

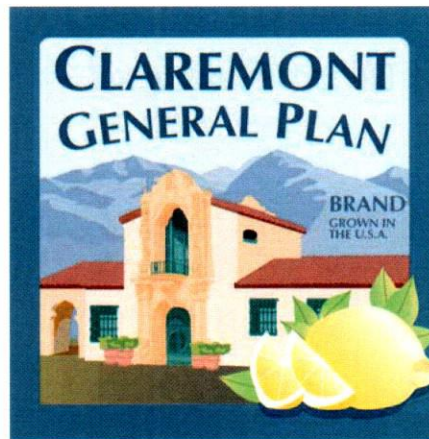
Appendix H: Noise Background and Modeling

Appendices

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LOCAL REGULATIONS AND STANDARDS

CHAPTER 6
PUBLIC SAFETY AND NOISE
ELEMENT



THE CITY OF CLAREMONT
GENERAL PLAN

CHAPTER 6 PUBLIC SAFETY AND NOISE ELEMENT

Claremont General Plan

Table of Contents

Chapter 6: Public Safety and Noise Element	6-1
Our Vision: A Safe and Nurturing Place to Live, Work, and Play	6-1
How We Identify and Guard Against Hazards	6-2
Public Safety	6-3
Public Safety Goals and Policies	6-32
Noise	6-39

List of Tables

6-1	Earthquake Magnitude and Intensity Comparison	6-5
6-2	Magnitude and Intensity of Maximum Credible Earthquake (MCE) for Faults Potentially Impacting Claremont	6-6
6-3	Claremont Fire Station Locations	6-28
6-4	Arterial Segments Generating and Ldn in Excess of 65 dB	6-43
6-5	Claremont Land Use/Noise Guidelines	6-47

List of Figures

6-1	Faults	6-7
6-2	Earthquake-Induced Landslides and Liquefaction	6-9
6-3	San Antonio Dam Inundation	6-13

CITY OF CLAREMONT GENERAL PLAN

6-4	High Fire Areas	6-16
6-5	Cable Airport Safety Zones	6-18
6-6	Noise Contour 2005.....	6-41
6-7	Cable Airport Noise Contours.....	6-44
6-8	Future Noise Contours	6-48



Sustainability Icon

The leaf icon identifies goals and policies involving sustainability (see example). The leaf signifies that the concept of sustainability – either economic, environmental and/or social – is promoted by that particular goal and policy.

CHAPTER 6

PUBLIC SAFETY AND NOISE

Claremont General Plan

Our Vision: A Safe and Nurturing Place to Live, Work, and Play

Claremont takes pride in maintaining a safe environment for its citizens. Public safety means promoting protection from hazards and providing a secure environment to live, work, play, and learn. Although it is impossible to predict our future, history of local disasters shows that Claremont is vulnerable to excessive noise and hazards such as earthquakes, flood inundation, wildfire, mud flow, landslide, and traffic safety.

Maintaining a safe environment requires constant assessment of the City's needs regarding hazards. The presence of fault lines, hillside terrain, wildland fire interface, the 10 and 210 Freeways, and the San Antonio Dam raise more than a few public safety and noise concerns. Since many natural and man-made hazards have regional impacts, the City coordinates with regional, state, and federal agencies to mitigate natural hazards and noise abatement. Claremont is an integral network of communities with varying geographic features and diverse populations, and the provisions for public safety will assure access and equal protection to all citizens.

Public Safety and Noise Vision Statement

This Vision Statement was crafted by the Citizens' Committee for Claremont, Public Safety and Noise Subcommittee.

How We Identify and Guard Against Hazards

The Public Safety and Noise Element establishes policies to protect the Claremont community from natural and human-caused hazards, and to abate noise by identifying its sources and assessing alternative methods of reducing noise impacts.

Scope and Content of the Public Safety and Noise Element

This Element fulfills requirements for two mandatory elements: Safety and Noise. Since these two elements overlap with regard to mitigation of hazards, they are combined into one chapter.

Historically, Claremont has placed an emphasis on planning, and part of this proactive approach to building a sustainable community involves identifying and avoiding or mitigating those hazards present in the environment that may adversely affect property and threaten lives. Government Code Sections 65302(g) and 65302(f) identify several issues to consider in such planning efforts, as does California Health and Safety Code Section 56050.1. In Claremont, issues of concern include:

- Seismic hazards, including ground shaking, surface rupture due to earthquake faults, landslides, and dam failure
- Non-seismic slope instability leading to landslides
- Geologic hazards, including subsidence and liquefaction
- Flooding and dam inundation
- Wildland fires
- Excessive noise
- Presence of hazardous materials

Since the goals and policies of the Public Safety and Noise Element aim to mitigate hazards and abate noise, they correlate closely to the Land Use, Community Design, and Heritage Preservation Element. Claremont's location at the base of the San Gabriel Mountains creates seismic, geologic, flood, and fire hazards. To help guide land use decision-making, this Element identifies areas prone to these hazards and sets guidelines and land use limitations focused on minimizing their impacts. Noise contour maps show which areas of the City are exposed to freeway, railway, and other major noise sources. By highlighting these areas and establishing noise/land use compatibility criteria, the City can use this information to protect residents from excessive noise. Policies in the Land Use, Community Design, and Heritage Preservation Element respond to these conditions.

Fire Sprinklers

As required by the Claremont Municipal Code, an automatic fire sprinkler system must be installed in all new development projects as a preventative safety measure against fire hazards.

Public Safety

The history of natural disasters in Claremont, and the effects from natural calamities and terrorism we experience throughout the nation, have elevated public safety issues in this century. We have seen that clear identification of threats to our safety allows us to better guard against disasters and to develop effective response plans. Foremost, we strive to minimize hazards and protect public health, to provide Claremont residents with timely response in times of emergencies, to supply adequate facilities and equipment, and to educate the public about hazards.

Natural Hazards

The historical record shows that locally and regionally, Claremont has experienced earthquakes, landslides, floods, and wildland fires.¹ The flood of 1938 significantly damaged the street system, flooded basements, and resulted in the death of several residents.² According to local lore, the walls surrounding Scripps College were constructed to prevent damage from any subsequent floods, not as a barrier between Scripps students and the young scholars at then-named Claremont Men's College.³

In 2003, the massive Grand Prix fire, which ultimately combined with the Old Fire to form a 40-mile front across the San Gabriel Mountains, consumed almost 60,000 acres, and destroyed and/or damaged 71 homes in and around Claremont. Thousands of Claremont residents were forced to evacuate and seek temporary shelter elsewhere. The damage caused by the fire in the City of Claremont was estimated at \$20 million.⁴

Wildland Fires

The Grand Prix fire in 2003 scorched most of Claremont's hillsides and destroyed or damaged over 70 homes.



Photo Credit: Dan Sullivan, 2003

¹ City of Claremont *City of Claremont Natural Hazard Mitigation Basic Plan*, adopted by City Council 26 October 2004, p. 10.

² Wright, p. 331

³ James Manifold, Member of the Citizens Committee for Claremont, 2004-06.

⁴ Jay Atenen, "Inferno Engulfs Claremont, Approaches Campus," *The Student Life News*, 2003.

Seismic Hazards

Seismic hazards represent a concern in Claremont given the City's location at the base of the San Gabriel Mountains, a seismically active range, and the fact that California sits at the edge of the Pacific Plate. Earthquakes are part of our lives, and we recognize that regional seismic events can result in property damage, deaths, fires, and other secondary effects.⁵ The primary results from earthquakes are strong ground shaking and surface fault rupture. Secondary effects include landslides, slope deformation, liquefaction, and ground subsidence.

Ground-shaking effects felt locally depend upon many factors, most notably the intensity of the event, distance to the earthquake epicenter, the depth of the earthquake, and local soils conditions. Seismologists use a logarithmic magnitude scale to describe the intensity of earthquakes. However, what impresses us most when an earthquake occurs are its effects. What kind of damage correlates to, for example, a 5.4 magnitude earthquake? The Modified Mercalli Scale, presented in Table 6-1, was developed to further public understanding of the potential destructive effects of earthquakes of varying magnitudes.

Although earthquakes have not resulted in catastrophic property damage, deaths, or widespread injuries in Claremont, the community has sustained damage and disruption to the street system during recent and historical seismic events. Early recorded earthquakes and earthquake-related incidents that have affected Claremont include the 1812 Wrightwood Earthquake of 7.0 to 7.5 magnitude, the 1858 San Bernardino Earthquake of a 5.5 to 6.5 magnitude, and the 1899 Cajon Pass Earthquake of 5.7 to 6.5 magnitude.⁶

During the twentieth century, many earthquakes have shaken up Claremont. Notable events that affected wide areas of Southern California include the 1933 Long Beach, 1971 Sylmar, and 1987 Whittier earthquakes. In 1992, Claremont was shaken by two events: a 7.3 magnitude earthquake originating from the desert community of Landers and a 6.4 magnitude in Big Bear. The Northridge tremor of 1994 rattled windows and nerves throughout the City, but Claremont was spared the widespread destruction experienced in the San Fernando Valley. In 1988 and 1990, earthquakes with a magnitude of 5.5 centered in Claremont caused minor structural damages.⁷ Historic patterns show, however, that any of the minor or major faults traversing the region are capable of causing significant disruption to our lives.

⁵ City of Claremont, *SEMS Multihazard Functional Plan*, March 18, 2004, p. 50.

⁶ Wilson Geosciences, Inc. *Seismic and Geologic Technical Background Report for the Claremont General Plan Update*. June 2005, p. G-20.

⁷ Wilson Geosciences, p. G-1.

Table 6-1
Earthquake Magnitude and Intensity Comparison

Descriptor	Magnitude	Intensity	Description
Not felt	1.0 - 3.0	I	I. Not felt except by a very few under especially favorable conditions.
Weak	3.0 - 3.9	II - III	II. Felt only by a few persons at rest, especially on upper floors of high-rise buildings. Delicately suspended objects may swing. III. Felt quite noticeably indoors, especially on upper floors of buildings, but many people do not recognize it as an earthquake. Standing automobiles may rock slightly. Vibrations like passing of a truck. Duration estimated.
Light	4.0 - 4.9	IV - V	IV. During the day felt indoors by many, outdoors by few. At night, some awakened. Dishes, windows, doors disturbed; walls make creaking sound. Sensation like heavy truck striking building. Standing motor cars rocked noticeably. V. Felt by nearly everyone; many awakened. Some dishes, windows and so on broken; cracked plaster in a few places; unstable objects overturned. Disturbances of trees, poles, and other tall objects sometimes noticed. Pendulum clocks may stop.
Strong	5.0 - 5.9	VI - VII	VI. Felt by all, many frightened and run outdoors. Some heavy furniture moved, few instances of fallen plaster and damaged chimneys. Damage slight. VII. Everybody runs outdoors. Damage negligible in buildings of good design and construction; slight to moderate in well-built ordinary structures; considerable damage in poorly built or badly designed structures; some chimneys broken. Noticed by persons driving cars.
Severe	6.0 - 6.9	VIII - IX	VIII. Damage slight in specially designed structures; considerable in ordinary substantial buildings with partial collapse; great in poorly built structures. Panel walls thrown out of frame structures. Fall of chimneys, factory stacks, columns, monuments, walls. Heavy furniture overturned. Sand and mud ejected in small amounts. Changes in well water. Persons driving cars disturbed. IX. Damage considerable in specially designed structures; well-designed frame structures thrown out of plumb; great in substantial buildings with partial collapse. Buildings shifted off foundations. Ground cracked conspicuously. Underground pipes broken.
Violent			
Extreme	7.0 - 7.9	X - XII	X. Some well-built wooden structures destroyed; most masonry and frame structures destroyed; ground badly cracked. Rails bent. Landslides considerable from river banks and steep slopes. Shifted sand and mud. Water splashed, slopped over banks. XI. Few, if any (masonry) structures remain standing. Bridges destroyed. Broad fissures in ground. Underground pipelines completely out of service. Earth slumps and land slips in soft ground. Rails bent greatly. XII. Damage total. Waves seen on ground surface. Lines of sight and level are distorted. Objects thrown into the air.
	8.0 and higher		

Source: United States Geological Survey (USGS) National Earthquake Information Center, October 2002, and Wilson Geosciences, Inc. Seismic and Geologic Technical Background Report, June 2005. G-26.

Figure 6-1 illustrates the spaghetti-like pattern of faulting surrounding our City, and Table 6-2 identifies faults thought capable of producing very substantial seismic events.

