APPENDIX 1

CITY OF LAKE FOREST
CEQA SIGNIFICANCE THRESHOLDS GUIDE

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SECTION 1 INTRODUCTION

1.1 CEQA SIGNIFICANCE THRESHOLDS

The *City of Lake Forest CEQA Significance Thresholds Guide* has been prepared as an internal guidance document for City staff. The information presented herein shall be used by staff for the review of projects, and in the preparation of environmental documents pursuant to the California Environmental Quality Act (CEQA). CEQA requires the analysis of discretionary projects to disclose their potential effects on the environment.

As stated in Section 15064(a) of the State CEQA Guidelines, "Determining whether a project may have a significant effect plays a critical role in the CEQA process." The identification of significance of an impact determines the level of environmental review required and the need for mitigation measures to reduce or eliminate project impacts. The tools used by a lead agency to make significance determinations include but are not limited to: CEQA's Mandatory Findings of Significance, Appendix G of the CEQA Guidelines (the model Initial Study checklist), agency (e.g., South Coast Air Quality Management District, Governor's Office of Planning and Research) regulatory standards and guides, consultation with other agencies, and the lead agency's specific thresholds of significance. As defined in the CEQA Guidelines (Section 15064.7) "a threshold of significance is an identifiable quantitative, qualitative or performance level of a particular environmental effect, non-compliance with which means the effect will normally be determined to be significant by the agency and compliance with which means the effect normally will be determined to be less than significant."

Section 15064(b)(1) of the State CEQA Guidelines states: "The determination of whether a project may have a significant effect on the environment calls for careful judgment on the part of the public agency involved, based to the extent possible on scientific and factual data. An ironclad definition of significant effect is not always possible because the significance of an activity may vary with the setting." The *City of Lake Forest CEQA Significance Thresholds Guide* is a tool that compiles information that is useful in the preparation of environmental documents. This information can be used to improve the level of consistency, predictability, and objectivity of the City's environmental documents. The Guide provides assistance in evaluating the significance of project impacts for six key topical issues in the City of Lake Forest: circulation/transportation, noise, air quality, land use, aesthetics, and water resources. For each topical issue, the following information is provided: background information; discussion of relevant standards, planning guidelines, policies etc.; thresholds of significance; and potential mitigation. It should be noted that the mitigation measures suggested in this document are examples of the types of mitigation that could be applied to a project to reduce identified environmental impacts. The actual mitigation recommended for a project will vary depending on the project itself, the specific impact, and other issues that may arise on a case-by- case basis. It is not intended that each mitigation measure identified in this document be applied to every project or that the mitigation be written exactly as presented herein. Similarly, there may be mitigation required of a project that is not identified in this document.

The *City of Lake Forest CEQA Significance Thresholds Guide* provides guidance and does not require mandatory application of all thresholds for every project. The guidance provided in this document does not substitute for the use of independent judgment to determine significance or the evaluation of the evidence in the record but is intended to provide sufficient flexibility to use the most appropriate criteria (i.e., on a case-by-case basis) for a particular project. (See *Mejia v. City of*

Los Angeles (2005) 130 Cal.App.4th 322; *Protect the Historic Amador Waterways v. Amador Water Agency* (2004) 116 Cal.App.4th 1099.) CEQA includes additional topics and requirements that are not addressed in this *City of Lake Forest CEQA Significance Thresholds Guide*. Section 15064(b)(2) of the State CEQA Guidelines states: "Thresholds of significance, as defined in Section 15064.7(a), may assist lead agencies in determining whether a project may cause a significant impact. When using a threshold, the lead agency should briefly explain how compliance with the threshold means that the project's impacts are less than significant. Compliance with the threshold does not relieve a lead agency of the obligation to consider substantial evidence indicating that the project's environmental effects may still be significant." The lead agency is responsible for ensuring that all CEQA requirements are met.

1.2 CITY OF LAKE FOREST

The City of Lake Forest is located between the coastal floodplain and the Santa Ana Mountains. The western portion of the City is near sea level while the northeastern portion of the City becomes progressively higher and steeper, reaching elevations of up to 1,500 feet. The Santa Ana Mountains can be seen from various points within the City (including major roadways) while the Saddleback Valley floor and the Pacific Ocean can be seen from the higher elevations. The Recreation and Resources Element of the City of Lake Forest General Plan states that, "Lake Forest's recreational amenities and natural resources form an important part of its unique character and quality of life. In our community, these resources include the City's parks and trails, natural open space areas, scenic vistas, and cultural, and biological, resources. It is important to understand, document, and appreciate these resources so that these valuable pieces of the community can be preserved and protected for future generations."

