APPENDIX G

Noise Study

MAPLE & MAIN PROJECT ENVIRONMENTAL NOISE ASSESSMENT

Hayward, California

December 3, 2015

Prepared for:

Paul Stephenson, AICP
Impact Sciences, Inc.
505 14th Street, Suite 1230
Oakland, CA 94612

Prepared by:

Carrie J. Janello

ILLINGWORTH & RODKIN, INC.
Acoustics • Air Quality
1 Willowbrook Court, Suite 120
Petaluma, CA 94954
(707) 794-0400

Project: 15-201

INTRODUCTION

The Maple & Main project proposes the construction of a mixed-use development with high-quality housing, retail, and jobs in close proximity to entertainment, shopping, and public transportation in downtown Hayward, California. The proposed mixed-use project includes a five-story, 235-unit apartment building and an existing medical office building. The proposed residential building would have three outdoor ground-level courtyards, a rooftop terrace, a clubhouse with fitness facilities, ground-level retail and leasing office, and a covered parking garage. The existing medical building would be reduced to approximately 60,000 square feet with two- and four-story sections under the project conditions. Improvements are proposed to both the exterior façade and interior of the building, including a more prominent lobby at the corner of Maple Court and McKeever Avenue.

This report evaluates the project's potential to result in significant impacts with respect to applicable California Environmental Quality Act (CEQA) Guidelines. The report is divided into two sections: 1) the Setting Section which provides a brief description of the fundamentals of environmental noise, summarizes applicable regulatory criteria, and discusses the results of the ambient noise monitoring survey completed to document existing noise conditions; and 2) the Impacts and Mitigation Measures Section which describes the significance criteria used to evaluate project impacts, provides a discussion of each project impact, and presents mitigation measures, where necessary, to provide a compatible project in relation to adjacent noise sources and land uses.

SETTING

Fundamentals of Environmental Noise

Noise may be defined as unwanted sound. Noise is usually objectionable because it is disturbing or annoying. The objectionable nature of sound could be caused by its *pitch* or its *loudness*. *Pitch* is the height or depth of a tone or sound, depending on the relative rapidity (*frequency*) of the vibrations by which it is produced. Higher pitched signals sound louder to humans than sounds with a lower pitch. *Loudness* is intensity of sound waves combined with the reception characteristics of the ear. Intensity may be compared with the height of an ocean wave in that it is a measure of the amplitude of the sound wave.

In addition to the concepts of pitch and loudness, there are several noise measurement scales which are used to describe noise in a particular location. A *decibel (dB)* is a unit of measurement which indicates the relative amplitude of a sound. The zero on the decibel scale is based on the lowest sound level that the healthy, unimpaired human ear can detect. Sound levels in decibels are calculated on a logarithmic basis. An increase of 10 decibels represents a ten-fold increase in acoustic energy, while 20 decibels is 100 times more intense, 30 decibels is 1,000 times more intense, etc. There is a relationship between the subjective noisiness or loudness of a sound and its intensity. Each 10 decibel increase in sound level is perceived as approximately a doubling of loudness over a fairly wide range of intensities. Technical terms are defined in Table 1.

There are several methods of characterizing sound. The most common in California is the *A-weighted sound level (dBA).* This scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. Representative outdoor and indoor noise levels in units of dBA are shown in Table 2. Because sound levels can vary markedly over a short period of time, a method for describing either the average character of the sound or the statistical behavior of the variations must be utilized. Most commonly, environmental sounds are described in terms of an average level that has the same acoustical energy as the summation of all the time-varying events. This *energy-equivalent sound/noise descriptor* is called L_{eq}. The most common averaging period is hourly, but L_{eq} can describe any series of noise events of arbitrary duration.

The scientific instrument used to measure noise is the *sound level meter*. Sound level meters can accurately measure environmental noise levels to within about plus or minus 1 dBA. Various computer models are used to predict environmental noise levels from sources, such as roadways and airports. The accuracy of the predicted models depends upon the distance the receptor is from the noise source. Close to the noise source, the models are accurate to within about plus or minus 1 to 2 dBA.

Since the sensitivity to noise increases during the evening and at night -- because excessive noise interferes with the ability to sleep -- 24-hour descriptors have been developed that incorporate artificial noise penalties added to quiet-time noise events. The *Community Noise Equivalent Level* (*CNEL*) is a measure of the cumulative noise exposure in a community, with a 5 dB penalty added to evening (7:00 p.m. - 10:00 p.m.) and a 10 dB addition to nocturnal (10:00 p.m. - 7:00 a.m.) noise levels. The *Day/Night Average Sound Level* (L_{dn}) is essentially the same as CNEL, with the exception that the evening time period is dropped and all occurrences during this three-hour period are grouped into the daytime period.

Fundamentals of Groundborne Vibration

Ground vibration consists of rapidly fluctuating motions or waves with an average motion of zero. Several different methods are typically used to quantify vibration amplitude. One method is the Peak Particle Velocity (PPV). The PPV is defined as the maximum instantaneous positive or negative peak of the vibration wave. In this report, a PPV descriptor with units of mm/sec or in/sec is used to evaluate construction generated vibration for building damage and human complaints. Table 3 displays the reactions of people and the effects on buildings that continuous vibration levels produce.

The annoyance levels shown in Table 3 should be interpreted with care since vibration may be found to be annoying at much lower levels than those shown, depending on the level of activity or the sensitivity of the individual. To sensitive individuals, vibrations approaching the threshold of perception can be annoying. Low-level vibrations frequently cause irritating secondary vibration, such as a slight rattling of windows, doors, or stacked dishes. The rattling sound can give rise to exaggerated vibration complaints, even though there is very little risk of actual structural damage.

Construction activities can cause vibration that varies in intensity depending on several factors. The use of pile driving and vibratory compaction equipment typically generates the highest

construction related groundborne vibration levels. Because of the impulsive nature of such activities, the use of the PPV descriptor has been routinely used to measure and assess groundborne vibration and almost exclusively to assess the potential of vibration to induce structural damage and the degree of annoyance for humans.

The two primary concerns with construction-induced vibration, the potential to damage a structure and the potential to interfere with the enjoyment of life, are evaluated against different vibration limits. Studies have shown that the threshold of perception for average persons is in the range of 0.008 to 0.012 in/sec PPV. Human perception to vibration varies with the individual and is a function of physical setting and the type of vibration. Persons exposed to elevated ambient vibration levels, such as people in an urban environment, may tolerate a higher vibration level.

Structural damage can be classified as cosmetic only, such as minor cracking of building elements, or may threaten the integrity of the building. Safe vibration limits that can be applied to assess the potential for damaging a structure vary by researcher and there is no general consensus as to what amount of vibration may pose a threat for structural damage to the building. Construction-induced vibration that can be detrimental to the building is very rare and has only been observed in instances where the structure is at a high state of disrepair and the construction activity occurs immediately adjacent to the structure.

