluated according to absolute exterior sound level. The noise exposure guidelines for acceptable ambient conditions depend on the type of

land use; for residential or community facility use, the goal is to maintain interior noise levels (L_{10}) of 45 dBA or lower. With-Action exterior sound levels are evaluated to determine if receptors would be in an acceptable ambient sound level environment.

As summarized in **Table 13-11** below, the highest predicted L_{10} sound level (81.1 dBA) is the noise levels at Measurement Site 6 during weekday PM period. The highest predicted L_{10} sound level at Measurement Site 1 would be 74.7 dBA. The highest predicted L_{10} sound level at Measurement Site 2 would be 75.2 dBA. The highest predicted L_{10} sound level at Measurement Site 3 would be 73.0 dBA. The highest predicted L_{10} sound level at Measurement Site 4 would be 75.3 dBA. And the highest predicted L_{10} sound level at Measurement Site 5 would be 71.4 dBA.

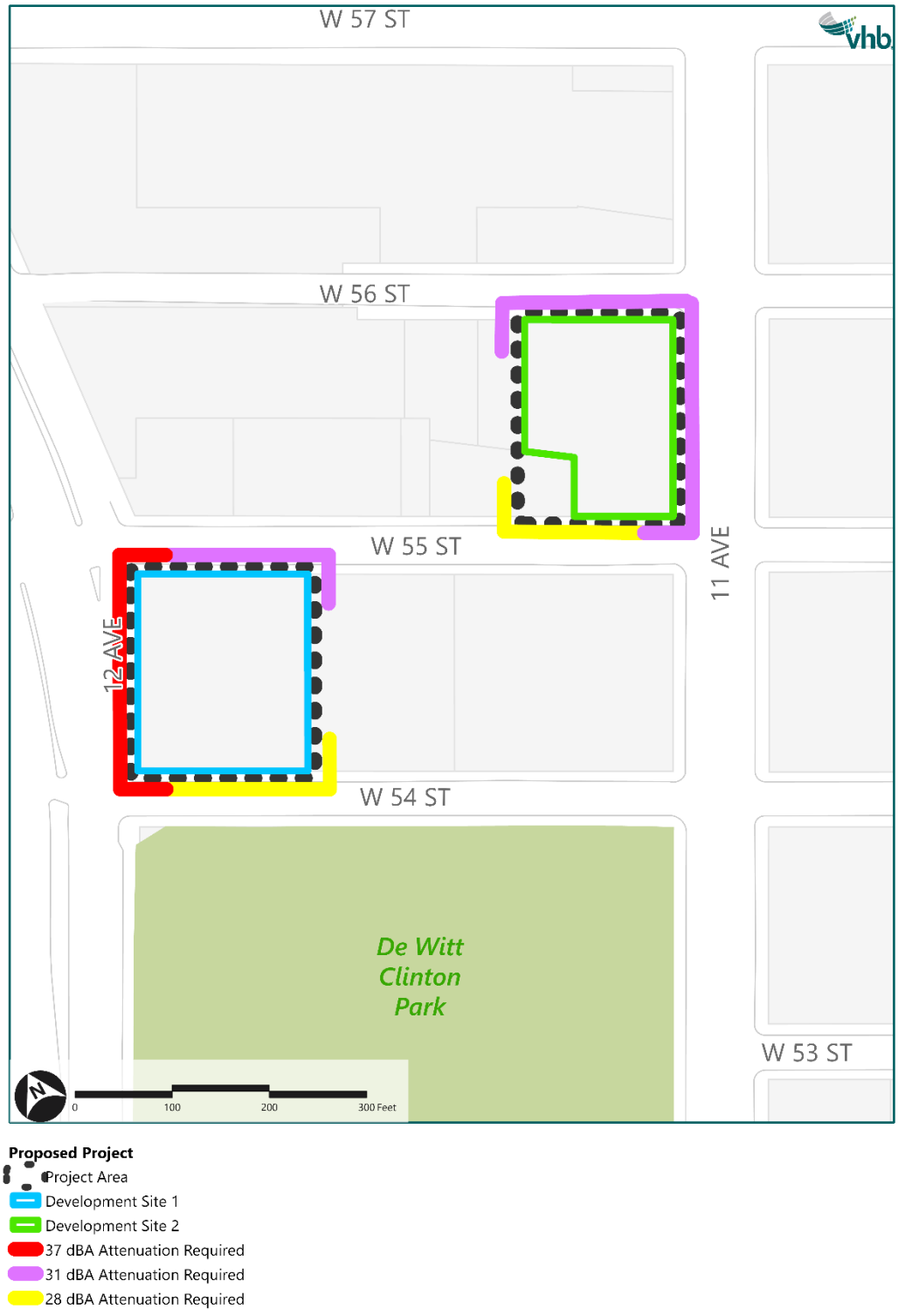
All of the receptors shown in **Table 13-11** and **Figure 13-2** are expected to exceed 70 dBA (L_{10}) during certain peak periods. According to the noise exposure guidelines in the *CEQR Technical Manual*, noise level (L_{10}) which is greater than 70 dBA and smaller than 80 dBA is considered *Marginally Unacceptable*, and noise level (L_{10}) which is greater than 80 dBA is considered *Clearly Unacceptable*. Based on the findings of Marginally and Clearly Unacceptable sound levels at the receptors mentioned above, window/wall sound attenuation is required at both development sites to maintain interior sound levels at acceptable levels.