**Table 6-2
Magnitude and Intensity of Maximum Credible Earthquake (MCE)
for Faults Potentially Impacting Claremont**

Regional Fault Name	Distance to Claremont¹ (miles)	Magnitude of MCE	Intensity Range of MCE (I)	Last Major Rupture
San Jose	0.7	6.4	X	Late Quaternary
Cucamonga	1.4	6.9	X	Late Quaternary; Historic
Sierra Madre	1.6	7.2	X	Holocene and Late Quaternary
Chino-Central Avenue	5.3	6.8	X	Late Quaternary
Puente Hills Blind Thrust	11.4	7.0	IX	No documented surface faulting
San Andreas-1857 Rupture	17.2	7.8	IX	Historical (1857) SE to Wrightwood
San Andreas - Carrizo	17.2	7.8	IX	Holocene

Source: Wilson Geosciences, Inc. *Seismic and Geologic Technical Background Report*, June 2005. G-24.

Notes: 1) Latitude 34.107, longitude 117.720 2. Blake, 2002.

Primary-Action Earthquake Hazards

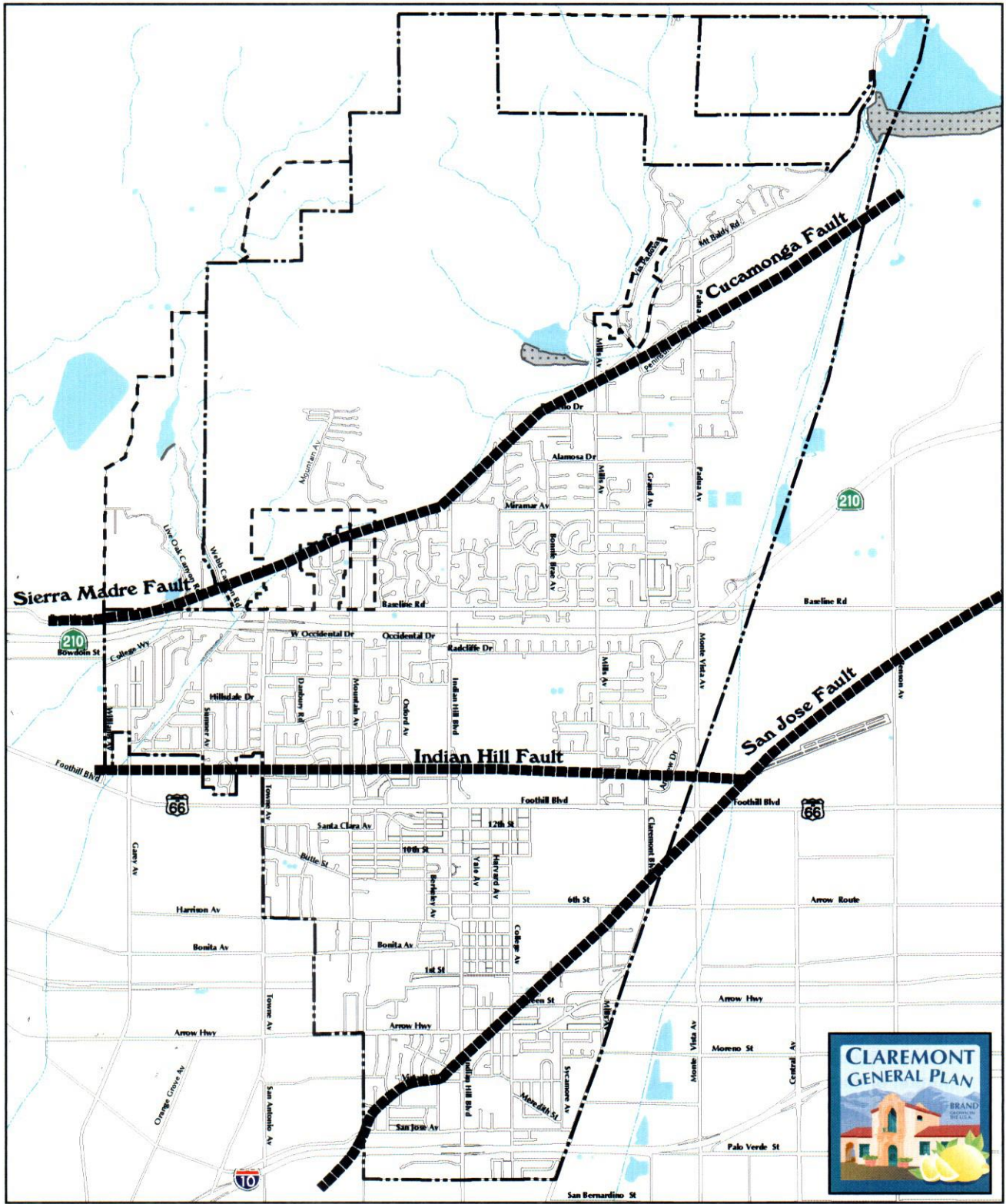
In Claremont, the two types of fault impacts of concern are ground shaking and fault rupture.

Ground Shaking

Fault-generated ground shaking can result in extensive structural damage, injury, and death. Five faults that may cause ground shaking are the Sierra Madre, Cucamonga, San Jose, Indian Hill, and San Antonio faults. In addition to ground shaking, these faults have the potential to cause groundwater movement and create groundwater barriers.

The Sierra Madre and the Cucamonga fault lines meet under the northern part of the City. Although they are not expected to rupture for several thousand years, these faults have the potential to create earthquakes with magnitudes of 7.2 for the Sierra Madre and 6.9 for the Cucamonga, with the additional threat of ground rupture.⁸ More information and study are needed to assess potential earthquake activity and threats posed by the San Jose, Indian Hill, and San Antonio faults.

⁸ Wilson Geosciences, p. G-12.



Source: California Geological Survey, Department of Conservation, 2005.

Figure 6-1
Faults



Fault Rupture

Fault rupture is a ground movement that occurs during an earthquake. Although impact is limited, these ground movements can cause structures to collapse, make roads impassable due to offsets, and sever utility lines.⁹ The chance of an earthquake leading to surface rupture hazards is minimal, but both "active" faults and "potentially active" faults should not be discounted as sources of potential seismic harm. Although no Alquist-Priolo Earthquake Fault Zone had been mapped in Claremont as of 2005, studies continue to determine if the Cucamonga and Sierra Madre faults traversing Claremont should be zoned as major fault lines.

Secondary-Action Earthquake Hazards

Secondary-action earthquake hazards include earthquake-induced landslides, liquefaction, subsidence, ground cracking, ridgetop spreading, and fill slope deformation.

Earthquake-Induced Landslides

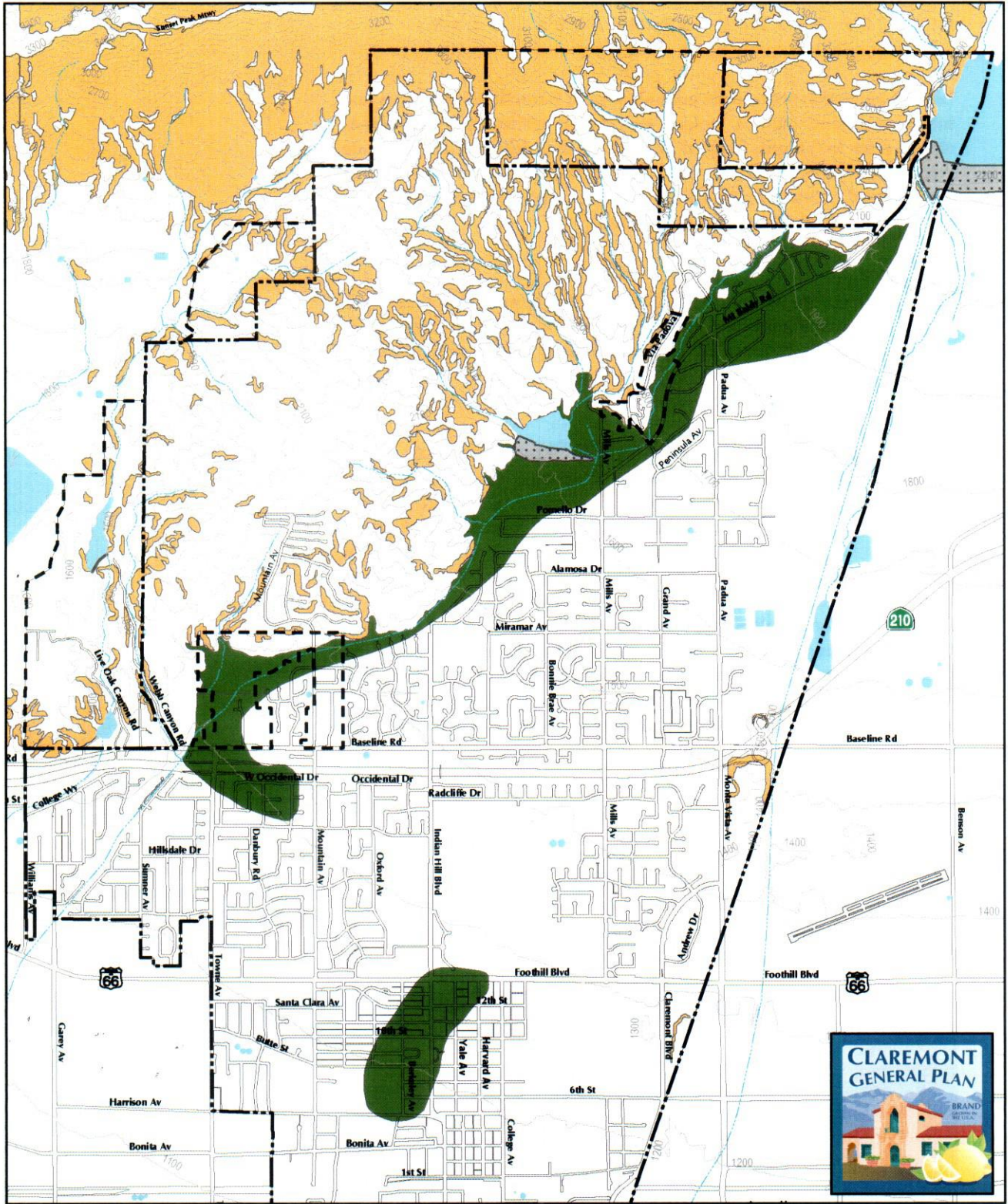
Earthquakes can induce landslides on hillsides or steep slopes. In a landslide, surface rocks and bedrocks can fall onto the roads, buildings, and utility lines below the slope, causing damage to residents and properties.

The Seismic Hazard Map (Figure 6-2) outlines the boundaries of areas vulnerable to earthquake-induced landslides and slope instability. The map shows that the northwestern and eastern parts of Claremont are sensitive to landslides following an earthquake. The map also indicates areas requiring landslide considerations for future developments.

Liquefaction

Liquefaction occurs when severe ground shaking leads to loss of shear strength of a soil. Liquefaction areas are locations where a low alluvium level and shallow groundwater contribute to high possibility of soils losing cohesion during an earthquake. Fortunately, most of Claremont's groundwater is at least 100 feet deep, and the underlying alluvial-sized soil particles reduce chances of liquefaction. The only two areas of liquefaction concern are the Thompson Wash in the northern portion of the City and properties along Indian Hill Boulevard between Foothill Boulevard and Bonita Avenue.

⁹ Wilson Geosciences, P. G-10



Seismic Hazards

Liquefaction

Areas where historic occurrence of liquefaction, or local geological, geotechnical and groundwater conditions indicated a potential for permanent ground displacements such that mitigation as defined Public Resources Code Section 2695 (c) would be required.

Earthquake-Induced Landslides

Areas where previous occurrence of landslide movement, or local topographic, geological, geotechnical and subsurface water conditions indicate a potential for permanent ground displacements such that mitigation as defined in Public Resources Code Section 2695 (c) would be required.

- 100-Foot Contour
- - - City Boundary
- - - Sphere of Influence

Source: California Geological Survey, Department of Conservation, 2005.



Figure 6-2
Earthquake Induced Landslides and Liquefaction

Since liquefaction-prone soils pose significant hazards to structures and inhabitants, land owners looking to develop within these two areas should refer to Seismic Hazard Zone maps that delineate approximate liquefaction areas. Aside from the Seismic Hazard Zone map, geotechnical borings, laboratory testing, and groundwater level information will identify liquefaction areas.¹⁰

Subsidence

Subsidence occurs when an earthquake causes loose soil to depress or consolidate, causing the land surface to break or sink. Generally, areas with younger alluvium are more susceptible to subsidence. Hazards related to subsidence occur when the foundation or walls of structures cause building to buckle or collapse.