TABLE 1 Definition of Acoustical Terms Used in this Report

Term	Definition
Decibel, dB	A unit describing, the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure. The reference pressure for air is 20 micro Pascals.
Sound Pressure Level	Sound pressure is the sound force per unit area, usually expressed in micro Pascals (or 20 micro Newtons per square meter), where 1 Pascal is the pressure resulting from a force of 1 Newton exerted over an area of 1 square meter. The sound pressure level is expressed in decibels as 20 times the logarithm to the base 10 of the ratio between the pressures exerted by the sound to a reference sound pressure (e. g., 20 micro Pascals). Sound pressure level is the quantity that is directly measured by a sound level meter.
Frequency, Hz	The number of complete pressure fluctuations per second above and below atmospheric pressure. Normal human hearing is between 20 Hz and 20,000 Hz. Infrasonic sound are below 20 Hz and Ultrasonic sounds are above 20,000 Hz.
A-Weighted Sound Level, dBA	The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise.
Equivalent Noise Level, L_{eq}	The average A-weighted noise level during the measurement period.
L_{max}, L_{min}	The maximum and minimum A-weighted noise level during the measurement period.
L_{01}, L_{10}, L_{50}, L_{90}	The A-weighted noise levels that are exceeded 1%, 10%, 50%, and 90% of the time during the measurement period.
Day/Night Noise Level, L_{dn} or DNL	The average A-weighted noise level during a 24-hour day, obtained after addition of 10 decibels to levels measured in the night between 10:00 p.m. and 7:00 a.m.
Community Noise Equivalent Level, CNEL	The average A-weighted noise level during a 24-hour day, obtained after addition of 5 decibels in the evening from 7:00 p.m.to 10:00 p.m. and after addition of 10 decibels to sound levels measured in the night between 10:00 p.m. and 7:00 a.m.
Ambient Noise Level	The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.
Intrusive	That noise which intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency, and time of occurrence and tonal or informational content as well as the prevailing ambient noise level.

Source: Handbook of Acoustical Measurements and Noise Control, Harris, 1998.

TABLE 2 Typical Noise Levels in the Environment

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	110 dBA	Rock band
Jet fly-over at 1,000 feet		
	100 dBA	
Gas lawn mower at 3 feet		
	90 dBA	
Diesel truck at 50 feet at 50 mph		Food blender at 3 feet
	80 dBA	Garbage disposal at 3 feet
Noisy urban area, daytime		
Gas lawn mower, 100 feet	70 dBA	Vacuum cleaner at 10 feet
Commercial area		Normal speech at 3 feet
Heavy traffic at 300 feet	60 dBA	
		Large business office
Quiet urban daytime	50 dBA	Dishwasher in next room
Quiet urban nighttime	40 dBA	Theater, large conference room
Quiet suburban nighttime		
	30 dBA	Library
Quiet rural nighttime		Bedroom at night, concert hall (background)
	20 dBA	
		Broadcast/recording studio
	10 dBA	
	0 dBA	

Source: Technical Noise Supplement (TeNS), California Department of Transportation, September 2013.

TABLE 3 Reactions of People and Damage to Buildings from Continuous or Frequent Intermittent Vibration Levels

Velocity Level, PPV (in/sec)	Human Reaction	Effect on Buildings
0.01	Barely perceptible	No effect
0.04	Distinctly perceptible	Vibration unlikely to cause damage of any type to any structure
0.08	Distinctly perceptible to strongly perceptible	Recommended upper level of the vibration to which ruins and ancient monuments should be subjected
0.1	Strongly perceptible	Virtually no risk of damage to normal buildings
0.3	Strongly perceptible to severe	Threshold at which there is a risk of damage to older residential dwellings such as plastered walls or ceilings
0.5	Severe - Vibrations considered unpleasant	Threshold at which there is a risk of damage to newer residential structures

Source: Transportation and Construction Vibration Guidance Manual, California Department of Transportation, September 2013.

Regulatory Background - Noise

The State of California and the City of Hayward have established regulatory criteria that are applicable in this assessment. The State CEQA Guidelines, Appendix G, are used to assess the potential significance of impacts pursuant to local General Plan policies, Municipal Code standards, or the applicable standards of other agencies. A summary of the applicable regulatory criteria is provided below.

State CEQA Guidelines. The CEQA contains guidelines to evaluate the significance of effects of environmental noise attributable to a proposed project. Under CEQA, noise impacts would be considered significant if the project would result in:

(a) Exposure of persons to or generation of noise levels in excess of standards established in the local General Plan or Noise Ordinance, or applicable standards of other agencies;

(b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels;

(c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project;

(d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project;

(e) For a project located within an airport land use plan or where such a plan has not been adopted within two miles of a public airport or public use airport, if the project would expose people residing or working in the project area to excessive noise levels; or

(f) For a project within the vicinity of a private airstrip, if the project would expose people residing or working in the project area to excessive noise levels.

CEQA does not define what noise level increase would be considered substantial. Typically, project-generated noise level increases of 3 dBA L_{dn}/CNEL or greater would be considered significant where exterior noise levels would exceed the normally acceptable noise level standard (60 dBA L_{dn}/CNEL for residential land uses). Where noise levels would remain at or below the normally acceptable noise level standard with the project, noise level increases of 5 dBA L_{dn}/CNEL or greater would be considered significant.

2010 Cal Green Code. The State of California established exterior sound transmission control standards for new non-residential buildings as set forth in the 2010 California Green Building Standards Code (Section 5.507.4.1 and 5.507.4.2). These standards were not altered in the 2013 revisions, and the sections that pertain to this project are as follows:

5.507.4.1 Exterior noise transmission, prescriptive method. Wall and roof-ceiling assemblies exposed to the noise source making up the building envelope shall meet a composite Sound Transmission Class (STC) rating of at least 50 or a composite Outdoor-Indoor Transmission Class (OITC) rating of no less than 40, with exterior windows of a minimum STC of 40 or OITC of 30 when the building falls within the 65 dBA L_{dn} noise contour of a freeway or expressway, railroad, industrial source, or fixed-guideway noise source, as determined by the local general plan noise element.

5.507.4.2 Performance method. For buildings located, as defined by Section 5.507.4.1, wall and roof-ceiling assemblies exposed to the noise source making up the building envelope shall be constructed to provide an interior noise environment attributable to exterior sources that does not exceed an hourly equivalent noise level ($L_{eq\ (1\text{-}hr)}$) of 50 dBA in occupied areas during any hour of operation.

City of Hayward 2040 General Plan. The City of Hayward 2040 General Plan Hazards Element establishes policies to control noise within the community. Applicable goals and policies presented in the General Plan are as follows:

GOAL HAZ-8. Minimize human exposure to excessive noise and ground vibration.

Policy HAZ-8.1: Locating Noise Sensitive Uses. The City shall strive to locate noise sensitive uses (e.g., residences, schools, hospitals, libraries, religions institutions, and convalescent homes) away from major noise sources of noise.

Policy HAZ-8.2: Noise Study and Mitigation. The City shall require development projects in areas where they may be exposed to major noise sources (e.g., roadways, rail lines, and airport, or other non-transportation noise sources) to conduct a project level environmental noise

analysis. The noise analysis shall determine noise exposure and noise standard compatibility with respect to the noise standards identified in Table HAZ-1 and shall incorporate noise mitigation when located in noise environments that are not compatible with the proposed use of the project. The study shall use Table HAZ-1 (Exterior Noise Standards for Various Land Uses) and Figure HAZ-1 (Future Noise Contour Map) to determine potential noise exposure impacts, noise compatibility thresholds, and the need for mitigation. The City shall determine mitigation measures based on project-specific noise studies, and may include sound barriers, building setbacks, the use of closed windows and the installation of heating and air conditioning ventilation systems, and the installation of noise attenuating windows and wall/ceiling insulation.

Policy HAZ-8.3: Incremental Noise Impacts of Commercial and Industrial Development. The City shall consider the potential noise impacts of commercial and industrial developments that are located near residences and shall require noise mitigation measures as a condition of project approval.

