APPENDIX I-3

Air Quality,
Greenhouse Gases,
Noise Analysis

DRAFT

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To: Stacie Henderson
From: Noah Tanski, NTEC
Date: August 16, 2021
RE: Supplemental Report for the Southern California Flower Market Project

A. Introduction

The following report provides an update to the receptor setting of the Southern California Flower Market Project (Project) and addresses the availability and specifications of commercially available moveable sound barrier systems, specifically within the context of the Project's construction noise impacts. The report also demonstrates how moveable sound barrier systems may be employed to effectively mitigate the Project's construction noise impacts.

B. Receptor Setting – 2021

To update the Project's current receptor setting to include new land uses that were constructed or converted to residential uses after the Notice of Preparation was released for the Project in May 2017, NTEC consulted resources, such as the zimas.lacity.org online tool, and then conducted a follow-up walking tour of the Project's vicinity on April 8, 2021, in order to ascertain the presence of any new noise sensitive receptors and note any changes to previously identified noise-sensitive receptors.

Previously Identified Noise-Sensitive Receptors

The following is a list of noise-sensitive receptors in the Project's vicinity that were identified in the EIR and during the administrative appeal process:

- Santee Court Apartments (716 S. Los Angeles Street)
- Santee Village Lofts (738 S. Los Angeles Street)
- Santee Village Apartments (743 Santee Street)
- Ballington Plaza Apartments (622 Wall Street)
- Jardin de la Infancia School (307 E. 7th Street)
- Garment Lofts (217 E. 8th Street)
- Textile Building Lofts (315 E. 8th Street)

NTEC's research and walking tour confirmed that all of these noise-sensitive receptors still occupy their respective addresses, with the potential exception of the Jardin de la Infancia School. Visual inspection of this receptor suggests that it has been closed and inoperable for some time, possibly due to the ongoing pandemic. Given the possibility that operations of this school receptor might resume as public health factors permit, NTEC will continue to identify the Jardin de la Infancia School as a noise-sensitive receptor and evaluate it as such.

NTEC further observed that the noise environment in the Project's vicinity is generally unchanged; ambient noise in the area is still primarily attributable to vehicle traffic along nearby roadways, and there are no new sources of noise or other factors that contribute to substantially different ambient noise conditions.

New Noise-Sensitive Receptors

NTEC's research and walking tour also resulted in the discovery of four new noise-sensitive receptors within the Project's vicinity:

- 649 Lofts (649 Wall Street)
- Flor 401 Lofts (401 E. 7th Street)
- Lyndon Hotel (413 E. 7th Street)
- Madison Hotel (423 E. 7th Street)

649 Lofts is a seven-story residential land use located approximately 100 feet north of the Project at the northern corner of the intersection of 7th Street and Wall Street. Flor 401 Lofts, a six-story residential land use, is located at the same intersection as 649 Lofts, approximately 120 feet northeast of the Project. Lyndon Hotel, a former hotel use that has been converted to a residential use, is located adjacent to Flor 401 Lofts along 7th Street, approximately 200 feet east of the Project. Madison Hotel is similarly a former hotel that has been converted to a residential use. It is located two parcels east of Lyndon Hotel on 7th Street, approximately 285 feet east of the Project.

Discussion

Table 1
Noise-Sensitive Receptors

Sensitive Receptor[A]	Building Description	Distance to Project (feet)
1. Textile Building Lofts (315 E. 8th Street)	12-story mixed-use residential high rise	55
2. Jardin de la Infancia School (307 E. 7th Street)	1-story mixed-commercial	100
3. 649 Lofts (649 Wall Street)	7-story mixed-use residential mid-rise	**100**
4. Flor 401 Lofts (401 E. 7th Street)	6-story residential mid-rise	**120**
5. Lyndon Hotel (413 E. 7th Street)	4-story converted hotel (to residential)	**200**
6. Santee Court Apartments (716 S. Los Angeles Street)	4-story residential mid-rise	240
7. Santee Village Apartments (738 Santee Street)	11-story residential mid-rise	240
8. Garment Lofts (217 E. 8th Street)	11-story mixed-use residential high rise	280
9. Madison Hotel (423 E. 7th Street)	5-story converted hotel (to residential)	**285**
10. Ballington Plaza (622 Wall Street)	3-story residential mid-rise complex	300

11. Santee Village Lofts (738 S. Los Angeles Street)	8-story mixed-use residential mid-rise complex	300
[A] Bold denotes added sensitive receptor sites that were constructed or converted to residential uses after the NOP was prepared for the underlying EIR.		

A map showing the locations of all referenced sensitive receptors is attached to this report as **Exhibit A** and reproduced below. **Table 1** lists these receptors in order of distance from the Project. As shown, no newly discovered sensitive receptor would be located closer to the Project than previously identified, and studied, receptors. All four of the newly identified receptors are located along 7th Street and oriented similarly in relation to the Project site. All Project-facing frontages of these newly identified receptors also directly front or face 7th Street, similar to the previously studied Jardin de la Infancia School receptor. All four of the newly identified receptors are located at a similar or greater distance from the Project than the previously studied Jardin de la Infancia School receptor. These factors combine to suggest that none of the newly identified receptors would experience Project-related noise impacts that exceed projected impacts to the Jardin de la Infancia School receptor. The location of the four new receptors indicate that they experience a similar noise environment as Jardin de la Infancia School, and their similar or greater distances from the Project indicate that they would experience similar or reduced Project-related noise levels as Jardin de la Infancia School. One distinction, however, is that the newly identified receptors are all multi-story in nature. Due to the mitigation measure regarding noise barriers discussed later in this report, however, this is not a factor that would result in increased, let alone significant, noise impacts to these receptors, as compared to the noise impacts that have previously been studied and projected to occur to Jardin de la Infancia School. **Section E** of this report provides the (a) estimated existing ambient noise levels and (b) the estimated noise levels during construction of the Project using the moveable sound barriers discussed in this report

C. Construction Noise Analysis – Moveable Sound Barriers

Moveable Sound Barriers – Overview

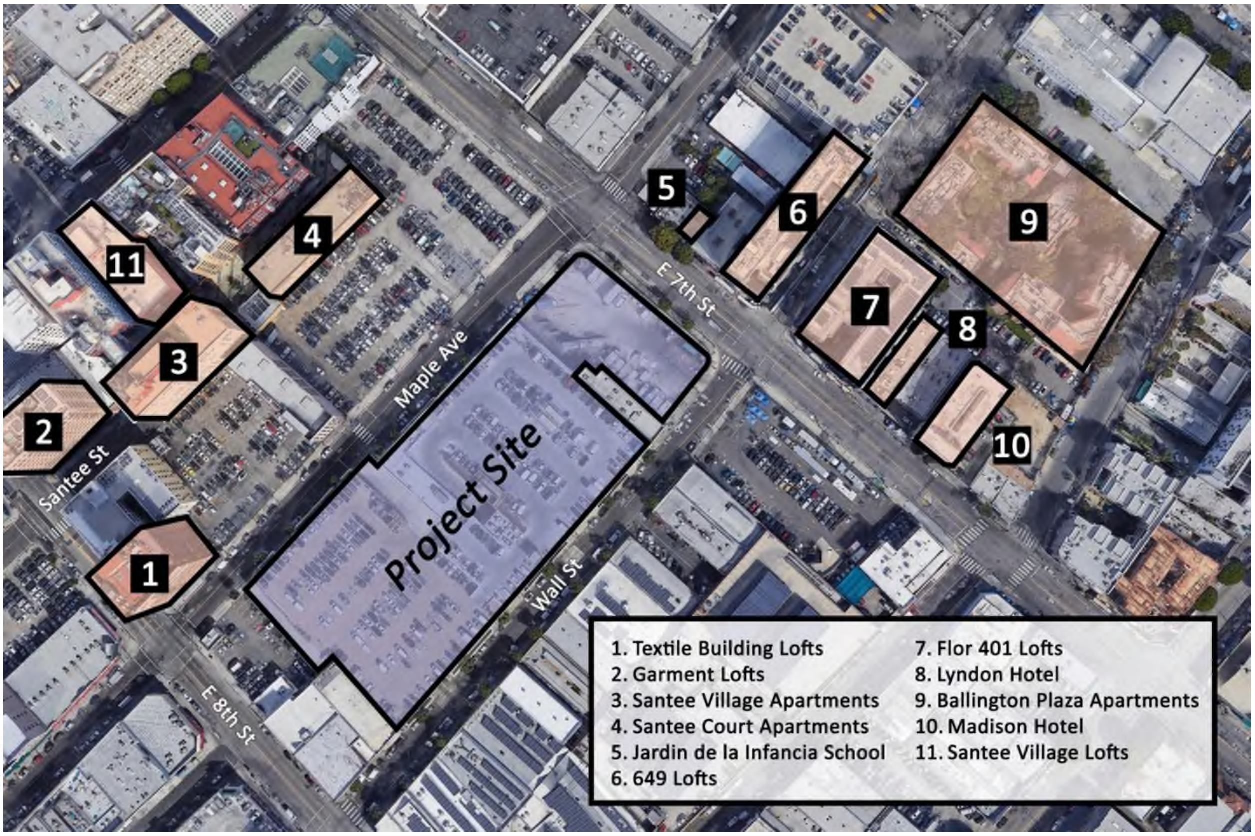
The following is a brief overview of three commercially available moveable sound barriers, presented to demonstrate the ready availability of such systems to the Project. These barriers constitute a small fraction of commercially available product, as evidenced by internet searching, but they are generally representative of the portability and features of moveable barrier systems.

<u>Environmental Noise Control – "Freestanding 'SK-8' Sound Barriers"</u>

Environmental Noise Control advertises this system for "low-frequency and heavy duty applications," and that the barriers "can be moved around a project site with a forklift for easy, effective positioning." Barrier panels are available in 16, 20, and 24-foot heights and are advertised as Sound Transmission Class rated STC-43 in accordance with ASTM E-413. Refer to **Figure 1**.[1]

[1] Source: https://www.environmental-noise-control.com/products/freestanding-sk-8-sound-barriers/

Exhibit A



NOISE RECEPTOR LOCATION MAP

Southern California Flower Market Project

Imagery via Google

Figure 1

"Freestanding 'SK-8' Sound Barrier"[2]

<u>Acoustiblock® – "AcoustiFence"</u>

Figure 2

"AcoustiFence"[3]

Acoustiblock® advertises its "AcoustiFence" system (refer to **Figure** 2) as being "extremely easy to install" because it can be secured to a chain link fence or a standalone frame. Thus, portable standalone fence sections or frames equipped with the "AcoustiFence" material could be manually positioned or moved via forklift or other simple means. Acoustiblock® advertises that the "AcoustiFence" material achieves a transmission loss of 28 dB and can be installed vertically at custom heights. A customer testimonial claims that "AcoustiFence" reduced construction sound levels "down from mid 70's [dB] to mid to high 50's on average…"[4]

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[2] Image source: https://www.environmental-noise-control.com/products/freestanding-sk-8-sound-barriers/
[3] Image source: https://www.acoustiblok.com/2018/04/23/construction-site-noise-barrier/
[4] Source: https://www.acoustiblok.com/acoustiblok-product-lines/acoustifence-noise-reducing-fences/

Echo Barrier® - "H9™ Acoustic Barrier"

Retailers of the "H9™ Acoustic Barrier" similarly describe its portability and lightweight nature. Like the "AcoustiFence" system described above, the "H9™ Acoustic Barrier" can be installed on fencing or standalone frames by a single worker, and it can be installed in a manner to create multi-story sound walls. One retailer advertises that the barrier's performance is "[t]ypically 10-20 dB reduction in the field," and "up to 40 dB depending on noise source and site geometry."[5]

Figure 3

"H9™ Acoustic Barrier"

D. Moveable Sound Barriers – Application and Effectiveness

Having confirmed the commercial availability of moveable sound barriers and reviewed their specifications, such barrier systems can effectively mitigate construction noise to less than significant levels. Available sound barrier systems range from lightweight options that can be manually positioned by construction workers to more robust applications that can be moved by light duty equipment, which would contribute minimally to overall construction noise levels. Further, the height of available barrier options – up to 24 feet or greater – would aid in eliminating sight lines to even the tallest nearby sensitive receptors. The Textile Building Lofts receptor is the closest sensitive receptor to the Project. Utilizing the following two equations, shown in **Figure 4** and **Figure 5**, a moveable barrier 24 feet in height (similar to the "Freestanding 'SK-8' Sound Barrier" shown in **Figure 1**) would eliminate sight lines from any on-site Project location to the top 12th story residences of Textile Building Lofts.

