

4.D Noise

The comments and corresponding responses in this section cover topics in Draft SEIR Section 3.C, Noise. These include topics related to:

- Comment NO-1: Noise Baseline
- Comment NO-2: Methodology
- Comment NO-3: Construction Noise Impacts
- Comment NO-4: Construction Vibration
- Comment NO-5: Operational Noise Impacts
- Comment NO-6: Noise Mitigation Measure
- Comment NO-7: Cumulative Noise

Comment NO-1: Noise Baseline

This response addresses comments from the commenter listed below; each comment on this topic is quoted in full below this list:

I-HEGGIE1-2
I-HEGGIE1-3
I-HEGGIE2-4
I-HEGGIE2-7

“My focus today is going to be on noise.

Noise effects on residents and childcare centers in adjacent Sunnyside have been ignored, although they are located within the 900-foot zone of the project noise considerations. Two childcare centers and preschools were identified in the EIR, in this east side of the project.

The sensitive receptors are closer to parts of the development than the studied 24-hour LT.3 location in Westwood Park. And Sunnyside sites lie in an area that is typically downwind of the construction site.

Like many childcare or nursery schools in the area, the Staples and Frida Kahlo Way -- I’ve forgotten the name of the mini location. It’s for children. Serves as a residence, as well as childcare center and preschool center. It needs a 24-hour noise study.”

(Jennifer Heggie, CPC Hearing, September 12, 2019 [I-HEGGIE1-2])

“Additionally, we suggest noise testing at the corner of Judson and Frida Kahlo Way, formerly Phelan Avenue, where a replacement City College daycare center is planned for the future.”

(Jennifer Heggie, CPC Hearing, September 12, 2019 [I-HEGGIE1-3])

"1. Noise effects on residences and child care centers in adjacent Sunnyside have not been tested although they are located within the 900 foot zone of project noise consideration. Two childcare centers and preschools were identified in the EIR in this area Northeast of the project. The sensitive receptors in this area are closer to some parts of the development than the studied 24-hour LT-3 location in Westwood Park, and the Northeast sites lie in an area that is typically downwind of the construction site. Like many childcare or nursery schools in the area, the Staples and Frida Kahlo Way Mighty Bambini location at the border of Sunnyside and Westwood Park appears to be a residence as well as childcare and preschool center. Like other childcare centers in surrounding residential neighborhoods, it deserves a 24-hour noise study. Additionally, noise testing will be needed at the corner of Judson and Frida Kahlo Way (formerly Phelan Avenue) where a replacement City College childcare center is planned within the construction timeframe, according to Dr. James Sohn of the City College of San Francisco."

(Jennifer Heggie, Email, September 23, 2019 [I-HEGGIE2-4])

"5. Additional noise studies need to be made to create a noise baseline at all noise monitoring sites. Long term (24-hr) sound assessments were made on the Western side of the project. Only short-term sound assessments were made on the East side at the City College MUB and Riordan High School, which is also a boarding school, and that testing was for a short period, less than half an hour before 9:30am. Not only will 24-hour noise monitoring enable an apples to apples comparison with the other 24-hour noise tests, 24-hour monitoring should be included to take into account the wide variation in sound levels as the City College lot fills, empties, and refills at different times of the day."

(Jennifer Heggie, Email, September 23, 2019 [I-HEGGIE2-7])

Response NO-1: Noise Baseline

The comments express concern that the noise analysis of the draft SEIR did not specifically address the potential noise impacts at childcare facility receptors to the northeast of the project site and that additional 24-hour measurements should be taken at all noise monitoring sites.

The construction noise impacts of the proposed project are analyzed on SEIR pp. 3.C-23 through 3.C-31. Table 3.C-8 on SEIR p. 3.C-27 presents the predicted construction-related noise levels at the nearest sensitive-receptor locations to the project site where the maximum combined noise levels from construction equipment would occur.

As described on SEIR p. 3.C-25, the closest sensitive receptors to the project site are: residences along Plymouth Avenue and San Ramon Way approximately 50 feet from the west side of the proposed buildings; Archbishop Riordan High School approximately 80 feet from the eastern

property line; and the 1100–1150 Ocean Avenue residences approximately 50 feet from the Lee Avenue extension area and the Phase 0 demolition activity area. The predicted construction-related noise levels at sensitive receptors are evaluated to determine whether the project would result in: (1) an increase in sustained noise levels that are 10 dBA above the ambient background noise levels over a substantial period of time, or (2) noise levels above the Federal Transit Administration’s limit of 90 dBA. The analysis and disclosure of maximum potential project-specific increases over existing ambient environments (i.e., a “worst-case” assessment) follows standard methodology for the evaluation of noise impacts.

Mighty Bambinis Childcare and Preschool and the future City College daycare planned near Judson Avenue and Frida Kahlo Way were not included in this impact table because they are substantially more distant than the receptors shown in Table 3.C-8 of the SEIR; thus, impacts would be less than those used to identify significant noise impacts.

~~For informational purposes and in~~ response to these comments, **Table RTC-1, Estimated Daytime Construction-Related Noise Levels at Offsite Receptor**, presents the resultant construction noise levels at Mighty Bambinis Childcare receptor, which is approximately 560 feet from the project boundary. As shown in Table RTC-1, construction-related noise levels at the Mighty Bambinis Childcare facility would be less than the FTA’s limit of the most stringent daytime standard of 90 dBA, which applies to residential uses. The resultant noise level increase at this receptor would also be less than the “Ambient + 10 dBA” standard applied for this analysis. Consequently, construction noise impacts for the existing northeasterly child-care receptor would be less than significant.

TABLE RTC-1
ESTIMATED DAYTIME CONSTRUCTION-RELATED NOISE LEVELS AT OFFSITE RECEPTOR

Construction Phase and Noisiest Combined Construction Activities	Hourly Leq in dBA at 50 Feet ^a	Minimum Distance between Receptor and Closest Equipment (feet)	Ambient Project Noise Level (Leq) Adjusted for Distance ^b	Daytime FTA Standard at Residential Uses (dBA)	Does Noise Level Exceed FTA Standard?	Ambient (62) + 10 dBA Standard ^d at Closest Receptor	Does Noise Level Exceed Ambient + 10 dBA Standard?
Existing Noise Receptor: Mighty Bambinis Childcare at Phelan and Staples avenues							
Phase 0 – Surface Preparation and Demolition	85	560	65	90	No	72 ^c	No
Phase 1 Building Construction	81	560	60	90	No	72 ^c	No
Phase 2 Building Construction	81	560	60	90	No	72 ^c	No

Commented [CF1]: Also clarify that the even though the impact would be l-t-s, the mitigation required for the project would still reduce the overall construction noise in the project area and would further reduce noise for receptors at further distances.

Commented [WW(2)]: Table note d is missing from both tables. Please rectify.

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Construction Phase and Noisiest Combined Construction Activities	Hourly Leq in dBA at 50 Feet ^a	Minimum Distance between Receptor and Closest Equipment (feet)	Ambient Project Noise Level (Leq) Adjusted for Distance ^b	Daytime FTA Standard at Residential Uses (dBA)	Does Noise Level Exceed FTA Standard?	Ambient (62) + 10 dBA Standard ^d at Closest Receptor	Does Noise Level Exceed Ambient + 10 dBA Standard?
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SOURCE: ESA, 2019.

NOTES:

dBA = A-weighted decibel; FTA = Federal Transit Administration; noise levels in **bold** exceed the indicated standard.

^a As calculated with the RCNM model with no attenuation for intervening berms or buildings.

^b Combined hourly noise levels were attenuated 6 dB for every doubling of distance from the source.

^c People often perceive 10 dBA as a doubling of loudness. The daytime ambient noise levels of 62 dBA were estimated using roadway noise modeling data for Judson Avenue [near \[redacted\] intersection](#).

Commented [WW(2)]: Table note d is missing from both tables. Please rectify.

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Table RTC-2, **Estimated Daytime Construction-Related Noise Levels at Cumulative Offsite Receptor**, presents the resultant construction noise levels the future City College daycare receptor as an extension of the cumulative construction noise analysis on SEIR pp. 3.C-38 and 3.C-39. This future receptor would be located approximately 750 feet from the project boundary. As shown in Table RTC-2, construction-related noise levels at the future City College daycare receptor would be less than the FTA's limit of the most stringent daytime standard of 90 dBA, which applies to residential uses. The resultant noise level increase at this receptor would also be less than the "Ambient + 10 dBA" standard applied for this analysis. Consequently, construction noise impacts for the future northeasterly child-care receptors would be less than significant.