Ground Cracking, Ridgetop Spreading, and Fill Slope Deformation

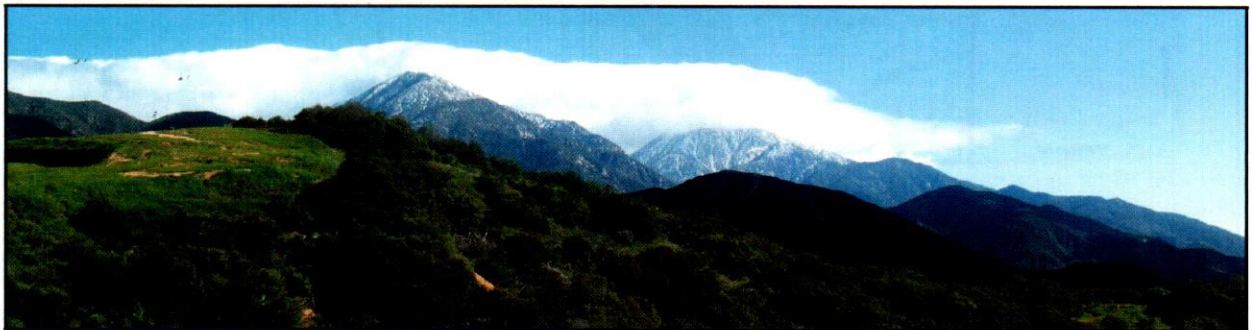
Other seismic-induced hazards include ground cracking, ridgetop spreading, and fill slope deformation. The extent of ground cracking depends on the ground material and usually involves only minor damage. On the other hand, ridgetop spreading could result in structural damage to residential buildings or utility infrastructures commonly located in steep slope areas, such as the northern region of Claremont. Earthquakes may also damage structures on fill slopes in the northwest region of the City. Damage to utility lines or buildings on the ridgetops or fill slopes can compromise emergency communication, water supply, and other vital services.¹¹ Development proposals on steep slopes or fill slopes require thorough review to determine their appropriateness.

Geologic Hazards

The topography and geology that give our City character - from the beautiful hillsides to the "Claremont potatoes" we see comprising the wonderful rock work in historic homes - reveal much about local geologic conditions. These conditions make us aware that soil conditions and slopes profoundly affect land use decisions.

Claremont Hillsides

The terrain in the Claremont hillsides is very diverse, with many small and large canyons creating a very hilly environment. Many of the hillside slope faces are greater than 30 percent. Elevations within the hillside areas of Claremont range from 1,300 feet to as high as 3,360 feet above sea level.



¹⁰ Wilson Geosciences, p. G-36.

¹¹ Wilson Geosciences, p. G-39.

Non-Seismic Landslides

Landslides that occur naturally are potential hazards in hillside areas. Landslides on steep slopes can move rapidly, damage property and infrastructure, interrupt utility lines, and restrict delivery of water, gas, electricity, and telecommunications. Heavy rainfall, removal of vegetation, excavations, and groundwater flows can also trigger landslides. In Claremont, properties north of Base Line Road have the most potential for slope instability.¹²

Many levels of landslide prevention and mitigation exist. Some of the structural methods include placing engineered buttresses along the hillside to provide support to loose materials. Another way to strengthen the soil is to place surface and subsurface drainage systems to drain out water from the soil. Debris basins at strategic locations can capture loose materials and prevent landslides from obstructing roads and destroying property.¹³

Except in hillside areas, most of the City is not affected by non-seismic landslides. Past landslides in Claremont involved minor inconveniences such as frequent debris removal from catch basins and roads.

Collapsible and Expansive Soil Hazards

Collapsible and expansive soils lay under Claremont's hillside areas and most of the City. The expansive soil of the hillside areas contain clay minerals in older alluvium and bedrock formation that are prone to collapse during dry seasons. The expansive soil in much of the urban area is prone to expand during the wet season. The collapse and expansion of these soils can be enough to cause structural damage to foundations, floor slabs, and concrete floors. Geotechnical investigations conducted prior to development can identify such hazards, and standard engineering techniques are available to mitigate potential hazards.

Flooding

Flooding has always been an issue in Claremont, as storm runoff from Mount Baldy rushes rapidly down the many canyons that outlet onto the Claremont alluvial plain. In 1938, a tremendous flood hit Claremont, damaging many properties and destroying most City streets. Prior to construction of the San Antonio Dam, major floods occurred in 1916, 1921, 1934, 1938, 1941, and 1943. Since completion of the San Antonio Dam in 1956, the structure has served important flood control and water supply functions for Claremont. Localized flooding is still an issue during heavy rainfall, but the dam has halted most of the severe floods.¹⁴

¹² Wilson Geosciences, p. G-40.

¹³ Wilson Geosciences, p. G-40.

¹⁴ Wright, p. 363.

Flood hazards in Claremont are divided into three categories: natural flooding, dam failure, and debris flow.

Natural Flooding

Two types of flood classification are flash floods and slow-rise floods. During slow-rise floods, emergency personnel have ample time to warn the community, but with flash floods, there is little time for preparation or warning. Although floods in other areas are due to water overflow, slow-rise floods in Southern California are the result of heavy rainfall or a combination of wet soil and lack of vegetation on the land.¹⁵

Most of the City has been developed on a foothill and along a downward slope; thus, flooding hazards are generally low. No property within the City lies within a federally designated 100-year or 500-year flood zone. With the construction of debris basins at the base of Chicken Creek, most areas of Claremont are protected from flood and mudflows.

Dam Inundation

Dam inundation occurs when structural damage to a dam results in a flood. Dam failure can occur due to an earthquake, erosion, design flaw, or water overflow during storms. Failures or near failures of the Baldwin Hills, Saint Francis, and Van Norman dams in Southern California were the result of geologic or seismic failures.

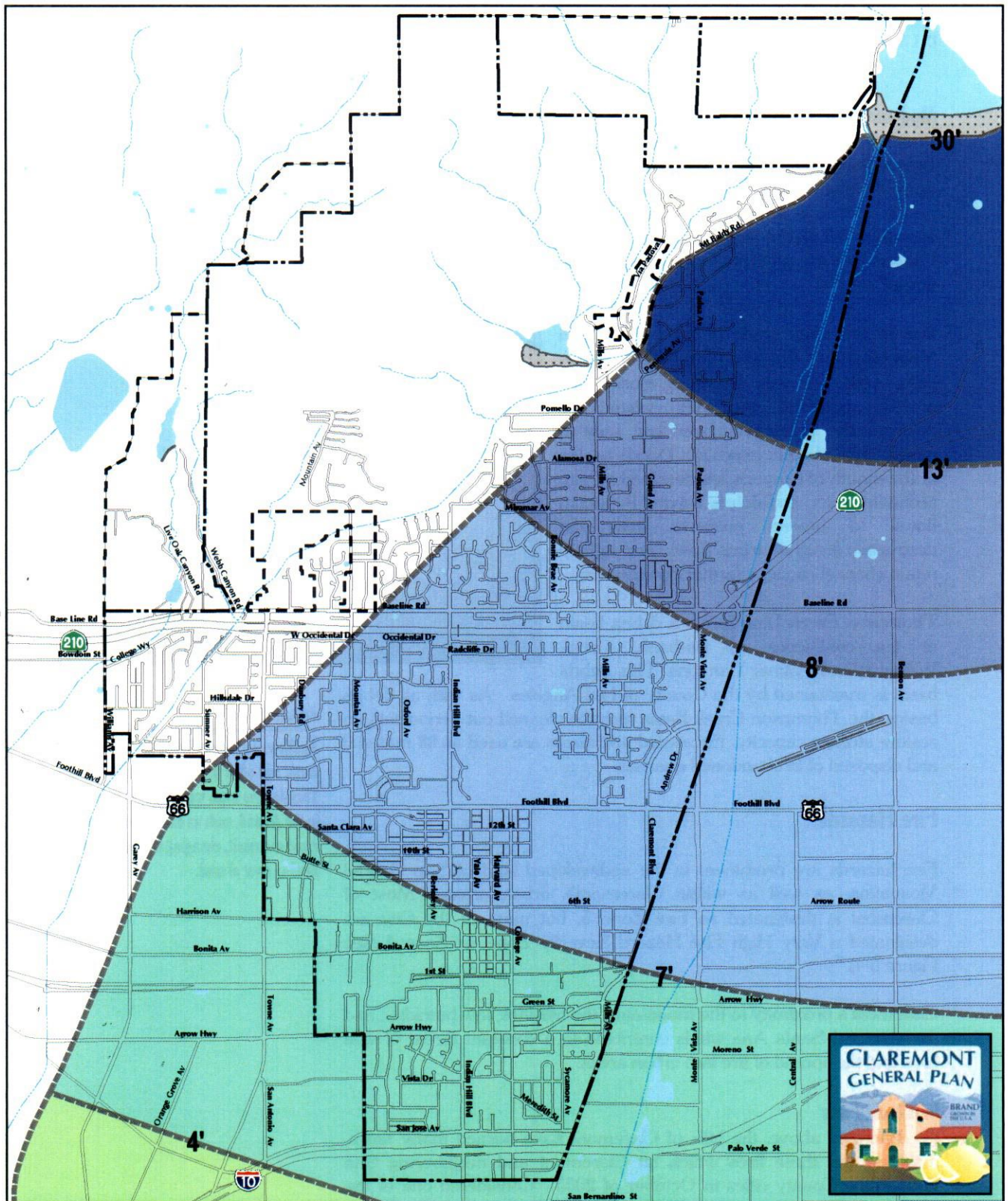
The western edge of San Antonio Dam is located in the northeast corner of Claremont, within the Santa Ana River Watershed, and extends east into San Bernardino County. The dam is a flood control and water conservation project constructed and operated by the U.S. Army Corps of Engineers. Construction of the dam began in April, 1952 and was completed in May of 1956.

Claremont would face the danger of dam inundation if dam failure coincided with a heavy rainfall. Since the rivers are rarely full, the chance of both incidents happening at the same time is unlikely. However, if these two incidents did occur, failure of the San Antonio Dam could result in large-scale flood inundation in three flood zones, as shown in Figure 6-3. Figure 6-3 shows that the area southeast of Mt. Baldy Road and Thompson Creek would be most affected if dam failure occurred. The inundation map shows the inundation area and the depth of flood water in these areas.¹⁶ Additional inundation hazards could occur if dams were to fail at Thompson Creek Reservoir and at two reservoirs in Live Oak Canyon.¹⁷

¹⁵ City of Claremont, *SEMS Multihazard Functional Plan*, p. 74.

¹⁶ Wilson Geosciences, p. G-45

¹⁷ Wilson Geosciences, p. G-41



San Antonio Dam Inundation Areas

Flood Water Arrival Time

	6 minutes		30' Average Over Bank Depth (feet)
	9 minutes		Limit of Flood Due to Dam Failure
	15 minutes		
	45 minutes		
	60 minutes		

The inundation areas shown on this map reflect events of extremely remote nature. These results are not in any way intended to reflect upon the integrity of the San Antonio Dam.

— · — · — City Boundary
 - - - - - Sphere of Influence

Source: U.S. Army Corps of Engineers, Los Angeles, February 1986.

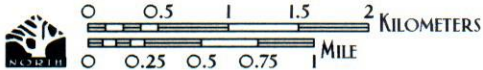


Figure 6-3
San Antonio Dam Inundation
 CLAREMONT GENERAL PLAN

Mud and Debris Flows

Poor drainage and deep topsoil can cause mud and debris flows. Debris flows contain a soaked mixture of natural concrete that slide down the slope and valleys. Mudflows can damage property and block roads. Debris is formed when parts of the hill become wet and loose enough to fall off the slope. In Claremont's sphere of influence, Palmer Canyon has the greatest potential for debris flows.¹⁸

Due to the steep grade of the San Gabriel Mountains and the low permeability of the soils, soils are very likely to erode. The erosion potential increases when fire destroys the vegetative cover and soils in steep areas become exposed. Debris basins at the mouth of canyons are designed to trap sediment, rock, and debris carried by storm flows, to protect property from the destructive force of debris flows, and to help retain channel capacity further downstream.

Thompson Creek Dam forms a debris basin at the confluence of Burbank, Cobal, Williams, and Palmer Canyons. This debris basin is maintained by the County of Los Angeles. As with all debris basins, the Thompson Creek Basin must be cleaned out periodically to restore storage capacity. Excavated sediments are used as fill material and disposed of in abandoned quarries.



Fire Hazards

Fire hazards are prominent in the undeveloped land of San Gabriel Mountains, as well as within Claremont's urban areas. Most of Claremont is designated as Fire Zone 3, but parts of the City are designated a Very High Fire Hazard Severity Zone, or Zone 4 (see Figure 6-4).¹⁹

Claremont's proximity to the mountains, the hillsides, low humidity, and the seasonal Santa Ana winds contribute to a constant threat of wild fires and the spread of fire into urban areas.