Policy HAZ-8.5: Residential Noise Standards. The City shall require the design of new residential development to comply with the following noise standards:

- The maximum acceptable interior noise level for all new residential units (single-family, duplex, mobile home, multi-family, and mixed-use units) shall be and L_{dn} of 45 dB with windows closed.

- The maximum acceptable exterior noise level for the primary open space area of a detached single-family home, duplex or mobile home, which is typically the backyard or a fenced side yard, shall be an L_{dn} of 60 dB. This standard shall be measured at the approximate center of the primary open space area. This standard does not apply to secondary open space areas, such as front yards, balconies, stoops, and porches.

- The maximum acceptable exterior noise level for the primary open space area of townhomes and multi-family apartments or condominiums (private rear yards for townhomes; and common courtyards, roof gardens, or gathering spaces for multi-family projects) shall be and L_{dn} of 65 dB. This standard shall be measured at the approximate center of the primary open space area. This standard does not apply to secondary open space areas, such as front yards, balconies, stoops, and porches.

Policy HAZ-8.17: Community Noise Control Ordinance. The City shall maintain, implement, and enforce a community noise control ordinance to regulate noise levels from public and private properties, vehicles, construction sites, and landscaping activities.

Policy HAZ-8.20: Construction Noise Study. The City may require development projects subject to discretionary approval to assess potential construction noise impacts on nearby sensitive uses and to minimize impacts on those uses, to the extent feasible.

Policy HAZ-8.21: Construction and Maintenance Noise Limits. The City shall limit the hours of construction and maintenance activities to the less sensitive hours of the day (7:00 a.m. to 7:00 p.m. Monday through Saturday and 10:00 a.m. to 6:00 p.m. on Sundays and holidays).

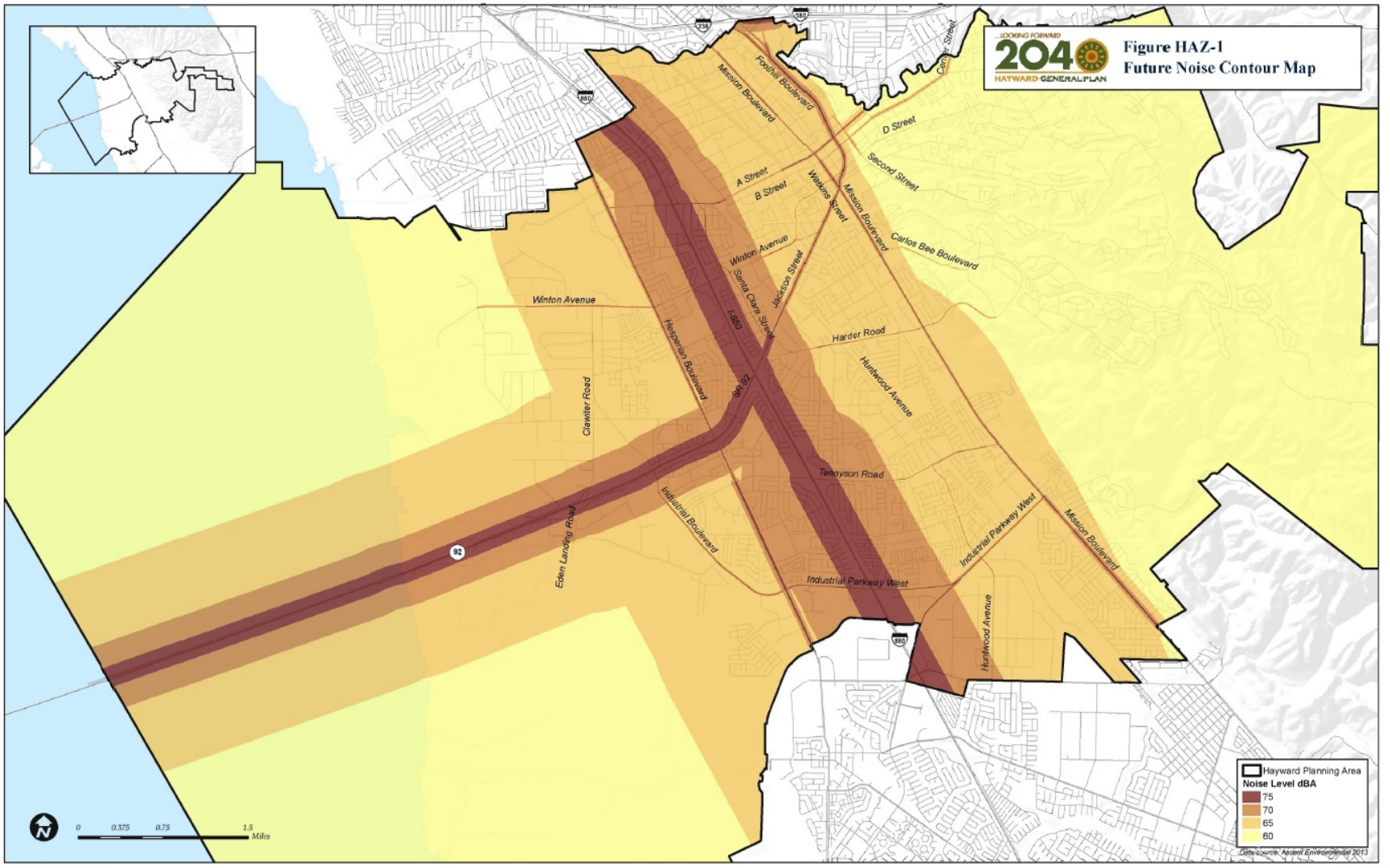
Policy HAZ-8.22: Vibration Impact Assessment. The City shall require a vibration impact assessment for proposed projects in which heavy-duty construction equipment would be used (e.g. pile driving, bulldozing) within 200 feet of an existing structure or sensitive receptor. If applicable, the City shall require all feasible mitigation measures to be implemented to ensure that no damage or disturbance to structures or sensitive receptors would occur.

TABLE HAZ-1
Exterior Noise Compatibility Standards for Various Land Uses

Land Use Type	Highest Level of Exterior Noise Exposure that is Regarded as "Normally Acceptable"[a] (Ldn[b] or CNEL[c])
Residential: Single-Family Homes, Duplex, Mobile Home	60
Residential: Townhomes and Multi-Family Apartments and Condominiums	65
Urban Residential Infill[d] and Mixed-Use Projects[e]	70
Lodging: Motels and Hotels	65
Schools, Libraries, Churches, Hospitals, Nursing Homes	70
Auditoriums, Concert Hall, Amphitheaters	Mitigation based on site-specific study
Sports Arena, Outdoor Spectator Sports	Mitigation based on site-specific study
Playgrounds, Neighborhood Parks	70
Golf Courses, Riding Stables, Water Recreation, Cemeteries	75
Office Buildings: Business, Commercial, and Professional	70
Industrial Manufacturing, Utilities, Agriculture	75

Source: Governor's Office of Planning and Research, *State of California General Plan Guidelines 2003,* October 2003.

a. As defined in the *State of California General Plan Guidelines 200,* "Normally Acceptable" means that the specified land uses is satisfactory, based upon the assumption that any building involved is of normal conventional construction, without any special noise mitigation. For projects located along major transportation corridors (major freeways, arterials, and rail lines) this "normally acceptable" exterior noise level may be exceeded for certain areas of the project site (e.g. the frontage adjacent to the corridor or parking areas) with the exception of primary open space areas (see policies HAZ-8.5 and HAZ-8.6).
b. Ldn or Day Night Average is an average 24-hour noise measurement that factors day and night noise levels.
c. CNEL or Community Noise Equivalent Level measurements are a weighted average of sound levels gathered throughout a 24-hour period.
d. Urban residential infill would include all types of residential development within existing or planned urban areas (such as Downtown, The Cannery Neighborhood, and the South Hayward BART Urban Neighborhood) and along major corridors (such as Mission Boulevard).
e. Mixed-Use Projects would include all mixed-use developments throughout the City of Hayward.