TABLE RTC-2
ESTIMATED DAYTIME CONSTRUCTION-RELATED NOISE LEVELS AT CUMULATIVE OFFSITE RECEPTOR

Construction Phase and Noisiest Combined Construction Activities	Hourly Leq in dBA at 50 Feet ^a	Minimum Distance between Receptor and Closest Equipment (feet)	Ambient Noise Level (Leq) Adjusted for Distance ^b	Daytime FTA Standard at Residential Uses (dBA)	Does Noise Level Exceed FTA Standard?	Ambient + 10 dBA Standard ^d at Closest Receptor	Does Noise Level Exceed Ambient + 10 dBA Standard?
Future City College daycare receptor at Judson Avenue and Frida Kahlo Way							
Phase 0 – Surface Preparation and Demolition	85	750	63	90	No	72 ^c	No
Phase 1 Building Construction	81	750	58	90	No	72 ^c	No
Phase 2 Building Construction	81	750	58	90	No	72 ^c	No

SOURCE: ESA, 2019.

NOTES:

dBA = A-weighted decibel; FTA = Federal Transit Administration; noise levels in **bold** exceed the indicated standard.

^a As calculated with the RCNM model with no attenuation for intervening berms or buildings.

^b Combined hourly noise levels were attenuated 6 dB for every doubling of distance from the source.

^c People often perceive 10 dBA as a doubling of loudness. The daytime ambient noise levels of 62 dBA were estimated using roadway noise modeling data for Judson Avenue.

Traffic noise impacts to these northeasterly child-care uses are addressed on draft SEIR pp. 3.C-36 through 3.C-38. Specifically, Table 3.C-11 on SEIR p. 3.C-37 presents the roadside noise level increases on Judson Avenue resulting from the proposed project operations. As can be seen from this table, noise levels at receptors along Judson Avenue would increase by 0.4 dBA or less, which would not be a perceptible increase and would be a less-than-significant operational noise impact. Traffic noise impacts to the future childcare use may be also be assessed using this same table which shows the increases along Frida Kahlo Way to also be less than significant (0.6 dBA or less).

The commenter also suggests that long-term (24-hour) noise monitoring should be conducted at receptor locations on the east side of the project site as was done for the receptors on the west side of the project site, which were included in the existing setting section of the draft SEIR Noise section. A long-term noise monitor at this location is unnecessary because XXX; the long-term noise monitors are not used for the construction analysis.

Commented [WW(3)]: Update as discussed on 2/6.

As stated on SEIR p. 3.C-23, construction activity is only proposed to would generally occur during daytime hours. Nighttime construction noise impacts is would not be expected to occur frequently or regularly. As stated on SEIR p. 3.C-23, while certain construction activities such as large concrete pours, may require earlier start or later finish times to accommodate such time-specific activities, construction activities would be subject to review, permitting, and approval by the San Francisco Department of Building Inspection.

Therefore 24 hour noise measurements, which were taken at on-site locations to determine the land use compatibility in terms of the Ldn noise descriptor, such long-term noise measurements were not taken for off-site receptor locations that might be affected by daytime construction noise and are not needed to determine construction-related impacts.

The text on SEIR p. 3.C-23 is revised as follows to clarify nighttime noise generating activity (deleted text is shown in strikethrough and new text is shown in double underline):

Commented [WW(4)]: Global: please double-check that you don't need to make further text edits related to this.

Construction activities would generally occur between the hours of 7 a.m. and 8 p.m., up to seven days a week. The project sponsor does not anticipate frequent or regular nighttime noise generating construction activity and would not occur during nighttime hours. Consequently, construction activities would be consistent with San Francisco Police Code section 2908.

For example, the second paragraph under NO-1 also requires text edits.

Construction-Related Noise Sources

Construction of the project would result in operation of heavy equipment on the project site for the demolition of the asphalt parking lot, west side berm, and north and east embankments, construction of new structures and associated infrastructure, and open space improvements. Construction activities would occur intermittently on the project site over the six-year construction duration and could expose nearby existing and future sensitive receptors to temporary increases in noise levels substantially in excess of ambient levels. Construction activity is only proposed to would generally occur during daytime hours; and nighttime construction is not anticipated to occur on a frequent or regular basis, and are is not assessed herein in detail. While certain

construction activities such as large concrete pours; may require earlier start or later finish times to accommodate such time-specific activities, construction activities that extend beyond normal hours have not been specifically identified by the applicant and would be subject to review, permitting, and approval by the San Francisco Department of Building Inspection.

Commented [WW(5): Maybe delete this or move it if not responding to a specific comment.

Comment NO-2: Methodology

This response addresses the comment from the commenter listed below; the comment on this topic is quoted in full below:

I-HEGGIE2-2

"In addition, some of the testing reports appear to provide inconsistent testing. This makes it difficult for non-professionals to compare apples to apples, track the meaning of the data and encourages misinterpreting possibly impactful conclusions. For example, adding a note below the Balboa Reservoir truck Roadway Noise Analysis on Page 1 of 2, in Appendix D2, would provide clarification of why the numbers of road segments tested differ depending on whether the test is for the existing environment, the existing plus developer's project, the existing plus additional housing scenario, or the cumulative plus developer's project."

(Jennifer Heggie, Email, September 23, 2019 [I-HEGGIE2-2])

Response NO-2: Methodology

The commenter requests clarification regarding the difference in the number of roadway segments analyzed in the traffic modeling spreadsheets between the various scenarios in Appendix D2 of the draft SEIR.

Page 1 of Appendix D2 of the draft SEIR contains the inputs and results for the roadway noise analysis. Operational traffic noise impacts are addressed on SEIR pp. 3.C-36 through 3.C-38 while the cumulative traffic noise impacts are addressed on SEIR pp. 3.C-40 through 3.C-41. The differences in the number of roadway segments analyzed depends on several factors including whether there are sensitive receptors present along a given roadway and ~~the~~ whether the extent of traffic distribution warrants an analysis of a roadway segment. SEIR p. 3.C-36 states that "[n]oise modeling was completed to estimate existing (baseline) and future (with the proposed project) traffic noise levels along seven street segments that have sensitive receptors in the project area based on traffic volumes presented in SEIR Section 3.B, Transportation and Circulation." The seven road segments are shown on Table 3.C-11 on SEIR p. 3.C-37.

Initially, two segments of Ocean Avenue, extending in either direction from the access point were included in the analysis. The additional two roadway segments on Ocean Avenue and cumulative roadway noise modeling were included in an initial draft of the analysis but were removed because existing roadway noise rendered the project contribution negligible. ~~Initially,~~

~~two segments of Ocean Avenue, extending in either direction from the access point were included in the analysis.~~ The traffic model spreadsheet inadvertently retained rows for Ocean Avenue in the appendix even though the analysis for this roadway were ~~not longer~~ included ~~upon finalization of in~~ the SEIR. Pages 1 and 2 of SEIR Appendix D2 has been revised to reflect the deletion of these roadway segments from the analysis.

As discussed on SEIR p. 3.C-40, although City College adopted a facilities master plan in March 2019; ~~however~~, this facilities master plan does not provide adequate information to develop a quantitative cumulative impact analysis as part of the Balboa Reservoir Project SEIR. ~~Instead, and~~ a qualitative cumulative analysis was subsequently developed that considers the growth and development information available for the City College Ocean Campus at the time of the draft SEIR preparation. Therefore, the cumulative data slots are not used in the draft SEIR and have been deleted from Appendix D2 as shown below. The appendices serve as supporting information to the SEIR and the relevant data and analysis are presented in the SEIR. The clarifications to the appendices have been shown below (deleted text is shown in strikethrough and new text is shown in double underline).

~~therefore, additional clarification within the appendices is not necessary.~~

Commented [CF6]: This is too much of a technical term. Please use a different term.

Commented [PJ(7)]: Add a summary statement that the methodology used in the draft SEIR is adequate.