Wildland Fires

As described above, the hills of Claremont have burned many times, including the three fires which hit Claremont and neighboring San Bernardino County cities in October of 2003. Considered one of the worst disasters in the history of the area, the Old Fire, Grand Prix Fire, and Padua Fire devastated thousands of homes and caused billions of

Mudflow

Mudflows (or debris flows) are rivers of rock, earth, and other debris saturated with water. They develop when water rapidly accumulates in the ground, such as during heavy rainfall or rapid snowmelt, changing the earth into a flowing river of mud.

¹⁸ City of Claremont, *SEMS Multihazard Functional Plan*, pp. 74-75.

¹⁹ City of Claremont, *Natural Hazard Mitigation Basic Plan*, pp. 8-15.

dollars in damage. Hot temperatures, low humidity, and fierce Santa Ana winds contributed to the fire's rapid spread beyond the San Bernardino National Forest to suburbs along the 210 Freeway. The 2003 Grand Prix fire damaged residential and commercial structures and infrastructure amounting to an estimated \$20 million.²⁰

The steep slopes along the San Gabriel Mountain foothills and the seasonal Santa Ana winds makes rapid wildland fires a top public safety concern in Claremont. Weather, topography, and vegetation type all affect the intensity of fires. California has extended droughts, which increase the number of days with low humidity and consequently, the amount of dried vegetation (fuel). Santa Ana winds – the hot, very dry winds that intermittently blow across Southern California in the fall – further increase the potential for ignition and spread of fires. In addition, a significant portion of north Claremont remains undeveloped and consists of rugged topography with highly flammable native vegetation. The major fire fuels are chaparral, sage, and grasses. These vegetation types typically have a very high oil content that creates a severe fire potential. The greatest potential of high fire hazard within Claremont lies in the north. The risk of wildland fires is compounded when isolated development occurs in and near brush-covered areas, particularly hillsides and steep canyons. Steep, rugged hillsides and steep canyons allow fire to spread rapidly.

To minimize potential fire danger, future developments must adhere to more strict fire safety development guidelines, such as the Hillside Zoning Ordinance (1981), brush clearances, fire resistance construction materials, adequate source of water, and emergency backup power.²¹

Windstorms

The seasonal Santa Ana wind conditions pose windstorm threats in Claremont. Windstorms are severe winds blowing at over 40 miles per hour. Windstorms can cause damage to properties, overhead utility lines, and infrastructure.²² A windstorm incident in January 1997 resulted in the City and County of Los Angeles declaring a state of local emergency. This 1997 windstorm produced winds of up to 106 miles per hour, uprooted over 1,000 of Claremont's treasured trees, and damaged residences, automobiles, and utility lines.²³

Hillside Zoning Ordinance

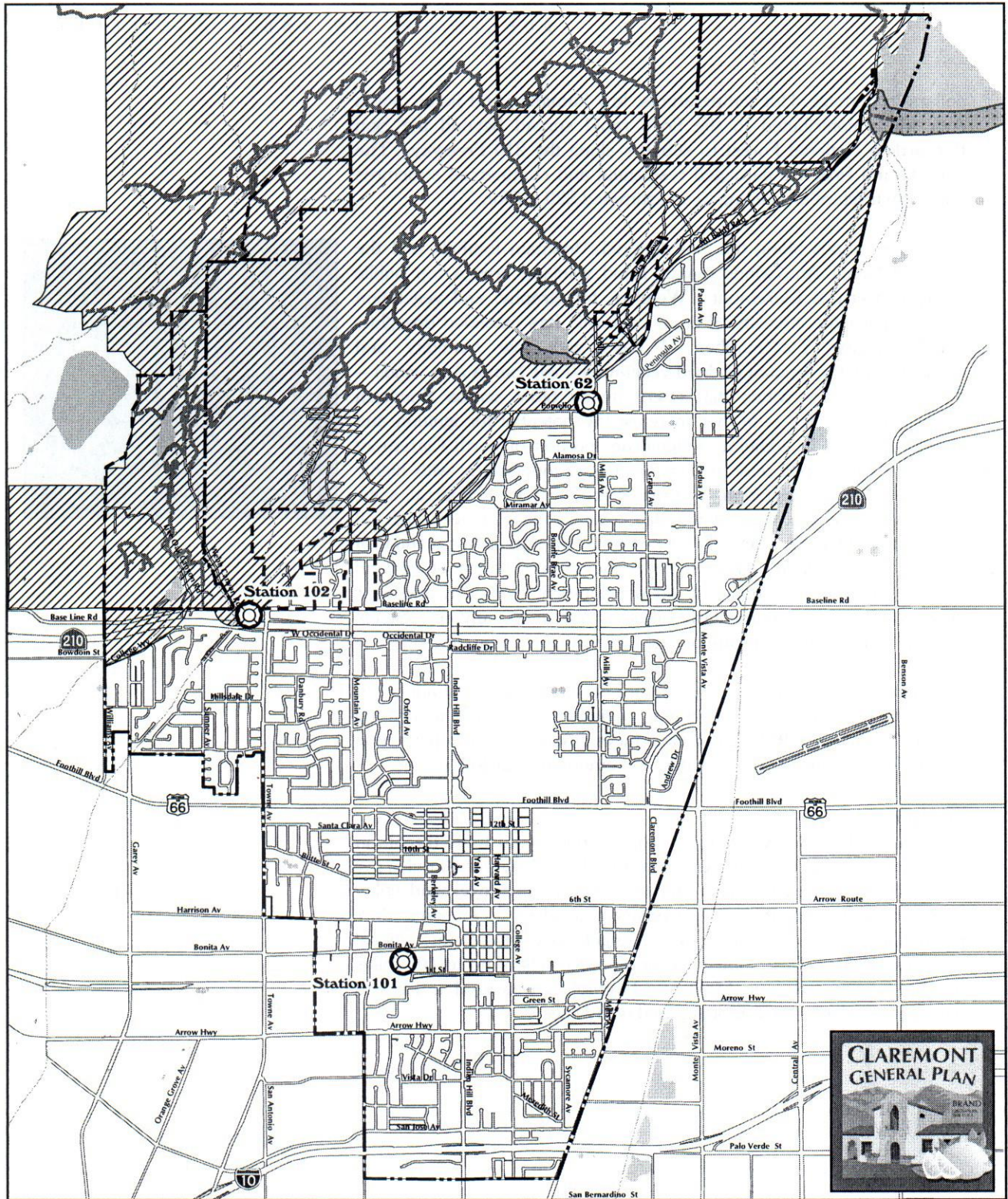
The hillside zoning ordinance of 1981 limits uses of the hillside area by providing permitted uses and intensity according to the steepness of the hill and available facilities. The intent is to prevent landslides, fire hazards, to reduce the need for grading and to limit removal of trees.

²⁰ City of Claremont, *Natural Hazard Mitigation Basic Plan*, p. 11.

²¹ P&D Consultants, *Hillside Existing Conditions Paper*, July 2004, p. 8-9.

²² City of Claremont, *Natural Hazards Mitigation Basic Plan*, pp. 9:7.

²³ City of Claremont, *SEMS Multihazard Functional Plan*, p. 73.



Legend

- Very High Fire Hazard Severity Zone
- Fire Roads
- Claremont Fire Station
Los Angeles County Fire Department
- City Boundary
- Sphere of Influence

Source: California Dept. of Forestry and Fire Protection, 2004; and State of California Stephen P. Teale Data Center.

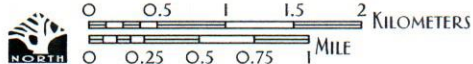


Figure 6-4

High Fire Areas

Human-Caused Hazards

Securing public safety also includes protection from hazards we create ourselves, particularly the public safety risks posed by hazardous materials, gang violence, or transportation-related hazards such as aircraft crashes.

Hazardous Materials

Hazardous materials seem insignificant as household products, but when massive amounts of these products amass in landfills, they can pose serious environmental and health risks to the community. Hazardous materials include waste labeled as toxic, poisonous, corrosive, flammable, combustible, or irritant.²⁴ These materials require special methods of storage and treatment that common sewage and drainage systems are not capable of handling. Improper disposal harms our environment and people who work in the waste management industry. Not only is it illegal to discard hazardous materials in the trash or to pour them into the storm drain or sewer system, doing so will contaminate the ground, water, and air.

The Los Angeles County Fire Department's Health Hazardous Materials Division identifies potential hazardous materials and protects public health and environment throughout the County from hazardous waste pollution. The County enforces proper handling of hazardous materials through inspections, emergency response, and site mitigation.

The City also ensures proper handling of hazardous waste through a waste collection program. This program is an extension of the County program and allows Claremont residents to properly dispose of hazardous household and electronic waste according to the Los Angeles County Waste Management Plan. The program is paid by County residents as a tax on waste disposed at County's landfills and the sanitation district fee on property tax. The City also collects used motor oil for free when scheduled through the Community Services Department, and the County provides appointment-based mobile units that collect hazardous materials at locations throughout the County.

The County reuses most of the collected materials such as paint for anti-graffiti programs, motor oil as lubricants, fuel and tar products for asphalt cover, and other materials as cement. Materials that cannot be recycled are handled separately for proper disposal. These sustainable practices keep the materials from entering the waste stream.

Air Crash Hazards

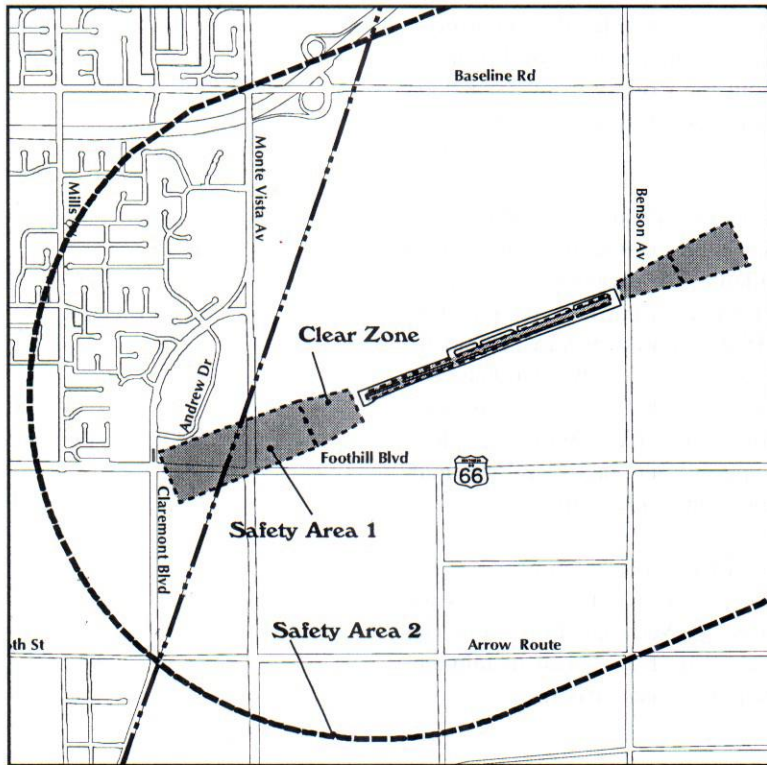
Air crash incidents are rare, but when they do occur, the results can be devastating. Such incidents concern residents of Claremont because the City has three airports nearby that serve small private aircrafts, as

²⁴ Los Angeles County Department of Public Works website. < http://www.lacofd.org/about_hhmd.htm > (October 3, 2005).

well as national and international passenger and air cargo carriers. The variety of air services and flight paths require regional coordination to prevent confusion in flight patterns and to maintain safety. Potential damages to aircrafts may also result in loss of life and property along its flight path. To avoid such outcomes, the Federal Aviation Administration has established land use restrictions to areas surrounding airports and flight paths.

The eastern parts of Claremont are within the Safety Area 2 of the Cable Airport safety zones, as identified in the Cable Airport Comprehensive Land Use Plan adopted in 1981. This "moderate crash hazard" area includes areas within a 5,000-foot radius of the runways ends, excluding Clear Zones and Safety Area²⁵ (see Figure 6-5). The airport land use plan includes air space restrictions established by the Federal Aviation Administration and restrictions against glare, electronic interference, and smoke that could cause aircraft complications or hazards in the Safety Area²⁶.

**Figure 6-5
Cable Airport Safety Zones**



²⁵ Heliplanners, "Aviation Safety Implications, Study of Potential Land Uses, Specific Parcels Southwest of Cable Airport." 11 July 2005, pp. 3-8.