The first step in confirming that fact is to calculate "P," which represents the difference between (i) the distance of the path from the construction noise source to the sensitive receptor with the barrier and (ii) the distance of the path from the construction noise source to the receptor without the proposed barrier (**Figure 4**). Knowing that the Project-facing frontage of Textile Building Lofts is approximately 55 feet northwest of the Project and estimating that a 12th-story residence would be approximately 115 feet in elevation relative to the Project's grade, it is reasonably assumed that a piece of equipment operating within 5 feet of a barrier placed along the northernmost boundary would be located approximately 123.55

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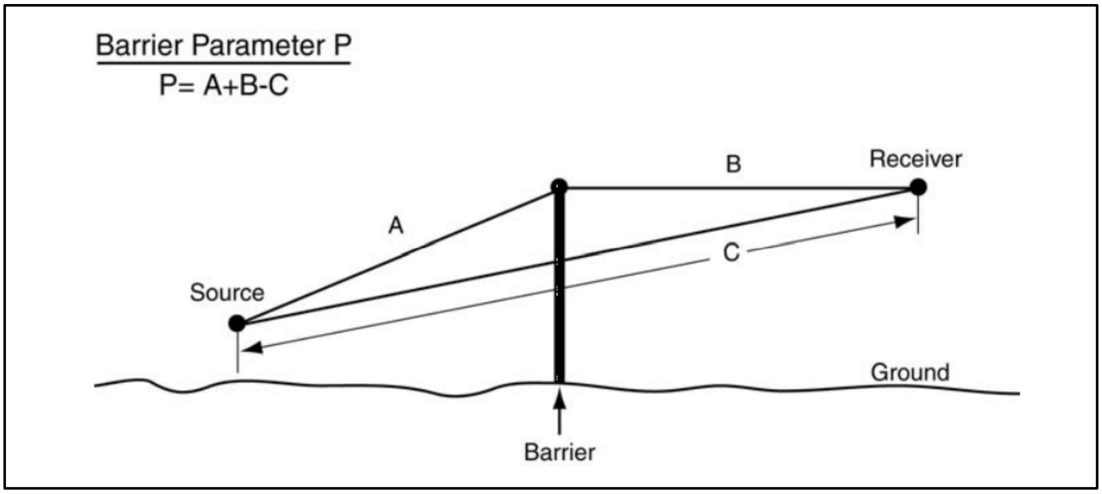
5 Source: https://www.unitedrentals.com/marketplace/equipment/other-equipment/barricades-signs/echo-h9-acoustic-barrier#/

feet from the receptor.[6] That value is "C" as depicted in **Figure 4,** which represents the distance of the path from the construction noise source to the receptor without the proposed barrier. Assuming that the barrier height is 24 feet, the distance of the path from the construction noise source to the receptor with the proposed barrier can be calculated by calculating the distances for the values of "A" and "B" in **Figure 4.** In this case, "A" equals 17.72 feet and "B" equals 106.33 feet. Based on these values for A, B and C, the value of "P" equals 0.5 feet. That value of "P" (0.5 feet) is then used in the equation used to determine noise attenuation, which is provided in **Figure 5** (the source of which is the FTA). Using a value of 0.5 feet for P, the barrier attenuation would be 10.02 or 10 dBA. Thus, despite the height of the 12th-story residence and its steep angle of sight to the noise source, a barrier at a distance of 55 feet from Textile Building Lofts would still be capable of providing 10 dBA of attenuation.

Figure 4



Source: FTA, Transit Noise and Vibration Impact Assessment, 2018.

Figure 5

$$A_{barrier} = \min\left\{15 or \left[20 \times \log\left(\frac{2.51\sqrt{P}}{\tanh\left[4.46\sqrt{P}\right]}\right) + 5\right]\right\}$$

Source: FTA, Transit Noise and Vibration Impact Assessment, 2018.

The use of moveable barriers would ensure that heavy equipment need not operate far from any barrier, eliminating the possibility of sight lines "passing over" barriers when equipment operates at too far a distance set back from them. Other examples (provided in the tables in **Exhibit B**) further confirm the effectiveness of moveable barriers at all source to receptor distances.

It should be noted that equipment operating below the grade of barrier installation, such as during site excavation, would permit greater barrier-to-equipment setback distances. For example, if an excavator were to operate from a sub-grade plane that is five feet below the plane of the barrier's installation, then the effective height of the barrier relative to the equipment would be increased by five feet (i.e., the top of a 24-foot tall barrier would then be 29-feet above the plane of the working excavator). This would increase the values of B and C (see **Figure 4**), which would in turn contribute to greater barrier

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6 For the purposes of this exercise, it will be assumed that the noise source is 7 feet in height.

performance (based on the equation in **Figure 5**), or allow a similar level of performance to be achieved for increased barrier-to-equipment setback distances. This detail is relevant to the discussion in Section F of this report. Section F presents a construction scenario example that utilizes the equations shown in **Figure 4** and **Figure 5** in addition to the baseline receptor noise levels discussed in the following Section E in order to demonstrate how moveable barriers such as the "Freestanding 'SK-8' Sound Barrier" may be implemented to reduce the Project's construction noise levels at Textile Building Lofts.

E. Existing Ambient Noise Levels

In connection with the original Environmental Impact Report (EIR) prepared for the Project, DKA Planning took short-term noise readings at locations surrounding the Project Site to determine these receptors' ambient noise conditions. For all noise monitoring locations, ambient noise was primarily attributable to vehicle traffic along nearby roadways. **Table 2** summarizes the results of this monitoring. These measured noise levels were subsequently utilized to estimate ambient noise levels at analyzed sensitive receptor locations, which are shown in **Table 3**. For Textile Building Lofts, Santee Court Apartments/Santee Village Apartments[7,8], the top floor of 649 Lofts, and the top floor of Flor 401 Lofts, ambient noise levels were estimated in relation to these receptors' distances from measured roadway noise sources (i.e., Maple Avenue, Wall Street, and 7th Street). **Exhibit D** to this report details the methodology for calculating the estimated ambient noise levels.

Table 2
Existing Daytime Ambient Noise Levels

Noise Measurement Location	Noise Level (dBA L_{eq})
1. Maple Avenue	64.8
2. Wall Street	68.0
3. Jardin de la Infancia School (7th Street)	73.4
Source: DKA Planning, 2017.	

Table 3
Daytime Ambient Noise Levels at Sensitive Receptor Locations

Sensitive Receptor[A]	Noise Level (dBA L_{eq})
Textile Building Lofts – 2nd Floor	65.4
Textile Building Lofts – 12th Floor	58.5
Santee Court/Village Apartments – 2nd Floor	57.8

7 Note that a correction was made to the estimated ambient noise levels at Santee Court Apartments/Santee Village Apartments relative to the level reported in the EIR, which was due to the mathematical discrepancy discussed in the memo attached as **Exhibit C** to this report.

8 Though the EIR specifically analyzed and addressed noise impacts to Santee Court Apartments and not Santee Village Apartments, it should be noted that these receptors are part of the same residential complex, experience similar ambient noise levels, and are located at a similar distance from the Project. Therefore, for analytical purposes, the impacts to each receptor would be similar. The one notable distinction between these receptors is that Santee Village Apartments contains seven more floors of residences than Santee Court. Thus when assessing impacts to the top floor of Santee Village/Court Apartments, this report refers to the 11th (top) floor of Santee Village Apartments.

Santee Court/Village Apartments – 11th Floor	57.2
Jardin de la Infancia School	73.4
649 Lofts – 1st Floor	73.4
649 Lofts – 7th Floor	69.4
Flor 401 Lofts – 1st Floor	73.4
Flor 401 Lofts – 6th Floor	69.6
[A] For Textile Building Lofts, Santee Court/Villages Apartments, 649 Lofts, and 401 Lofts, separate ambient noise levels have been estimated for each receptors' lowest and highest residentially occupied floor levels to ensure that the following construction noise analysis accounts for the varying baseline ambient noise conditions and noise impacts that floors of different heights experience. Source: DKA Planning, 2017, and NTEC 2021.	

F. Construction Noise Analysis

For the following analysis, construction equipment source noise levels have been updated based on Version 2 of the Federal Highway Administration's Roadway Construction Noise Model (FHWA RCNM 2.0). Based on that model, **Table 4** lists the hourly noise levels of construction vehicles and equipment that could be used for the Project.

Table 4
Estimated Construction Equipment Noise Levels

Noise Source	Noise Level (dBA L_{eq})[1]					
	50 feet	100 feet	150 feet	200 feet	250 feet	300 feet
Auger Drill Rig	80.5	74.5	71.0	68.5	66.5	64.9
Backhoe	71.8	65.8	62.3	59.8	57.8	56.3
Bulldozer	76.0	70.0	66.5	64.0	62.0	60.5
Compactor (Roller)†	82.4	76.4	72.9	70.4	68.4	66.8
Concrete Mixer Truck	77.1	71.1	67.6	65.1	63.1	61.6
Concrete Pump Truck	76.5	70.5	67.0	64.5	62.5	60.9
Concrete Saw	78.4	72.4	68.9	66.4	64.4	62.8
Crane	66.2	60.2	56.7	54.2	52.3	50.7
Dump Truck (On-site)	77.7	71.7	68.2	65.7	63.7	62.2
Excavator	71.9	65.9	62.4	59.9	57.9	56.4
Front-End Loader	68.4	62.4	58.9	56.4	54.4	52.9

Shotcrete	74.0	68.0	64.5	62.0	60.0	58.5
Telescopic Handler (Graddall)†	88.3	82.3	78.8	76.3	74.3	72.7
Welding Machine	67.2	61.2	57.7	55.2	53.2	51.7
[1] Noise levels derived from FHWA RCNM 2.0 utilizing typical usage factors for equipment. † Noise levels for these equipment are not representative of L_{eq} equivalent noise levels over periods of operations, but of L_{max} peak instantaneous noise levels associated with a single pass-by (i.e., drive-by) event. The L_{eq} equivalent noise levels associated with these equipment's operations over a given work period would be lower.						

Construction Noise Analysis - Unmitigated

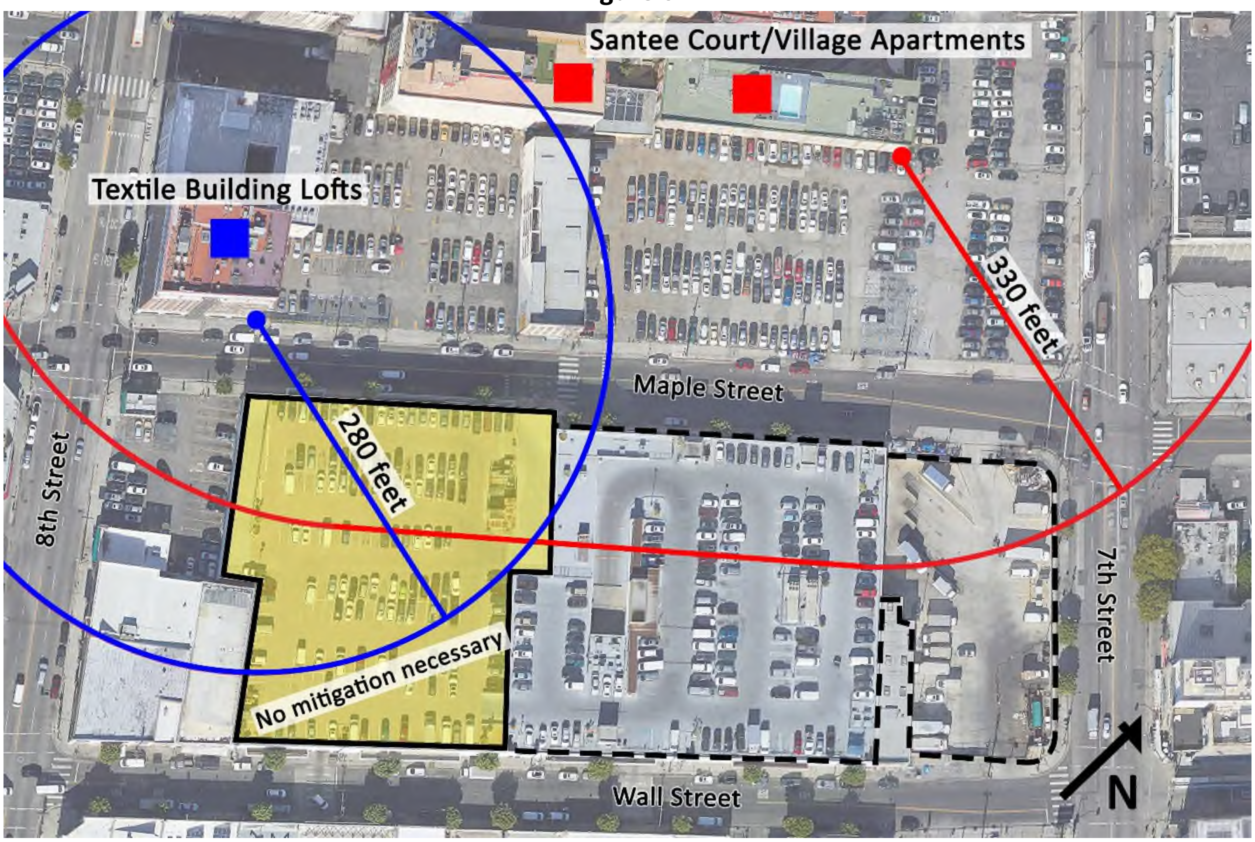
Table 5 shows the unmitigated noise levels and related noise increases that have been calculated at receptors for the construction periods when grading activities are ongoing using an excavator and front-end loader/bulldozer (the scenario evaluated in the EIR). The calculations utilized minimum Project-to-receptor distances for each receptor and floor level. As shown, without mitigation, Textile Building Lofts and Santee Court/Village Apartments could experience construction-related noise impacts in excess of the 5 dBA L_{eq} increase threshold of significance.