G12010071 01 004

September, 2013

City of Hayward Municipal Code. The City's Municipal Code contains a Noise Ordinance that limits noise levels during construction activities and at adjacent properties. Section 4-1.03.1 of the Municipal Code outlines residential and commercial property noise limits and Section 4-1.03.4 outlines construction noise limits. The applicable Municipal Code sections are presented below:

Section 4-1.03.1 Noise Restriction by Decibel

(a) Residential Property Noise Limits.

1. No person shall produce or allow to be produced by human voice, machine, device, or any combination of same, on residential property, a noise level at any point outside of the property plane that exceeds seventy (70) dBA between the hours of 7:00 a.m. and 9:00 p.m. or sixty (60) dBA between the hours of 9:00 p.m. and 7:00 a.m.

2. No person shall produce or allow to be produced by human voice, machine, device, or any combinations of same, on multifamily residential property, a noise level more than sixty (60) dBA three feet from any wall, floor, or ceiling inside any dwelling unit on the same property, when windows and doors of the dwelling unit are closed, except within the dwelling unit in which the noise source or sources may be located.

(b) Commercial and Industrial Property Noise Limits. Except for commercial and industrial property abutting residential property, no person shall produce or allow to be produced by human voice, machine, device, or any other combination of same, on commercial or industrial property, a noise level at any point outside of the property plane that exceeds seventy (70) dBA. Commercial and industrial property that abuts residential property shall be subject to the residential property noise limits set forth in sections (a)(1) and (2) above.

Section 4-1.03.4 Construction and Alteration of Structures; Landscaping Activities

Unless otherwise provided pursuant to a duly-issued permit or a condition of approval of a land use entitlement, the construction, alteration, or repair of structures and any landscaping activities, occurring between the hours of 10:00 a.m. and 6:00 p.m. on Sundays and holidays, and 7:00 a.m. and 7:00 p.m. on other days, shall be subject to the following:

(a) No individual device or piece of equipment shall produce a noise level exceeding eighty-three (83) dBA at a distance of twenty-five (25) feet from the source. If the device or equipment is housed within a structure on the property, the measurement shall be made outside the structure at a distance as close as possible to twenty-five (25) feet from the equipment.

(b) The noise level at any point outside the property plane shall not exceed eighty-six (86) dBA.

(c) During all other times, the decibel levels set forth in Section 4-1.03.1 shall control.

Existing Noise Environment

The project site is located south of McKeever Avenue, between Maple Court and Main Street in downtown Hayward. Currently, the site is developed with a variety of buildings and uses, including a medical office, the former Bryman College campus, and single-family residences, as well as surface parking. The project site is adjacent to commercial buildings fronting A Street to the south. Opposite McKeever Avenue to the north and opposite Main Street to the west are single-family residences. Commercial property is also located opposite Main Street to the west, as well as opposite Maple Court to the east.

A noise monitoring survey was performed at the site beginning on Wednesday September 30, 2015 and concluding on Friday October 2, 2015. The monitoring survey included two long-term and two short-term noise measurements, as shown in Figure 1. The noise environment at the site and in the surrounding areas results primarily from vehicular traffic along A Street, which is buffered from the site by the adjacent property to the south. Traffic along the surrounding roadways including Maple Court, McKeever Avenue, and Main Street also contribute to the noise environment, as well as train traffic from the Hayward BART station located within a half mile of the site. Occasional overhead aircraft associated with Hayward Executive Airport and Oakland International Airport also affect the noise environment at the project site.

Long-term noise measurement LT-1 was made along the western boundary of the project site, approximately 30 feet east of the centerline of Main Street and approximately 245 feet north of the centerline of A Street. LT-1 was placed in a tree near the roadway. Hourly average noise levels at this location typically ranged from 57 to 68 dBA L_{eq} during the day, and from 47 to 66 dBA L_{eq} at night. The day-night average noise level from Wednesday September 30, 2015 through Friday October 2, 2015 ranged from 65 to 67 dBA L_{dn}. The daily trend in noise levels at LT-1 is shown in Figure 2.

LT-2 was made in the parking lot of the commercial property located east of the project, opposite Maple Court. LT-2 was approximately 15 feet east of the centerline of Maple Court and approximately 440 feet north of the centerline of A Street. Hourly average noise levels at this location typically ranged from 57 to 72 dBA L_{eq} during the day, and from 49 to 71 dBA L_{eq} at night. The day-night average noise level from Wednesday September 30, 2015 through Friday October 2, 2015 ranged from 66 to 68 dBA L_{dn}. The daily trend in noise levels at LT-2 is shown in Figure 3. From 7:00 a.m. through 9:00 a.m. on Thursday October 1, 2015, elevated noise levels occurred at LT-2 and were likely due to local parking lot activities.

Both of the short-term noise measurements were conducted on Friday October 2, 2015 in a ten-minute interval starting at 10:20 a.m. ST-1 was made in the parking lot of the existing land uses on the project site. ST-1 was approximately 230 feet north of the centerline of A Street and approximately 155 feet east of the centerline of Main Street. The ten-minute $L_{eq(10)}$ measured at ST-1 was 54 dBA $L_{eq(10)}$, and the estimated day-night average noise level was 59 dBA L_{dn}. ST-2 was made at the front yard equivalent of 1032 McKeever Avenue north of the project site. ST-2 was approximately 25 feet north of the centerline of McKeever Avenue. The ten-minute $L_{eq(10)}$ measured at ST-2 was 57 dBA $L_{eq(10)}$, and the estimated day-night average noise level was 60 dBA L_{dn}. Table 4 summarizes the results for both short-term measurements.

FIGURE 1 Noise Measurement Locations

FIGURE 2 Daily Trend in Noise Levels at LT-1, from September 30 through October 2, 2015