²⁶ The Federal Aviation Administration, "Part 77 Airspace Obstruction Analysis," <http://www.faa.gov/arp/ace/part77.cfm> (7 Nov 2005).

Additionally, Safety Area 2 may be subject to requirements of Federal Aviation Administration which restrict building heights as follows:

- Any construction or alteration exceeding 200 feet above ground level
- Any construction or alteration:
 - within 20,000 feet of a public use or military airport which exceeds a 100:1 surface from any point on the runway of each airport with at least one runway more than 3,200 feet
 - within 10,000 feet of a public use or military airport which exceeds a 50:1 surface from any point on the runway of each airport with its longest runway no more than 3,200 feet

Land uses and developments in these areas should avoid potential glare, electronic interference, or smoke that may affect aircraft operations.

Police and Emergency Services

Claremont sets high standards for public safety and protection. The City's Police Department coordinates with the Los Angeles County Fire Department and the Red Cross to fulfill emergency services and safety needs of residents. The Claremont Police Department serves as the primary responding agency to emergencies, and provides law enforcement services to residences and businesses. The City contracts with the County Fire Department for fire and paramedic response and hazard mitigation. The Red Cross works with the City to manage and operate shelters. The City educates the public regarding disaster prevention and welcomes the help of community volunteers. Public awareness and education provide essential knowledge about how to assess and respond to emergency situations, and increase the community's ability to minimize undesired outcomes.

Police Services

Until Claremont incorporated in 1907, the Los Angeles County Sheriff provided law enforcement services. The first City Marshal worked part time enforcing the first speed limits and guarding the town at night. Over the years, the Claremont Police force continued to develop with additional members, full facilities, and better compensation. The duty of the police officers also continued to grow in terms of the area covered and population that needed protection.²⁷

The Claremont Police Department staff responds to emergency situations within the City and patrols our neighborhoods to promote a

²⁷ Wright. pp. 177-181.

safe environment. The staff also holds official criminal records, investigates crime, and in an emergency, assesses situations and quickly dispatches appropriate emergency responses. The Police Department also utilizes reserve police officers who perform similar duties as regular police officers²⁸ and enhance police services to the community.

Claremont Policy Facility

The Police Station located at 570 W. Bonita Avenue no longer meets the needs of the Claremont Police Department. A Space Needs Assessment/Site Feasibility Study for the Police Station, conducted in 2002, identified the facility as being at the end of its useful life. The station suffers from excessive overcrowding, lack of key functional space, wear and tear due to age and round-the-clock usage, inability to address technological changes, and difficulty meeting regulatory requirements, including the Americans with Disabilities Act, CALOSHA, and California Board of Corrections. The study also identified the current site of the Police Station as very challenging to meet the demands of a new police station, if one were to be built on the same site. Any revitalized/expanded or new Police Station must address all of its traditional roles, yet accommodate the expanding needs of Claremont. The need for a new or expanded/improved facility is addressed in Policy 6-9.1.

Crime Prevention and Personal Safety

Although the City's crime rate is not considered high in comparison to rates in adjacent cities, the Police Department promotes safety by increasing awareness of child abuse, domestic violence, rape, robbery, burglary, gang violence, check fraud, and identity theft. Crime prevention also involves educating the public about vacation security, business and neighborhood watch programs, security when residents are home alone, information regarding Megan's Law, and poison accidents.

Unbiased Policing Policy

The Police Department has adopted an "Unbiased Policing Policy." The Department is committed to unbiased policing; to clarify the circumstances in which officers can consider race, ethnicity, national origin, religion, age, gender, gender identity or sexual orientation, socio-economic status, and disability when making law enforcement decisions; and to reinforce procedures that serve to assure the public that service and law enforcement are provided in an equitable way.

Profiling is defined as any police-initiated action that relies on the race, ethnicity or national origin, gender, sexual orientation, gender identity, religion, socio-economic status, or disability, rather than the behavior of an individual or information that leads the police to a particular

²⁸ Claremont Police Department website. <http://www.claremontpd.org/uniform_services/records/records.htm> (10 October 2005).

individual who has been identified as being or having been engaged in criminal activity.

The policy reads as follows:

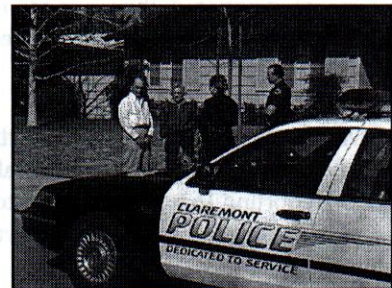
- 1) It is the policy of the Claremont Police Department that all police-initiated actions, which includes all investigative detentions, traffic stops, arrests, searches and seizures of persons and/or property by officers, shall be based on a standard of reasonable suspicion or probable cause as required by the Fourth Amendment of the U.S. Constitution and statutory authority, as well as equal protection of laws required by the Fourteenth Amendment of the U.S. Constitution. Officers must be able to articulate specific facts, circumstances, and conclusions which support probable cause or reasonable suspicion for the arrest, investigative detention, search, or traffic stop. Except as provided below, officers shall not consider race, ethnicity, national origin, religion, age, gender, gender identity, or sexual orientation in establishing either reasonable suspicion or probable cause, or as a basis for requesting consent to search.
- 2) Except as provided below, officers shall not consider race or ethnicity in establishing either reasonable suspicion or probable cause. Similarly, except as provided below, officers shall not consider race, ethnicity, national origin, religion, age, gender, gender identity or sexual orientation, socio-economic status and disability in deciding to initiate either consensual encounters or nonconsensual encounters.
- 3) Officers may take into account the reported race, age, gender, ethnicity or national origin of a specific suspect or suspects in the same way they would use specific information regarding age, height, weight, etc., about specific suspects.

Community-Oriented Policing

The Police Department emphasizes community-based policing, and relies on the voluntary assistance of its community members to provide effective and comprehensive policing services. In its efforts to increase public awareness and improve relations with the community, the Police Department coordinates the following community outreach programs:

- Community Emergency Response Team (CERT) Training
- Youth Academy
- Ride-alongs
- Crime Alert Program
- Community Patrol Volunteer Program
- Citizen Police Academy
- Bicycle Safety Programs
- Drug Abuse Resistance Education (D.A.R.E.)
- Senior Outreach Programs

Claremont Police Department



Community Oriented Policing

A philosophy that is oriented toward preventing crime, addressing criminal behavior and responding to citizen concerns. The success of Community Based Policing depends upon collaboration between police and community members to solve problems with innovative solutions.

- Claremont Police Commission

- School Resource Officer (SRO)
- Department Tours
- Liaison to the following committees: Teen Committee, Committee on Aging, Committee on Human Relations, Claremont Colleges, and the Ecumenical Council

Police Commission

The Police Commission, composed of Claremont residents, provides a public forum to discuss police issues including department policies, procedures and police actions, and to help create a climate of mutual respect and partnership among community members and the Police Department. The commission's six areas of best practices include department policy, recruitment and hiring, training, community outreach, technology, citizen complaints, and officer accountability. The commission creates ad hoc committees to address public safety issues within the City and to support unbiased policing by the Police Department.

Police Review Ad Hoc Committee (PRAH)

The Police Review Ad Hoc Committee (PRAH) is an advisory sub-committee of the Police Commission. Complaints of police misconduct are investigated by the Police Department and forwarded to the Chief of Police. The Chief forwards these completed investigations to the PRAH for review.

The PRAH is charged with reviewing the investigation and determining if the information gathered in the investigation is satisfactory or if there is additional investigation needed before the investigation can be concluded.

Civil Liberties Education and Reporting Program

The Claremont City Council established the Civil Liberties Education and Reporting Program in 2003 to increase awareness of civil liberties and to establish a system to report government actions that violate civil liberties.

City Communications System

The City operates its own three-channel, Ultra High Frequency (UHF) radio communications system. Two of the channels are utilized by the Police Department and the third is used for all other City departments. The third channel is also used as the Emergency Operations Center (EOC) channel during a disaster.

The communications system includes a local repeater site in the City and a remote repeater site in Chino Hills. The primary communications center is housed in the Police Department and is utilized for daily public safety operations by up to two communications officers. There are additional alternative communications positions in the City Emergency Operations Center and the Mobile Command Post.

Foot/Bicycle Patrol

Since 1993, officers have used bicycles to patrol small areas with high visibility access. Bicycles allow for increased contact and trust between police officers and members of the community. These officers also promote bicycle safety education programs to local students participating in youth programs.

Community Patrol Volunteer Program

Community members over 18 years of age can participate in the Community Patrol Volunteer Program to provide assistance to the Police Department in programs such as vacation house checks, fingerprinting, community patrol, evidence transportation, traffic control, parking enforcement, clerical support, and serving as reserve crossing guards.

Explorer Program

The Explorer Program is sponsored by the Police Department and the Boy Scouts of America, and encourages youth interest in law enforcement and community service through practical experience in law enforcement. The program is designed to improve self-confidence, discipline, and build character in youth participants.

Traumatic Intervention Services

This program provides emotional support services to victims of traumatic events such as deaths, rape, assault, robbery, burglary, and traffic collisions. The service operates with the assistance of community volunteers who provide on-call service.

Chaplain Program

The Police Department and the International Conference of Police Chaplains sponsor local priests, pastors, and religious leaders to travel with police officers to respond to trauma or deaths, to notify families, and to provide religious services and counseling to trauma victims, involved families, criminals, or City employees requesting their service.

Neighborhood Watch

This program emphasizes the importance and effectiveness of crime reporting by neighbors. It allows citizens to report suspicious behavior or incidents to the Claremont Police Department. By encouraging a Neighborhood Watch group in each neighborhood and promoting neighbors to keep an eye on their community, the City is able to increase security for its residents. The program also provides public awareness and prevention seminars.

Business Watch

This program is sponsored by the Police Department and the Chamber of Commerce, and encourages business owners and operators to educate employees regarding business-related crime prevention. Business-related crimes include credit and check fraud, robbery, burglary, and shoplifting.

Traffic Safety

Public safety entails road safety for drivers, pedestrians, and bicyclists. Claremont relies on its officers to enforce traffic regulations. Officers in cars and on motorcycles direct enforcement activities to areas with high traffic collision rates, and areas of concern to community members where violations are most common. Radar speed trailers are placed on streets to encourage drivers to drive within the speed limits. A community hotline is used by residents to communicate traffic safety concerns.

Traffic and Transportation Commission

The Traffic and Transportation Commission reviews and makes recommendations on issues which help to promote a safe environment while traveling within the City. The commission serves as a liaison between the community and City government in evaluating matters pertaining to traffic and transportation. Traffic safety issues routinely reviewed by the commission include, but are not limited to:

- Traffic circulation around school sites
- Traffic hazard mitigation
- Mitigation of traffic noise and maintenance of good air quality
- Traffic impacts on city streets resulting from proposed development
- Traffic volumes and speeds on residential streets
- Establishment of city-wide speed limits
- Pedestrian and bicyclist safety issues

Engineering Division

The Engineering Division is responsible for traffic safety features in the City. All traffic safety features are installed and maintained under the direction of the City Traffic Engineer. This includes the installation and maintenance of traffic control devices, as well as the implementation of traffic safety programs and the establishment of traffic regulation within the Municipal Code. Some of the assigned responsibilities of the City's Engineering division include:

- Installation of traffic striping and signage
- Installation of traffic signals
- Review of stop sign requests
- Overview of crosswalk installations
- Radar speed survey
- Review of all traffic control plans
- Review of traffic impact reports and all traffic studies
- Issuance of oversized permits
- Issuance of all permits pertaining to the public right of way
- Insuring proper roadway and traffic control maintenance
- Bikeway planning and implementation
- Pedestrian safety

Mobility and Circulation

Issues related to mobility and circulation are addressed in Chapter 4, Community Mobility Element.

Gang Activities

Gangs are differentiated from other youth groups by their frequent and intentional involvement in illegal activities and a more developed leadership structure. Many street gang activities in Claremont come from sources outside of the community. There is a loosely knit Claremont gang that dates back several generations. This gang was more concentrated in its activities in the mid-1980s and early '90s. Since that time, a significant number of the member families have moved out of the City, and the gang has returned to being a loose-knit group with little, if any, criminal activity or contacts with the Police. In addition to the activities of this gang, the City geographically borders two areas of Pomona which typically have high incidents of gang activity. Gang activities from these have spilled into Claremont.