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Pages 1 and 2 of SEIR Appendix D2 are revised as follows:

Existing		TOTAL # VEHICLES			VEHICLE TYPE %			VEHICLE SPEED			NOISE LEVEL (dBA)			CALCULATED NOISE LEVEL	Receptor	Adjusted	Distance	Distance				
ROAD SEGMENT		# VEHICLES			Auto	MT	HT	Auto	MT	HT	Auto	MT	HT	15 meters from Roadway	Dist. from Roadway	Noise Level	from Roadway to 65 dBA	from Roadway to 65 dBA				
Galvino Peak														roadway center	Center (m.)	(dBA)	(m.)	(ft)				
from:	to:		%	Auto	%	MT	%	HT														
F. Kahlo	Ocean Cloud	1179	07	1143.6	2	23.58	1	11.79	25	40	25	40	25	40	60.7	55.5	60.1	64.1	40	59.8	12.1	39.7
F. Kahlo	C. Coll N. Judson	914	07	880.58	2	19.28	1	9.14	25	40	25	40	25	40	59.6	54.4	59.0	63.0	40	58.7	9.4	30.8
Lee	Ocean Sta	197	07	181.99	2	3.54	1	1.87	25	40	25	40	25	40	52.2	47.0	51.8	55.6	40	51.3	1.7	5.6
Lee	Ocean Highway	195	07	181.02	2	3.32	1	1.66	25	40	25	40	25	40	52.2	47.0	51.8	55.8	40	51.3	1.7	5.6
Plymouth	Ocean S. Wood	177	07	171.89	2	3.54	1	1.77	25	40	25	40	25	40	52.4	47.2	51.9	55.8	40	51.8	1.8	6.0
City Coll N	F. Kahlo Sta	323	07	313.31	2	8.46	1	3.23	25	40	25	40	25	40	55.1	49.9	54.5	58.4	40	54.2	3.3	10.9
Judson	F. Kahlo Genesee	870	07	849.9	2	13.4	1	5.7	25	40	25	40	25	40	58.2	53.0	57.7	61.6	40	57.4	5.6	22.6
Assumptions:		PM peak hour traffic data from Kittelson																				
Existing + Developer's Project		TOTAL # VEHICLES			VEHICLE TYPE %			VEHICLE SPEED			NOISE LEVEL (dBA)			CALCULATED NOISE LEVEL	Receptor	Adjusted	Distance	Distance				
ROAD SEGMENT		# VEHICLES			Auto	MT	HT	Auto	MT	HT	Auto	MT	HT	15 meters from Roadway	Dist. from Roadway	Noise Level	from Roadway to 65 dBA	from Roadway to 65 dBA				
Galvino Peak														roadway center	Center (m.)	(dBA)	(m.)	(ft)				
from:	to:		%	Auto	%	MT	%	HT														
F. Kahlo	Ocean Cloud	1179	07	1143.6	2	23.58	1	11.79	25	40	25	40	25	40	60.7	55.5	60.1	64.1	40	59.8	12.1	39.7
F. Kahlo	C. Coll N. Judson	997	07	967.09	2	19.94	1	9.97	25	40	25	40	25	40	60.0	54.8	59.4	63.3	40	59.1	10.2	33.6
Lee	Ocean Sta	207	07	375.35	2	7.74	1	3.87	25	40	25	40	25	40	53.8	48.0	52.5	56.2	40	55.0	4.0	13.0
Lee	Ocean Highway	209	07	202.73	2	4.18	1	2.09	25	40	25	40	25	40	53.2	48.0	52.5	56.6	40	52.3	2.1	7.0
Plymouth	Ocean S. Wood	177	07	171.89	2	3.54	1	1.77	25	40	25	40	25	40	52.4	47.2	51.9	55.8	40	51.8	1.8	6.0
City Coll N	F. Kahlo Sta	323	07	355.95	2	7.35	1	3.68	25	40	25	40	25	40	55.6	50.4	55.1	59.0	40	54.7	3.8	12.4
Judson	F. Kahlo Genesee	700	07	679	2	14	1	7	25	40	25	40	25	40	58.4	53.2	57.9	61.8	40	57.5	7.2	23.6
Assumptions:		PM peak hour traffic data from Kittelson																				
Existing + Additional Housing Scenario		TOTAL # VEHICLES			VEHICLE TYPE %			VEHICLE SPEED			NOISE LEVEL (dBA)			CALCULATED NOISE LEVEL	Receptor	Adjusted	Distance	Distance				
ROAD SEGMENT		# VEHICLES			Auto	MT	HT	Auto	MT	HT	Auto	MT	HT	15 meters from Roadway	Dist. from Roadway	Noise Level	from Roadway to 65 dBA	from Roadway to 65 dBA				
Galvino Peak														roadway center	Center (m.)	(dBA)	(m.)	(ft)				
from:	to:		%	Auto	%	MT	%	HT														
F. Kahlo	Ocean Cloud	1179	07	1143.6	2	23.58	1	11.79	25	40	25	40	25	40	60.7	55.5	60.1	64.1	40	59.8	12.1	39.7
F. Kahlo	C. Coll N. Judson	1063	07	1031.1	2	21.25	1	10.53	25	40	25	40	25	40	60.2	54.8	59.7	63.6	40	59.4	10.5	35.0
Lee	Ocean Sta	434	07	420.98	2	8.99	1	4.34	25	40	25	40	25	40	53.3	48.3	52.9	56.7	40	55.5	4.5	14.6
Lee	Ocean Highway	226	07	219.22	2	4.52	1	2.26	25	40	25	40	25	40	53.5	48.3	52.9	56.9	40	52.8	2.3	7.6
Plymouth	Ocean S. Wood	177	07	171.89	2	3.54	1	1.77	25	40	25	40	25	40	52.4	47.2	51.9	55.8	40	51.8	1.8	6.0
City Coll N	F. Kahlo Sta	475	07	464.83	2	9.58	1	4.75	25	40	25	40	25	40	55.8	50.4	55.1	59.0	40	54.7	3.8	12.4
Judson	F. Kahlo Genesee	730	07	711.01	2	14.88	1	7.33	25	40	25	40	25	40	58.5	53.4	58.1	62.0	40	57.7	7.5	24.7
Assumptions:		PM peak hour traffic data from Kittelson																				
Cumulative + Developer's Project		TOTAL # VEHICLES			VEHICLE TYPE %			VEHICLE SPEED			NOISE LEVEL (dBA)			CALCULATED NOISE LEVEL	Receptor	Adjusted	Distance	Distance				
ROAD SEGMENT		# VEHICLES			Auto	MT	HT	Auto	MT	HT	Auto	MT	HT	15 meters from Roadway	Dist. from Roadway	Noise Level	from Roadway to 65 dBA	from Roadway to 65 dBA				
Galvino Peak														roadway center	Center (m.)	(dBA)	(m.)	(ft)				
from:	to:		%	Auto	%	MT	%	HT														
F. Kahlo	Ocean Cloud	1244	07	1209.2	2	25.04	1	12.44	25	40	25	40	25	40	61.4	56.2	60.8	64.8	40	60.5	12.8	41.3
F. Kahlo	C. Coll N. Judson	1039	07	1004.02	2	22.08	1	10.39	25	40	25	40	25	40	60.9	55.7	60.4	64.9	40	60.6	11.3	36.9
Lee	Ocean Sta	597	07	582.98	2	11.64	1	5.97	25	40	25	40	25	40	54.1	49.0	53.7	57.9	40	53.6	5.2	17.1
Lee	Ocean Highway	434	07	420.98	2	11.64	1	5.97	25	40	25	40	25	40	53.5	48.4	53.0	57.3	40	53.0	2.7	8.9
Plymouth	Ocean S. Wood	177	07	171.89	2	3.54	1	1.77	25	40	25	40	25	40	52.4	47.2	51.9	55.8	40	51.8	1.8	6.0
City Coll N	F. Kahlo Sta	520	07	509.48	2	11.72	1	5.20	25	40	25	40	25	40	56.3	51.0	55.7	59.6	40	54.5	4.3	14.1
Judson	F. Kahlo Genesee	824	07	803.64	2	17.40	1	8.24	25	40	25	40	25	40	59.4	54.3	59.0	63.0	40	58.7	8.0	26.3
Assumptions:		PM peak hour traffic data from Kittelson																				

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Cumulative + Additional Housing Scenario

ROAD SEGMENT	# VEHICLES	VEHICLE TYPE %			VEHICLE SPEED						NOISE LEVEL (dBA)			CALCULATED NOISE LEVEL 15 meters from Roadway	Receptor Dist. from Roadway	Adjusted Noise Level	Distance from Roadway to 65 dBA	Distance from Roadway to 65 dBA
		Auto	MT	HT	Auto	MT	HT	Auto	MT	HT	Auto	MT	HT					
Calvano Peak																		
from: to:		%	Auto	%	MT	%	HT							roadway center	Center (m)	(dBA)	(ft)	(ft)
Plymouth Ocean Cloud	1201	96	1153	1	12.01	3	35.03	25	40	25	40	25	40	50.7	52.5	55.9	65.5	70.0
City Coll N F. Kahlo Site	345	92	317.4	1	3.45	2	24.15	25	40	25	40	25	40	55.1	47.1	53.2	63.9	38.9
Trask Alone	22	91	0.022	0	0.022	159	21.59	25	40	25	40	25	40	13.5	25.2	52.9	59	29.9
Assumptions: PM peak hour traffic data from Kittelson																		