Notable natural features in the City include the foothills of the Santa Ana Mountains and natural water courses. The Whiting Ranch Wilderness Park is a prominent visual feature in the northern portion of the City located generally between the planned communities of Portola Hills and Foothill Ranch. There are five water courses that traverse the City: Aliso Creek, Serrano Creek, Borrego Canyon Wash, and two smaller creeks. While portions of these creeks are channelized for flood control purposes, significant portions of Aliso Creek and Serrano Creek include trails and open space and have a natural/undeveloped character. The City of Lake Forest also has four man-made lakes, three located within residential developments and one in Veterans Park.

The City developed as a series of primarily residential Planned Communities. Development within each Planned Community is designed to be compatible and form a consistent visual image. In older areas of the City, particularly near I-5, residential neighborhoods were not developed as part of Planned Communities and have less architectural and visual consistency.

Low-scale (one- to three-story) commercial development is concentrated near I-5 and along the primary arterials of El Toro Road, Lake Forest Drive, Bake Parkway and Portola Parkway. Existing sources of night lighting within the City include commercial districts, parking areas, outdoor sports facilities, and roadways.

1.3 SUMMARY OF SIGNIFICANCE THRESHOLDS

The following provides a summary of the thresholds of significance presented in Sections 2 through 7 of this document.

Circulation/Transportation

A proposed project would normally have a significant impact if it is determined to:

- Not meet any of the screening criteria described in Attachment 1 to this CEQA SignificanceThreshold Guide – *City of Lake Forest Transportation Analysis Guidelines*; and
- Exceed any of the vehicle miles traveled (VMT) thresholds described in Attachment 1 to this CEQA Significance Threshold Guide – *City of Lake Forest Transportation Analysis Guidelines;* and/or
- Conflict with program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities; and/or
- Includes design features or uses that may cause traffic hazards such as sharp curves, tight turning radii from streets, limited roadway visibility, short merging lanes, uneven road grades, or any other conditions determined by the City traffic engineer to be a hazard; and/or
- Results in inadequate emergency access.

NOISE

Traffic Noise

A proposed project would normally have a significant offsite traffic noise impact if one of the following criteria are met:

- When existing noise levels are between 60 dBA and 65 dBA CNEL, a 3 dBA CNEL increase in noise will be considered significant;
- When existing noise levels exceed 65 dBA CNEL, a 1.5 dBA CNEL increase in noise will be considered significant.

Stationary Noise

The project would normally have a significant stationary noise impact if it would:

- Exceed the stationary source noise criteria for the City of Lake Forest as specified by the exterior noise standards set forth in the Noise Control Chapter (11.16) of the Lake Forest Municipal Code.

Construction Noise

The project would normally have a significant construction noise impact if it would:

- Exceed 80 dBA Leq(1-hour) between the hours of 7:00 a.m. and 8:00 p.m., Monday through Saturday.[1]

Vibration

The project would normally have a significant vibration impact if it would:

[1] Construction is prohibited between 8:00 p.m. and 7:00 a.m., Monday through Saturday, or at any time on Sunday or a City holiday.

- Exceed the applicable standards from the Federal Transit Administration (FTA) or Caltrans vibration limits.

SECTION 3 – NOISE

3.1 BACKGROUND

Potential noise and vibration impacts are commonly divided into two groups: short-term construction and long- term operational (stationary source and mobile vehicular noise). Short-term impacts are usually associated with noise and vibration generated by construction activities. Long-term impacts include effects on surrounding land uses generated by a project once it is operational, and those impacts which occur at a project site. Construction-related and operational noise and vibration impacts are addressed in this section.

Noise has been defined as unwanted sound, and it is known to have adverse effects on people. Based on these effects, criteria have been established to help protect public health and safety and prevent disruption of certain human activities. These criteria are based on such known impacts of noise on people as hearing loss, speech interference, sleep interference, physiological responses, and annoyance.

Most noise metrics use the A-weighted noise level to quantify noise impacts on humans. A-weighting is a frequency weighting that accounts for human sensitivity to different frequencies. When the A-scale is used, the decibel levels are represented by dBA (A-weighted decibels). The City of Lake Forest's noise standards are expressed in terms of dBA. On this scale, the range of human hearing extends from about 3 dBA to about 140 dBA. A 10 dBA increase is judged by most people as a doubling of the sound level. Generally, noise increases of less than three dB are not detectable by the human ear.

