

MEMORANDUM

To: Pei-Ming Chou, Michael Baker International

From: Zhe Chen, Michael Baker International

Date: January 12, 2021

Subject: Manhattan Beach Hotel Mixed-Use Project – Addendum to Noise Technical Memorandum

PURPOSE

The purpose of this technical memorandum is to evaluate potential long-term stationary noise impacts associated with outdoor gathering area noise as a result of the proposed Manhattan Beach Hotel Mixed-Use Project (project), located in the City of Manhattan Beach (City), California. This memorandum serves as an addendum to the *Manhattan Beach Hotel Mixed-Use Project – Noise Technical Memorandum* (Noise Memo) prepared by Michael Baker International, dated September 21, 2020.

IMPACT ANALYSIS

Impact NOI-1: Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Long-Term Operational Noise Impacts

Stationary Noise

Outdoor Gathering Area Noise

Crowd Noise. The project would include a bar and exterior deck area located on the fourth floor facing Sepulveda Boulevard. These areas have the potential to be accessed by groups of people intermittently for various occasions. Noise generated by groups of people (i.e., crowds) is dependent on several factors including vocal effort, impulsiveness, and the random orientation of the crowd members. Noise from a

single speaker is estimated at 72 dBA at one meter (3.28 feet) away for loud speaking.¹ When considering the group size, the sound power level could be estimated by the following equation:²

$$L_{WAeq} = 15 * \log (\text{Number of People}) + 64 \text{ dBA}$$

The bar would be partially enclosed and only open to the terrace, so noise generated by the crowd in the bar would be significantly reduced. As a conservative analysis, assuming the outdoor terrace and patio would be occupied by 150 people at the same time, the sound power level would increase to 97 dBA, which is equivalent to sound pressure level of 86 dBA at 3.28 feet. In addition, the consumption of alcohol has the potential to increase the level of crowd noise by at most 6 dBA. As such, crowd noise would be 92 dBA at 3.28 feet.

The closest sensitive receptors would be residences located approximately 300 feet to the east across Chabela Drive and approximately 300 feet to the west across Sepulveda Boulevard. At the distance of 300 feet, crowd noise would be reduced to approximately 53 dBA. In addition, residences to the east would be completely shielded by the hotel building (15 dBA reduction) and residences to the west would be partially shielded by commercial buildings along Sepulveda Boulevard (3 dBA reduction).³ Therefore, crowd noise would be reduced to 38 dBA at residences to the east and 50 dBA at residences to the west. As discussed in the Noise Memo, ambient noise level during daytime at residences located to the east of the project site was 55.8 dBA L_{eq} , and residences located to the west of the project site are located in the 70 dBA CNEL traffic noise contour zone according to the City's General Plan Noise Element. Based on the City's Municipal Code Section 5.48.160(B) Table 6 (Table 4 of the Noise Memo), if the ambient noise level exceeds the City's noise standard, then the ambient noise level becomes the exterior noise standard. Therefore, noise level generated by the crowd would not exceed the ambient noise levels (i.e. daytime exterior noise standard) or the City's nighttime exterior noise standard (50 dBA) and not audible at the nearest residences. The impact would be less than significant.

Amplified Speakers Noise. Typically, music from amplified speakers generate noise levels ranging from 75 dBA to 93 dBA at 1.2 meters (3.94 feet).⁴ As a conservative analysis, it is assumed that amplified speaker noise would be 93 dBA at 3.94 feet.

The closest sensitive receptors would be residences located approximately 300 feet to the east and approximately 300 feet to the west across Sepulveda Boulevard. At the distance of 300 feet, noise from amplified speakers would be reduced to approximately 55 dBA. As discussed in above, the ambient noise levels at the nearest residences are the daytime exterior noise standards, and noise generated from amplified speakers would not exceed the ambient noise levels. It should be noted that electronic speakers can be adjusted to lower noise levels if desired or needed and noise levels on the sides and behind the disc jockey (DJ) stage drop due to the directional characteristics of the speakers. Furthermore, the live

¹ M.J. Hayne, et al, *Prediction of Crowd Noise, Acoustics*, November 2006.

² M.J. Hayne, et al, *Prediction of Noise from Small to Medium Sized Crowds, Acoustics*, November 2011.

³ Federal Highway Administration, *Roadway Construction Noise Model User's Guide: Appendix A*, January 2006.

⁴ Elliott H. Berger, Rick Neitzel, and Cynthia A. Kladden, *Noise Navigator Sound Level Database with Over 1700 Measurement Values*, July 6, 2010.

music would be subject to the Manhattan Beach Planning Commission Draft Solution No. PC 20-10 and would conclude no later than 9:00 p.m.⁵ Therefore, the impact would be less than significant.

Mitigation Measures: No mitigation required.

REFERENCES

Documents

1. City of Manhattan Beach, *City of Manhattan Beach Department of Community Devolvement Memorandum – October 14, 2020*, https://cms6ftp.visioninternet.com/manhattanbeach/commissions/planning_commission/2020/20201014/20201014-2.pdf, accessed January 7, 2021.
2. Elliott H. Berger, Rick Neitzel, and Cynthia A. Kladden, *Noise Navigator Sound Level Database with Over 1700 Measurement Values*, July 6, 2010.
3. Federal Highway Administration, *Roadway Construction Noise Model User's Guide: Appendix A*, January 2006.
4. M.J. Hayne, et al, *Prediction of Crowd Noise, Acoustics*, November 2006.
5. M.J. Hayne, et al, *Prediction of Noise from Small to Medium Sized Crowds, Acoustics*, November 2011.

⁵ City of Manhattan Beach, *City of Manhattan Beach Department of Community Devolvement Memorandum – October 14, 2020*, https://cms6ftp.visioninternet.com/manhattanbeach/commissions/planning_commission/2020/20201014/20201014-2.pdf, accessed January 7, 2021.