Appendix I-1

Noise Technical Memorandum for the Reduced Development Footprint Alternative – Vernal Pool Minimization

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MEMORANDUM

To:	City of San Marcos
From:	Connor Burke, INCE.
Subject:	Reduced Development Footprint Alternative – Vernal Pool Impact Minimization
Date:	January 4, 2024
Attachment(s):	A: Noise Technical Report for the Pacific Project, November 2022

This memorandum summarizes potential noise and vibration impacts associated with the Reduced Development Footprint Alternative – Vernal Pool Impact Minimization, the revised 228-unit residential development project plan for the Pacific Project, in comparison to the previous 449-unit project. This assessment utilizes City of San Marcos (City) significance thresholds that are comparable to those relating to noise and vibration assessment in Appendix G of the California Environmental Quality Act Guidelines (14 CCR 15000 et seq.).

The following analysis refers to the Noise Technical Report we prepared for the Pacific Project dated November 2022 (Attachment A) and compares the anticipated noise and vibration impacts from the revised 228-unit project, which would locate all 228 residential units in the southern portion of the site, to the previous 449-unit project.

1 Impact Discussion

1.1 Short-Term Construction

The alternative would concentrate demolition, grading, and building construction activities in the southern portion of the site, over 600 feet from the nearest sensitive receptors to the north. With this greater separation distance, construction noise levels experienced at sensitive receptors would be substantially reduced compared to the original site plan. Noise attenuation due to geometric spreading would result in over 10 dB of reduction compared to the original estimate of noise levels reaching up to 70 dBA Leq at receptors 150 feet away. Even with the loudest construction activities occurring closer to receptors south of the site that are over 1300 feet away, construction noise would continue to be temporary and occur during allowable daytime hours per the City's noise ordinance. The analysis for the original project did not identify any exceedances of applicable noise standards at nearby receptors. The reduced scale of the alternative project confined to the southern portion of the site would further ensure construction noise impacts remain **less than significant** without need for additional mitigation, similar to the original project.

1.2 Roadway Traffic Noise

The reduction in project units from 449 to 228 would proportionally decrease the amount of traffic added to nearby roadways. With 221 fewer units, the project vehicle trip generation would be reduced by approximately 49% (assuming consistent trip generation rates per unit). Traffic noise levels increase logarithmically in relation to the

actual traffic volume. Therefore, a 49% reduction in project traffic volumes would correspond to approximately a 2 dB decrease in traffic noise levels generated by the project. The traffic noise analysis for the 449-unit project did not identify any significant impacts at sensitive receptors. The incremental 2 dB reduction in traffic noise for the smaller 228-unit project reaffirms that this impact would remain **less than significant** and marginally improved compared to the prior project site plan.

1.3 Stationary Operations Noise

With fewer residential units proposed, stationary noise sources associated with building operations, such as HVAC systems, would likewise be reduced compared to the previous project. Stationary noise impacts associated with the 449-unit project were found to be less than significant. The smaller 228-unit project would further reduce stationary noise levels and this impact would remain **less than significant.**

1.4 Conventional Construction Activity Vibration

The overall reduction in project scale and concentration of construction activities within the remaining project site areas would result in similar vibration levels compared to the previous project. Construction vibration impacts associated with the 449-unit project were found to be less than significant at nearby sensitive receptors. The 228-unit project would generate similar vibration levels that would remain below thresholds for human annoyance and building damage. Vibration impacts would be similar to the previous project and **less than significant** without mitigation needed.