Table 5
Unmitigated Construction Noise Levels – Grading

Receptor	Construction Noise Level (dBA L_{eq})	Existing Ambient Noise Level (dBA L_{eq})	New Noise Level (dBA L_{eq})[A]	Increase
Equipment: Excavator and Front-End Loader/Bulldozer				
Textile Building Lofts – 2nd Floor	75.8	65.4	76.2	10.8
Textile Building Lofts – 12th Floor	69.6	58.5	69.9	11.4
Santee Court/Village Apartments – 2nd Floor	63.6	57.8	64.6	6.8
Santee Court/Village Apartments – 11th Floor	62.9	57.2	63.9	6.7
Jardin de la Infancia School	71.9	73.4	75.7	2.3
649 Lofts – 1st Floor	71.9	73.4	75.7	2.3
649 Lofts – 7th Floor	70.1	69.4	72.8	3.4
Flor 401 Lofts – 1st Floor	71.9	73.4	75.7	2.3
Flor 401 Lofts – 6th Floor	69.2	69.6	72.4	2.8
[A] These noise levels represent the logarithmic sum of each receptors' construction noise level and ambient noise level. Source: NTEC, 2021.				

As noted, the results shown in **Table 5** have been calculated using minimum Project-to-receptor distances. However, given the size of the Project Site and distances to surrounding receptors, some areas of the Project Site are far enough from receptors such that impacts from grading activities would not result in 5 dBA L_{eq} or greater noise increases even without mitigation. The location of these areas is relevant to the following discussion concerning moveable sound barrier implementation. For example, **Figure 6** shows a 280-foot radius extending from the corner of Textile Building Lofts that is nearest to the Project. The portion of the Project Site shaded in yellow is the location of the proposed South Building where grading and excavation activities may occur near the Textile Building Lofts.[9] Grading and excavation activities that occur within the yellow shaded area but outside the 280-foot "contour of significance" would be too distanced from Textile Building Lofts to cause 5 dBA Leq noise increases at any floor level. Other areas of the Project Site, outlined with a dashed border, would not include grading and excavation activities that would require noise mitigation via moveable sound barriers. Thus, these areas are not relevant to the following discussion concerning moveable sound barrier implementation.

Figure 6



9 More specifically, the 280-foot contour denotes where grading/excavation activities could result in impacts to the 12th floor of Textile Building Lofts. For the 2nd Floor of Textile Building Lofts, the contour of significance occurs at a radius of only approximately 135 feet.

Regarding Jardin de la Infancia School, 649 Lofts, and Flor 401 Lofts: the Project's grading and excavation activities would not result in significant unmitigated noise impacts to these receptors. As a result, the contour of significance for these receptors would not overlap with the Project Site. For Santee Court/Village Apartments, its contour of significance is almost entirely overlapped by the 280-foot contour associated with Textile Building Lofts (within the shaded yellow area that is relevant to the moveable noise barrier analysis).[10] Thus, for all practical purposes, the 280-foot Textile Building Lofts contour of significance identifies where grading/excavation activities for the proposed South Building could result in significant impacts (see footnote 11 below and page 17 of this report for further discussion); the implementation of moveable sound barriers to mitigate grading/excavation-related noises within this 280-foot contour would additionally ensure that impacts to Santee Court/Village Apartments are less than significant.

Moveable Sound Barrier Implementation Example

The following is an example of how moveable sound barriers may be implemented in order to effectively mitigate the Project's construction noise impacts, specifically as it relates to grading/excavation activities (the scenario evaluated in the EIR). The example focuses on grading/excavation activities that would occur at the location of the proposed South Building, which would expose Textile Building Lofts and Santee Court/Village Apartments to potentially significant noise levels without mitigation.[11] As noted previously, a 280-foot contour of significance denotes where grading/excavation activities for the proposed South Building could result in significant impacts to these receptors. As such, the example demonstrates how grading/excavation activities occurring within this contour of significance could be mitigated by the implementation of moveable sound barriers.

Generally speaking, the South Building site would be graded/excavated as follows: (1) the perimeter of the site would be trenched to a depth of approximately five feet, and shoring would be installed. (2) The site would be excavated to the five-foot depth of the previously installed trenching and shoring. (3) This process would repeat in no greater than five-foot increments until the proper depth is reached.

Because trenching for shoring installation would be a more methodical process, daily usage of grading/excavation equipment (such as an excavator and a bulldozer/front-end loader) would be far less than during bulk excavation. Thus, over the course of a given work day, the time-averaged noise impact of this equipment would be less than impacts associated with bulk excavation. Further, due to the nature of perimeter trenching, equipment use would have no potential to occur at minimum Project-to-receptor

10 The area where the Santee Court/Village Apartments contour of significance extends beyond the Textile Lofts Building's contour of significance – denoting the location where grading/excavation activities could result in a significant impact to Santee Court/Village Apartments and not Textile Building Lofts – is so small that any work in this area would be transient in nature and not capable of contributing to 5 dBA L_{eq} noise increases over the course of any appreciable time-averaged period.

11 Most grading activities occurring elsewhere on the Project Site, such as the north parking area, would take place beyond the contours of significance associated with Textile Building Lofts and Santee Court/Village Apartments. Some grading activities occurring at the location of the north parking area could expose Santee Court/Village Apartments to potentially significant construction noise levels, but this impact would be mitigated to less than significant levels without the use of moveable sound barriers and is therefore not specifically addressed by the above example of moveable sound barrier implementation.

distances for an entire day's work activities.[12] Nevertheless, the following moveable sound barrier implementation example for the site's bulk grading/excavation may also be applied to the site's trenching to mitigate noise levels related to this activity.

After the perimeter of the South Building site has been trenched to a depth of five feet, the remainder of the site would be excavated to that same depth. The following summarizes one possible way that this bulk grading/excavation could be conducted in a manner that facilitates the effective use of moveable noise barriers, which for the purposes of this example are assumed to be the 24-foot "Freestanding 'SK-8' Sound Barrier" models discussed earlier in this report.

(1) See **Figure 7**. Bulk excavation would begin in the portion of the highlighted site area that is beyond the 280-foot contour of significance. Grading/excavation in this area of the site would require no mitigation – distance alone would be sufficient to attenuate construction noise to less than significant levels at Textile Building Lofts and all other receptors.

(2) As grading/excavation activities approach the 280-foot contour of significance, noise barriers would be installed along the 240-foot contour. This would ensure that impacts to Textile Building Lofts as a result of grading/excavation activities occurring within 40 feet of this barrier are mitigated by no less than 8.8 dBA (see Exhibit B and Exhibit D for worksheets demonstrating the effectiveness of moveable sound barriers at the distances referenced in this example). This would be sufficient to ensure that impacts to the top floor of Textile Building Lofts are no greater than a 1.1 dBA L_{eq} increase when grading/excavation activities occur between the 240-foot and 280-foot contours.

(3) As grading/excavation activities approach the 240-foot contour, the noise barriers would be moved to the 210-foot contour. This would ensure that impacts to Textile Building Lofts as a result of grading/excavation activities occurring within 30 feet of this barrier are mitigated by no less than 12.0 dBA, and that related noise increases at the top floor of Textile Building Lofts would be no greater than 0.7 dBA L_{eq}.

(4) As grading/excavation activities approach the 210-foot contour, the noise barriers would be moved to the 180-foot contour. This would ensure that impacts to Textile Building Lofts as a result of grading/excavation activities occurring within 30 feet of this barrier are mitigated by no less than 9.3 dBA, and that related noise increases at the top floor of Textile Building Lofts would be no greater than 1.5 dBA L_{eq}.

(5) As grading/excavation activities approach the 180-foot contour, the noise barriers would be moved to the 155-foot contour. This would ensure that impacts to Textile Building Lofts as a result of grading/excavation activities occurring within 25 feet of this barrier are

[12] The South Building site is oriented to Textile Building Lofts as a baseball diamond is oriented to home plate. Perimeter trenching in closest proximity to Textile Building Lofts would occur along the base paths from home plate to first base and from third base to home plate. Trenching activities would move either away from or toward Textile Building Lofts along these "base paths" over the course of a given workday, meaning that the distance between trenching equipment and the receptor would always exceed the minimum Project-to-receptor distance.

mitigated by no less than 10.1 dBA, and that related noise increases at the top floor of Textile Building Lofts would be no greater than 1.5 dBA L_{eq}.

(6) As grading/excavation activities approach the 155-foot contour, the noise barriers would be moved to the 135-foot contour. This would ensure that impacts to Textile Building Lofts as a result of grading/excavation activities occurring within 25 feet of this barrier are mitigated by no less than 11.6 dBA, and that related noise increases at the top floor of Textile Building Lofts would be no greater than 1.4 dBA L_{eq}.

(7) As grading/excavation activities approach the 135-foot contour, the noise barriers would be moved to the 115-foot contour. This would ensure that impacts to Textile Building Lofts as a result of grading/excavation activities occurring within 20 feet of this barrier are mitigated by no less than 8.2 dBA, and that related noise increases at the top floor of Textile Building Lofts would be no greater than 2.9 dBA L_{eq}.

(8) As grading/excavation activities approach the 115-foot contour, the noise barriers would be moved to the 100-foot contour. This would ensure that impacts to Textile Building Lofts as a result of grading/excavation activities occurring within 15 feet of this barrier are mitigated by no less than 10.8 dBA, and that related noise increases at the top floor of Textile Building Lofts would be no greater than 2.1 dBA L_{eq}.

(9) As grading/excavation activities approach the 100-foot contour, the noise barriers would be moved to the 70-foot contour. This would ensure that impacts to Textile Building Lofts as a result of grading/excavation activities occurring within 10 feet of this barrier are mitigated by no less than 10.2 dBA, and that related noise increases at the top floor of Textile Building Lofts are no greater than 3.0 dBA L_{eq}.

(10) Between the 70-foot and 55-foot contours, grading/excavation activities would be required to maintain a setback of no more than approximately 7.5 feet from moveable sound barriers. This would ensure that impacts to Textile Building Lofts are mitigated by no less than 9.5 dBA and that impacts to the top floor of this receptor are no greater than a 3.7 dBA L_{eq} increase.

(11) After the entire site has been excavated to a depth of five feet, the process (including prior trenching and shoring activities) would repeat in no greater than five-foot (depth) increments until the site's proper depth is reached. See **Table 6** below for a summary of noise impacts associated with each contour distance.

