

Project name:
Inglewood Basketball and Event Center

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Subject: Supplemental Base Ambient Noise Level Data

The following information was prepared as a supplement to AECOM's September 2018 Site Acoustical Design Environmental Impact Report Technical Narrative (Technical Narrative) for the Inglewood Basketball and Event Center Project (Project) located in the city of Inglewood, CA. As summarized in the Technical Narrative, Section 5-27 of the Inglewood Municipal Code (City Code) establishes minimum base ambient noise level (BANL) thresholds for various land use zones and times of day. This section of the City Code also stipulates that, if the measured BANL at a land use zone exceeds the default applicable BANL threshold, then the measured BANL becomes the new threshold.

Two key noise-sensitive receivers (NSRs) are predicted to experience Project-associated noise levels in excess of the City's applicable default BANL thresholds. Thus, the purpose of this memorandum is to provide empirical BANL data at these NSRs to determine whether existing BANLs are greater than default applicable BANL thresholds.

Studied Noise-Sensitive Receptors

NSR 1: Located at 4024 W 102nd Street, this NSR is representative of single-family residential receptors located along the south side of W 102nd Street, west of S Prairie Avenue. Based on the assumptions in the Technical Narrative for the studied "Game Day Event Conclusion" scenario, these residences were predicted to experience hourly noise levels in excess of the default applicable BANL thresholds due to Project vehicular traffic along 102nd Street as patrons egress the western Project parking structure.

NSR 2: Located at 3900 W. Century Boulevard, this NSR is representative of an existing commercial land use zone. Two existing 3-story hotel structures exist at this address that are currently abandoned and potentially undergoing demolition. NSR 2 represents the two western facades of the structures. Based on the assumptions in the Technical Narrative for the studied "Plaza Concert Event" scenario, the second and third stories of this hotel were determined to experience hourly noise levels in excess of the City Code due to a combination of influence from the Project sound reinforcement system (e.g. loudspeakers) and crowd cheering.

Base Ambient Noise Level Survey

Measurement Sites and Methodology

After reviewing available unprocessed data collected by Environmental Science Associates (ESA) in May of 2018, it was determined that BANL data collected by ESA near NSR-1 was adequately representative¹. This measurement, referred to in this memo as ESA-R5, was located within a Project parcel on the north side of 102nd Street at 4019 W 102nd Street. Since adequate BANL data had already been collected near NSR-1, a single short-term (ST) SPL measurement, referred to in this memo as ST-1, was conducted within a Project parcel abutting the western property boundary of NSR-2. The studied NSRs and measurement locations are shown on aerial imagery in Figure 1.



Figure [SEQ Figure * ARABIC], Studied NSRs and Measurement Locations

The sound level meter was mounted atop a camera tripod so that the microphone was approximately 5 feet above grade. The microphone was placed more than 10 feet from any reflecting surfaces and was outfitted with a 3.5" spherical, open-cell foam windscreen. In addition to current factory calibration certification, the calibration status of the SLM and accompanying microphone were field-checked before and after the measurement.

Survey Results and Observations

AECOM's measurement at ST-1 was conducted on Wednesday, April 3, 2019, between the hours of 5 p.m. and 10 p.m. (17:00-22:00 hours). Measured meteorological conditions during measurement start showed a temperature of approximately 67 degrees Fahrenheit, relative humidity of 51%, and wind speeds at an average velocity of 3 miles per hour.

During the ST-1 measurement period, the dominant noise source in the Project vicinity was frequent fixed-wing aircraft overflights from jet airliners approaching Los Angeles International Airport (LAX). Additional notable noise sources included vehicular traffic along West Century Boulevard and frequent emergency response vehicle siren sounding.

¹ AECOM is not responsible for any error in presentation or interpretation of the ESA-collected data. This memorandum assumes that the data provided from ESA were collected using a methodology consistent with standard industry practices. Specific long-term sound level meter deployment details and observations are entirely unknown.

Measured Sound Level Data

Table 1 presents a summary of hourly equivalent (L_{eq}) sound pressure level (SPL) at measurement site ESA-R5 during four afternoon and evening periods, or the likely periods during which the "Game Day Event Conclusion" scenario may occur near NSR-1.

Table [SEQ Table * ARABIC], Summary of Base Ambient Noise Levels (1-Hour L_{eq} , dBA) at ESA-R5

Period (hh:mm)	Thursday May 10, 2018	Friday May 11, 2018	Saturday May 12, 2018	Sunday May 13, 2018
14:00 – 15:00	63	64	62	62
15:00 – 16:00	62	64	63	62
16:00 – 17:00	65	64	62	64
17:00 – 18:00	64	64	63	64
18:00 – 19:00	64	65	65	66
19:00 – 20:00	65	64	65	64
20:00 – 21:00	63	64	64	64
21:00 – 22:00	64	65	65	64
22:00 – 23:00	63	64	63	62
23:00 – 00:00	62	62	64	63

Source: ESA 2018

The consistency of ambient noise levels across the weekday and weekend measurement period suggests that noise from fixed-wing aircraft overflights, vehicle traffic, and other existing noise sources in the vicinity of the studied NSR do not vary on a day-to-day basis. Measured noise levels across the afternoon (14:00-19:00), evening (19:00-22:00), and nighttime (22:00-00:00) periods are similarly consistent, only varying by approximately 4 dBA, with peak hourly noise levels consistently occurring between the periods of 18:00 and 20:00.

Table 2 presents a summary of acoustical metrics and statistical values at measurement location ST-1 during a weekday evening period, or the likely period during which the "Plaza Concert Event" scenario may occur near NSR-2.

Table [SEQ Table * ARABIC], Summary of Base Ambient Noise Levels (1-Hour Values, dBA) at ST-1

Period (hh:mm)	SPL Metrics and Statistical Values (dB[A])					
	L_{eq}	L_{min}	L_{max}	L_{10}	L_{50}	L_{90}
17:00 – 18:00	64	50	84	66	58	55
18:00 – 19:00	64	51	82	67	58	55
19:00 – 20:00	65	50	85	66	58	54
20:00 – 21:00	61	48	81	63	56	53
21:00 – 22:00	62	55	52	73	64	56

Source: AECOM 2019

Measured sound pressure levels at ST-1 were generally consistent with those collected at site ESA-R5, with hourly noise levels ranging between 61 and 65 dBA, L_{eq} , and peak hourly noise levels also occurring between the periods of 18:00 and 20:00.

Conclusion

Consideration of a Revised BANL Threshold at NSR-1

The default BANL thresholds at the residential land uses represented by NSR-1 are 55 dBA between the hours of 07:00 and 22:00, and 45 dBA between the hours of 22:00 and 07:00. As apparent in Table 1, measured hourly SPLs near NSR-1 are consistently higher than 60 dBA during all presented hours. As a result, impact assessments associated with the "Game Day Conclusion" scenario should consider establishing a revised BANL.

Consideration of a Revised BANL Threshold at NSR-2

The default BANL threshold at the commercial land uses represented by NSR-2 is 65 dBA during any hour. As apparent in Table 2, measured hourly SPLs near NSR-2 are consistently lower-than or equal-to 65 dBA during all measured hours. As a result, the established minimum BANL remains applicable during any hour.

Establishment of a Revised BANL

There are a multitude of ways that one can interpret the City Code with respect to determining revised BANLs based upon on-site measurement data. Due to the potential for inconsistent interpretations, AECOM reserves determination of specific revised BANL thresholds for whomever conducts the final impact assessment.