Prior to the 1980s, gangs in Los Angeles County were typically neighborhood based, meaning they claimed a particular area, often a neighborhood where a majority of the members lived, and this was considered their "turf." The proliferation of drug sales, especially cocaine, changed this model of thinking for the gangs, and while they still had a home base of sorts, law enforcement saw gangs entering the drug trade in large numbers and expanding their areas of control or sought after turf to include other communities outside of their own, including areas outside of the state. This transitory nature impacts communities like Claremont that typically do not have a large concentration of gang members living in their community. The violence and criminal activity associated with these gang members travels with them as they move about and venture into other areas to establish the gang or to engage in criminal activities. Often, communities that are directly adjacent to or that have freeway access within their community are impacted by gang-related criminal activity to varying degrees, as these gang members utilize the freeways to travel about.

As part of its operational plan, the Police Department assigns a minimum of one detective as its gang specialist. This officer is responsible for disseminating intelligence on gang activity to department personnel. In addition to this detective, department personnel routinely attend gang training, participate in gang-related enforcement efforts in surrounding communities, and are members of various gang intelligence and training groups.

To discourage youth involvement with gangs, the City will continue to provide diverse after-school programs for the City's youth and families. Such programs will engage youth in volunteer and recreational programs that strengthen family and social networks. Job placements and internship programs will help our youth gain job skills and spark positive interests. Joint tutoring programs with The Colleges and the Claremont Unified School District will be geared to raise high school graduation rates.

Fire Prevention and Protection Services

The first fire protection group in Claremont was made up of a diverse group of volunteers, including representatives from all types of professions. With a college bell as their alarm system, a horse, a cart, and the help of Sanborn fire insurance maps, these volunteers fought fires from 1903 until the 1960s, when the City hired its first fire chief and firemen. The City continued to rely on volunteers to supplement its fire fighters until the City hired an all professional staff in the 1970s.²⁹



Los Angeles County Fire Department

Los Angeles County Fire Station 102 is located just south of Base Line Road on Sumner Avenue.

Since 1975, fire services have been provided to residents of Claremont through a contract with the Consolidated Fire Protection District of Los Angeles County. A Los Angeles County Assistant Fire Chief is responsible for communications between the City and the Los Angeles County Fire Department. The Fire Department is responsible for the protection of life and property from losses due to fire, explosion, and other disasters. The City receives wildland fire protection and forestry tree service from the County Fire Department's County Forester and Fire Warden. The City has three Los Angeles County fire stations at the locations listed in Table 6-3; however, since the County serves emergency cases within the county regardless of city boundaries, services from stations in Pomona, San Dimas, or Glendora can be dispatched depending on availability and distance. The city of Upland is also under automatic aid agreement with the County to provide fire protection to the area bounded by Pomello Drive, Mills Avenue, and Foothill Boulevard. The County can also deploy ladder companies from Glendora and Pomona.

All emergency calls are answered by police dispatchers, who redirect fire-related services to the Fire Department. Aside from fire and medical services, every emergency medical incident receives basic life support and advanced life support. The average first-in emergency response time in Claremont is under five minutes, and the average

²⁹ Wright. pp. 171-175.

response time for truck serve is less than eight minutes. The County Fire Department also provides the following services: home fire safety inspection, assistance developing home fire escape plans, business inspections, rescue youth program, fire cause determination, hazardous material inspections, teaching fire prevention in schools, coordinating educational programs with other agencies, hospitals and schools, and answering citizens' questions regarding fire hazards.³⁰ The Consolidated Fire Protection District is funded by a designated portion of the property taxes paid by the owners of all taxable parcels within Claremont and the unincorporated areas.

**Table 6-3
Claremont Fire Station Locations**

Fire Station	Address	Battalion	Equipment	Services
Station 62	3710 N. Mills Ave.	2	3-person assessment engine company (a fire company with some limited paramedic capabilities) and an unstaffed patrol	Fire and emergency basic life support medical services
Station 101	606 W. Bonita Ave.	2	3-person engine company and an unstaffed patrol, and a paramedic 2-person squad	Fire, emergency medical services, advanced life support/ paramedic service
Station 102	4370 Sumner Ave.	2	3-person engine company	Fire and emergency basic life support medical services

Source: Los Angeles County Fire Department, 2004.

Wildand Fire Protection

The Los Angeles County Fire Department constantly monitors fire hazards in the County, and hosts ongoing programs for investigation and alleviation of hazardous situations. In the event of a major wildfire, the Fire Department warns owners of homes and inhabitants of communities in the path of the flames, and recommends evacuation if the threat is eminent. The responsibility for warning and evacuation is in the hands of the law enforcement agencies. Evacuation can only be recommended, not ordered, since no one can be forced to leave his or her home. Formal evacuation routes are not predetermined due to the unpredictability of a fire. Thus, law enforcement agencies react according to the needs of each situation.

Government Code Section 51178 specifies that the Director of the California Department of Forestry and Fire Protection, in cooperation with local fire authorities, is required to identify areas that are Very High Fire Hazard Severity Zones in Local

Los Angeles County Fire Department

Los Angeles County Fire Department personnel work to contain the Grand Prix fire burning Claremont hillsides in 2003.



Photo Credit: Dan Sullivan, 2003

³⁰ City of Claremont, *Natural Hazards Mitigation Basic Plan*. pp. 8-14, 15.

Responsibility Areas. This requirement is based on the Bates Bill, adopted September 29, 1992, which was initiated following the 1991 Oakland Hills Tunnel Fire.

Emergency Preparedness

Emergency Operations Center

The City maintains an Emergency Operations Center (EOC) at City Hall. An alternate EOC, located at the Community Service Facility, can be utilized if the primary EOC is damaged in a disaster. In addition to these EOC facilities, the Police Department maintains a Mobile Command Post that is capable of establishing a field EOC.

Mobile Command Center

The Police Department maintains the City mobile command center. This vehicle contains two communications positions, amateur radio systems, and a wireless access system. The mobile command center can function as a primary EOC in the event that the designated EOCs were deemed non-operational.



Typically, the command center would function as a field EOC, linking directly with the primary EOC. Field personnel provide updates to the primary EOC through the staff assigned to the command center.

The command center, through its wireless link, can provide real time data and video images to the EOC or any authorized City network site. The link also provides a platform from which the Police Department can transfer business and emergency phone lines, including 911 lines, if the primary communications center were damaged during a disaster.

Mobile Command Center

The Claremont Police Department Mobile Command Center serves as a portable command post and community resource vehicle.

Standardized Emergency Management System (SEMS)

Claremont has adopted the Standardized Emergency Management System (SEMS) for responding to any large-scale disaster requiring a multi-agency and multi-jurisdictional response. Under the SEMS model, five functions activate in the event of a disaster, including:

- Management
- Operations
- Planning and Intelligence
- Logistics
- Finance and Administration

The City has prepared a SEMS Multi-hazard Functional Plan that will allow the City to take advantage of regional, state, and federal resources following any large-scale disaster. The duties of each function are coordinated through the EOC.

National Incident Management System (NIMS)

NIMS is the federal equivalent to the SEMS response plan and will become the national standard for responses to large-scale disasters and emergency responses.

Community Emergency Response Team (CERT) Program

In 2005, the Claremont Police Department partnered with the Los Angeles County Fire Department to coordinate a CERT program to teach and involve citizens in disaster identification, mitigation, and relief. In addition to public safety protection offered by the City, public education gives each community member the knowledge and power to respond quickly and wisely to disasters. The goal of the program is to minimize hazards by empowering citizens with the information to identify and detect hazards at an early stage, and to facilitate faster recovery. The program educates residents and City administrators who wish to learn about topics such as disaster preparedness, disaster fire suppression, disaster medical operations, search and rescue, disaster psychology and organization, and terrorism. Upon completion, participants will be able to identify hazards likely to impact their homes, perform steps to prepare for such hazards, and utilize basic medical treatments.

Mutual Aid

The City relies on mutual aid agreements with adjacent cities, counties, and resources from other government agencies to meet demands regarding emergency services, hospital needs in regional emergencies, and terrorism readiness.

Mutual Aid OES (Area D)

The City, through the Police Department, is a member/participant in the State of California Office of Emergency Services (OES) mutual aid and disaster management program. Through "Operational Areas,"

Purpose of the SEMS Multi-hazard Functional Plan

To establish procedures and responsibilities of various city staff in the event of an emergency

- *SEMS Multi-hazard Functional Plan*

OES staff coordinates training, development of disaster training and response plans, and coordinates the response to disasters and emergency related incidents. A supervisory or management level employee is assigned as the department's liaison to Area D.

The Operation Emergency Management program provides a duty officer on a 24-hour basis to address inquires and concerns from county, local, and state officials regarding potential or escalating emergency conditions.

The City maintains a link to the County Emergency Operations Center. This link provides the City EOC with direct access to Office of Emergency's Management Incident System (EMIS) via microwave and does not rely on typical phone line or computer access points. EMIS provides up to date emergency management information and the ability for the 88 cities in Los Angeles County to provide up-to-minute reports on situations impacting their communities.

Mutual Aid Platoon (Area D)

The Police Department participates in a countywide law enforcement mutual aid program managed by the Los Angeles County Sheriff Department, Emergency Operations Bureau. A supervisory or management level employee is assigned as the department's liaison to Area D.

Mutual aid groups are utilized to respond to emergencies, both natural and human-caused, that exceeded the management capabilities of the law enforcement agency that has primary jurisdiction. Agencies participating in the mutual aid platoon system agree to participate in training exercises held annually by each of the areas. Each agency also agrees to send fifty percent of their on-duty personnel to any request for mutual aid.

Hospitals and Ambulance Service

In Claremont, emergency medical services are provided by Fire Station 101's paramedic squad. If that station's squad is busy, another paramedic squad from fire stations outside of Claremont is dispatched. Patients requiring further attention can seek medical assistance at the nearest hospitals, including Pomona Valley Community Hospital in Pomona and San Antonio Community Hospital in Upland. Disaster relief services are provided by the Claremont Chapter of the American Red Cross.

Terrorism Readiness and Response

Although terrorism may not appear to be a significant issue in Claremont since no critical or credible targets exist, the City nevertheless prepares its citizens for potential threats through informal seminars. To increase emergency survival during a terrorist attack, the Police Department offers presentations on terrorism readiness and response. The program is an extension of the Department of Justice

Office of Community Oriented Policing Homeland Security Program, and educates the community on terrorism, emergency plans, updating emergency supplies, and procedures to follow in case of a terrorist threat or attack. The department also coordinates the Community Emergency Preparedness Action Committee (CEPAC) and Community Emergency Business Action Team (CEBAT).

Terrorist Early Warning Group (TEW)

The Terrorism Early Warning Group supports the County Emergency Operations Center. In the early 2000s, the Operational Area established a response or planning effort to deal with the response to terrorism. It established a Terrorism Working Group, chaired by the County Office of Emergency Management (an interagency entity) that also brings together many of the cities in the county. Key members are the FBI, the Sheriff's Department, city and county fire departments, and the Department of Health Services, as well as the state Office of Emergency Services.

Operationally, the TEW provides support in the event of a potential field response to terrorism. Area Command Teams support field response elements. Area Command Team is the law enforcement term, while Incident Management Team is the fire service counterpart. Both would be present at an actual terrorist event. These teams are essentially the overhead command elements that manage complex incidents in the field.

The TEW provides threat assessments, and works in conjunction with law enforcement agencies throughout the county in providing intelligence information and updates. A supervisory or management level employee from the Police Department is assigned as the departments' liaison to the TEW.

Public Safety Goals and Policies

These goals and policies outline the City's intent to promote safety and security through prevention and mitigation.

Goal 6-1 Work to promote a safe community in which residents can live, work, and play.

Policy 6-1.1 Foster an environment of trust by ensuring non-biased policing in Claremont, and by adopting policies and encouraging collaboration that creates transparency about the activities of the Police Department.

Policy 6-1.2 Facilitate traffic safety for motorists and pedestrians through proper street design and traffic monitoring.

Goal 6-2 Minimize the risk of injury, loss of life, and damage to property resulting from natural and human-caused disasters and conditions.

Policy 6-2.1 Practice proactive planning and development approaches that require developers to identify potential hazards that might affect a development and mitigate the potential hazards as needed to the satisfaction of the City.

Policy 6-2.2 Enforce Uniform Building Code standards for grading.

Policy 6-2.3 Review and explore disaster preparedness and emergency response capabilities on a regular basis.

Policy 6-2.4 Cooperate with and coordinate emergency preparedness and response programs with jurisdictions, agencies, and organizations such as surrounding cities, The Claremont Colleges, the Claremont School District, and the Los Angeles County Fire Department.

Policy 6-2.5 Continue and expand public educational programs to include all aspects of public safety.