Table 6
Moveable Sound Barrier Implementation Example – Impact Summary

Moveable Sound Barrier Distance Contour	Allowable Grading/Excavation Setback from Barrier	Minimum Mitigation Provided[A]	Noise Level at Textile Building Lofts - 12th Story[B]	Increase[C]
No Barrier - 280 feet+[D]	N/A	N/A	63.5 dBA L_{eq}	< 5.0 dBA L_{eq}
240 feet	40 feet	8.8 dBA	59.6 dBA L_{eq}	1.1 dBA L_{eq}
210 feet	30 feet	12.0 dBA	59.2 dBA L_{eq}	0.7 dBA L_{eq}
180 feet	30 feet	9.3 dBA	60.0 dBA L_{eq}	1.5 dBA L_{eq}
155 feet	25 feet	10.1 dBA	60.0 dBA L_{eq}	1.5 dBA L_{eq}
135 feet	25 feet	11.6 dBA	59.9 dBA L_{eq}	1.4 dBA L_{eq}
115 feet	20 feet	8.2 dBA	61.4 dBA L_{eq}	2.9 dBA L_{eq}
100 feet	15 feet	10.8 dBA	60.6 dBA L_{eq}	2.1 dBA L_{eq}
Between 100 & 70 feet	10 feet	10.2 dBA	61.5 dBA L_{eq}	3.0 dBA L_{eq}
Between 70 & 55 feet	7.5 feet	9.5 dBA	62.2 dBA L_{eq}	3.7 dBA L_{eq}

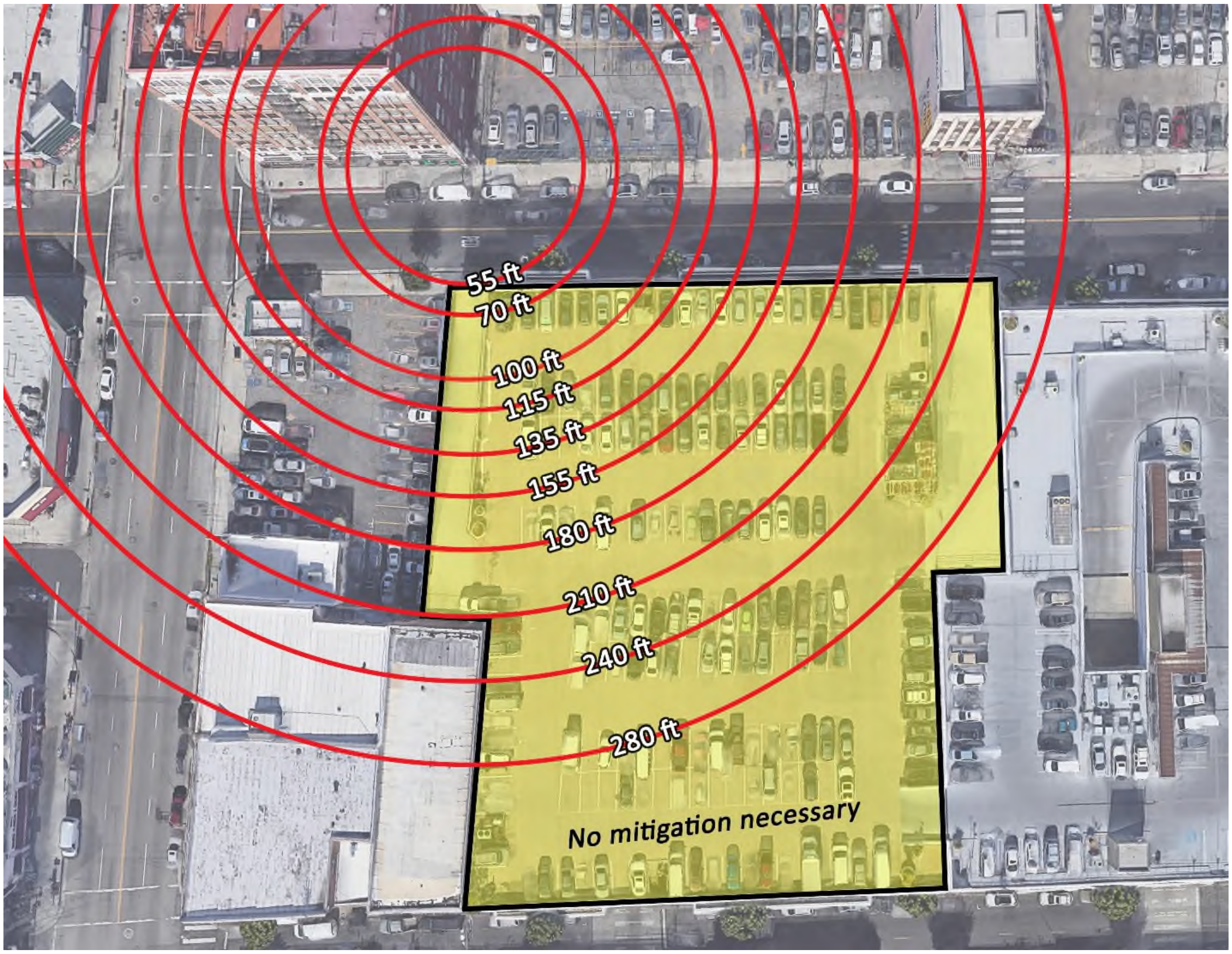
[A] Represents the mitigation provided when grading/excavation activities occur at the maximum allowable setback distance from barriers. At lesser setback distances (i.e. when activities occur closer to barriers), the mitigation provided by barriers would be greater.

[B] This noise level represents the logarithmic sum of the resultant grading/excavation-related noise level at the 12th story of Textile Building Lofts and this receptor's ambient noise level, which is 58.5 dBA L_{eq} (see Table 3).

[C] Noise increases are calculated by subtracting the 58.5 dBA L_{eq} ambient noise level for the 12th story of Textile Building Lofts from the noise levels in the preceding column.

[D] This row demonstrates how grading/excavation activities occurring at a contour distance of greater than 280 feet would result in noise increases that are less than 5.0 dBA L_{eq}.
Source: NTEC, 2021. See Exhibit B for materials related to the calculation of mitigation that would be provided by moveable sound barriers at the given contour distances. See **Exhibit E** for materials related to the calculation of noise impacts at the 12th Story of Textile Building Lofts when moveable sound barriers are installed at the given contour distances.

Figure 7



In considering the allowable setback between the 70-foot and 55-foot contours – no more than 7.5 feet – it is anticipated that equipment used in this area would be downsized. For example, a mini-excavator could be utilized to excavate in this area, and a skid steer loader could also be utilized to aid in earthmoving tasks. Not only would this equipment be capable of operating within the given setback, but they would also generate substantially less noise than their larger counterparts. For example, whereas a standard mid-size excavator may be rated at 150 horsepower or greater, the types of mini-excavator that could be utilized are generally rated at less than 40 horsepower. Though the Federal Highway Administration has not published referenced noise levels for mini excavators, it is reasonable to assume that noise levels for such equipment would be substantially less than for larger and more powerful models. Thus not only would downsized equipment be capable of maintaining the given setback distance, but they would generate reduced noise levels as well, likely resulting in noise impacts to the 12th story of Textile Building Lofts that are less than the estimated 3.7 dBA L_{eq} increase.

Further, it is important to note that the area between the 70-foot and 55-foot contours is exceedingly small – less than 400 square feet. Additionally, some material will have already been excavated from this area by preceding trenching/shoring activity. It is estimated that less than 64 cubic yards worth of material would be excavated from this portion of the site. Therefore, a minimal amount of grading/excavation work would be necessary. Even downsized equipment would be capable of fully excavating/grading this location in less than a full workday. As a result, the daily impact would be reduced, because only a partial workday's worth of activities would occur in this location.

Given these considerations, the equipment setback requirement between the 55-foot and 70-foot contours would feasibly permit necessary grading/excavation activities in this location, despite the seeming stringency.

As noted, implementation of moveable sound barriers per the given example would further ensure that noise increases to the 11th (top) floor of Santee Court/Village Apartments are also less than 5.0 dBA L_{eq}. Due to the Santee Court/Village Apartments receptor's increased setback from the Project Site (over 200 feet, as compared to Textile Building Lofts' 55-foot setback), grading/excavation equipment could occur up to approximately 50 feet from a moveable sound barrier and still be sufficiently shielded from this receptor's top floor. (Refer to the calculations in **Exhibit** F.) This 50-foot allowable barrier setback for Santee Court/Village Apartments is greater than any permissible barrier setback per the given implementation example, which is why the implementation example would be capable of adequately shielding (and therefore mitigating) the top floor of Santee Court/Village Apartments. In application, the placement of moveable sound barriers could be adjusted so that barriers are oriented more perpendicularly, and less obliquely, between grading/excavation activities and Santee Court/Village Apartments, depending where such activities are occurring on site.

G. Revisions to Mitigation Measure I-2

Given the effectiveness of moveable sound barriers, NTEC recommends that the DEIR's Mitigation Measure I-2 be revised as follows (additions are underlined, and deletions are in strikethrough):

I-2 *~~Temporary~~ Sound barriers rated to achieve ~~capable of achieving~~ a sound attenuation of at least 15 dBA with a minimum height of 24 feet shall be erected along the ~~Project's~~ Project site's boundaries that face sensitive receptors, namely the property lines that parallel Maple Avenue and E. 7th Street. ~~facing Santee Court Apartments~~. Sound barriers capable of achieving a sound attenuation of at least 15 dBA and of the same minimum height of 24 feet shall also be erected along portions of the Project's property line that parallel Wall Street and delineate the North Parking Area. ~~Temporary~~ Sound barriers capable of achieving a sound attenuation of at least 10 dBA with a minimum height of 10 feet shall be erected along all other Project construction boundaries or property lines. Additionally, movable sound barriers composed of materials rated to achieve a sound attenuation of at least 15 dBA with a minimum height of 24 feet shall be utilized to shield line of sight paths from operating heavy equipment[13] to surrounding sensitive receptors. The distance between the operating heavy equipment and the moveable sound barriers shall be determined based on achieving the performance standard of an increase in ambient noise levels of not more than 5 dBA* L_{eq}*. The project applicant or its contractor shall submit an implementation plan and an acoustical study detailing the specifications of the moveable sound barrier and the construction process for deploying the moveable sound barriers to achieve the ~~that~~ standard of sound attenuation of 15 dBA to the City for its review and approval prior to the issuance of any grading or excavation permit.*

13 "Heavy equipment" refers to bulldozers, backhoes, excavators, and similarly large construction vehicles.

The additions to Mitigation Measure I-2 would have the effect of requiring moveable sound barriers to be continually positioned in manners capable of shielding sightlines from heavy equipment noise sources to all surrounding identified sensitive receptors. The revised Mitigation Measure I-2 would thereby also provide additional mitigations to newly identified multi-story residential sensitive receptors located along 7th Street, though impacts to these receptors would be less than significant without mitigation. Just as moveable sound barriers would be capable of shielding line of sight noise paths to the nearest and tallest sensitive receptor, Textile Building Lofts, they would be even more adept at shielding noise paths to the comparatively shorter and more distant 649 Lofts, Flor 401 Lofts, Lyndon Hotel, and Madison Hotel sensitive receptors, as the line of sight angles to these receptors would be comparatively less steep.

H. Construction Noise Impact after Mitigation

As **Table 6** (below) and the additional tables provided in Exhibit B demonstrate, the attenuation provided by moveable barriers would be no less than 8 dBA, assuming that Mitigation Measure I-2 has been implemented in accordance with the example discussed in Section F. Accordingly, the Project's construction noise impacts would be less than significant after implementation of Mitigation Measures I-1 and I-2 (i.e., the increase in noise levels would be less than 5 dBA L_{eq}), at the receptors listed in **Table 6**. The receptors listed in **Table 1** that are not listed in **Table 6** (Lyndon House, Garment Lofts, Madison Hotel, Santee Village Lofts, and Ballington Plaza) would also not experience noise increases greater than 5 dBA L_{eq} because those other receptors are farther away than the receptors listed in **Table 6**.

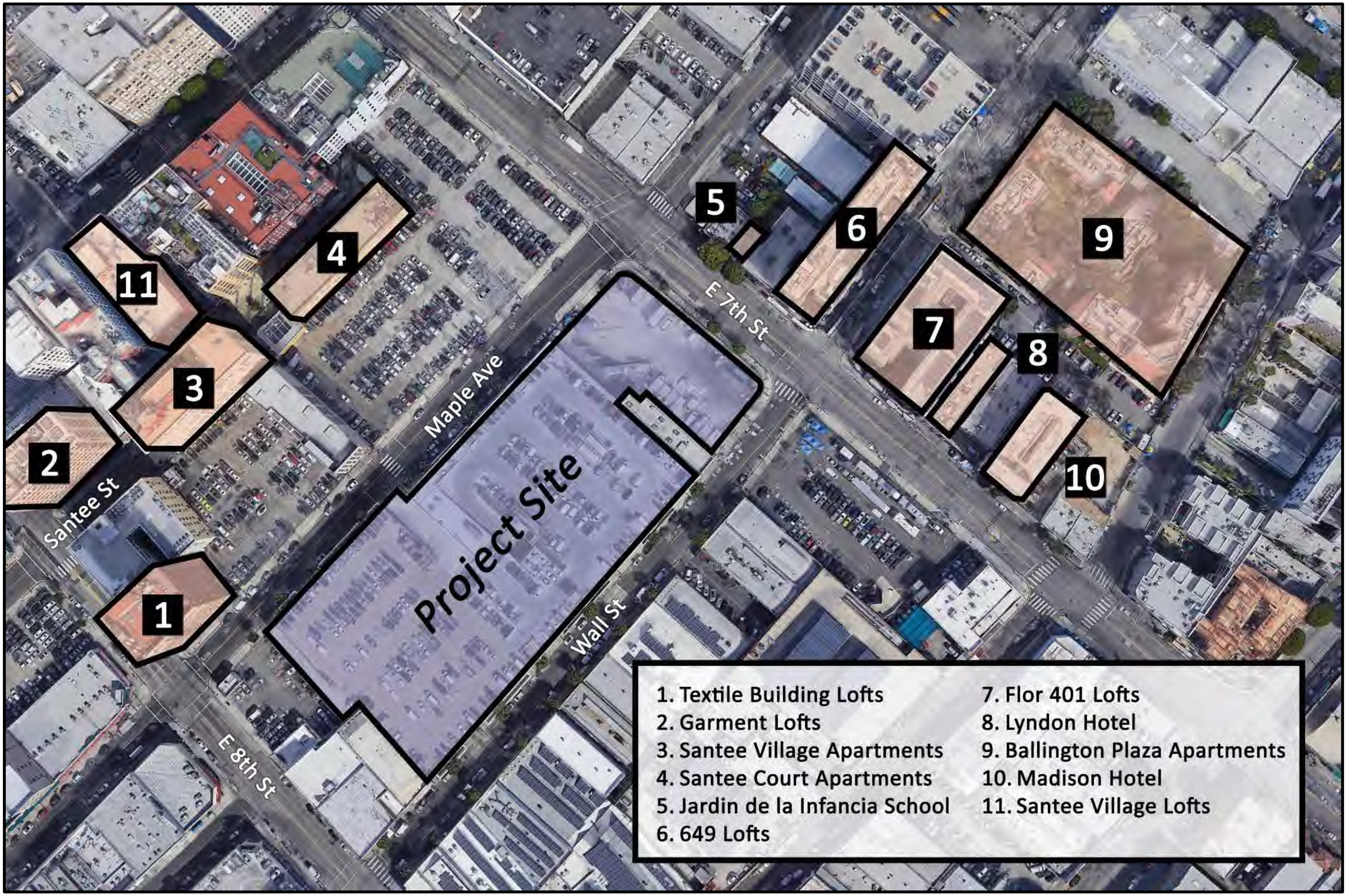
Table 6
Mitigated Construction Noise Levels – Grading