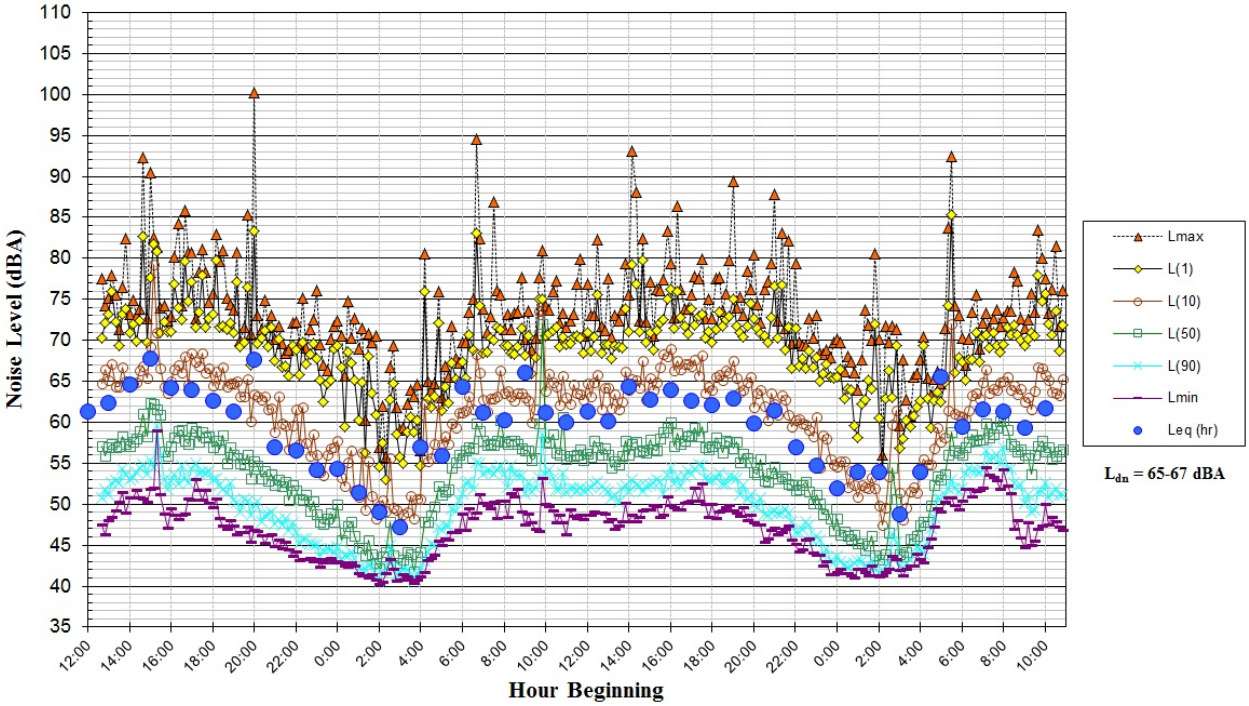


FIGURE 3 Daily Trend in Noise Levels at LT-2, from September 30 through October 2, 2015

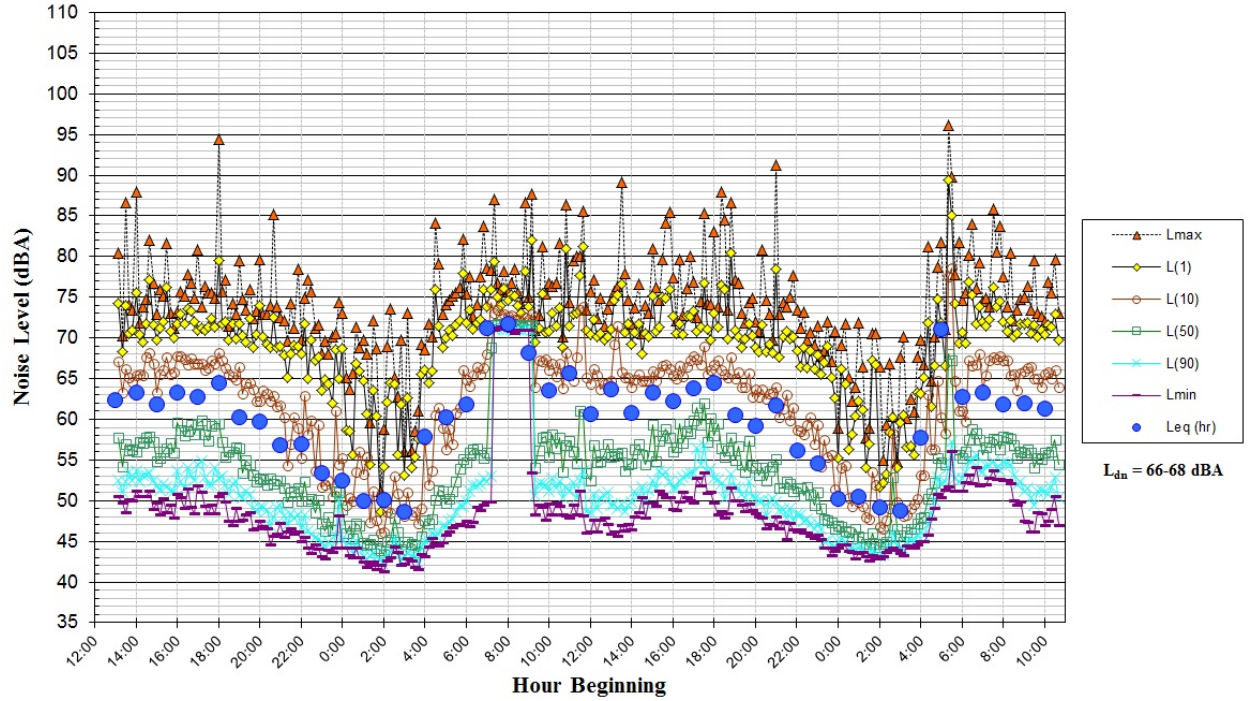


TABLE 4 Summary of Short-Term Noise Measurements (dBA)

Noise Measurement Location (Date, Time)	L_{max}	$L_{(1)}$	$L_{(10)}$	$L_{(50)}$	$L_{(90)}$	$L_{eq(10)}$	L_{dn}
ST-1: In the parking lot of existing project site (10/2/2015, 10:20-10:30)	63	62	57	53	50	54	59
ST-2: Front yard equivalent of 1032 McKeever Ave (10/2/2015, 10:20-10:30)	69	67	61	53	46	57	60

NOISE IMPACTS AND MITIGATION MEASURES

Significance Criteria

The following criteria were used to evaluate the significance of environmental noise resulting from the project:

- A significant noise impact would be identified if the project would expose persons to or generate noise levels that would exceed applicable noise standards presented in the General Plan or Municipal Code.
    - Residential uses are considered "normally acceptable" where exterior noise exposures are 60 dBA L_{dn} or less and interior noise levels are 45 dBA L_{dn} or less.

- A significant impact would be identified if the construction of the project would expose persons to excessive vibration levels. Groundborne vibration levels exceeding 0.3 in/sec PPV would have the potential to result in cosmetic damage to normal buildings, groundborne vibration levels exceeding 0.08 in/sec PPV would have the potential to result in cosmetic damage to fragile buildings, and groundborne vibration levels exceeding 0.1 in/sec PPV would have the potential to result in human annoyance.

- A significant impact would be identified if traffic generated by the project or project improvements/operations would substantially increase noise levels at sensitive receivers in the vicinity. A substantial increase would occur if: a) the noise level increase is 5 dBA L_{dn} or greater, with a future noise level of less than 60 dBA L_{dn}, or b) the noise level increase is 3 dBA L_{dn} or greater, with a future noise level of 60 dBA L_{dn} or greater.

- A significant noise impact would be identified if construction-related noise would temporarily increase ambient noise levels at sensitive receptors. Hourly average noise levels exceeding 60 dBA $L_{eq,}$ and the ambient by at least 5 dBA L_{eq}, for a period of more than one year would constitute a significant temporary noise increase at adjacent residential land uses.

Impact 1: **Noise and Land Use Compatibility.** Future noise levels at the project site are not expected to exceed the City of Hayward's exterior noise and land use compatibility standards. Interior noise levels are expected to exceed the 45 dBA L_{dn} threshold assuming standard construction methods and materials. **This is a significant impact.**

The Maple & Main Mixed-Use Development project proposes the construction of five-story apartment building with 235 units and the reduction of an existing medical office building with two- and four-story sections in Hayward, California. Primary access to the proposed apartment building would be from Main Street, and primary access to the medical office building would be from McKeever Avenue. Adjacent to the project site along the southern property line are existing commercial buildings, and along the northern property line are existing local businesses and single-family residences. Additional commercial land uses are located opposite Main Street to the west and opposite Maple Court to the east. Residential land uses are located opposite McKeever Avenue to the north and opposite Main Street to the west of the project site.