Policy 6-2.6 Maintain a list of public buildings that could support emergency functions in the event of a disaster.

Policy 6-2.7 Require that development of major facilities and high-occupancy buildings in the hazardous zone submit design analysis, soils, geologic, and seismic reports to

the City to indicate that an undue hazard does not exist or would not result from construction on the property.

Policy 6-2.8 Continually review the City's disaster communication system, and update/modify as needed.

Policy 6-2.9 Continue to implement the City's hillside plan to reduce harm to future residents at the urban interface.

Policy 6-2.10 Restrict vehicular and recreational use of the undeveloped foothill areas during critically hazardous periods.

Goal: 6-3 Lower the risks of aircraft accidents.

Policy: 6-3.1 Adhere to airport comprehensive land use plans and restrictions established by the Federal Aviation Administration to reduce damage resulting from aircraft accidents.

Seismic Hazards

The presence of multiple faults within and near Claremont poses constant seismic threats to residents and workers. Continuing investigation of faults will provide important information to help assess their potential threats. The goals and policies for seismic hazards emphasize land use and building requirements for structures in seismic hazard zones and retrofit of hazardous buildings.

Goal 6-4 Minimize risks to public safety from seismic events.

Policy 6-4.1 Enforce the most recent building codes governing seismic safety and structural design to minimize damage from earthquakes.

Policy 6-4.2 Continue to support efforts to identify location, potential activity, and dangers associated with faults under investigation, and implement recommendations (setbacks, foundation/building design methods, etc.) contained in geotechnical reports.

Geologic Hazards

Development could expose future residents to geologic hazards particularly in hillside areas. The goals and policies of geologic hazards address the need for proper land use requirements to prevent foreseeable geologic hazards.

Goal 6-5 Minimize risks to public safety from geologic events.

Policy 6-5.1 Require geotechnical evaluation and recommendations prior to new development, as appropriate. Such geotechnical evaluation shall analyze the potential hazards from:

- Landslides
- Liquefaction
- Expansive soils
- Mud and debris flow

Recommendations shall include mitigation to avoid or minimize the identified hazards.

Flood Hazards

Claremont will protect its residents from flood hazards through structural and non-structural planning such as dam reinforcement and adequate evacuation plans.

Goal 6-6 Minimize the risks associated with storm flooding and dam inundation.

Policy 6-6.1 Work with the U.S. Army Corps of Engineers and Los Angeles County to ensure dam structures are upgraded as needed to withstand earthquakes and prevent inundation of downstream areas.

Policy 6-6.2 Work with the U.S. Army Corps of Engineers and Los Angeles County to encourage regular maintenance and monitoring of flood-control facilities.

Policy 6-6.3 Complete the Chicken Creek flood control measures, and transfer operations and management to Los Angeles County.

Fire Hazards

Since City hillsides are susceptible to wildfire, the City will strive to administer proper fire prevention through public education and land use restrictions. In case of fire emergencies, the City will strive to be sufficiently equipped with facilities and personnel to mitigate fire hazards.



Goal 6-7 Minimize the risks associated with urban and wildland fires.

-
- Policy 6-7.1 Work with the Fire Department to establish minimum standards for water supply and access for fire-fighting equipment.
-
- Policy 6-7.2 Work with Fire Department to enforce restrictions on vehicular and recreational use of foothill areas during critically hazardous periods.
-
- Policy 6-7.3 Enforce building fire codes and ordinances, and continue to research and adopt best practices pertaining to fire management and fire hazards.
-
- Policy 6-7.4 Work with the Fire Department to establish an aggressive fire inspection and code enforcement program.
-
- Policy 6-7.5 Continue to disseminate information relating to fire prevention measures and resident response to emergency situations, with the understanding that an informed public can greatly aid in the reduction of fire loss.
-
- Policy 6-7.6 Continue to work with Los Angeles County Weed Abatement Division to implement and enforce the county's systematic weed abatement program.

Hazardous Waste Management

The City will promote proper disposal of hazardous waste material by educating the community of the dangers of improperly handled hazardous materials and by adhering to the guidelines of the Los Angeles County Hazardous Waste Management Plan. This will promote a healthy and safe environment for workers and residents of Claremont.

Goal 6-8 Minimize the improper storage and dumping of hazardous waste materials.

-
- Policy 6-8.1 Educate residents regarding the types of household hazardous waste and proper manners of disposal, and continue to have yearly hazardous waste round-ups. 
-
- Policy 6-8.2 Utilize the Los Angeles County Hazardous Waste Management Plan as a guide to future hazardous waste management planning efforts. 
-
- Policy 6-8.3 Continue to require that all proposals for businesses involved in hazardous materials use, storage, or transport areas submit a hazards safety plan to

appropriate City agencies, and the County Fire Department for review of potential hazards.

Policy 6-8.4 Inform residents about the dangers of improper disposal of hazardous materials.

Police Services

The City will strive to provide police services through unbiased staff members and police officers, state-of-the-art facilities, and the use of the latest technologies. Preventative policing practices, community-oriented policing, and use of volunteers and outreach activities are intended to involve the Claremont community in providing comprehensive policing services.

Goal 6-9 Provide effective and comprehensive policing services and enforce laws in an equitable way.

Policy 6-9.1 Provide a state-of-the-art Police Station and up-to-date emergency communications technology for the Claremont Police Department.

Policy 6-9.2 Continue to encourage design concepts that inhibit criminal behaviors.

Policy 6-9.3 Provide timely responses to emergency and non-emergency calls for service 24 hours a day.

Policy 6-9.4 Strive for the smooth and efficient movement of traffic throughout the community.

Policy 6-9.5 Recruit, hire, and train personnel to provide public service in an unbiased manner.

Policy 6-9.6 Continue to develop and implement community oriented Policing Project to foster accountability, mutual trust, and respect between the community and the Police Department.

Policy 6-9.7 Assign personnel and resources, such that each police patrol unit can maintain 30 to 35 percent "free patrol" time to provide preventative crime patrol, proactive traffic enforcement and regulation, and community-oriented public safety service.

Policy 6-9.8 Initiate proactive crime suppression and prevention strategies throughout the community.

Policy 6-9.9 Provide additional, cost-effective public safety services through the utilization of volunteers in our Police Reserve Officer, Community Patrol Volunteer Program, Explorer Program, Traumatic Intervention Service, Chaplain Volunteer Program, and Community Emergency Response Team (CERT).

Policy 6-9.10 Participate in school liaison activities such as Healthy Start Collaborative Program (School Resource Officer), on-campus probation officer, Drug Abuse Resistance Education (D.A.R.E.), Adopt-a-Cop, Red Ribbon Week, School Attendance Review Board (SARB), and other joint police/school district projects that may be developed in the future.

Policy 6-9.11 Participate in community outreach activities such as Neighborhood Watch, Business Crime Watch, security surveys, crime prevention presentations, Cubs for Kids, Designated Driver, Bike Safety Rodeos, CERT, Citizen's Academy, and other activities that may be developed in the future.

Policy 6-9.12 Continue to monitor gang activities in the community, and work with surrounding jurisdictions and outside groups and organizations to prevent criminal activities and gang violence.

Emergency Services

The City will work to provide proper response and preparedness to natural and human-caused disasters by collaborating with other jurisdictions and by abiding by the City's Emergency Plan. The City will continue public educations regarding emergency preparedness to protect its citizens in case of local, regional, and national threats and emergencies.

Goal 6-10 Strive to maintain the highest level of emergency preparedness for natural and human-caused disasters and threats.

Policy 6-10.1 Educate residents of hazards and threats addressed in the Claremont Emergency Plan/SEMS Multi-hazard Functional Plan and the Natural Hazard Mitigation Basic Plan, and use these plans as a guide to prevention and mitigation of natural and human-caused hazards.

Policy 6-10.2 Educate City staff to follow established procedures and responsibilities stated in the Emergency Plan/SEMS



CITY OF CLAREMONT GENERAL PLAN

Multi-hazard Functional Plan and the Natural Hazard Mitigation Basic Plan in the event of an emergency.

Policy 6-10.3 Complete implementation of a reverse 911 system to facilitate evacuation in case of an emergency.

Policy 6-10.4 Respond to emergency calls for service within an average of less than four minutes.

Policy 6-10.5 Work to ensure the adequacy of disaster response and coordination of all segments and populations in the community.



Policy 6-10.6 Continue to have a paramedic squad assigned within Claremont boundaries.

Noise

Excessive noise can disrupt our lives. From the continuous thrum of cars and trucks traveling the freeways to the unnerving whine of gasoline-powered leaf blowers on an otherwise quiet morning, noise can interrupt our conversations, our thoughts, and our leisure activities. Noise sensitivity varies depending on the time of day, its duration and pitch, and preferences of individuals. Despite this variability, most residents agree that too much noise or the wrong type of noise irritates us and can adversely affect our health.

In Claremont, transportation corridors are the major source of noise. The 10 Freeway, the 210 Freeway, and the Metrolink and planned Gold Line train tracks all traverse the breadth of the City west to east. In addition, aircraft operations at Cable Airport and Brackett Field, and aircraft flights from Ontario International Airport, fly over Claremont.



San Bernardino Metrolink Line

The San Bernardino Line is Metrolink's busiest line. The line connects downtown Los Angeles, Union Station to San Bernardino. Over 30 trains stop at Claremont TransCenter on a daily basis.

Scope of Noise Element

In recognition of the adverse health effects associated with excessive noise, the California Government Code, Section 65302(f) very specifically identifies the types of community noise to be addressed in the General Plan. The Noise Element is to identify noise sources from:

- Highways and freeways
- Primary arterials and major local streets
- Passenger and freight on-line railroad operations and ground rapid transit systems
- Commercial, general aviation, heliport, and military airport operations, aircraft over-flights, jet engine tests stands, and all other ground facilities and maintenance functions related to airport operations
- Local industrial plants, including, but not limited to, railroad classification yards

- Other stationary ground noise sources identified by local agencies as contributing to the community noise environment

Noise Metrics

Evaluating noise is complex. The unit of measurement is an A-weighted sound pressure level, or dB(A), which accounts for sound pressure level, as well as the pitch of sound and the way the average human ear responds to the pressure and pitch. Health considerations associated with excessive noise exposure include hearing loss or damage, interference with oral communication, and interference with sleep. At prolonged exposure at sound levels over 85 dB(A), a person experiences hearing loss. At 60 dB(A), noise impairs speech intelligence, and sound levels over 40 to 45 dB(A) can disturb sleep.³¹

To account for the fact that noise during night-time hours can be more irksome than day-time noise, acousticians have developed noise metrics that apply a weighed ambient noise level average over a 24-hour period, giving "penalties" to noise that occurs during the 10:00 P.M. to 7:00 A.M. period. These metrics are defined as either the Community Equivalent Noise Level (CNEL) or Day-Night Level (Ldn). Noise contour maps - similar to topographic maps that show steepness of terrain - can then be developed to identify noise level averages throughout the community.