Receptor	Construction Noise Level (dBA L_{eq})	Existing Ambient Noise Level (dBA L_{eq})	New Noise Level (dBA L_{eq})[A]	Increase[B]
Equipment: Excavator and Front-End Loader/Bulldozer				
Textile Building Lofts – 2nd Floor	60.7	65.4	66.7	1.3
Textile Building Lofts – 12th Floor	59.7	58.5	62.2	3.7
Santee Court/Village Apartments – 2nd Floor	48.6	57.8	58.3	0.5
Santee Court/Village Apartments – 11th Floor	47.8	57.2	57.7	0.5
Jardin de la Infancia School	56.9	73.4	73.5	0.1
649 Lofts – 1st Floor	56.9	73.4	73.5	0.1
649 Lofts – 7th Floor	55.1	69.4	69.6	0.2
Flor 401 Lofts – 1st Floor	55.6	73.4	73.5	0.1
Flor 401 Lofts – 6th Floor	54.2	69.6	69.7	0.1

[A] These noise levels represent the logarithmic sum of each receptors' construction noise level and ambient noise level.
[B] As explained in Section F of this report, noise increases would vary for each receptor depending on the distances to moveable sound barriers and the setback of equipment to these barriers. The increases

shown in this table are equal to noise increases that would occur at minimum Project-to-receptor distances, which correspond with the maximum possible increases that receptors could experience based on the moveable sound barrier implementation example also discussed in Section F. See Exhibits B and D to this report to view materials related to the calculation of moveable sound barrier effectiveness and impacts to the receptors shown in this table. Source: NTEC, 2021.

EXHIBIT A



NOISE RECEPTOR LOCATION MAP

Southern California Flower Market Project

Imagery via Google

EXHIBIT B

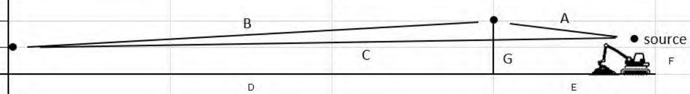
Sound Barrier Analysis Tables

Sound Barrier Analysis: 55ft Distance

	Height	Transmission Loss	STC Rating	Possible dBA Reduction
SK-8 Sound Barrier	24	-	43	15

Receiver/Floor Height (ft)
-
115
105
95
75
55
35
15
-
-

D:	55	ft
E:	7.5	ft
F:	2	ft (7ft - 5ft work depth
G:	24	ft



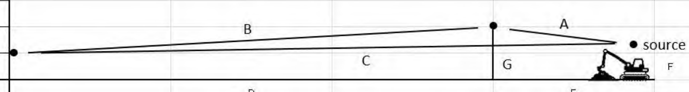
Receiver/Floor Height (ft)	A	B	C	P	dBA Reduction
-	-	-	-	-	-
115	23.24	106.33	129.13	0.44	9.45
105	23.24	97.91	120.48	0.67	11.28
95	23.24	89.81	112.05	1.00	13.01
75	23.24	75.01	96.10	2.15	15.00
55	23.24	63.13	81.95	4.43	15.00
35	23.24	56.09	70.68	8.66	15.00
15	23.24	55.73	63.84	15.14	15.00
-	-	-	-	-	-
-	-	-	-	-	-

Sound Barrier Analysis: 70ft Distance

	Height	Transmission Loss	STC Rating	Possible dBA Reduction
SK-8 Sound Barrier	24	-	43	15

Receiver/Floor Height (ft)
-
115
105
95
75
55
35
15
-
-

D:	70	ft
E:	10	ft
F:	2	ft (7ft - 5ft work depth
G:	24	ft



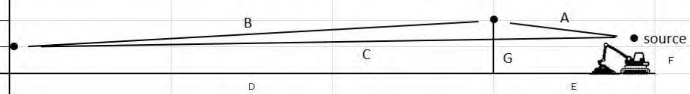
Receiver/Floor Height (ft)	A	B	C	P	dBA Reduction
-	-	-	-	-	-
115	24.17	114.81	138.45	0.52	10.19
105	24.17	107.06	130.42	0.80	12.05
95	24.17	99.70	122.67	1.20	13.77
75	24.17	86.61	108.30	2.47	15.00
55	24.17	76.56	95.96	4.76	15.00
35	24.17	70.86	86.54	8.49	15.00
15	24.17	70.58	81.05	13.69	15.00
-	-	-	-	-	-
-	-	-	-	-	-

Sound Barrier Analysis: 115ft Distance

	Height	Transmission Loss	STC Rating	Possible dBA Reduction
SK-8 Sound Barrier	24	-	43	15

Receiver/Floor Height (ft)
-
115
105
95
75
55
35
15
-
-

D:	115 ft
E:	20 ft
F:	2 ft (7ft - 5ft work depth
G:	24 ft



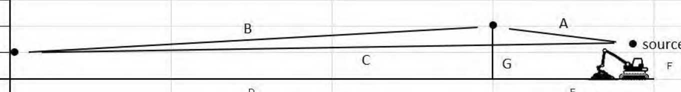
Receiver/Floor Height (ft)	A	B	C	P	dBA Reduction
-	-	-	-	-	-
115	29.73	146.65	176.05	0.33	8.22
105	29.73	140.66	169.81	0.59	10.71
95	29.73	135.15	163.93	0.95	12.78
75	29.73	125.80	153.47	2.06	15.00
55	29.73	119.10	145.03	3.81	15.00
35	29.73	115.52	138.97	6.28	15.00
15	29.73	115.35	135.62	9.46	15.00
-	-	-	-	-	-
-	-	-	-	-	-

Sound Barrier Analysis: 135ft Distance

	Height	Transmission Loss	STC Rating	Possible dBA Reduction
SK-8 Sound Barrier	24	-	43	15

Receiver/Floor Height (ft)
-
115
105
95
75
55
35
15
-
-

D:	135 ft
E:	20 ft
F:	2 ft (7ft - 5ft work depth)
G:	24 ft



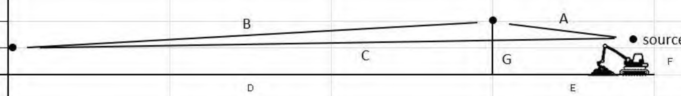
Receiver/Floor Height (ft)	A	B	C	P	dBA Reduction
-	-	-	-	-	-
115	29.73	162.81	191.82	0.72	11.58
105	29.73	157.44	186.10	1.07	13.27
95	29.73	152.53	180.76	1.50	14.77
75	29.73	144.31	171.33	2.71	15.00
55	29.73	138.51	163.81	4.43	15.00
35	29.73	135.45	158.47	6.71	15.00
15	29.73	135.30	155.54	9.49	15.00
-	-	-	-	-	-
-	-	-	-	-	-

Sound Barrier Analysis: 155ft Distance

	Height	Transmission Loss	STC Rating	Possible dBA Reduction
SK-8 Sound Barrier	24	-	43	15

Receiver/Floor Height (ft)
-
115
105
95
75
55
35
15
-
-

D:	155	ft
E:	25	ft
F:	2	ft (7ft - 5ft work depth
G:	24	ft



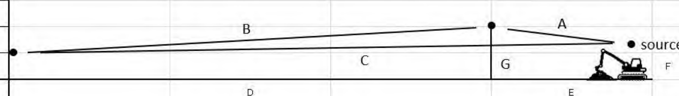
Receiver/Floor Height (ft)	A	B	C	P	dBA Reduction
-	-	-	-	-	-
115	33.30	179.74	212.53	0.51	10.09
105	33.30	174.89	207.39	0.80	12.05
95	33.30	170.49	202.61	1.18	13.73
75	33.30	163.17	194.24	2.24	15.00
55	33.30	158.07	187.64	3.73	15.00
35	33.30	155.39	183.00	5.69	15.00
15	33.30	155.26	180.47	8.09	15.00
-	-	-	-	-	-
-	-	-	-	-	-

Sound Barrier Analysis: 180ft Distance

	Height	Transmission Loss	STC Rating	Possible dBA Reduction
SK-8 Sound Barrier	24	-	43	15

Receiver/Floor Height (ft)
-
115
105
95
75
55
35
15
-
-

D:	180	ft
E:	30	ft
F:	2	ft (7ft - 5ft work depth
G:	24	ft



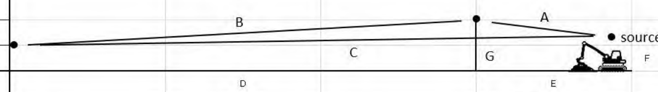
Receiver/Floor Height (ft)	A	B	C	P	dBA Reduction
-	-	-	-	-	-
115	37.20	201.70	238.47	0.43	9.31
105	37.20	197.39	233.90	0.69	11.38
95	37.20	193.50	229.67	1.03	13.11
75	37.20	187.09	222.33	1.96	15.00
55	37.20	182.65	216.58	3.27	15.00
35	37.20	180.34	212.58	4.96	15.00
15	37.20	180.22	210.40	7.03	15.00
-	-	-	-	-	-
-	-	-	-	-	-

Sound Barrier Analysis: 210ft Distance

	Height	Transmission Loss	STC Rating	Possible dBA Reduction
SK-8 Sound Barrier	24	-	43	15

Receiver/Floor Height (ft)
-
115
105
95
75
55
35
15
-
-

D:	210	ft
E:	30	ft
F:	2	ft (7ft - 5ft work depth
G:	24	ft



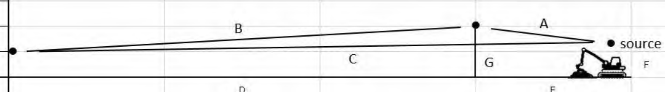
Receiver/Floor Height (ft)	A	B	C	P	dBA Reduction
-	-	-	-	-	-
115	37.20	228.87	265.27	0.80	12.03
105	37.20	225.08	261.17	1.11	13.46
95	37.20	221.68	257.39	1.49	14.73
75	37.20	216.10	250.86	2.45	15.00
55	37.20	212.28	245.78	3.70	15.00
35	37.20	210.29	242.26	5.23	15.00
15	37.20	210.19	240.35	7.04	15.00
-	-	-	-	-	-
-	-	-	-	-	-

Sound Barrier Analysis: 240ft Distance

	Height	Transmission Loss	STC Rating	Possible dBA Reduction
SK-8 Sound Barrier	24	-	43	15

Receiver/Floor Height (ft)
-
115
105
95
75
55
35
15
-
-

D:	240	ft
E:	40	ft
F:	2	ft (7ft - 5ft work depth
G:	24	ft



Receiver/Floor Height (ft)	A	B	C	P	dBA Reduction
-	-	-	-	-	-
115	45.65	256.67	301.94	0.38	8.84
105	45.65	253.30	298.34	0.61	10.84
95	45.65	250.28	295.04	0.89	12.50
75	45.65	245.36	289.36	1.65	15.00
55	45.65	241.99	284.97	2.67	15.00
35	45.65	240.25	281.94	3.96	15.00
15	45.65	240.17	280.30	5.52	15.00
-	-	-	-	-	-
-	-	-	-	-	-

EXHIBIT C

email: noah@ntenvironmental.net
call/text: 310-722-6346

To: Stacie Henderson

From: Noah Tanski, NTEC

Date: July 13, 2021

RE: Ambient Noise Level Correction for Santee Court Apartments and Santee Village Apartments

The following discussion provides a correction regarding ambient noise levels that were estimated for Santee Court Apartments (716 S. Los Angeles Street) and Santee Village Apartments (743 Santee Street) as a part of the Southern California Flower Market Project (Project) DEIR. Note that these receptors are a part of the same residential community and are the same height and distance from the Project and Maple Avenue. Thus, the following discussion and estimations apply in the exact same manner to either receptor.