Everyday sounds normally range from 30 dBA (very quiet) to 100 dBA (very loud). Noise from transportation activities (transportation corridors, major arterials, collector roadways, railroad, etc.) is the primary component of the noise environment in the City of Lake Forest. Noise generated by construction equipment, including trucks, graders, bulldozers, concrete mixers, pile drivers, and portable generators, can reach high levels. Noise levels from construction equipment generally range from 76 to 91 dBA for equipment powered by internal combustion engines, saws, and vibrating equipment, and from the mid-80s to more than 100 dBA for impact equipment. Excavation and grading activities typically represent the highest potential for noise impacts.

3.2 NOISE METRICS

To account for the fluctuation in noise levels over time, noise impacts are commonly evaluated using time-averaged noise levels. Two of the most used noise scales are the Equivalent Continuous Sound Level (LEQ) and the Community Noise Equivalent Level (CNEL).

LEQ is the sound level corresponding to a steady-state sound level containing the same total energy as a time-varying signal over a given sample period. LEQ is the "energy" average noise level during the time period of the sample. LEQ can be measured for any time period but is typically measured for one hour. It is the energy sum of all the events and background noise levels that occur during that time period.

LMAX means the highest sound level measured during the measurement period.

CNEL is the predominant rating scale used in California for land use compatibility assessment. The CNEL scale represents a time weighted 24-hour average noise level based on the A-weighted

decibel. "Time-weighted" means that noise that occurs during certain sensitive time periods is penalized in noise analyses. Noises occurring in the evening (7:00 p.m. to 10:00 p.m.) are penalized by 5 dBA and nighttime (10:00 p.m. to 7:00 a.m.) noises are penalized by 10 dBA. A CNEL noise level may be reported as a "CNEL of 60 dBA," "60 dBA CNEL," or simply "60 CNEL."

3.3 APPLICABLE NOISE STANDARDS

The City of Lake Forest General Plan (Public Safety Element) and the Municipal Code (Chapter 11.16 – *Noise Control*) establish noise standards for the City.

PUBLIC SAFETY ELEMENT OF THE GENERAL PLAN

Table PS-1 of the Public Safety Element summarizes land use compatibility noise standards for various types of land uses (Table 3-1 below). As a result of the Supreme Court decision regarding the assessment of the environment's impacts on projects (*California Building Industry Association (CBIA) v. Bay Area Air Quality Management District (BAAQMD)*, 62 Cal. 4th 369 (No. S 213478) issued December 17, 2015), it is generally no longer the purview of the CEQA process to evaluate the impact of existing environmental conditions on any given project. As a result, while noise from existing sources is taken into account as part of the baseline, the direct effects of noise from nearby noise sources relative to land use compatibility of a future project is typically no longer a required topic for impact evaluation under CEQA. Generally, no determination of significance is required with the exception of new school projects, projects significantly affected by airport noise, and project's that would exacerbate existing conditions (i.e., projects that would have a significant operational impact that could expose on-site users to substantial noise). In the cases of these exceptions, the noise and land use compatibility standards from Table 3-1 should be used to evaluate the potential impact of surrounding noise sources on future sensitive project residents, workers, or users.

TABLE 3-1
LAND USE COMPATIBILITY FOR COMMUNITY NOISE ENVIRONMENT[5, 6]

Land Use [1]	Outdoor Activity Areas [2, 3]	Interior Spaces	
		Ldn, dB	Leq, dB [4]
Residential	60	45	–
Motels/Hotels	65	45	–
Mixed-Use	65	45	–
Hospitals, Nursing Homes	60	45	–
Theaters, Auditoriums	–	–	35
Churches	60	–	40
Office Buildings	65	–	45
Schools, Libraries, Museums	70	–	45
Playgrounds, Neighborhood Parks	70	–	-
Industrial	75	–	45
Golf Courses, Water Recreation	70	–	–

1. Where a proposed use is not specifically listed, the use shall comply with the criteria for the most similar use as determined by the City.

2. Outdoor activity areas for residential development are considered to be the private exterior living area of single-family homes and the main common areas where people generally congregate for multi-family and residential components of mixed-use developments. Outdoor activity areas for non-residential developments are the common areas where people generally congregate, including community centers, pool areas, and outside lunch facilities. New multi-family developments and residential components of mixed-use developments with balconies or patios that are exposed to noise that exceeds the outdoor criteria in this table are required to provide occupancy disclosure notices to all future tenants regarding potential noise impacts.