Existing + Construction Trucks

ROAD SEGMENT	# VEHICLES	VEHICLE TYPE %			VEHICLE SPEED						NOISE LEVEL (dBA)			CALCULATED NOISE LEVEL 15 meters from Roadway	Receptor Dist. from Roadway	Adjusted Noise Level	Distance from Roadway to 65 dBA	Distance from Roadway to 65 dBA
		Auto	MT	HT	Auto	MT	HT	Auto	MT	HT	Auto	MT	HT					
Calvano Peak																		
from: to:		%	Auto	%	MT	%	HT							roadway center	Center (m)	(dBA)	(ft)	(ft)
Plymouth Ocean Cloud	1201	96	1153	1	12.01	3	35.03	25	40	25	40	25	40	50.7	52.5	55.9	65.5	70.0
City Coll N F. Kahlo Site	345	92	317.4	1	3.45	2	24.15	25	40	25	40	25	40	55.1	47.1	53.2	63.9	38.9
Trask Alone	22	91	0.022	0	0.022	159	21.59	25	40	25	40	25	40	13.5	25.2	52.9	59	29.9
Assumptions: PM peak hour traffic data from Kittelson																		

Existing

ROAD SEGMENT	# VEHICLES	VEHICLE TYPE %			VEHICLE SPEED						NOISE LEVEL (dBA)			CALCULATED NOISE LEVEL 15 meters from Roadway	Receptor Dist. from Roadway	Adjusted Noise Level	Distance from Roadway to 65 dBA	Distance from Roadway to 65 dBA
		Auto	MT	HT	Auto	MT	HT	Auto	MT	HT	Auto	MT	HT					
Calvano Peak																		
from: to:		%	Auto	%	MT	%	HT							roadway center	Center (m)	(dBA)	(ft)	(ft)
Plymouth Ocean S. Wood	177	97	171.69	2	3.54	1	1.77	25	40	25	40	25	40	52.4	47.2	51.9	55.8	1.8
Plymouth San Ramo Wild wd																	51.8	6.0
Assumptions: PM peak hour traffic data from Kittelson																		

Existing + Developer's Project Alternative C

ROAD SEGMENT	# VEHICLES	VEHICLE TYPE %			VEHICLE SPEED						NOISE LEVEL (dBA)			CALCULATED NOISE LEVEL 15 meters from Roadway	Receptor Dist. from Roadway	Adjusted Noise Level	Distance from Roadway to 65 dBA	Distance from Roadway to 65 dBA
		Auto	MT	HT	Auto	MT	HT	Auto	MT	HT	Auto	MT	HT					
Calvano Peak																		
from: to:		%	Auto	%	MT	%	HT							roadway center	Center (m)	(dBA)	(ft)	(ft)
Plymouth San Ramo Wild wd	222	97	215.34	2	4.44	1	2.22	25	40	25	40	25	40	53.4	48.2	52.9	58.8	2.3
Assumptions: PM peak hour traffic data from Kittelson																		

Existing + Additional Housing Alternative C

ROAD SEGMENT	# VEHICLES	VEHICLE TYPE %			VEHICLE SPEED						NOISE LEVEL (dBA)			CALCULATED NOISE LEVEL 15 meters from Roadway	Receptor Dist. from Roadway	Adjusted Noise Level	Distance from Roadway to 65 dBA	Distance from Roadway to 65 dBA
		Auto	MT	HT	Auto	MT	HT	Auto	MT	HT	Auto	MT	HT					
Calvano Peak																		
from: to:		%	Auto	%	MT	%	HT							roadway center	Center (m)	(dBA)	(ft)	(ft)
Plymouth San Ramo Wild wd	238	97	228.52	2	4.72	1	2.36	25	40	25	40	25	40	53.7	48.5	53.1	57.1	2.4
Assumptions: PM peak hour traffic data from Kittelson																		

Page 2 of 2

Comment NO-3: Construction Noise Impacts

This response addresses comments from the commenter listed below; each comment on this topic is quoted in full below this list:

O-CURRIER-1	I-HEGGIE2-6	I-HEGGIE2-14
O-CURRIER-2	I-HEGGIE2-8	I-HEGGIE2-15
I-BIERINGER1-3	I-HEGGIE2-12	I-HEGGIE2-17
I-HEGGIE2-4	I-HEGGIE2-13	I-OSAWA-11

"Good afternoon. That's a tough one to follow, but I've got a few concerns. My name's Dr. Andrew Currier. I'm representing Archbishop Riordan High School, as its President.

There's a multitude of concerns. But as it relates to this report, we serve 680 boys, 9 to 12, and a quarter of them, 170 of them, have diagnosed learning needs. And if you see, if I could pull this up, this circle RSP; that represents the learning area. It's a specialized designed learning area for

students with diagnosed learning needs that they can't -- we can't move them elsewhere in the building.

So, we're worried that there's not enough information about the noise, the dust, the disruption to their learning growth, their academic growth. Again, we don't have any option to move them elsewhere in the building, so we really want more detail on that. We want some sensitivity to that. These are young men that cannot be served by San Francisco public schools. These are specialized programs.

Commented [PJ(8)]: In the response, refer to the dust control discussion in the AQ section of the draft SEIR.

We also have 50 students in residence at Archbishop Riordan High School who, also, some of them have significant learning needs. They can't go elsewhere to receive this help."

(Andrew Currier, PhD, President, Archbishop Riordan High School, CPC Hearing, September 12, 2019 [O-CURRIER-1])

"So, we need more information about the noise impact. How is this all -- how is the hammering, the excavation, the drilling, all of that noise, all of that disruption, the trucks when they're beeping to back up, the backhoes, all that noise, how is that going to impact -- is that going to be two years lost on 170 students' education, who are trying despite learning needs and differences, to prepare themselves for college.

They're paying, in some cases, \$60,000 a year to attend Riordan for this specialized care. That's all going to be disrupted for two plus years? That's unacceptable to us. So, we need more detail on this."

(Andrew Currier, PhD, President, Archbishop Riordan High School, CPC Hearing, September 12, 2019 [O-CURRIER-2])

"One example. The draft SEIR fails to include the City College multi-use building as a sensitive receptor, which I think is a euphemism for young kids, okay.

The multi-use building is 150 feet from the construction site and is used for childcare classes, for children and classes on the site.

The short term measurement location information in the SEIR, which is on page 3, section C.9, notes that, and I quote from the DEIR: The college campuses are generally not considered a noise-sensitive receptor.

The MUB has been used for childcare classes, for children on site for years and will continue to be used that way. Therefore, it qualifies as a noise-sensitive receptor. And the DEIR completely ignores that, as they ignore the impact to City College, and the impact on Riordan College."

(Garry Bieringer, CPC Hearing, September 12, 2019 [I-BIERINGER1-3])

"4. The draft SEIR fails to include the City College Multi-Use Building (MUB) as a sensitive receptor. MUB is approximately 150 feet from the construction site (per the scale of Figure 2-1, p 2-2) and is used for childcare classes where children attend classes on site. The short-term measurement location information in the SEIR for ST-3 (page 3.C- 9) notes that "The Multi-Use Building is the nearest City College building to the project site; however, college campuses are generally not considered a noise-sensitive receptor." The MUB has been used for childcare classes for children on site for several years and is expected to continue to be used for that purpose and therefore needs to be recognized as a noise-sensitive receptor site that qualifies as such for noise testing."

(Jennifer Heggie, Email, September 23, 2019 [I-HEGGIE2-6])

"6. During Phase 0 of construction, there will be up to 200 one-way trips per day during peak activity, and the noisiest period will continue for two months (page 3.C-26). 22 truck trips are anticipated per hour. This is a truck trip every two to three minutes between the hours of 7am and 4pm. The noisiest period in Phase 1 would last four months. There is no school vacation that lasts for four months; so, even without including the seven-month noisiest period of Phase 2, during Phases 0 and 1, the level of truck hauling activity will occur during class hours and disturb classes as well as access to classes due to equipment VMT."