As explained on page 4.I-10 of the DEIR, the 50.8 dBA L_{eq} ambient noise level for Santee Court Apartments (refer to DEIR Table 4.I-4) "was estimated with respect to its distance from Maple Avenue and 7th Street, its primary sources of ambient noise." The DEIR goes on to explain that the "estimation was utilized to more accurately account for this receptor's setback from these roadways." Because Santee Court Apartments is located approximately 180 feet from Maple Avenue (200 feet from its centerline) and because the noise measurement of Maple Avenue was taken just 40 feet from its centerline, it would have been inappropriate to apply the Maple Avenue noise measurement directly to the receptor; this likely would have exaggerated the ambient noise level that is actually experienced by Santee Court Apartments. Because Santee Court Apartments is located 160 feet farther from the Maple Avenue centerline than the noise measurement location, noise levels from Maple Avenue would be further attenuated, or reduced, at the receptor location as compared to noise levels observed at the noise measurement location. The attenuation attributable to this additional 160 feet of distance was estimated and deducted from the 64.8 dBA L_{eq} noise level that was measured along Maple Avenue, resulting in the 50.8 dBA L_{eq} Santee Court Apartments ambient noise level that was utilized in the DEIR.

In order to calculate changes in noise levels at any two distances from "line" sources of noise such as roadways (i.e., Maple Avenue), the following equation is utilized:

$$dBA_2 = dBA_1 + 10\log_{10}(D_1/D_2)$$

Where:
dBA_1 = noise level at distance D_1 and conventionally the known noise level
dBA_2 = noise level at distance D_2 and conventionally the unknown noise level[1]

[1] Source: California Department of Transportation, Technical Noise Supplement to the Traffic Noise Analysis Protocol, September 2013

However, when estimating the ambient noise level for Santee Court Apartments, the following typo was made in the equation (in bold):

$$dBA_2 = dBA_1 + \mathbf{2}0\log_{10}(D_1/D_2)$$

It is this typo that resulted in the ambient noise level of 50.8 dBA L_{eq} at Santee Court Apartments. As demonstrated below:

$$50.8 = 64.8 + 20\log_{10}(40/200)$$

Where:
dBA_1 = 64.8 dBA L_{eq}, the noise level measured along Maple Avenue, 40 feet from its centerline
dBA_2 = 50.8 dBA L_{eq}, the noise level estimated at Santee Court Apartments, 200 feet from the Maple Avenue centerline

Utilizing the corrected equation, a correct ambient noise level of 57.8 dBA L_{eq} is estimated for Santee Court Apartments:

$$57.8 = 64.8 + 10\log_{10}(40/200)$$

Where:
dBA_1 = 64.8 dBA L_{eq}, the noise level measured along Maple Avenue, 40 feet from its centerline
dBA_2 = 57.8 dBA L_{eq}, the noise level estimated at Santee Court Apartments, 200 feet from the Maple Avenue centerline

The same equation is utilized to estimate the 57.2 dBA L_{eq} ambient noise level for the top 11^{th} floor of Santee Court Apartments:

$$57.2 = 64.8 + 10\log_{10}(40/230)$$

Where:
dBA_1 = 64.8 dBA L_{eq}, the noise level measured along Maple Avenue, 40 feet from its centerline
dBA_2 = 57.2 dBA L_{eq}, the noise level estimated at the top 11^{th} floor of Santee Court Apartments, approximately 230 feet[2] from the Maple Avenue centerline

In light of this correction, the correct daytime ambient noise level for the bottommost residential floor of Santee Court Apartments (or Santee Village Apartments) is 57.8 dBA L_{eq}, and the correct daytime ambient noise level for the uppermost 11^{th} floor of Santee Court Apartments (or Santee Village Apartments) is 57.2 dBA L_{eq}.

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2 This 230 foot distance accounts for the additional height of the 11^{th} floor, which is approximately 115 feet above ground level.

EXHIBIT D

Textile Building Lofts - 2nd Floor: GRADING (Earthmoving)

Ambient Noise Level:	65.4 dBA Leq
Distance:	60.5 feet

Unmitigated

Equipment Noise Levels

Equipment	Noise Level - 50ft dBA Leq	Usage %	Workday Noise Level - 50ft dBA Leq
Excavator	75.9	0.4	71.9
Bulldozer	80.0	0.4	76.0
-	0	1	0.0
-	0	1	0.0
-	0	1	0.0
		Combined dBA Leq:	77.4

Unmitigated Construction Noise Impact

Combined Equipment Noise Level	77.4 dBA Leq
Total Shielding (existing building rows/sound barrier)	0 dBA
Ground Factor	0
Distance - Equipment to Receptor	60.5 ft
Unmitigated Construction Noise Level	75.8 dBA Leq
Ambient Noise Level	65.4 dBA
New Noise Level	76.2 dBA Leq
Unmitigated Noise Increase	**10.8 dBA**

Mitigated

Equipment Noise Levels

Equipment	Noise Level - 50ft dBA Leq	Usage %	Workday Noise Level - 50ft dBA Leq
Excavator	75.9	0.4	71.9
Bulldozer	80	0.4	76.0
-	0	1	0.0
-	0	1	0.0
-	0	1	0.0
		Combined dBA Leq:	77.4

Mitigated Construction Noise Impact

Combined Equipment Noise Level	77.4	dBA Leq
Total Shielding (sound barrier)	15	dBA
Ground Factor	0	
Distance - Equipment to Receptor	61.4	ft
Mitigated Construction Noise Level	60.7	dBA Leq
Ambient Noise Level	65.4	dBA
New Noise Level	66.7	dBA Leq
Mitigated Noise Increase	**1.3**	**dBA**

Textile Building Lofts - 12th Floor: GRADING (Earthmoving)

Ambient Noise Level:	58.5 dBA Leq
Distance:	123.55 feet

Unmitigated

Equipment Noise Levels

Equipment	Noise Level - 50ft dBA Leq	Usage %	Workday Noise Level - 50ft dBA Leq
Excavator	75.9	0.4	71.9
Bulldozer	80	0.4	76.0
-	0	1	0.0
-	0	1	0.0
-	0	1	0.0
		Combined dBA Leq:	77.4

Unmitigated Construction Noise Impact

Combined Equipment Noise Level	77.4 dBA Leq
Total Shielding (existing building rows/sound barrier)	0 dBA
Ground Factor	0
Distance - Equipment to Receptor	123.55 ft
Unmitigated Construction Noise Level	69.6 dBA Leq
Ambient Noise Level	58.5 dBA
New Noise Level	69.9 dBA Leq
Unmitigated Noise Increase	**11.4 dBA**

Mitigated

Equipment Noise Levels

Equipment	Noise Level - 50ft dBA Leq	Usage %	Workday Noise Level - 50ft dBA Leq
Excavator	75.9	0.4	71.9
Bulldozer	80	0.4	76.0
-	0	1	0.0
-	0	1	0.0
-	0	1	0.0
		Combined dBA Leq:	77.4

Mitigated Construction Noise Impact

Combined Equipment Noise Level	77.4	dBA Leq
Total Shielding (sound barrier)	9.5	dBA
Ground Factor	0	
Distance - Equipment to Receptor	129	ft
Mitigated Construction Noise Level	59.7	dBA Leq
Ambient Noise Level	58.5	dBA
New Noise Level	62.2	dBA Leq
Mitigated Noise Increase	**3.7**	**dBA**

Construction Noise Impact Analysis

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Santee Court/Village Apartments - 2nd Floor: GRADING (Earthmoving)

Ambient Noise Level:	57.8 dBA Leq
Distance:	245 feet

Unmitigated

Equipment Noise Levels

Equipment	Noise Level - 50ft dBA Leq	Usage %	Workday Noise Level - 50ft dBA Leq
Excavator	75.9	0.4	71.9
Bulldozer	80	0.4	76.0
-	0	1	0.0
-	0	1	0.0
-	0	1	0.0
		Combined dBA Leq:	77.4

Unmitigated Construction Noise Impact

Combined Equipment Noise Level	77.4 dBA Leq
Total Shielding (existing building rows/sound barrier)	0 dBA
Ground Factor	0
Distance - Equipment to Receptor	245 ft
Unmitigated Construction Noise Level	63.6 dBA Leq
Ambient Noise Level	57.8 dBA
New Noise Level	64.6 dBA Leq
Unmitigated Noise Increase	**6.8 dBA**

Mitigated

Equipment Noise Levels

Equipment	Noise Level - 50ft dBA Leq	Usage %	Workday Noise Level - 50ft dBA Leq
Excavator	75.9	0.4	71.9
Bulldozer	80	0.4	76.0
-	0	1	0.0
-	0	1	0.0
-	0	1	0.0
		Combined dBA Leq:	77.4

Mitigated Construction Noise Impact

Combined Equipment Noise Level	77.4	dBA Leq
Total Shielding (sound barrier)	15	dBA
Ground Factor	0	
Distance - Equipment to Receptor	245	ft
Mitigated Construction Noise Level	48.6	dBA Leq
Ambient Noise Level	57.8	dBA
New Noise Level	58.3	dBA Leq
Mitigated Noise Increase	**0.5**	**dBA**

Santee Court/Village Apartments - 11th Floor: GRADING (Earthmoving)

Ambient Noise Level:	57.2	dBA Leq
Distance:	268	feet

Unmitigated

Equipment Noise Levels

Equipment	Noise Level - 50ft dBA Leq	Usage %	Workday Noise Level - 50ft dBA Leq
Excavator	75.9	0.4	71.9
Bulldozer	80	0.4	76.0
-	0	1	0.0
-	0	1	0.0
-	0	1	0.0
		Combined dBA Leq:	77.4

Unmitigated Construction Noise Impact

Combined Equipment Noise Level	77.4	dBA Leq
Total Shielding (existing building rows/sound barrier)	0	dBA
Ground Factor	0	
Distance - Equipment to Receptor	268	ft
Unmitigated Construction Noise Level	62.9	dBA Leq
Ambient Noise Level	57.2	dBA
New Noise Level	63.9	dBA Leq
Unmitigated Noise Increase	**6.7**	**dBA**

Mitigated

Equipment Noise Levels

Equipment	Noise Level - 50ft dBA Leq	Usage %	Workday Noise Level - 50ft dBA Leq
Excavator	75.9	0.4	71.9
Bulldozer	80	0.4	76.0
-	0	1	0.0
-	0	1	0.0
-	0	1	0.0
		Combined dBA Leq:	77.4

Mitigated Construction Noise Impact

Combined Equipment Noise Level	77.4	dBA Leq
Total Shielding (sound barrier)	15	dBA
Ground Factor	0	
Distance - Equipment to Receptor	270	ft
Mitigated Construction Noise Level	47.8	dBA Leq
Ambient Noise Level	57.2	dBA
New Noise Level	57.7	dBA Leq
Mitigated Noise Increase	**0.5**	**dBA**

Construction Noise Impact Analysis

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Jardin de la Infancia School: GRADING (Earthmoving)

Ambient Noise Level:	73.4 dBA Leq
Distance:	95 feet

Unmitigated

Equipment Noise Levels

Equipment	Noise Level - 50ft dBA Leq	Usage %	Workday Noise Level - 50ft dBA Leq
Excavator	75.9	0.4	71.9
Bulldozer	80	0.4	76.0
-	0	1	0.0
-	0	1	0.0
-	0	1	0.0
		Combined dBA Leq:	77.4

Unmitigated Construction Noise Impact

Combined Equipment Noise Level	77.4 dBA Leq
Total Shielding (existing building rows/sound barrier)	0 dBA
Ground Factor	0
Distance - Equipment to Receptor	95 ft
Unmitigated Construction Noise Level	71.9 dBA Leq
Ambient Noise Level	73.4 dBA
New Noise Level	75.7 dBA Leq
Unmitigated Noise Increase	**2.3 dBA**

Mitigated

Equipment Noise Levels

Equipment	Noise Level - 50ft dBA Leq	Usage %	Workday Noise Level - 50ft dBA Leq
Excavator	75.9	0.4	71.9
Bulldozer	80	0.4	76.0
-	0	1	0.0
-	0	1	0.0
-	0	1	0.0
		Combined dBA Leq:	77.4

Mitigated Construction Noise Impact

Combined Equipment Noise Level	77.4	dBA Leq
Total Shielding (sound barrier)	15	dBA
Ground Factor	0	
Distance - Equipment to Receptor	95	ft
Mitigated Construction Noise Level	56.9	dBA Leq
Ambient Noise Level	73.4	dBA
New Noise Level	73.5	dBA Leq
Mitigated Noise Increase	**0.1**	**dBA**

Flor 401 Lofts - First Floor: GRADING (Earthmoving)