Future Exterior Noise Environment

The future noise environment at the project site would continue to result primarily from traffic along A Street, with traffic along Main Street, McKeever Avenue, and Maple Court being the secondary sources. In October 2015, a traffic study was completed for the proposed project. According to the study, traffic volumes along Main Street and Maple Court would increase by as much as 300% under Cumulative Plus Project conditions; however, considering the low traffic volumes under Existing conditions, the effect on the noise environment would be equivalent to a noise level increase of up to 3 dBA L_{dn}. Future traffic along A Street would increase by as much as 65%, which would result in a noise level increase of 2 dBA L_{dn}. Therefore, the worst-case scenario noise level increase under Cumulative Plus Project traffic conditions would be 3 dBA L_{dn}.

For all mixed-use developments throughout the City of Hayward, Table HAZ-1 of the City's General Plan states that the maximum acceptable exterior noise level for outdoor use areas would be 70 dBA L_{dn}, as measured from the approximate center of the outdoor area. This standard would not apply to balconies or porches. According to the site plan, there would be four outdoor use areas associated with the proposed mixed-use apartment building (three first-floor courtyards and a rooftop terrace), and the medical building would not have any outdoor use areas. Figure 4 shows each outdoor use area located on the proposed mixed-use development.

The first courtyard would be located to the north of the proposed apartment building and to the west of the medical building that would remain under proposed project conditions. This courtyard would consist of a picnic/lounge area and would receive partial shielding from Main Street and McKeever Avenue traffic by the proposed project buildings, as well as existing local businesses and residences located to the northwest of the project site. The center of Courtyard 1 would be set back from the centerline of Main Street by approximately 165 feet and would be set back from the centerline of McKeever Avenue by approximately 160 feet. At these distances and with the partial shielding from the intervening buildings, the future exterior noise levels at Courtyard 1 would be less than 65 dBA L_{dn}.

The second courtyard, which includes a pool, would be surrounded by the proposed apartment building and the section of the existing medical building intended to remain under future project conditions. The center of Courtyard 2 would be set back from the centerline of Maple Court by approximately 150 feet. With shielding from the proposed buildings, the future exterior noise levels at this courtyard would be less than 65 dBA L_{dn}.

Courtyard 3 would be a circular-shaped sitting area surrounding a water feature. Located along the southern boundary of the project site, this courtyard would be shielded from traffic along Main Street by the proposed apartment building but would have direct line-of-sight to A Street. The center of Courtyard 3 would be approximately 145 feet from the centerline of Main Street and approximately 210 feet from the centerline of A Street. Based on the existing short-term measurement at ST-1, the future exterior noise level at Courtyard 3 would be 63 dBA L_{dn} under future worst-case scenario conditions.

Located on roof of the proposed apartment building would be an outdoor terrace. This outdoor use area would be located to the north of Courtyard 3 and would have direct line-of-sight to Main Street and A Street. The center of the rooftop terrace would be set back from the centerline of each respect roadway by 150 and 265 feet. At these distances and taking into account the elevation of the rooftop terrace, the future exterior noise levels would be at or below 65 dBA L_{dn}.

Since future exterior noise levels at each of the outdoor use areas of the proposed mixed-use project would be below 70 dBA L_{dn}, this would be a less-than-significant impact.

FIGURE 4 Outdoor Use Areas Located at the Proposed Mixed-Use Building

Future Interior Noise Environment

Proposed Mixed-Use Apartment Building

According to Policy HAZ-8.5 of the City of Hayward's General Plan, the City requires that interior noise levels should be maintained at 45 dBA L_{dn} or less for all residences and mixed-use units.

The mixed-use units facing the adjacent roadways would include commercial retail, offices, and apartments on the first floor and apartments only on the upper floors. The eastern façade of the mixed-use building would be set back from the centerline of Maple Court by approximately 35 feet. At this distance, the apartments facing the roadway would be exposed to future exterior noise levels of 65 to 67 dBA L_{dn}. While the apartments located on the northern façade within 265 feet of the centerline of Maple Court would receive partial shielding from the medical building, the units along this façade would have direct line-of-sight to Maple Court. These units would be exposed to future exterior noise levels ranging from 54 to 67 dBA L_{dn}. The units along the southern façade with direct line-of-sight of Maple Court would be set back from the centerline of the roadway by 35 to 185 feet. These apartments would also be exposed to traffic noise from A Street, with partial shielding provided by the existing commercial property fronting A Street. The units along the southern façade of the proposed mixed-use building located east of the parking garage would be exposed to future exterior noise levels ranging from 57 to 67 dBA L_{dn}.

The western façade of the proposed mixed-use building would face Main Street, with a setback of approximately 40 feet. The apartments, leasing office, and retail store along this building façade would be exposed to future exterior noise levels of 67 to 69 dBA L_{dn}. For the apartments surrounding Courtyard 3 along the southern façade of this part of the proposed building, the units would be shielded from traffic along Maple Court and Main Street but would have direct line-of-sight to A Street. The first and second floors facing A Street would be partially shielded by existing intervening buildings, but the upper floors would be unshielded. The setbacks for these units would range from 175 to 280 feet. At these distances, the units would be exposed to future exterior noise levels ranging from 61 to 64 dBA L_{dn}. The units located to the north of proposed parking garage would face McKeever Avenue. While the first and second floors would be partially shielded by existing local businesses and residences located to the northwest of the project site, the upper floors would have a direct line-of-sight to traffic along McKeever Avenue and Main Street. These units would be set back from the centerline of McKeever Avenue by approximately 195 feet and would be set back from the centerline of Main Street by 40 to 225 feet. At these distances, the units would be exposed to future exterior noise levels ranging from 57 to 69 dBA L_{dn}.

Interior noise levels would vary depending upon the design of the buildings (relative window area to wall area) and the selected construction materials and methods. Standard residential construction provides approximately 15 dBA of exterior to interior noise reduction, assuming the windows are partially open for ventilation. Standard construction with the windows closed provides approximately 20 to 25 dBA of noise reduction in interior spaces. Where exterior noise levels range from 60 to 65 dBA L_{dn}, the inclusion of adequate forced-air mechanical ventilation is often the method selected to reduce interior noise levels to acceptable levels by closing the windows to control noise. Where noise levels exceed 65 dBA L_{dn}, forced-air mechanical

ventilation systems and sound-rated construction methods are normally required. Such methods or materials may include a combination of smaller window and door sizes as a percentage of the total building façade facing the noise source, sound-rated windows and doors, sound rated exterior wall assemblies, and mechanical ventilation so windows may be kept closed at the occupant's discretion. For the mixed-use apartment building, interior levels would be as high as 54 dBA L_{dn}. This would be a significant impact.

Medical Building

In the description of the proposed project, the Maple & Main Mixed-Use project would comply with the state mandated Cal Green building code. The State of California requires that wall and roof-ceiling assemblies exposed to the adjacent roadways have a composite STC[1] rating of at least 50 or a composite OITC rating of no less than 40, with exterior windows of a minimum STC of 40 or OITC of 30 when the commercial property falls within the 65 dBA L_{dn} noise contour determined in the local general plan noise element. According to the City's General Plan, the project site does fall within the 65 dBA L_{dn} 2040 contour line, which is shown above in Figure HAZ-1. The State also requires interior noise levels to be maintained at 50 dBA $L_{eq(1\text{-}hr)}$ or less during hours of operation at the medical building.