(Jennifer Heggie, Email, September 23, 2019 [I-HEGGIE2-8])

"10. We would appreciate a clear understanding of the noise impact of cutting the construction period from six to three (or four) years. Would the noisiest period of construction occur in the first two or three (or four) years whether the time period of the project is three (to four) or six years?"

(Jennifer Heggie, Email, September 23, 2019 [I-HEGGIE2-12])

"11. We understand the same equipment will be used whatever the time schedule. But will a compressed time schedule mean more equipment will need to be operated simultaneously, increasing the noise level at certain times? It is to be expected that construction compressed into two phases would increase the level of disruption along community streets due to more frequent construction truck hauling near multiple sensitive receptors, residences, and education institutions."

(Jennifer Heggie, Email, September 23, 2019 [I-HEGGIE2-13])

"12. If the construction schedule is compressed, please address the likelihood of the need for additional hours of work per day or night required to meet the compressed timeframe. Will

Commented [PJ(9)]: Global: cross reference appropriate DSEIR or RTC response at beginning or end of each response.

compressing the time frame into three years increase the risk of emergency requests for special permits for night work?”

Commented [CF10]: Respond per 2/6 discussion.

(Jennifer Heggie, Email, September 23, 2019 [I-HEGGIE2-14])

“13. If the City grants special work permits for periods outside of the standard allowable 7 am to 8 pm construction hours, boarding school students at Riordan HS and residents living along Plymouth, Ocean, Lee and on the Northeast side of the development in Sunnyside and Westwood Park, will likely experience sleep disturbance. The SEIR leaves open the possibility for special night permitting. This will affect the health, wellbeing and productivity of all concerned, and negative night permitting impacts should not be acceptable in this residential area.”

(Jennifer Heggie, Email, September 23, 2019 [I-HEGGIE2-15])

“15. In general, although SF Planning doesn’t include City College students in their learning environment as sensitive receptors in noise assessments, due to the type of activity and the duration and amount of noise exposure, they should be considered in this category. Per the World Health Organization, as stated in the SEIR document, a known health effect from noise is decreased performance on complex cognitive tasks (reading, attention, memorization and problem solving.)”

(Jennifer Heggie, Email, September 23, 2019 [I-HEGGIE2-17])

“Consideration must be given to the impact of construction noise on the classrooms at Riordan High, as work will be done during school hours.”

(Ed Osawa, Email, September 22, 2019 [I-OSAWA-11])

Response NO-3: Construction Noise Impacts

The following summarizes comments and associated sub-headings where they are addressed:

Commented [WW(11): Global: consider doing something like a bulleted list, table, or something else that clearly identifies upfront where comments and responses are addressed for responses with multiple sub-topics. This isn’t currently consistent across the RTC.

- Comments expressed concern that the City College Multi-Use -Building is not identified and analyzed as a sensitive receptor because the child-care classes would include the presence of children. This comment is addressed below under the sub heading of “City College Multi-Use-Building.”
- Another comment requests expressed additional information concern about noise impacts to students’ learning abilities at Archbishop Riordan High School, specifically during construction. This comment is addressed below under the sub heading of “Archbishop Riordan High School.”

- A ~~third~~ comment ~~raises expressed~~ concern regarding the frequency and duration of truck hauling trips along the North Access Road. This comment is addressed below under the sub heading of "North Access Road."
- A ~~fourth~~ comment ~~raises expressed~~ concerns regarding potential impacts to sleep disturbance from nighttime construction work. This comment is addressed below under the sub heading of "Nighttime Construction."
- Other comments expressed concerns and whether such a compression would result in increased intensity of construction and therefore greater construction noise levels. These comments are addressed below under the sub heading of "Compressed Construction Schedule."

City College Multi-Use Building

Commenters expressed concern that the City College Multi-Use Building is not identified and analyzed as a sensitive receptor because the ~~commenter states the child care~~ classes would include ~~child care and~~ the presence of children. ~~As stated on SEIR p. 3.C-4, the department defines noise-sensitive receptors as occupants of residences, schools, daycare centers, hotels, hospitals, places of worship, and nursing homes. Although not cited in the SEIR, the planning department uses the Governor's Office of Planning and Research's General Plan Guidelines 2017 for defining noise sensitive uses. The guidelines define noise sensitive uses. The guidelines do not define such uses like City College classes as a noise-sensitive receptor. Thus, the SEIR did not originally include City College as a noise-sensitive receptor. The potential presence of children in a given land use does not necessarily indicate that such a land use in a noise-sensitive receptor.~~

Commented [CF12]: Update per 2/6 discussion.

The planning department ~~followed up consulted~~ with City College regarding these classes ~~stated by the commenter.~~ Based on information from City College, these classes are child behavior observation classes. The classes at the Multi-Use Building are three hours in duration and are offered daily. However, parents may opt to bring their child once a week, or up to five times a week. There is no outdoor space for children associated with the Multi-Use Building. ~~Neither the City of San Francisco Noise Ordinance nor the Noise Element of the General Plan specifically define noise-sensitive land uses. Caltrans identifies noise-sensitive land uses as residences, schools, hospitals, churches, and parks.~~² Locations where a land use is designed for children to receive instruction on a regular basis (i.e., are enrolled) such as an elementary or pre-school are typically considered to be noise-sensitive. ~~The City and County of San Francisco has not historically considered adult education facilities, such as City College, University of California San Francisco, or San Francisco State University, to be noise-sensitive receptors with the exception of dedicated child care facilities that may be present on such uses or dormitories and similar areas where people would reasonably be expected to sleep.~~

Commented [PJ13]: Confirm that this memo was finalized and is included in the admin record.

¹ Rosario Villasana, Department Chair of Child Development and Family Studies, City College. Phone correspondence with Jeanie Poling, San Francisco Environmental Planning, on October 1, 2019.

² ~~California Department of Transportation (Caltrans), Technical Noise Supplement to the Traffic Noise Analysis Protocol, September 2013, p. 6-5.~~

In an effort to disclose potential construction noise impacts at the exterior of the Multi-Use Building, an analysis of the construction noise impacts at the exterior of the Multi-Use Building is provided in **Table RTC-3, Estimated Daytime Construction-Related Noise Levels at the Multi-Use Building**. As can be seen from this table, exterior noise levels would be below the 90 dBA standard applicable to residential uses but would exceed the applicable 65 dBA “Ambient + 10 dBA” standard for this location by 10 dB during Phase 0 and 5 dB during Phases 1 and 2. As stated above, there are no outdoor space for children associated with the Multi-Use Building, and construction noise heard inside the building would be further attenuated by the building which is of recent construction. Additionally, Mitigation Measure M-NO-1: Construction Noise Control Measures would likely be sufficient to achieve the 10 dBA reduction necessary to further reduce the construction noise impact heard inside the building at this receptor, to a less than significant level, if it were to be considered noise sensitive. However, Nevertheless, as stated on SEIR p. 3.C-31, the overall construction noise impact of the proposed project is significant and unavoidable with mitigation.

**TABLE RTC-3
ESTIMATED DAYTIME CONSTRUCTION-RELATED NOISE LEVELS AT THE MULTI-USE BUILDING**

Construction Phase and Noisiest Combined Construction Activities	Hourly Leq in dBA at 50 Feet ^a	Minimum Distance between Receptor and Closest Equipment (feet)	Noise Level (Leq) Adjusted for Distance ^b	Daytime FTA Standard at Residential Uses (dBA)	Does Noise Level Exceed FTA Standard?	Ambient + 10 dBA Standard ^d at Closest Receptor	Does Noise Level Exceed Ambient + 10 dBA Standard?
Existing Noise Receptor: City College Multi-Use Building							
Phase 0 – Surface Preparation and Demolition	85	175	75	90	No	65	Yes
Phase 1 Building Construction	81	175	70	90	No	65	Yes
Phase 2 Building Construction	81	175	70	90	No	65	Yes

SOURCE: ESA, 2019.

NOTES:

dBA = A-weighted decibel; FTA = Federal Transit Administration; noise levels in **bold** exceed the indicated standard.

^a As calculated with the RCNM model with no attenuation for intervening berms or buildings.

^b Combined hourly noise levels were attenuated 6 dB for every doubling of distance from the source.

^c People often perceive 10 dBA as a doubling of loudness. The daytime ambient noise levels of 62 dBA were estimated using roadway noise modeling data for Judson Avenue.