3. In areas where it is not possible for a new project to reduce exterior noise levels to achieve the outdoor activity area criteria using a practical application of the best noise-reduction technology, as determined by a qualified acoustician, an increase of up to 5 CNEL over the outdoor standard will be allowed provided that available exterior noise reduction measures have been implemented and interior noise levels are in compliance with this table

4. Determined for a typical operating hour during periods of use.

5. In accordance with Policy PS-6b, this table shall be used for land use compatibility noise criteria or when making planning and development decisions. These criteria represent the acceptable noise level for new sensitive receptors. These criteria are not to be retroactively applied for existing uses. These criteria are also not generally intended for use as CEQA significance thresholds for noise generated by new projects to existing receptors; that purpose is achieved by compliance with Municipal Code standards.

6. Abbreviations: dB = decibel; Leq = equivalent noise level; Ldn = Day-Night Average Level; CNEL = community noise equivalent level.

NOISE ORDINANCE

The Noise Control Chapter (11.16) of the Lake Forest Municipal Code ("Noise Ordinance"), is designed to protect people from non-transportation (stationary) noise sources such as music, construction activity, machinery, and equipment such as air conditioners. The Noise Ordinance sets limits for stationary noise sources, depending on the type of land use that is receiving the noise. Table 3-2 lists the A-weighted noise level (dBA) limit for these sources. The ordinance applies different criteria during different time periods. The noise criteria are more stringent in late night and early morning hours and reflect a heightened sensitivity to noise during these time periods. For purposes of determining potential project impacts during environmental impact review processes pursuant to the California Environmental Quality Act ("CEQA"), the average hourly level (L_{eq}) standards shall be utilized unless all sources are impact in nature.

TABLE 3-2
CITY OF LAKE FOREST NOISE ORDINANCE EXTERIOR NOISE STANDARDS

Land Use	Noise Level (dBA Leq)	Noise Level (dBA Lmax)	Time Period
Residential in Residential Zones	60	80	7:00 a.m.–10:00 p.m.
	50	70	10:00 p.m.–7:00 a.m.
Residential Portion of Mixed-Use in Mixed-Use Zones	65	85	7:00 a.m.–10:00 p.m.
	50	70	10:00 p.m.–7:00 a.m.
Churches, Hospitals, and Schools in Residential and Mixed-Use Zones	65	85	All Hours
Churches, Hospitals, and Schools in Commercial and Industrial Zones	70	90	All Hours

Section 11.16.050 of the Noise Ordinance identifies specific activities that would be exempt from

the provisions of the noise restrictions. Exempted activities include, but are not limited to, construction, repair, remodeling, and grading, provided that: (1) the City has issued a building permit, grading permit, or similar permit for such activities; (2) said activities do not take place between the hours of 8:00 p.m. and 7:00 a.m. Monday through Saturday, or at any time on Sunday or a legal City of Lake Forest holiday; and (3) the average construction noise levels do not exceed 80 dBA Leq(1-hour) at nearby "noise-sensitive land uses," as that term is defined in Section 11.16.020 of the Municipal Code.

3.4 THRESHOLDS OF SIGNIFICANCE

TRAFFIC NOISE

Generally, a 3 dBA increase in noise levels is barely perceptible, and a 5 dBA increase in noise levels is clearly perceptible. In areas where the existing ambient noise level exceeds 65 dBA CNEL, the noise environment is considered degraded and less of an increase in ambient noise levels is allowed. Therefore, a proposed project would normally have a significant offsite traffic noise impact if one of the following criteria are met:

- When existing noise levels are between 60 dBA and 65 dBA CNEL, a 3 dBA CNEL increase in noise will be considered significant;
- When existing noise levels exceed 65 dBA CNEL, a 1.5 dBA CNEL increase in noise will be considered significant.

STATIONARY NOISE

The Noise Ordinance sets limits on the level and duration of time a stationary noise source (e.g., mechanical equipment) may impact a noise-sensitive area. Table 3-2 outlines these noise limits. The determination that a project has the potential to exceed the City's established noise limits is typically based on a noise technical report prepared by a qualified acoustical consultant. The project would normally have a significant stationary noise impact if it would exceed the stationary source noise criteria for the City of Lake Forest as specified in Table 3-2.