2 Conclusion

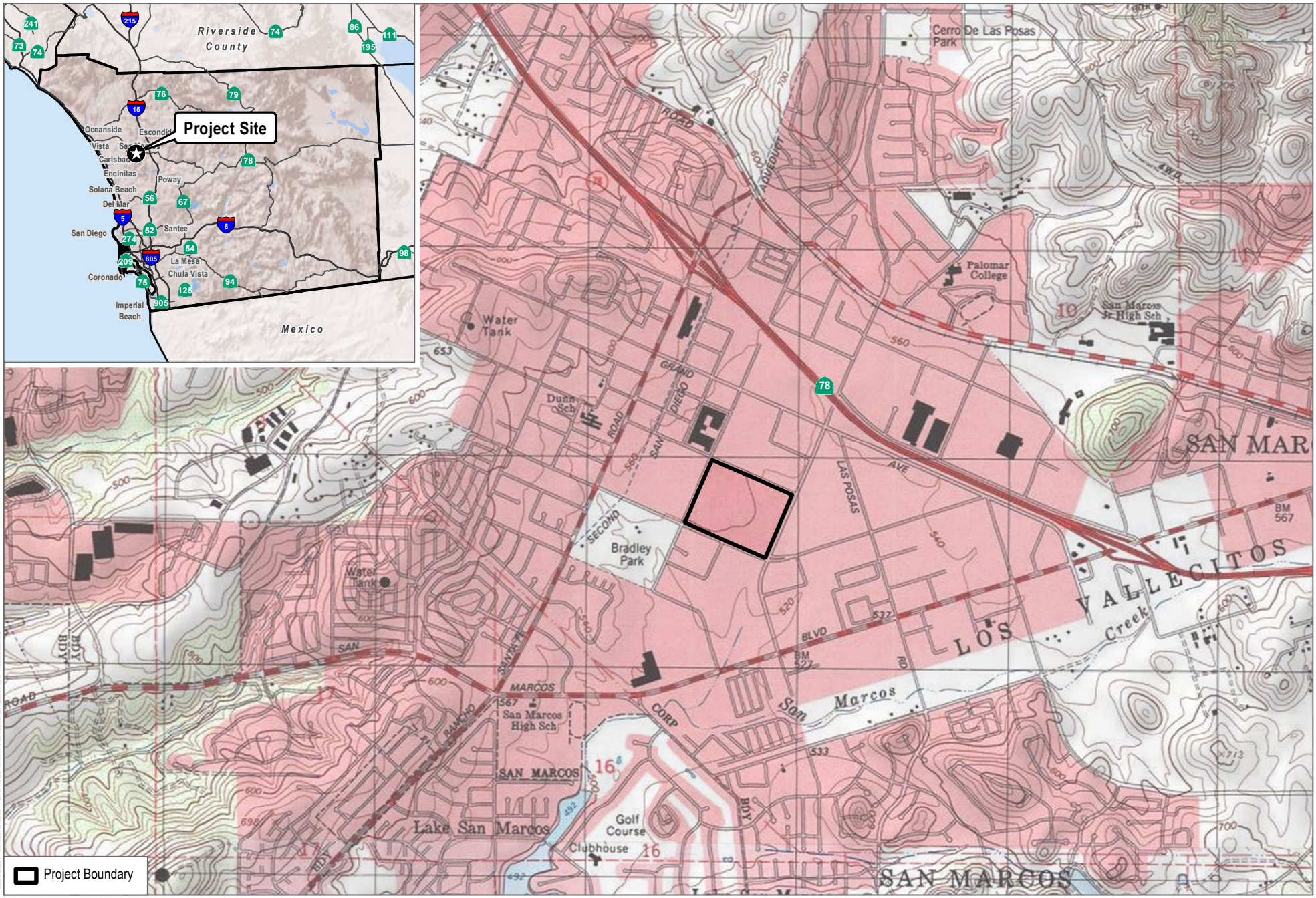
In summary, the reduction in project units from 449 to 228 would proportionally decrease construction and operational noise levels, as well as groundborne vibration generated by the project. The noise and vibration analyses conducted for the previous 449-unit project did not identify any significant impacts. The revised 228-unit project would further reduce the projected noise and vibration levels. Impacts would remain less than significant and no additional mitigation measures are necessary beyond what was identified for the previous project.

This technical memorandum appends the previous Noise Technical Report dated November 2022 prepared for the original 449-unit project. The memorandum demonstrates the revised 228-unit project would have reduced noise and vibration impacts compared to the previous project.

Should you have any questions, comments, or suggestions on how this memo could better suit your needs, please do not hesitate to contact me at cburke@dudek.com.

Sincerely,

Connor Burke, INCE
Environmental Noise Specialist



SOURCE: USGS 7.5-Minute Serues San Marcos Quadrangle

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0 1,000 2,000 Feet

FIGURE 1

Project Location

Pacific GPA/Rezone EIR

PROJECT SUMMARY

RESIDENCES	228 HOMES
GROSS SITE AREA	33.229 ACRES (9.590 ACRES NET)
GROSS DENSITY	6.86 DU/AC (23.77 DU/AC NET)

UNIT MIX

ROWHOMES		
22	2BD/2BA	1,200 SF
22	3BD/3BA	1,310 SF
36	3BD/3.5BA	1,736 SF
36	4BD/3.5BA	1,890 SF
116 ROWHOMES		
VILLAS		
64	2BD/2BA	1,232 SF
24	3BD/2.5BA	1,486 SF
24	3BD/3BA	1,832 SF
112 VILLAS		
228 TOTAL HOMES		

PARKING SUMMARY

228 DU	228 X 2.33 =	532 SPACES
TOTAL REQUIRED		532 SPACES
TOTAL PROVIDED		532 SPACES (76 OPEN / 456 PRIVATE GARAGES)*

*NOTE: RECIPROCAL ACCESS AND PARKING AGREEMENT BETWEEN LOTS 1 & 2

OPEN SPACE

COMMON OPEN SPACE		
GROUND FLOOR AREA	103,868 SF X 30% =	31,160 SF
TOT LOT	228 / 25 = 9.12 X 400 SF =	3,648 SF
PLAYGROUND		800 SF
	TOTAL REQUIRED	35,608 SF
	TOTAL PROVIDED	70,915 SF
PRIVATE OPEN SPACE		
GROUND FLOOR LIVING	96 DU X 250 SF =	24,000 SF
2ND FLOOR DECK AREA	228 DU X 50 SF =	11,400 SF
	TOTAL REQUIRED	35,400 SF
	TOTAL PROVIDED	40,426 SF

NOTE: AC UNITS TO BE SCREENED FROM PUBLIC ROW

SOURCE: Summa Architecture, 2024

FIGURE 2

Reduced Development Footprint Alternative - Vernal Pool Impact Minimization

Pacific Project EIR

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