Archbishop Riordan High School

One commenter states that additional information expressed concern about construction noise impacts to students at Archbishop Riordan High School, specifically to student learning for the duration of activities. As discussed on SEIR p. 3.C-25, Archbishop Riordan High School would be the receptor nearest to the project site’s eastern property line. The high school is a land use designed for children to receive instruction on a regular basis and is therefore considered a noise-sensitive receptor for the analysis. The construction noise impact analysis applies three separate noise

Commented [WW(14): Shouldn’t this be a text edit that says northern? Or northeastern?

criteria, consistent with guidance developed by the planning department and the Federal Transit Administration.

Archbishop Riordan High School would be located approximately 80 feet from Phase 0 demolition activities, which would last approximately two months. The high school is also about 80 feet from the peak construction haul truck activity along North Access Road, which would occur over a four-month period. During Phase 1 and Phase 2, the high school would be approximately 50 feet from standard construction activities for Lee Avenue and Block G, respectively. Construction noise impacts are identified as a significant impact in the draft SEIR based on the increase of noise levels over existing ambient levels and the duration of the overall construction period.

Predicted noise levels are conservative in that they assume activity at the closest point to each sensitive receptor, which would occur for only a fraction of the entire duration of demolition and construction activity. As demolition progresses away from the receptor location, noise levels experienced by the closest receptor would be less than the noise levels in SEIR Table 3.C-8, which reflect demolition activity as a worst-case analysis.

Mitigation Measure M-NO-1, Construction Noise Control Measures, is identified in the draft SEIR to reduce the severity of construction noise impacts to the degree feasible. This mitigation includes measures that would be directly applicable to reducing noise impacts at Archbishop Riordan High School, such as locating noisy activities as far from receptors as feasible, ~~and~~ shielding noisy stationary equipment, and, ~~erecting~~ ~~of~~ temporary plywood noise barriers around the construction site, particularly where a site adjoins noise-sensitive uses such as Archbishop Riordan High School. ~~However,~~ even with implementation of this mitigation measure, given the extended duration of construction phases and given that noise levels would substantially exceed existing noise levels at Archbishop Riordan High School, the construction noise impact is identified in the draft SEIR as significant and unavoidable with mitigation.

Commented [CF15]: Also discuss the monitoring, outreach, and point of contact requirements of the mitigation plan.

~~It should be noted that predicted noise levels are conservative in that they assume activity at the closest point to each sensitive receptor, which would occur for only a fraction of the entire duration of demolition and construction activity. As demolition progresses away from the receptor location, noise levels experienced by the closest receptor would be less than the noise levels in Table 3.C-8, which reflect demolition activity as a worst-case analysis.~~

North Access Road

~~Another comment raises expressed concern that the frequency and duration of truck hauling trips along the North Access Road is such that it would extend beyond potential summer break periods and disturb classroom operations at Archbishop Riordan High School. The SEIR identified the impact as significant and unavoidable with mitigation.~~

The commenter is correct that during Phase 0 of construction, there would be up to 200 one-way trips per day during peak activity, and the noisiest period would continue for two months. As further stated on SEIR p. 3.C-26, 22 truck trips are anticipated per hour during peak demolition periods with a frequency of a truck trip every two to three minutes between the hours of 7 a.m. and 4 p.m. Table 3.C-8 on SEIR p. 3.C-27 presents the contribution of both haul trucks and

equipment; during each phase of construction, and shows that the contribution of haul trucks to hourly noise levels would be 63 dBA at Archbishop Riordan High School, which is approximately 6 dBA greater than existing ~~monitored~~ noise levels ~~from the existing 323 peak hour vehicles using this same roadway~~. However, as indicated in this same table, the noise contribution from demolition equipment would be up to 82 dBA when occurring at the nearest point to Archbishop Riordan High School, which would have the greater potential for causing temporary increases in noise levels that could be disturbing to classes. As stated above, predicted off-road equipment noise levels are conservative in that they assume activity at the closest point to each sensitive receptor, which would occur for only a fraction of the entire duration of demolition and construction activity.

Commented [CF16]: Update per 2/6 discussion.

To further address this comment with respect to potential noise impacts to Riordan High School, the sixth bullet point of Mitigation Measure M-NO-1 on SEIR p. 3.C-30 is revised as follows (deleted text is shown in ~~strike through~~ and new text is shown in double underline):

Undertake the noisiest activities during times of least disturbance to surrounding residents and occupants (9 a.m. to 4 p.m.); and select or construct haul routes that avoid the North Access Road and the adjacent Archbishop Riordan High School and residential uses along Plymouth Avenue and Lee Avenue, such as the temporary or permanent relocation of North Street; the permanent relocation is described in Variant 4: North Street Extension on page 5-22 and depicted in Figure 5-4 on page 5-20 of the SEIR.

~~It should be noted that the~~ The feasibility of implementing ~~the either a temporary or permanent North Street extension, as envisioned in Variant 4,~~ is unknown at this time, as an agreement on timing and right-of-way acquisition would need to be developed with City College.

Mitigation Measure M-NO-1, Construction Noise Control Measures, is identified in the SEIR to reduce the severity of construction noise impacts to the degree feasible. Even with implementation of this mitigation measure, as revised above, given the extended duration of construction phases and given that noise levels would substantially exceed existing noise levels at Archbishop Riordan High School, the construction noise impact is identified in the draft SEIR as significant and unavoidable with mitigation.

Nighttime Construction

One comment raises concerns regarding potential impacts to sleep disturbance from nighttime construction work. ~~As stated on SEIR p. 3.C-23 of the draft SEIR, construction activity is only proposed to occur during daytime hours and nighttime construction noise impacts would not occur and are not assessed as a potential impact. As stated on SEIR p. 3.C-23, construction activity would generally occur during daytime hours. Nighttime construction noise is not expected to occur frequently or regularly. At this time, no regular nighttime construction is anticipated by the developer.~~ Accordingly, no hauling of materials, equipment warm-up, or any other activity is anticipated during nighttime hours except in unusual circumstances such as large concrete pours, which may require earlier start or later finish times, as explained on page 2-39 of the SEIR. ~~As stated on SEIR p. 3.C-23, while certain construction activities such as large concrete pours may require earlier start or later finish times to accommodate such time specific activities.~~ The project sponsor

has indicated that each building would require one concrete pour. ~~If~~ nighttime work after 8 p.m. were needed, a special nighttime construction permit would be required and subject to review, permitting, and approval by the San Francisco Department of Building Inspection. Mitigation Measure M-NO-1 also includes a requirement for the project sponsor to notify the planning department's development performance coordinator at the time that night noise permits are requested or as soon as possible after emergency/unanticipated activity causing noise with the potential to exceed noise standards has occurred.

Commented [CF17]: Add in what the approximate total number of times this activity could occur (ie, how many buildings are proposed that would total the number of concrete pours).

The text under "Construction-Related Noise Sources" under Impact NO-1, SEIR p. 3.C-23 is revised as follows to clarify nighttime work (deleted text is shown in ~~strikethrough~~ and new text is shown in double underline):

~~While certain construction activities, such as large concrete pours, may require earlier start or later finish times to accommodate such time-specific activities, and could include one concrete pour per building, which could occur a total X number of times throughout the project construction activities. Such construction activities that extend beyond normal hours have not been specifically identified by the applicant and would be subject to review, permitting, and approval by the San Francisco Department of Building Inspection.~~

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Compressed Construction Schedule

Several comments express concerns ~~and whether such that~~ a compressed schedule would result in increased intensity of construction and therefore greater construction noise levels. ~~As a practical matter, compression of the construction schedule from six to three years would increase the intensity of construction and may result in more individual pieces of equipment operating simultaneously than under the proposed six-year construction period of the project.~~

Under the compressed scenario, Phase 0 would occur over a 12-month period, the same as under the six-year construction scenario; therefore, the construction noise impacts for Phase 0 would be the same.

Under the compressed scenario, Phases 1 and 2 would be constructed simultaneously after Phase 0 and would involve more equipment operation but not at the same location, as Phase 1 and Phase 2 are in separate geographic areas of the project site. Consequently, construction noise impacts at Archbishop Riordan High School as assessed in Table 3.C-8 of the SEIR would only marginally increase by at most 3 dBA and only if development of Blocks G and TH2 were to occur simultaneously (see Figure 2-18, SEIR p. 2-40). ~~while all other~~ Phase 1 development would be over 300 feet away from Archbishop Riordan High School, such that construction noise would be attenuated by distance so as not to contribute considerably to construction noise from concurrent development of Phase 2 area under the compressed schedule.