Ambient Noise Level:	73.4 dBA Leq
Distance:	110 feet

Unmitigated

Equipment Noise Levels

Equipment	Noise Level - 50ft dBA Leq	Usage %	Workday Noise Level - 50ft dBA Leq
Excavator	75.9	0.4	71.9
Bulldozer	80	0.4	76.0
-	0	1	0.0
-	0	1	0.0
-	0	1	0.0
		Combined dBA Leq:	77.4

Unmitigated Construction Noise Impact

Combined Equipment Noise Level	77.4 dBA Leq
Total Shielding (existing building rows/sound barrier)	0 dBA
Ground Factor	0
Distance - Equipment to Receptor	110 ft

Unmitigated Construction Noise Level	70.6 dBA Leq
Ambient Noise Level	73.4 dBA
New Noise Level	75.2 dBA Leq
Unmitigated Noise Increase	**1.8 dBA**

Mitigated

Equipment Noise Levels

Equipment	Noise Level - 50ft dBA Leq	Usage %	Workday Noise Level - 50ft dBA Leq
Excavator	75.9	0.4	71.9
Bulldozer	80	0.4	76.0
-	0	1	0.0
-	0	1	0.0
-	0	1	0.0
		Combined dBA Leq:	77.4

Mitigated Construction Noise Impact

Combined Equipment Noise Level	77.4	dBA Leq
Total Shielding (sound barrier)	15	dBA
Ground Factor	0	
Distance - Equipment to Receptor	110	ft
Mitigated Construction Noise Level	55.6	dBA Leq
Ambient Noise Level	73.4	dBA
New Noise Level	73.5	dBA Leq
Mitigated Noise Increase	**0.1**	**dBA**

Flor 401 Lofts - 6th Floor: GRADING (Earthmoving)

Ambient Noise Level:	69.6 dBA Leq
Distance:	129 feet

Unmitigated

Equipment Noise Levels

Equipment	Noise Level - 50ft dBA Leq	Usage %	Workday Noise Level - 50ft dBA Leq
Excavator	75.9	0.4	71.9
Bulldozer	80	0.4	76.0
-	0	1	0.0
-	0	1	0.0
-	0	1	0.0
		Combined dBA Leq:	77.4

Unmitigated Construction Noise Impact

Combined Equipment Noise Level	77.4 dBA Leq
Total Shielding (existing building rows/sound barrier)	0 dBA
Ground Factor	0
Distance - Equipment to Receptor	129 ft
Unmitigated Construction Noise Level	69.2 dBA Leq
Ambient Noise Level	69.6 dBA
New Noise Level	72.4 dBA Leq
Unmitigated Noise Increase	**2.8 dBA**

Mitigated

Equipment Noise Levels

Equipment	Noise Level - 50ft dBA Leq	Usage %	Workday Noise Level - 50ft dBA Leq
Excavator	75.9	0.4	71.9
Bulldozer	80	0.4	76.0
-	0	1	0.0
-	0	1	0.0
-	0	1	0.0
		Combined dBA Leq:	77.4

Mitigated Construction Noise Impact

Combined Equipment Noise Level	77.4	dBA Leq
Total Shielding (sound barrier)	15	dBA
Ground Factor	0	
Distance - Equipment to Receptor	129	ft
Mitigated Construction Noise Level	54.2	dBA Leq
Ambient Noise Level	69.6	dBA
New Noise Level	69.7	dBA Leq
Mitigated Noise Increase	**0.1**	**dBA**

Construction Noise Impact Analysis

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649 Lofts - First Floor: GRADING (Earthmoving)

Ambient Noise Level:	73.4 dBA Leq
Distance:	95 feet

Unmitigated

Equipment Noise Levels

Equipment	Noise Level - 50ft dBA Leq	Usage %	Workday Noise Level - 50ft dBA Leq
Excavator	75.9	0.4	71.9
Bulldozer	80	0.4	76.0
-	0	1	0.0
-	0	1	0.0
-	0	1	0.0
		Combined dBA Leq:	77.4

Unmitigated Construction Noise Impact

Combined Equipment Noise Level	77.4 dBA Leq
Total Shielding (existing building rows/sound barrier)	0 dBA
Ground Factor	0
Distance - Equipment to Receptor	95 ft
Unmitigated Construction Noise Level	71.9 dBA Leq
Ambient Noise Level	73.4 dBA
New Noise Level	75.7 dBA Leq
Unmitigated Noise Increase	**2.3 dBA**

Mitigated

Equipment Noise Levels

Equipment	Noise Level - 50ft dBA Leq	Usage %	Workday Noise Level - 50ft dBA Leq
Excavator	75.9	0.4	71.9
Bulldozer	80	0.4	76.0
-	0	1	0.0
-	0	1	0.0
-	0	1	0.0
		Combined dBA Leq:	77.4

Mitigated Construction Noise Impact

Combined Equipment Noise Level	77.4	dBA Leq
Total Shielding (sound barrier)	15	dBA
Ground Factor	0	
Distance - Equipment to Receptor	95	ft
Mitigated Construction Noise Level	56.9	dBA Leq
Ambient Noise Level	73.4	dBA
New Noise Level	73.5	dBA Leq
Mitigated Noise Increase	**0.1**	**dBA**

649 Lofts - 7th Floor: GRADING (Earthmoving)

Ambient Noise Level:	69.4 dBA Leq
Distance:	117 feet

Unmitigated

Equipment Noise Levels

Equipment	Noise Level - 50ft dBA Leq	Usage %	Workday Noise Level - 50ft dBA Leq
Excavator	75.9	0.4	71.9
Bulldozer	80	0.4	76.0
-	0	1	0.0
-	0	1	0.0
-	0	1	0.0
		Combined dBA Leq:	77.4

Unmitigated Construction Noise Impact

Combined Equipment Noise Level	77.4 dBA Leq
Total Shielding (existing building rows/sound barrier)	0 dBA
Ground Factor	0
Distance - Equipment to Receptor	117 ft
Unmitigated Construction Noise Level	70.1 dBA Leq
Ambient Noise Level	69.4 dBA
New Noise Level	72.8 dBA Leq
Unmitigated Noise Increase	**3.4 dBA**

Mitigated

Equipment Noise Levels

Equipment	Noise Level - 50ft dBA Leq	Usage %	Workday Noise Level - 50ft dBA Leq
Excavator	75.9	0.4	71.9
Bulldozer	80	0.4	76.0
-	0	1	0.0
-	0	1	0.0
-	0	1	0.0
		Combined dBA Leq:	77.4

Mitigated Construction Noise Impact

Combined Equipment Noise Level	77.4	dBA Leq
Total Shielding (sound barrier)	15	dBA
Ground Factor	0	
Distance - Equipment to Receptor	117	ft
Mitigated Construction Noise Level	55.1	dBA Leq
Ambient Noise Level	69.4	dBA
New Noise Level	69.6	dBA Leq
Mitigated Noise Increase	**0.2**	**dBA**

EXHIBIT E

Textile Building Lofts - 12th Floor: GRADING (Earthmoving) at 280 feet

Ambient Noise Level:	58.5 dBA Leq
Distance:	302 feet

Unmitigated

Equipment Noise Levels

Equipment	Noise Level - 50ft dBA Leq	Usage %	Workday Noise Level - 50ft dBA Leq
Excavator	75.9	0.4	71.9
Bulldozer	80	0.4	76.0
-	0	1	0.0
-	0	1	0.0
-	0	1	0.0
		Combined dBA Leq:	77.4

Unmitigated Construction Noise Impact

Combined Equipment Noise Level	77.4 dBA Leq
Total Shielding (existing building rows/sound barrier)	0 dBA
Ground Factor	0
Distance - Equipment to Receptor	302 ft
Unmitigated Construction Noise Level	61.8 dBA Leq
Ambient Noise Level	58.5 dBA
New Noise Level	63.5 dBA Leq
Unmitigated Noise Increase	**5.0 dBA**

Textile Building Lofts - 12th Floor: GRADING (Earthmoving) at 240 feet Contour

Ambient Noise Level:	58.5 dBA Leq
Distance:	302 feet

Unmitigated

Equipment Noise Levels

Equipment	Noise Level - 50ft dBA Leq	Usage %	Workday Noise Level - 50ft dBA Leq
Excavator	75.9	0.4	71.9
Bulldozer	80	0.4	76.0
-	0	1	0.0
-	0	1	0.0
-	0	1	0.0
		Combined dBA Leq:	77.4

Unmitigated Construction Noise Impact

Combined Equipment Noise Level	77.4 dBA Leq
Total Shielding (existing building rows/sound barrier)	0 dBA
Ground Factor	0
Distance - Equipment to Receptor	302 ft

Unmitigated Construction Noise Level	61.8 dBA Leq
Ambient Noise Level	58.5 dBA
New Noise Level	63.5 dBA Leq
Unmitigated Noise Increase	**5.0 dBA**

Mitigated

Equipment Noise Levels

Equipment	Noise Level - 50ft dBA Leq	Usage %	Workday Noise Level - 50ft dBA Leq
Excavator	75.9	0.4	71.9
Bulldozer	80	0.4	76.0
-	0	1	0.0
-	0	1	0.0
-	0	1	0.0
		Combined dBA Leq:	77.4

Mitigated Construction Noise Impact

Combined Equipment Noise Level	77.4	dBA Leq
Total Shielding (sound barrier)	8.8	dBA
Ground Factor	0	
Distance - Equipment to Receptor	302	ft
Mitigated Construction Noise Level	53.0	dBA Leq
Ambient Noise Level	58.5	dBA
New Noise Level	59.6	dBA Leq
Mitigated Noise Increase	**1.1**	**dBA**

Textile Building Lofts - 12th Floor: GRADING (Earthmoving) at 210ft Contour

Ambient Noise Level:	58.5	dBA Leq
Distance:	265	feet

Unmitigated

Equipment Noise Levels

Equipment	Noise Level - 50ft dBA Leq	Usage %	Workday Noise Level - 50ft dBA Leq
Excavator	75.9	0.4	71.9
Bulldozer	80	0.4	76.0
-	0	1	0.0
-	0	1	0.0
-	0	1	0.0
		Combined dBA Leq:	77.4

Unmitigated Construction Noise Impact

Combined Equipment Noise Level	77.4	dBA Leq
Total Shielding (existing building rows/sound barrier)	0	dBA
Ground Factor	0	
Distance - Equipment to Receptor	265	ft
Unmitigated Construction Noise Level	63.0	dBA Leq
Ambient Noise Level	58.5	dBA
New Noise Level	64.3	dBA Leq
Unmitigated Noise Increase	**5.8**	**dBA**

Mitigated

Equipment Noise Levels

Equipment	Noise Level - 50ft dBA Leq	Usage %	Workday Noise Level - 50ft dBA Leq
Excavator	75.9	0.4	71.9
Bulldozer	80	0.4	76.0
-	0	1	0.0
-	0	1	0.0
-	0	1	0.0
		Combined dBA Leq:	77.4

Mitigated Construction Noise Impact

Combined Equipment Noise Level	77.4	dBA Leq
Total Shielding (sound barrier)	12	dBA
Ground Factor	0	
Distance - Equipment to Receptor	265	ft
Mitigated Construction Noise Level	51.0	dBA Leq
Ambient Noise Level	58.5	dBA
New Noise Level	59.2	dBA Leq
Mitigated Noise Increase	**0.7**	**dBA**

Construction Noise Impact Analysis

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Textile Building Lofts - 12th Floor: GRADING (Earthmoving) at 180ft Contour

Ambient Noise Level:	58.5 dBA Leq
Distance:	238 feet

Unmitigated

Equipment Noise Levels

Equipment	Noise Level - 50ft dBA Leq	Usage %	Workday Noise Level - 50ft dBA Leq
Excavator	75.9	0.4	71.9
Bulldozer	80	0.4	76.0
-	0	1	0.0
-	0	1	0.0
-	0	1	0.0
		Combined dBA Leq:	77.4

Unmitigated Construction Noise Impact

Combined Equipment Noise Level	77.4 dBA Leq
Total Shielding (existing building rows/sound barrier)	0 dBA
Ground Factor	0
Distance - Equipment to Receptor	238 ft
Unmitigated Construction Noise Level	63.9 dBA Leq
Ambient Noise Level	58.5 dBA
New Noise Level	65.0 dBA Leq
Unmitigated Noise Increase	**6.5 dBA**

Mitigated

Equipment Noise Levels

Equipment	Noise Level - 50ft dBA Leq	Usage %	Workday Noise Level - 50ft dBA Leq
Excavator	75.9	0.4	71.9
Bulldozer	80	0.4	76.0
-	0	1	0.0
-	0	1	0.0
-	0	1	0.0
		Combined dBA Leq:	77.4