CONSTRUCTION NOISE

Per Section 11.16.050, a project would normally have a significant construction noise impact if construction noise exceeds 80 dBA Leq at nearby Noise-Sensitive Residential Land Uses, as that term is defined in the Municipal Code, between the hours of 7:00 a.m. and 8:00 p.m., Monday through Saturday, or exceeds Municipal Code standards at nearby Noise-Sensitive Residential Land Uses between 8:00 p.m. and 7:00 a.m., Monday through Saturday, or at any time on Sunday or a legal City of Lake Forest holiday.

VIBRATION

The Noise Control Chapter (11.16) of the Lake Forest Municipal Code states that operating or permitting the operation of any device that creates vibration that is distinctly perceptible to an individual at a receiving vibration-sensitive land use is prohibited. A project would normally have a significant vibration impact if it would exceed applicable criteria from the FTA or Caltrans regarding vibration damage and annoyance limits.

3.5 POTENTIAL MITIGATION

The mitigation measures listed in this section are examples of the types of mitigation that could be applied to a project to reduce identified noise impacts. The actual mitigation recommended for a project will vary depending on the project itself, the specific impact, and other issues that may arise on a case-by-case basis. It is not intended that each mitigation measure identified in this section be applied to every project or that the mitigation be written exactly as presented herein. Similarly, mitigation may be required that is not identified in this document.

CONSTRUCTION NOISE

Potential mitigation measures for short-term construction-related noise impacts that exceed the significance thresholds may include:

- Use of noise control techniques (e.g., absorptive mufflers, use of intake silencers, engine enclosures and acoustically attenuating shields or shrouds) on equipment and trucks used for project construction.

- Use of temporary sound barriers/blankets between construction equipment and nearby sensitive receptors. Barriers must be constructed with solid material with a density of at least 1 pound per square foot with no gaps from the ground to the top of the barrier and must be lined on the construction side with acoustical blanket.

- Use of hydraulically or electrically powered impact tools (e.g., jack hammers, pavement breakers, and rock drills) for project construction to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatic tools is unavoidable, an exhaust muffler and/or sound attenuation barriers/blankets on the compressed air exhaust may be used. Quieter procedures would include, for example, drills rather than impact equipment.

- Use of temporary power poles or the electrical grid instead of generators.

- Locating stationary noise sources as far from adjacent properties as possible, and use of temporary sheds, insulation barriers, or other measures as determined by the City.

- To the extent consistent with applicable safety regulations, use of trucks with SAE J994 Class "D" or equivalent reverse motion alarms (ambient-adjusting, or “smart alarms” that automatically adjust the alarm to 5 dBA above the ambient near the operating equipment) or switched off back-up alarms with human spotters in compliance with all safety requirements and laws.

- Truck routes that avoid residential areas to the extent possible.

STATIONARY NOISE SOURCES

Potential mitigation measures for long-term stationary noise impacts that exceed the significance thresholds may include:

- Redesign the source to radiate less noise (e.g., substitute a quieter equipment type/process or enclose the source with sound absorbent material);

- Use insulation or construct solid barriers between noise sources and noise receivers;

- Separate noise sources from noise receivers by distances sufficient to attenuate the noise to acceptable levels;

- Locate delivery, truck loading, or trash pickup areas as far from “noise-sensitive land uses” (as that term is defined in Section 11.16.020 of the Municipal Code) as possible;

- Limit delivery and loading/unloading hours;

- Insulate structures;
- Limit the hours of use of noise-generating equipment;
- Require a follow-up acoustical analysis once preliminary noise reduction considerations are presented;
- Inspect noise generating equipment prior to issuance of occupancy permits to verify onsite containment of noise.

TRAFFIC NOISE

Potential mitigation measures for long-term mobile noise impacts that exceed the significance thresholds may include:

- Attenuate noise by using barriers;
- Installation of "quiet pavement" (e.g., rubberized asphalt);
- Redirect sound transmission paths;

VIBRATION

Potential mitigation measures for vibration impacts that exceed the significance thresholds may include:

- Use of equipment that generates lower vibration levels (e.g., static rollers instead of vibratory rollers, smaller earthmoving equipment when within close distances of receptors, alternatives to impact pile driving);
- Increase or establish minimum property line setbacks for vibration-generating equipment;
- Require vibration monitoring during applicable phases of construction.

3.6 REFERENCES

- *City of Lake Forest 2020 General Plan – Public Safety Element*
- *City of Lake Forest Municipal Code, Chapter 11.16 – Noise Control.*