The part of the medical building to remain under future project conditions would be located near the corner of McKeever Avenue and Maple Court. The eastern façade of the medical building would be setback from the centerline of Maple Court by approximately 20 feet. At this distance, the building façade would be exposed to future exterior noise levels ranging from 59 to 74 dBA $L_{eq(1\text{-}hr)}$ during daytime hours of operation. The northern façade of the building would be setback from the centerline of McKeever Avenue by approximately 65 feet, and at this distance, the building façade would be exposed to future exterior noise levels ranging from 48 to 74 dBA $L_{eq(1\text{-}hr)}$ during the day. A wall assembly with an STC rating of at least 50 and window assemblies with an STC rating of at least 40 would provide at least 35 to 40 dBA of noise reduction in interior spaces. The inclusion of adequate forced-air mechanical ventilation systems is normally required so windows may be kept closed at the occupant's discretion. The sound-rated construction materials established in the Cal Green Code in combination with forced-air mechanical ventilation would satisfy the threshold for the entire medical building. This would not be a significant impact.

Mitigation Measure 1:

The following mitigation measures shall be incorporated into the proposed project to reduce interior noise levels:

- Based on the building floor plans and elevations provided at the time of this analysis, preliminary calculations indicate that apartments in the proposed mixed-use building facing Maple Court would require windows and doors with a minimum STC rating of 24 to 26. The units on the northern and southern façades located beyond 50 feet from the

[1] **Sound Transmission Class (STC)** A single figure rating designed to give an estimate of the sound insulation properties of a partition. Numerically, STC represents the number of decibels of speech sound reduction from one side of the partition to the other. The STC is intended for use when speech and office noise constitute the principal noise problem.

centerline of Maple Court would require standard construction materials with forced-air mechanical ventilation at achieve 45 dBA L_{dn} interior levels.

- Windows and doors with a minimum STC rating of 26 to 28 would be adequate for the units facing Main Street. The apartments on northern and southern façades located beyond 75 feet from the centerline of Main Street would require standard construction materials with forced-air mechanical ventilation to achieve 45 dBA L_{dn} interior levels.

- The apartments located on the interior of the building would require forced-air mechanical ventilation systems with standard construction materials to meet the 45 dBA L_{dn} interior threshold.

- A qualified acoustical consultant shall review the final site plan, building elevations, and floor plans prior to construction and recommend building treatments to reduce interior noise levels to 45 dBA L_{dn} or lower. Treatments would include, but are not limited to, sound-rated windows and doors, sound-rated wall and window constructions, acoustical caulking, protected ventilation openings, etc. The specific determination of what noise insulation treatments are necessary shall be conducted on a unit-by-unit basis during final design of the project. Results of the analysis, including the description of the necessary noise control treatments, shall be submitted to the City, along with the building plans and approved design, prior to issuance of a building permit.

- Provide a suitable form of forced-air mechanical ventilation, as determined by the local building official, for all residences on the project site, so that windows can be kept closed at the occupant's discretion to control interior noise and achieve the interior noise standards.

The implementation of this mitigation measure would reduce the impact to a less-than-significant level.

Impact 2: **Exposure to Excessive Ground-borne Vibration.** Construction-related vibration caused by some types of construction activity could be in excess of 0.3 in/sec PPV at the existing single-family residences adjacent to the project site. **This is a significant impact.**

The construction of the project may generate perceptible vibration when heavy equipment or impact tools (e.g. jackhammers, hoe rams) are used. Construction activities would include site demolition, preparation work, foundation work, and new building framing and finishing. The proposed project would not require pile driving, which can cause excessive vibration.

For structural damage, the California Department of Transportation recommends a vibration limit of 0.5 in/sec PPV for buildings structurally sound and designed to modern engineering standards, which typically consist of buildings constructed since the 1990s. A conservative vibration limit of 0.3 in/sec PPV has been used for buildings that are found to be structurally sound but where structural damage is a major concern, which would include older residences built with conventional materials. For ancient buildings or buildings that are documented to be

structurally weakened, a conservative limit of 0.08 in/sec PPV is often used to provide the highest level of protection. No ancient buildings or buildings that are documented to be structurally weakened adjoin the project site. A single-family residence adjacent to the medical office building was built in the 1940s, and assuming that this residence was constructed using conventional materials, ground-borne vibration levels exceeding the conservative 0.3 in/sec PPV limit would have the potential to result in a significant vibration impact.

Table 5 presents typical vibration levels that could be expected from construction equipment at a distance of 25 feet. Project construction activities, such as drilling, the use of jackhammers, rock drills and other high-power or vibratory tools, and rolling stock equipment (tracked vehicles, compactors, etc.) may generate substantial vibration in the immediate vicinity. Vibration levels would vary depending on soil conditions, construction methods, and equipment used. The single- and multi-family residences located opposite Main Street and opposite McKeever Avenue would range from 90 to 105 feet from the project site, which would result in vibration levels ranging from 0.001 to 0.051 in/sec PPV. The single-family residences adjacent to the project site along the northern boundary are approximately 90 feet from the location of the proposed apartment building. At this distance, vibration levels would be expected to range from 0.001 to 0.051 in/sec, which is below the 0.3 in/sec PPV significance threshold used to assess cosmetic damage to buildings that are structurally sound and the 0.08 in/sec PPV threshold used to assess cosmetic damage to buildings that are structurally weakened. Such vibration levels would also be below the 0.1 in/sec PPV significance threshold used to assess the potential for human annoyance. The single-family residence adjacent to the existing medical building, however, is approximately 10 feet from the project property line. At this distance, vibration levels would be expected to be range from 0.008 in/sec PPV to 0.58 in/sec PPV, which would at times exceed the 0.3 in/sec PPV significance threshold used to assess cosmetic damage to buildings that are structurally sound. This could potentially result in “architectural” damage to the building. This is a significant impact.

Mitigation Measure 2:

Within 20 feet of the existing, adjacent residence:

- Compaction activities shall not be conducted using a vibratory roller. Within this area, compaction shall be performed using smaller hand tampers.

- Demolition, earth-moving, and ground-impacting operations shall be phased so as not to occur at the same time and shall use the smallest equipment possible to complete the work. The use of large bulldozers, hoe rams, drill-rigs shall be avoided within 20 feet of the existing, adjacent residence.

- Construction and demolition activities shall not involve clam shell dropping operations.

The implementation of this mitigation measure would reduce vibration levels to 0.1 in/sec PPV or less, below the thresholds used to assess the potential for cosmetic damage or human annoyance due to construction-related vibration. Therefore, the impact would be mitigated to a less-than-significant level.

TABLE 5 Vibration Source Levels for Construction Equipment

Equipment		PPV at 25 ft. (in/sec)	Approximate L_v at 25 ft. (VdB)
Pile Driver (Impact)	upper range	1.158	112
	typical	0.644	104
Pile Driver (Sonic)	upper range	0.734	105
	typical	0.170	93
Clam shovel drop		0.202	94
Hydromill (slurry wall)	in soil	0.008	66
	in rock	0.017	75
Vibratory Roller		0.210	94
Hoe Ram		0.089	87
Large bulldozer		0.089	87
Caisson drilling		0.089	87
Loaded trucks		0.076	86
Jackhammer		0.035	79
Small bulldozer		0.003	58

Source: Transit Noise and Vibration Impact Assessment, United States Department of Transportation, Office of Planning and Environment, Federal Transit Administration, May 2006.