Mitigated Construction Noise Impact

Combined Equipment Noise Level	77.4	dBA Leq
Total Shielding (sound barrier)	9.3	dBA
Ground Factor	0	
Distance - Equipment to Receptor	238	ft
Mitigated Construction Noise Level	54.6	dBA Leq
Ambient Noise Level	58.5	dBA
New Noise Level	60.0	dBA Leq
Mitigated Noise Increase	**1.5**	**dBA**

Textile Building Lofts - 12th Floor: GRADING (Earthmoving) at 155ft Contour

Ambient Noise Level:	58.5	dBA Leq
Distance:	213	feet

Unmitigated

Equipment Noise Levels

Equipment	Noise Level - 50ft dBA Leq	Usage %	Workday Noise Level - 50ft dBA Leq
Excavator	75.9	0.4	71.9
Bulldozer	80	0.4	76.0
-	0	1	0.0
-	0	1	0.0
-	0	1	0.0
		Combined dBA Leq:	77.4

Unmitigated Construction Noise Impact

Combined Equipment Noise Level	77.4	dBA Leq
Total Shielding (existing building rows/sound barrier)	0	dBA
Ground Factor	0	
Distance - Equipment to Receptor	213	ft

Unmitigated Construction Noise Level	64.9	dBA Leq
Ambient Noise Level	58.5	dBA
New Noise Level	65.8	dBA Leq
Unmitigated Noise Increase	**7.3**	**dBA**

Mitigated

Equipment Noise Levels

Equipment	Noise Level - 50ft dBA Leq	Usage %	Workday Noise Level - 50ft dBA Leq
Excavator	75.9	0.4	71.9
Bulldozer	80	0.4	76.0
-	0	1	0.0
-	0	1	0.0
-	0	1	0.0
		Combined dBA Leq:	77.4

Mitigated Construction Noise Impact

Combined Equipment Noise Level	77.4	dBA Leq
Total Shielding (sound barrier)	10.1	dBA
Ground Factor	0	
Distance - Equipment to Receptor	213	ft
Mitigated Construction Noise Level	54.8	dBA Leq
Ambient Noise Level	58.5	dBA
New Noise Level	60.0	dBA Leq
Mitigated Noise Increase	**1.5**	**dBA**

Textile Building Lofts - 12th Floor: GRADING (Earthmoving) at 135ft Contour

Ambient Noise Level:	58.5 dBA Leq
Distance:	192 feet

Unmitigated

Equipment Noise Levels

Equipment	Noise Level - 50ft dBA Leq	Usage %	Workday Noise Level - 50ft dBA Leq
Excavator	75.9	0.4	71.9
Bulldozer	80	0.4	76.0
-	0	1	0.0
-	0	1	0.0
-	0	1	0.0
		Combined dBA Leq:	77.4

Unmitigated Construction Noise Impact

Combined Equipment Noise Level	77.4 dBA Leq
Total Shielding (existing building rows/sound barrier)	0 dBA
Ground Factor	0
Distance - Equipment to Receptor	192 ft
Unmitigated Construction Noise Level	65.8 dBA Leq
Ambient Noise Level	58.5 dBA
New Noise Level	66.5 dBA Leq
Unmitigated Noise Increase	**8.0 dBA**

Mitigated

Equipment Noise Levels

Equipment	Noise Level - 50ft dBA Leq	Usage %	Workday Noise Level - 50ft dBA Leq
Excavator	75.9	0.4	71.9
Bulldozer	80	0.4	76.0
-	0	1	0.0
-	0	1	0.0
-	0	1	0.0
		Combined dBA Leq:	77.4

Mitigated Construction Noise Impact

Combined Equipment Noise Level	77.4	dBA Leq
Total Shielding (sound barrier)	11.6	dBA
Ground Factor	0	
Distance - Equipment to Receptor	192	ft
Mitigated Construction Noise Level	54.2	dBA Leq
Ambient Noise Level	58.5	dBA
New Noise Level	59.9	dBA Leq
Mitigated Noise Increase	**1.4**	**dBA**

Textile Building Lofts - 12th Floor: GRADING (Earthmoving) at 115ft Contour

Ambient Noise Level:	58.5 dBA Leq
Distance:	176 feet

Unmitigated

Equipment Noise Levels

Equipment	Noise Level - 50ft dBA Leq	Usage %	Workday Noise Level - 50ft dBA Leq
Excavator	75.9	0.4	71.9
Bulldozer	80	0.4	76.0
-	0	1	0.0
-	0	1	0.0
-	0	1	0.0
		Combined dBA Leq:	77.4

Unmitigated Construction Noise Impact

Combined Equipment Noise Level	77.4 dBA Leq
Total Shielding (existing building rows/sound barrier)	0 dBA
Ground Factor	0
Distance - Equipment to Receptor	176 ft
Unmitigated Construction Noise Level	66.5 dBA Leq
Ambient Noise Level	58.5 dBA
New Noise Level	67.2 dBA Leq
Unmitigated Noise Increase	**8.7 dBA**

Mitigated

Equipment Noise Levels

Equipment	Noise Level - 50ft dBA Leq	Usage %	Workday Noise Level - 50ft dBA Leq
Excavator	75.9	0.4	71.9
Bulldozer	80	0.4	76.0
-	0	1	0.0
-	0	1	0.0
-	0	1	0.0
		Combined dBA Leq:	77.4

Mitigated Construction Noise Impact

Combined Equipment Noise Level	77.4	dBA Leq
Total Shielding (sound barrier)	8.2	dBA
Ground Factor	0	
Distance - Equipment to Receptor	176	ft
Mitigated Construction Noise Level	58.3	dBA Leq
Ambient Noise Level	58.5	dBA
New Noise Level	61.4	dBA Leq
Mitigated Noise Increase	**2.9**	**dBA**

Textile Building Lofts - 12th Floor: GRADING (Earthmoving) at 100ft Contour

Ambient Noise Level:	58.5 dBA Leq
Distance:	161 feet

Unmitigated

Equipment Noise Levels

Equipment	Noise Level - 50ft dBA Leq	Usage %	Workday Noise Level - 50ft dBA Leq
Excavator	75.9	0.4	71.9
Bulldozer	80	0.4	76.0
-	0	1	0.0
-	0	1	0.0
-	0	1	0.0
		Combined dBA Leq:	77.4

Unmitigated Construction Noise Impact

Combined Equipment Noise Level	77.4 dBA Leq
Total Shielding (existing building rows/sound barrier)	0 dBA
Ground Factor	0
Distance - Equipment to Receptor	161 ft
Unmitigated Construction Noise Level	67.3 dBA Leq
Ambient Noise Level	58.5 dBA
New Noise Level	67.8 dBA Leq
Unmitigated Noise Increase	**9.3 dBA**

Mitigated

Equipment Noise Levels

Equipment	Noise Level - 50ft dBA Leq	Usage %	Workday Noise Level - 50ft dBA Leq
Excavator	75.9	0.4	71.9
Bulldozer	80	0.4	76.0
-	0	1	0.0
-	0	1	0.0
-	0	1	0.0
		Combined dBA Leq:	77.4

Mitigated Construction Noise Impact

Combined Equipment Noise Level	77.4	dBA Leq
Total Shielding (sound barrier)	10.8	dBA
Ground Factor	0	
Distance - Equipment to Receptor	161	ft
Mitigated Construction Noise Level	56.5	dBA Leq
Ambient Noise Level	58.5	dBA
New Noise Level	60.6	dBA Leq
Mitigated Noise Increase	**2.1**	**dBA**

Construction Noise Impact Analysis

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Textile Building Lofts - 12th Floor: GRADING (Earthmoving) at 70ft Contour

Ambient Noise Level:	58.5 dBA Leq
Distance:	138 feet

Unmitigated

Equipment Noise Levels

Equipment	Noise Level - 50ft dBA Leq	Usage %	Workday Noise Level - 50ft dBA Leq
Excavator	75.9	0.4	71.9
Bulldozer	80	0.4	76.0
-	0	1	0.0
-	0	1	0.0
-	0	1	0.0
		Combined dBA Leq:	77.4

Unmitigated Construction Noise Impact

Combined Equipment Noise Level	77.4 dBA Leq
Total Shielding (existing building rows/sound barrier)	0 dBA
Ground Factor	0
Distance - Equipment to Receptor	138 ft
Unmitigated Construction Noise Level	68.6 dBA Leq
Ambient Noise Level	58.5 dBA
New Noise Level	69.0 dBA Leq
Unmitigated Noise Increase	**10.5 dBA**

Mitigated

Equipment Noise Levels

Equipment	Noise Level - 50ft dBA Leq	Usage %	Workday Noise Level - 50ft dBA Leq
Excavator	75.9	0.4	71.9
Bulldozer	80	0.4	76.0
-	0	1	0.0
-	0	1	0.0
-	0	1	0.0
		Combined dBA Leq:	77.4

Mitigated Construction Noise Impact

Combined Equipment Noise Level	77.4	dBA Leq
Total Shielding (sound barrier)	10.2	dBA
Ground Factor	0	
Distance - Equipment to Receptor	138	ft
Mitigated Construction Noise Level	58.4	dBA Leq
Ambient Noise Level	58.5	dBA
New Noise Level	61.5	dBA Leq
Mitigated Noise Increase	**3.0**	**dBA**

Textile Building Lofts - 12th Floor: GRADING (Earthmoving) at 55ft Contour

Ambient Noise Level:	58.5 dBA Leq
Distance:	129 feet

Unmitigated

Equipment Noise Levels

Equipment	Noise Level - 50ft dBA Leq	Usage %	Workday Noise Level - 50ft dBA Leq
Excavator	75.9	0.4	71.9
Bulldozer	80	0.4	76.0
-	0	1	0.0
-	0	1	0.0
-	0	1	0.0
		Combined dBA Leq:	77.4

Unmitigated Construction Noise Impact

Combined Equipment Noise Level	77.4 dBA Leq
Total Shielding (existing building rows/sound barrier)	0 dBA
Ground Factor	0
Distance - Equipment to Receptor	129 ft
Unmitigated Construction Noise Level	69.2 dBA Leq
Ambient Noise Level	58.5 dBA
New Noise Level	69.6 dBA Leq
Unmitigated Noise Increase	**11.1 dBA**

Mitigated

Equipment Noise Levels

Equipment	Noise Level - 50ft dBA Leq	Usage %	Workday Noise Level - 50ft dBA Leq
Excavator	75.9	0.4	71.9
Bulldozer	80	0.4	76.0
-	0	1	0.0
-	0	1	0.0
-	0	1	0.0
		Combined dBA Leq:	77.4

Mitigated Construction Noise Impact

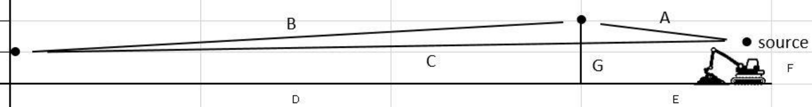
Combined Equipment Noise Level	77.4	dBA Leq
Total Shielding (sound barrier)	9.5	dBA
Ground Factor	0	
Distance - Equipment to Receptor	129	ft
Mitigated Construction Noise Level	59.7	dBA Leq
Ambient Noise Level	58.5	dBA
New Noise Level	62.2	dBA Leq
Mitigated Noise Increase	**3.7**	**dBA**

EXHIBIT F

Sound Barrier Analysis Table – Santee Court/Village Apartments

SANTEE COURT/VILLAGE APARTMENTS - Sound Barrier Analysis: 240ft Distance					
		Height	Transmission Loss	STC Rating	Possible dBA Reduction
SK-8 Sound Barrier		24	-	43	15

Receiver/Floor Height (ft)		
-	D:	240 ft
105	E:	50 ft - max setback
95	F:	7 ft
85	G:	24 ft
75		
55		
35		
15		
-		
-		



Receiver/Floor Height (ft)	A	B	C	P	dBA Reduction
-	-	-	-	-	-
105	52.81	253.30	306.11	0.00	5.00
95	52.81	250.28	303.06	0.04	5.00
85	52.81	247.63	300.31	0.14	5.00
75	52.81	245.36	297.87	0.30	7.87
55	52.81	241.99	293.95	0.86	12.34
35	52.81	240.25	291.35	1.71	15.00
15	52.81	240.17	290.11	2.87	15.00
-	-	-	-	-	-
-	-	-	-	-	-

NOTE: For the top floor of Santee Court/Village Apartments, a minimum 5.0 dBA of mitigation would be provided by moveable sound barrier attenuation so long as grading/excavation equipment operate within 50 feet of moveable sound barriers that are positioned at or near the Project's Maple Street-facing property line, which is approximately 240 feet from Santee Court/Village Apartments. As maximum unmitigated impacts to the top floor of Santee Court/Village Apartments would be no more than a 6.8 dBA increase (see Table 5 of the Supplemental Report), this minimum 5.0 dBA of mitigation would be sufficient to ensure that impacts to the top floor of Santee Court/Village Apartments are below a 5.0 dBA increase and therefore less than significant.