Table 13-11 Predicted With-Action Noise Level and Required Building Attenuation Value

Development Site #	Measurement Site #	L_{10} (dBA)	Facade	Required Attenuation (dBA)
1	6	81.1	West	37
	5	71.4	South	28
	4	75.3	North	31
2	3	73.0	South	28
	2	75.2	East	31
	1	74.7	North	31

Source: VHB, 2025

Figure 13-2 Composite Window/Wall Sound Attenuation Requirements



To implement this attenuation requirement, an (E)-Designation (E-869) for noise would be applied to the development sites specifying the appropriate amount of window/wall attenuation and the need for alternate means of ventilation. The text for the (E)-Designation would be as follows:

Development Site 1 (Block 1102, Lot 11)

In order to ensure an acceptable interior noise environment, future residential uses must provide a closed-window condition with a minimum of 37 dBA window/wall attenuation on the western façade facing Twelfth Avenue, on the southern façade facing West 54th Street within 50 feet of Twelfth Avenue and on the northern façade facing West 55th Street within 50 feet of Twelfth Avenue, 28 dBA window/wall attenuation on the remaining southern façade facing West 54th Street and on the eastern façade facing Eleventh Avenue within 50 feet of West 54th Street, and 31 dBA window/wall attenuation on the remaining northern façade facing West 55th Street and on the eastern façade facing Eleventh Avenue within 50 feet of West 55th Street, to maintain an interior noise level (L_{10}) not greater than 45 dBA for residential uses. For commercial office uses, the required attenuation along each respective facade would be 5 dBA lower in order to maintain an interior noise level (L10) not greater than 50 dBA for commercial office use. To maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, well-sealed air conditioners, package-terminal air conditioners, or central air conditioning.

Development Site 2 (Block 1103, Lot 36)

In order to ensure an acceptable interior noise environment, future residential uses must provide a closed-window condition with a minimum of 31 dBA window/wall attenuation on the northern façade facing West 56th Street, on the western façade facing Twelfth Avenue within 50 feet of West 56th Street, on the eastern façade facing Eleventh Avenue, and on the southern façade facing West 55th Street within 50 feet within Eleventh Ave, and 28 dBA window/wall attenuation on the remaining southern facing West 55th Street and on the western façade facing Twelfth Avenue within 50 feet of West 55th Street, to maintain an interior noise level (L_{10}) not greater than 45 dBA for residential uses. For commercial office uses, the required attenuation along each respective facade would be 5 dBA lower in order to maintain an interior noise level (L10) not greater than 50 dBA for commercial office use. To maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, well-sealed air conditioners, package-terminal air conditioners, or central air conditioning.