Impact 3: **Substantial Permanent Noise Increases.** The proposed project would not result in a permanent noise level increase at the existing residential land uses in the project vicinity. **This is a less-than-significant impact.**

A significant impact would result if traffic generated by the project would substantially increase noise levels at sensitive receivers in the vicinity. A substantial increase would occur if: a) the noise level increase is 5 dBA L_{dn} or greater, with a future noise level of less than 60 dBA L_{dn}, or b) the noise level increase is 3 dBA L_{dn} or greater, with a future noise level of 60 dBA L_{dn} or greater. Residences to the north of the project site have existing noise levels of 60 dBA L_{dn}, but under future plus project conditions, the noise levels would exceed 60 dBA L_{dn}; therefore, a significant impact would occur if existing levels would increase by 3 dBA L_{dn}. For residences located to the west of the project site where existing noise levels range from 65 to 67 dBA L_{dn}, a significant impact would occur if project-generated traffic would permanently increase noise levels by 3 dBA L_{dn}.

The noise environment in the site vicinity is dominated by A Street traffic and the nearby traffic along Mission Boulevard and Foothill Boulevard. Traffic volumes along Main Street, McKeever Avenue, and Maple Court also affect the noise environment. The traffic report completed for the proposed project provided peak hour volumes for the project-generated traffic. According to the study, the project is projected to add 79 trips during peak morning hours and 111 trips during peak evening hours. Compared to the traffic along the surrounding roadways, the project would not result in a substantial increase in traffic volumes and associated noise levels. The permanent noise level increase due to this project-generated traffic increase at the surrounding noise-sensitive receptors would be approximately 1 dBA L_{dn}. This impact is a less-than-significant impact.

Mitigation Measure 3: **None required.**

Impact 4: **Cumulative Noise Increase.** The proposed project would not make a cumulatively considerable contribution to future noise levels at residential land uses in the vicinity. **This is a less-than-significant impact.**

A significant impact would occur if two criteria are met: 1) if the cumulative traffic noise level increase was 3 dBA L_{dn} or greater for existing levels exceeding 60 dBA L_{dn} or was 5 dBA L_{dn} or greater for existing levels at or below 60 dBA L_{dn}; and 2) if the project would make a "cumulatively considerable" contribution to the overall traffic noise increase. A "cumulatively considerable" contribution would be defined as an increase of 1 dBA L_{dn} or more attributable solely to the proposed project.

Cumulative traffic noise level increases were calculated by comparing the Cumulative traffic volumes and the Cumulative Plus Project volumes to Existing traffic volumes. The traffic noise increases calculated under both Cumulative scenarios (with and without the project) were 3 dBA L_{dn} along the roadways surrounding the project site. Since the traffic noise under future cumulative conditions would increase by 3 dBA L_{dn} with and without the proposed project, the project's contribution is an increase of 0 dBA L_{dn}. Therefore, the project would not make a cumulatively considerable contribution to increased noise levels. This would be a less-than-significant impact.

Mitigation Measure 4: **None required.**

Impact 5: **Temporary Construction Noise.** Existing noise-sensitive land uses would be exposed to construction noise levels in excess of the significance thresholds for a short-term time period. **This is a potentially significant impact**.

Noise impacts resulting from construction depend upon the noise generated by various pieces of construction equipment, the timing and duration of noise-generating activities, and the distance between construction noise sources and noise-sensitive areas. Construction noise impacts primarily result when construction activities occur during noise-sensitive times of the day (e.g., early morning, evening, or nighttime hours), the construction occurs in areas immediately adjoining noise-sensitive land uses, or when construction lasts over extended periods of time.

Construction activities generate considerable amounts of noise, especially during earth-moving activities when heavy equipment is used. The highest maximum noise levels generated by project construction would typically range from about 80 to 90 dBA L_{max} at a distance of 50 feet from the noise source. Typical hourly average construction-generated noise levels for mixed-use developments are about 81 to 88 dBA L_{eq} measured at a distance of 50 feet from the center of the site during busy construction periods (e.g., earth moving equipment, impact tools, etc.). Hourly average construction noise levels associated with the erection of the mixed-use units, such as hammer- and drilling-related noise, range from approximately 63 to 71 dBA at a distance of 50 feet. The noise levels associated with construction of the mixed-use units would be substantially less than the noise levels associated with grading and pavement activities during project site preparation. Construction-generated noise levels drop off at a rate of about 6 dBA per doubling

of the distance between the source and receptor. Shielding by buildings or terrain can provide an additional 5 to 10 dBA noise reduction at distant receptors.

Based on the estimated equipment noise levels above and on-site data, nearby sensitive locations would likely experience construction noise that is louder than ambient traffic noise, which represents a potentially significant impact.

Mitigation Measure 5:

Construction equipment should be well-maintained and used judiciously to be as quiet as possible. Additionally, construction activities for the proposed project should include the following best management practices to reduce noise from construction activities near sensitive land uses:

- Ensure that all construction activities (including the loading and unloading of materials, truck movements, and warming of equipment motors) are limited to the hours of 7:00 a.m. to 7:00 p.m. Monday through Saturday and between the hours of 10:00 a.m. and 6:00 p.m. on Sundays and holidays.

- Contractors equip all internal combustion engine-driven equipment with mufflers, which are in good condition and appropriate for the equipment.

- Contractors utilize “quiet” models of air compressors and other stationary noise sources where technology exists.
- Locate loading, staging areas, stationary noise-generating equipment, etc. as far as feasible from sensitive receptors when sensitive receptors adjoin or are near a construction project area.

- Comply with Air Resource Board idling prohibitions of uneasy idling of internal combustion engines.

- Construct solid plywood fences around construction sites adjacent to operational business, residences or noise-sensitive land uses.

- A temporary noise control blanket barrier could be erected, if necessary, along building facades facing construction sites. This mitigation would only be necessary if conflicts occurred which were irresolvable by proper scheduling.

- Route construction-related traffic along major roadways and as far as feasible from sensitive receptors.

- Businesses, residences or noise-sensitive land uses adjacent to construction sites should be notified of the construction schedule in writing. Designate a "construction liaison" that would be responsible for responding to any local complaints about construction noise. The liaison would determine the cause of the noise complaints (e.g., starting too early,

bad muffler, etc.) and institute reasonable measures to correct the problem. Conspicuously post a telephone number for the liaison at the construction site.

Implementation of these measures would reduce construction noise levels emanating from the site, limit construction hours, and minimize disruption and annoyance. With the implementation of these measures, the lack of high-intensity construction equipment required for the proposed project, and the fact that noise generated by construction activities would be temporary, the impact from a temporary increase in ambient noise levels at the project site during construction would be less-than-significant.

Impact 6: **Noise and Land Use Compatibility (Aircraft).** The proposed project would be located in a compatible noise environment with respect to noise generated by Hayward Executive Airport and Oakland International Airport. **This is a less-than-significant impact**.

Hayward Executive Airport is a city-owned, public-use airport located approximately 2.1 miles southwest of the project site, and Oakland International Airport is a public-use airport owned by the Port of Oakland that is located approximately 7.4 miles northwest of the project site. Although aircraft-related noise could occasionally be audible at the project site, noise from aircraft would not substantially increase ambient noise levels. The project site lies outside the airport influence area of both airports, as established in the Hayward Executive Airport Land Use Compatibility Plan of 2012 and the Oakland International Airport Land Use Compatibility Plan of 2010. Exterior and interior noise levels resulting from aircraft would be compatible with the proposed project. This is a less-than-significant impact.

Mitigation Measure 6: None Required.