Additionally, because construction noise analysis involves consideration of the simultaneous operation of the two noisiest pieces of equipment, the compressed construction scenario would not appreciably result in a change in the character of the significant and unavoidable construction noise impact identified in the SEIR. Therefore, due to the ~~distances involved~~ attenuation between

the project construction and nearest sensitive receptors, the compressed construction scenario would ~~only~~ have a potential for only a modest increase in noise levels over those predicted for the proposed schedule.

Similar to the proposed six-year schedule, the truck trips would be phased over the duration of the planned construction activities but compressed into three years. As described in Section 3.B, Transportation and Circulation, SEIR pp. 3.B-60 and 3.B-61, under the compressed schedule, the average number of construction-related truck trips would increase by approximately 20 percent. Therefore, the peak volume of truck trips under the compressed schedule would also occur over four months in 2022 and would be 1.2 times greater than the six-year schedule due to the simultaneous construction of Phase 1 and 2. As for the proposed construction schedule and as acknowledged on SEIR p. 3.C-29, the compressed construction schedule would result in ~~as for the proposed construction schedule, a~~ construction noise impacts from off-road equipment and ~~from haul trucks noise that~~ would be significant and unavoidable.

Commented [CF18]: Update per 2/6 discussion.

The text on SEIR p. 3.C-29 is revised as follows to clarify the noise analysis under the compressed construction schedule (deleted text is shown in ~~strikethrough~~ and new text is shown in double underline):

As stated in the footnote to Table 2-2, p. 2-38, the phasing of project implementation would be subject to changes due to market conditions and other unanticipated factors. Consequently, construction could be complete as early as 2024 or extend beyond 2027. If construction occurs over a shorter period than shown in Table 2-2 (e.g., Phases 1 and 2 occurring simultaneously following Phase 0), a relatively larger amount of construction would take place during a relatively shorter period of time, thereby increasing the typical daily construction activity.

Compression of the construction schedule from six to three years would increase the intensity of construction and may result in more individual pieces of equipment operating simultaneously than under the proposed six-year construction period of the project. Under the compressed scenario, Phase 0 would occur over a 12-month period, as under the six-year construction scenario; therefore, the construction noise impacts for Phase 0 would be the same.

Under the compressed scenario, Phases 1 and 2 would be constructed simultaneously after Phase 0 and would involve more equipment operation but not at the same location, as Phase 1 and Phase 2 are in separate geographic areas of the project site. Consequently, construction noise impacts at Archbishop Riordan High School as assessed in Table 3.C-8 would marginally increase by at most 3 dBA and only if development of blocks G and TH2 were to occur simultaneously (see Figure 2-18). ~~while a~~ All other Phase 1 development would be over 300 feet away, such that construction noise would be attenuated by distance so as not to contribute considerably to construction noise from concurrent development of Phase 2 area under the compressed schedule. Additionally, because construction noise analysis involves consideration of the simultaneous operation of the two noisiest pieces of equipment, the compressed construction scenario would not appreciably result in a change in the character of the significant and unavoidable

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construction noise impact identified. Therefore, due to the distances involved, the compressed construction scenario would only have a potential for a modest increase in noise levels over those predicted for the proposed schedule. The same pieces of equipment would be operating under a compressed construction schedule. Therefore, the maximum noise level would not change based on the methodology above combining the operation of the noisiest pieces of equipment with each phase. Under the compressed construction schedule, the construction noise impact from off-road equipment would be significant.

Commented [CF19]: Address the truck traffic noise in these revisions as well.

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Commented [PJ(20)]: See edits and comments to identical text above.

Comment NO-4: Construction Vibration

This response addresses comments from the commenter listed below; each comment on this topic is quoted in full below this list:

I-HEGGIE2-16
I-TIMA-6

"14. Construction-related vibration impacts were not addressed in the PEIR. Studies do not include an evaluation of the vibration impact of construction equipment although as noted on p. 3.C-32, equipment used for demolition, site preparation and excavation activities, including the hoe ram and vibratory roller/compactor, which will be used, could generate varying degrees of temporary groundborne vibration.

Per Table 3.C-6 on page 3.C-14, older buildings may be damaged at .1 PPV (in/sec) if they are fragile though old buildings or residential structures would normally be able to withstand a maximum of 0.25 to 0.3 PPV when subjected to continuous or frequent intermittent sources. The Vibratory Roller/Compactor, a piece of equipment that will be used, creates 0.21 PPV (in/sec) at 25 feet. Although it may not be likely, it is possible there are homes along Plymouth Avenue that are in close enough proximity and fragile enough to be damaged by vibration. Have the homes along Plymouth been evaluated for their distance and fragility for possible vibration impacts?"

(Jennifer Heggie, Email, September 23, 2019 [I-HEGGIE2-16])

"And in regards to building, the shaking of the construction element way above the viability demands of construction. And my house is old and I do not want to have cracks in my stucco. Thank you."

(Hedda Tima, CPC Hearing, September 12, 2019 [I-TIMA-6])

Response NO-4: Construction Vibration

Two comments expressed concern that the project could result in construction-related vibration impacts that may cause building damage to structures. The commenter is correct that construction vibration was not analyzed in the [Balboa Park Station Area Plan](#) PEIR, and this is acknowledged on [this project's](#) SEIR p. 3.C-2.

The SEIR did, however, analysis construction-related vibration impacts are assessed under Impact NO-2 on SEIR pp. 3.C-32 and 3.C-33. The methodology is provided on SEIR pp. 3.C-20 to 3.C-21 and 3.C-32 to 3.C-33, and is based on the California Department of Transportation and Federal Transit Administration guidance. Table 3.C-6, Vibration Guidelines for Potential Damage to Structures, on SEIR p. 3.C-14, identifies the vibration level at which different structure types (i.e., from “extremely fragile historic buildings, ruins, ancient monuments” to “modern industrial/commercial buildings”) would be subject to potential damage.

As noted on SEIR p. 3.C-22, construction equipment such as hoe rams and bulldozers could generate temporary groundborne vibration. As shown in Table 3.C-9 (SEIR p. 3.C-33), vibration levels at the Plymouth Avenue residences would be expected to be 0.21 in/sec peak particle velocity (PPV), which is below the 0.5 in/sec PPV standard for structural damage applicable to modern buildings. The Plymouth Avenue residences are considered older residential structures; therefore, the 0.3 in/sec PPV standard should be applied. Even with the 0.3 PPV standard, the Plymouth Avenue residences 25 feet away from the project site would experience less-than-significant vibration levels.

The second paragraph of SEIR p. 3.C-32 is revised as follows to correct the vibration standard for older residential structures (deleted text is shown in ~~strike through~~ and new text is shown in double underline):

This analysis evaluates the significance of construction-related vibration on structures and people (receptors), specifically cosmetic damage effects on structures and sleep disturbance and associated health effects on people. For building damage, the threshold limit depends on the architectural characteristics of the potentially affected structure (see Table 3.C-6, p. 3.C-14), ~~but, for~~ for modern residential, industrial and commercial buildings, a standard of 0.5 in/sec PPV is applied, while for older residential structures, a standard of 0.3 in/sec PPV is applied. The potential for sleep disturbance vibration effects are evaluated only when construction activities are proposed during the nighttime hours, which would not occur under the proposed project, therefore, there would be no sleep disturbance vibration impacts.

Commented [CF21]: Also clarify that potential nighttime construction pours would not include the use of vibratory equipment.

The fourth paragraph of SEIR p. 3.C-32 is revised as follows to correct the vibration standard for older residential structures (deleted text is shown in ~~strike through~~ and new text is shown in double underline):

As shown in Table 3.C-6, p. 3.C-14, depending on the type of vibration (transient versus continuous), groundborne vibration generated by project-related demolition and construction activities above ~~0.5~~ 0.3 in/sec PPV could cause cosmetic damage to new or

older nearby structures. As shown Table 3.C-9, estimated vibration levels of PPV's would be ~~well~~ below the ~~0.5-0.3~~ in/sec threshold and this impact would be *less than significant*.

Comment NO-5: Operational Noise Impacts

This response addresses comments from the commenter listed below; each comment on this topic is quoted in full below this list:

I-MUELLER1-3

"It should be obvious that proposing an unsafe density of housing units next to one of the largest and most successful Community Colleges in the State is not appropriate. It was wrong 30 years ago and it's wrong now. The sheer noise factor of thousands of new residents warehoused next to a college with a daily enrollment the size of a small city makes the educational environment totally compromised."

(Madeline Mueller, Email, September 23, 2019 [I-MUELLER1-3])

Response NO-5: Operational Noise

This comment expresses concern that operational noise from the proposed dense residential uses would be incompatible with the adjacent community college.

Operational noise impacts of the proposed project are assessed on SEIR pp. 3.C-33 through 3.C-38. [First](#),

Impact NO-3 discusses the potential for the project to generate operational noise from fixed mechanical equipment. **Mitigation Measure M-NO-3, Fixed Mechanical Equipment Noise Controls**, on SEIR p. 3.C-36, is identified to reduce this potentially significant operational noise impact to a less-than-significant level by establishing a performance standard consistent with the noise limits established in section 2909(a) and (d) of the San Francisco Noise Ordinance.

The operational noise analysis in Impact NO-3 of the SEIR uses the noise exposure limits established in section 2909(a) and (d) of the San Francisco Noise Ordinance, which are land use based. Figure 3.C-3 on SEIR p. 3.C-16 presents the land use compatibility chart from the City and County of San Francisco General Plan Noise Element. As shown on this chart, the normally acceptable noise environment for residential uses within the City is up to 60 dBA, Ldn, while the normally acceptable noise environment for a school use is up to 65 dBA. Consequently, the ~~General~~ [General Plan](#)-Noise Element ~~for of the City of San Francisco~~ [General Plan](#) considers multifamily residential uses to be compatible with the same noise environment as for educational uses, and the operational noise analysis and mitigation of the draft SEIR would be applicable to both residential and school land uses.

~~Secondly~~, Impact NO-4 presents the operational traffic analysis associated with implementation of the proposed project. As can be seen from Table 3.C-11 on SEIR p. 3.C-37, there would not be a significant traffic noise increase along any roadways adjacent to sensitive land uses. Therefore, operation of the proposed project would not have a significant operational noise impact or land use compatibility impact with respect to noise exposure to adjacent school and collegiate land uses.

Comment NO-6: Noise Mitigation Measure

This response addresses comments from the commenter listed below; each comment on this topic is quoted in full below this list:

I-HEGGIE1-4
I-HEGGIE2-5

“The first mitigation measure for noise recommends selecting truck haul routes that, quote: Avoid the north access road and adjacent Riordan High School and residential uses along Lee Avenue.

But there is only one alternative route, Lee Avenue to Ocean Avenue, which is also adjacent to a sensitive receptor, the Harmony Family Childcare. A high school, nursery schools and daycare centers are located at or near all of the identified possible entrances and exit site points.

The Lee Avenue alternative is already identified in the Cumulative Transportation Items 4 and 6.B, as a route that poses significant and unavoidable adverse impacts to transportation and circulation, even after mitigation.

Commented [WW(22): Update per 2/6 discussion.

Mitigation measure for Noise Number 1 would only exacerbate another unmitigatable project issue. The first mitigation of the report also recommends undertaking the noisiest activities during times of least disturbance to surrounding residents and occupants, which are identified as 9:00 a.m. to 4:00 p.m. This coincides with the period when daycare centers and nursery schools are in session. Riordan High School holds classes and afterschool activities. And the majority of City College classes, including child development classes in the multi-use building, are in session.

Commented [WW(23): Cross-reference earlier response to this.

The times of least disturbance need to be redefined.”

(Jennifer Heggie, CPC Hearing, September 12, 2019 [I-HEGGIE1-4])

“2. The first Mitigation Measure for noise recommends selecting truck haul routes that “avoid the North Access Road and adjacent Riordan High School and residential uses along Plymouth Avenue.” But there is only one alternative route, Lee Avenue to Ocean Avenue, which is also adjacent to a sensitive receptor, Harmony Family Childcare. A high school, nursery schools and

daycare centers are located at, or near, all the identified possible entrance and exit points of the project. The Lee Avenue alternative is already identified in Cumulative Transportation Items 4 and 6b [C-TR-4 and C-TR- 6b] as a route that poses significant and unavoidable adverse impacts to transportation and circulation, even after mitigation. It appears that the mitigation measure for noise #1 would exacerbate another unmitigable project issue.

3. The first mitigation measure of the Report also recommends undertaking the noisiest activities during “times of least disturbance” to surrounding residents and occupants which are identified as from 9am-4pm [per page 3.C-30], a period prior to the maximum existing use of the adjacent land at City College, which is between 11am and 1pm. This coincides with the period when daycare centers and nursery schools are in session, Riordan HS holds classes and after school activities, and the majority of City College classes, including child development classes in the Multi-Use Building, are in session. The times of least disturbance needs to be redefined. There may be no time of least disturbance for the many diverse uses of the area, and if that is the case, that should be noted.”

(Jennifer Heggie, Email, September 23, 2019 [I-HEGGIE2-5])

Response NO-6: Noise Mitigation Measure

The comment expresses-expressed concern that selecting another haul truck route could result in construction-related haul truck noise impacts being transferred from one location (Riordan High School) to receptors along Lee Avenue. The commenter also raises concerns that the identified times of least disturbance suggested in Mitigation Measure M-NO-1 on page 3.C-30 of the draft SEIR may not be appropriate for all surrounding land uses near the Lee and Ocean Avenue intersection.

The commenter is correct that if Lee Avenue were to be used as an alternative route, truck travel on this roadway could be a potentially significant impact to existing receptors along Lee Avenue. This would not change the conclusions of the SEIR as the SEIR identified this impact as significant and unavoidable with mitigation. However, the measure is intended to provide consideration to construct a temporary roadway to and from Frida Kahlo Way to avoid such impacts. The text of Mitigation Measure M-NO-1 on SEIR p. 3.C-30 has been modified as indicated in Response NO-3, Construction Noise Impacts, on RTC p. 4.D-12, above.

The modifications clarify that the project sponsor should select or construct haul routes that avoid the North Access Road and the adjacent Archbishop Riordan High School and residential uses along Plymouth Avenue and Lee Avenue, such as the temporary or permanent relocation of North Street; the permanent relocation is described in Variant 4: North Street Extension on page 5-22 and depicted in Figure 5-4 on page 5-20 of the SEIR. The feasibility of implementing the North Street extension, as envisioned in Variant 4, is unknown at this time as an agreement on timing and right-of-way acquisition would need to be developed with City College.

With regard to the measure within The purpose of Mitigation Measure M-NO-1 to would be to conduct noisiest activities during daytime hours. this measure is consistent with efforts by the

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City and County of San Francisco to limit noise from extreme noise-generating construction activity such as the use of heavy rams for demolition. Pursuant to the San Francisco Noise Ordinance, construction activities within the city may occur on the site between 7 a.m. and 8 p.m.

As the commenter states, there is likely no set period where all noise-sensitive receptors would be unlikely to be present. However, the intent of this mitigation is to restrict the noisiest activity to hours when a majority of receptors ~~may be less impacted by construction noise~~ such as residential uses along Plymouth Avenue ~~may be less impacted by construction noise~~. Notwithstanding these efforts, the construction noise impact is identified as significant and unavoidable with mitigation.

Commented [WW(24)]: Update per 2/6 discussion.

Comment NO-7: Cumulative Noise

This response addresses comments from the commenter listed below; each comment on this topic is quoted in full below this list:

I-HEGGIE2-18

"16. As you note, because City College has been making changes to their master plan, checking in with them for their most current plans for development in the areas closest to the Balboa Reservoir is an ongoing process. A recent plan calls for constructing a Performing Arts Education Center building twice as tall as the one indicated in the DEIR on the City College-owned "upper reservoir." Please take into account the cumulative impact to noise of new plans."

(Jennifer Heggie, Email, September 23, 2019 [I-HEGGIE2-18])

Response NO-7: Cumulative Noise

As discussed on SEIR p. 3.C-40 of the draft SEIR, although City College adopted a facilities master plan in March 2019, this facilities master plan does not provide adequate information to develop a quantitative cumulative impact analysis as part of the Balboa Reservoir Project SEIR. The approach to the cumulative impact analysis with respect to City College is also described on SEIR pp. 3.A-10 to 3.A-14. ~~This section, which~~ describes the available information of the facilities master plan projects ~~and~~, potential bond measures, and acknowledges that the facilities master plan projects may change depending on funding availability.

The SEIR noise section qualitatively assesses the impacts of the City College Ocean Campus project, including the potential Performing Arts and Education Center building on the east basin. Therefore, the cumulative analysis appropriately considers the growth and development information available for the City College Ocean Campus at the time of the draft SEIR preparation including the Performing Arts Education Center.