Noise Conditions in 2005

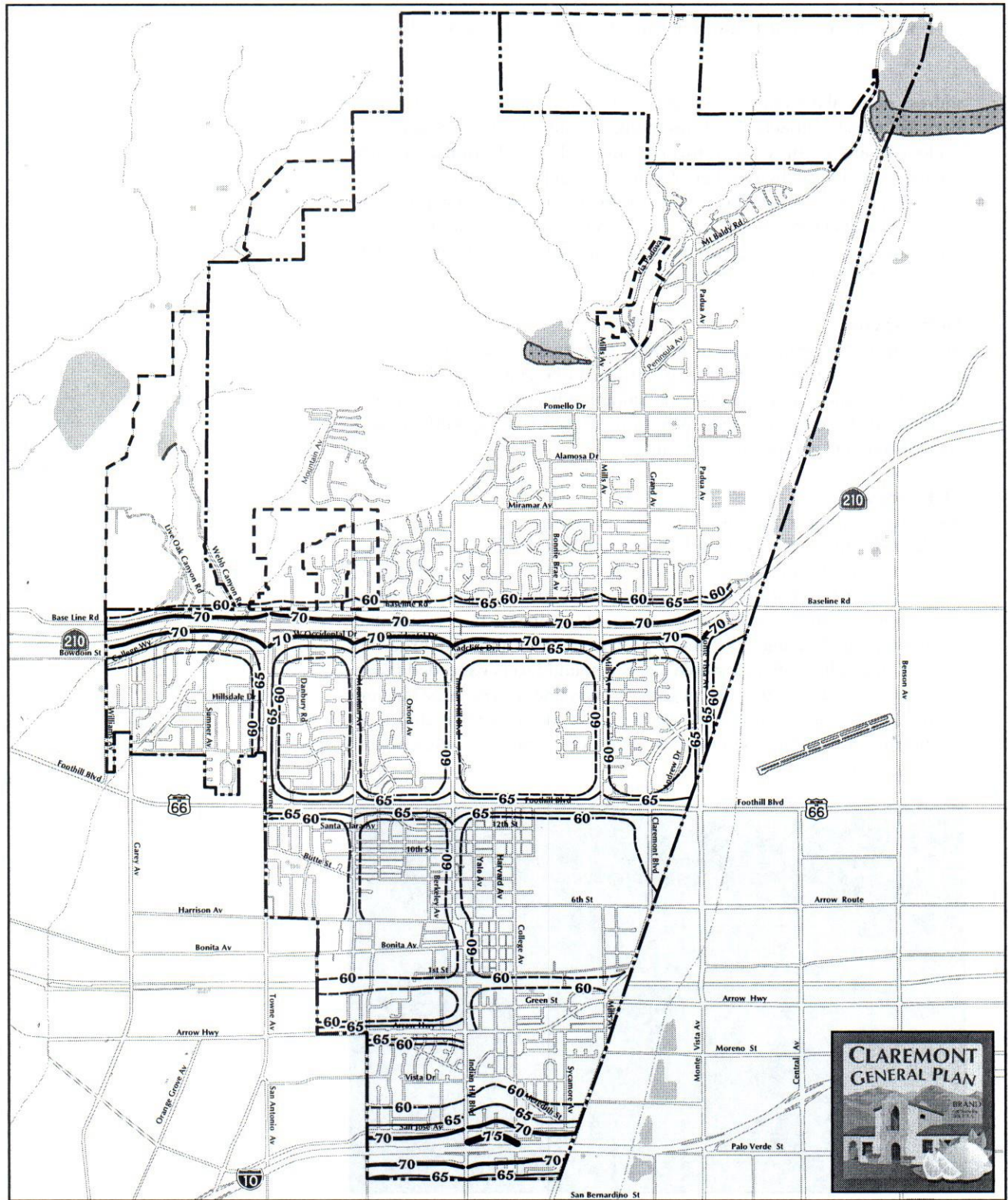
Figure 6-6 shows noise exposure contours in the City of Claremont, represented by Ldn, for baseline year 2005. These contours take into account the following noise sources.

Traffic Noise

Noise from the freeways crossing Claremont exceeds 65 Ldn, which is generally considered a threshold noise level for residential use.³² Freeways are under the state's jurisdiction, and local jurisdictions encountered difficulties through the years having Caltrans address community noise concerns. Concerned Claremont community members organized Citizens Against Freeway Noise following the opening of the 210 Freeway. The group held public meetings to

³¹ Wieland Associates, Inc., *Evaluation of the Existing Noise Environment for the City of Claremont General Plan*, February 2005, p. 5.

³² Wieland Associates, Inc., p. 10.



Noise Contours

- 60 CNEL
- 65 CNEL
- 70 CNEL
- 75 CNEL

- - - - - City Boundary
 - · - · - Sphere of Influence

Source: Wieland Associates, 2005.

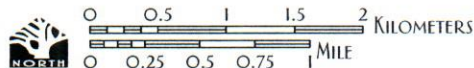


Figure 6-6

Noise Contours 2005

CLAREMONT GENERAL PLAN

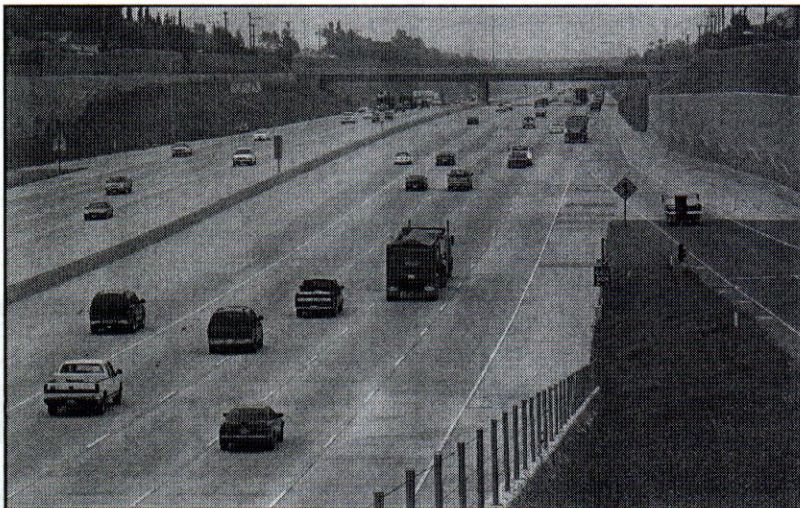
address noise abatement issues and made recommendations regarding freeway noise impacts in Claremont. Caltrans has refused to implement any of these recommendations, and noise from the freeway continues to rise as the number of vehicles using the freeway increase. As a result, noise from the freeway remains an important issue for many residents in the community. To achieve any relief from the noise, Claremont will need to continue to press Caltrans and state and federal legislators for noise mitigation programs.

10 Freeway

Although only a small segment of the 10 Freeway crosses Claremont, noise surveys show an Ldn level of 70 to 74 dB near the 10 Freeway, impacting residential neighborhoods along the route. Noise emanating from the 10 Freeway is due in part to the rough freeway surface, and thus far remains unmitigated by Caltrans.³³

210 Freeway

Noise surveys undertaken in 2003-2004 showed an Ldn level of 67 to 72 dB near the 210 Freeway. Noise concerns and abatement are similar to the 10 Freeway. At the time of freeway planning and construction, Claremont residents monitored Caltrans' efforts to ensure that freeway noise would not adversely impact the residential neighborhoods flanking the route. However, after the 210 Freeway opened and traffic volumes increased, the sound levels exceeded those predicted by planning models, negatively affecting a very large section of the City. Causes for the excessive noise includes poor choice in paving material, the grade changes at the east and west ends of the City, and lack of landscaping.



³³ Urban Crossroads, Inc. *Notes from Foothill Freeway Impacts*. 29 January 2003. and *State Route Freeway Draft Noise Impact Assessment*. 9 January 2004.

Major and Secondary Arterials

Residents near Major and Secondary Arterial roadways also experience high noise levels during peak commute hours. Community noise monitoring and modeling studies conducted in 2004 indicated that noise levels along most major roadways in Claremont exceed the 65 Ldn threshold.

**Table 6-4
Arterial Segments Generating an Ldn in Excess of 65 dB**

Arterial	Segment
Arrow Highway	West City limits to Indian Hill Boulevard
Base Line Road	N. Towne Avenue to East City limits
Foothill Boulevard	N. Towne Avenue to East City limits
Indian Hill Boulevard	Arrow Highway to Foothill Boulevard.
Monte Vista Avenue	Claremont Boulevard. to Base Line Road
N. Towne Avenue	Foothill Boulevard. to Base Line Road

Railway Noise

The Metrolink San Bernardino County Line, operated by Southern California Regional Rail Authority (SCRRA), stops at the Claremont Station. The line operates seven days a week, with trains running between 4:00 A.M. to 10:00 P.M., with the schedule varying on weekends and weekdays. The noise levels from the trains are within the required sound limits, but the whistle and warning bells are a source of annoyance.

Once fully operational, the Metro Gold Line light-rail passenger service will travel from the Montclair Transit Center to Los Angeles Union Station. Through Claremont, the Gold Line will run along tracks parallel to the Metrolink route. This increased rail traffic will elevate the bell and whistle noise from the trains through the City, and depending upon Gold Line schedules and train frequency, some form of noise abatement may be needed.

Cable Airport

Cable Airport is the largest privately owned airport open to the public in the country and was established in 1945 by Dewey and Maude Cable.

Aircraft Noise

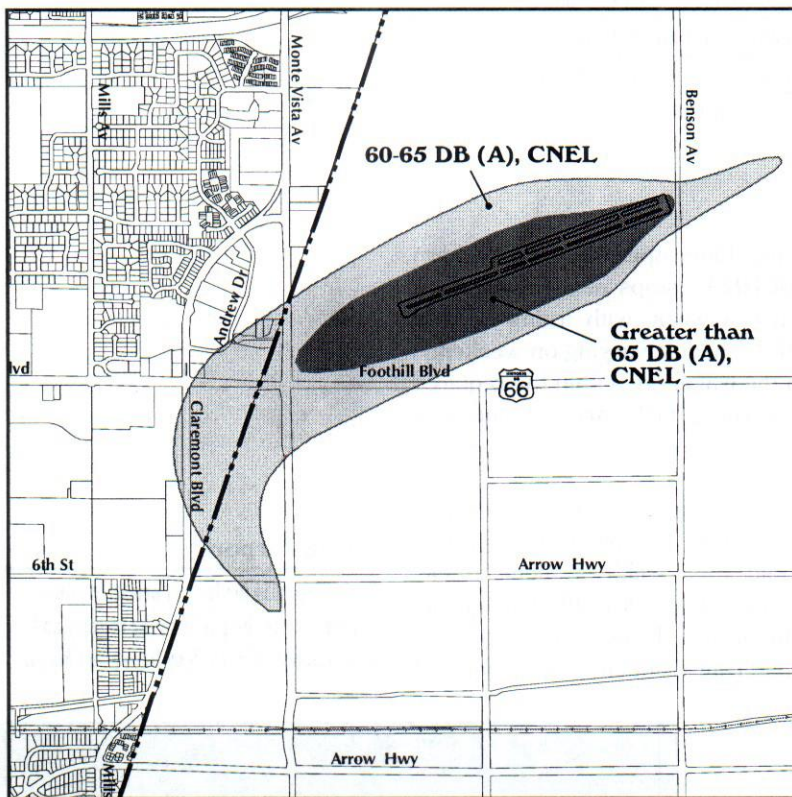
Although not as significant as the other noise sources, airplanes and helicopters represent a third source of transportation-related noise in Claremont. The proximity of Cable Airport, Ontario International Airport, and Brackett Field, and law enforcement patrol helicopters, all contribute to aircraft noise in our skies.



Cable Airport

Cable Airport, located just beyond the Claremont city limit in Upland, is a privately owned and operated general aviation facility that allows public access. Measured noise contours associated with Cable Airport operations, shown in Figure 6-7, indicate that critical noise contours do not impact any residential neighborhoods in Claremont, although the eastern edge of Pitzer College is marginally impacted by aircraft noise. Problems arise more from overflights during the day. Any increase in activity at Cable Airport could impact neighborhoods and The Colleges along Claremont's eastern border.

**Figure 6-7
Cable Airport Noise Contours**



Ontario International Airport

Ontario International Airport serves over seven million passengers annually, and its capacity is increasing as Inland Empire air cargo service and passengers continue to grow. The airport's proximity to Claremont provides convenient access for trips, both domestic and international travel.

Aircraft take-offs from Ontario International Airport impact the local environment since the established flight path for aircraft departing the airport follows the 10 Freeway through the south part of Claremont. The noise impacts increase when pilots deviate from the established

flight path by turning early and flying north over the central part of Claremont.

Over the years, Claremont has worked with officials from the Los Angeles World Airports (LAWA), which operates Ontario International Airport, to minimize the "early turns." LAWA established a "no early-turns" notification program to increase pilot awareness regarding noise intrusion over the City of Claremont. The program instructs the pilots that they are not to fly north over Claremont except when conditions for traffic safety dictate alternative flight paths. This program has helped reduce the number of early turns. Reducing early turns requires constant monitoring of the number of early turns and the on-going efforts of LAWA to continually remind pilots of the no early turns policy.

Brackett Field

Brackett Field, also a general aviation airport, is owned by Los Angeles County and services private and business aircraft. The airport, located in La Verne, serves around 2,500 annual passengers. Although Brackett Field's noise contours do not impact Claremont, flight paths cross over the City, and Claremont residents occasionally voice concerns over associated noise.

Helicopters

Helicopter noise can be more irritating than noise from other aircraft because helicopters operate at low altitudes and produce more noise. Air surveillance and patrol are essential public safety services that often involve helicopter operations, and we tend to tolerate this occasional noise. Helicopter operations also include news and traffic monitoring helicopters. However, helicopter operations during late-night hours can be bothersome, and the frequency of helicopter operations has increased since the opening of the 210 Freeway.

Non-Transportation Noise Sources

Noise sources are not limited to planes, trains, and automobiles. In Claremont, activities in our commercial and industrial districts are potential stationary noise sources. Because most business are low scale, low intensity, and conducted indoors, with the exception of vehicle sales, noise generally is limited to that associated with loading dock operations, frequent truck uses, mechanical equipment, and use of outdoor paging systems. The City regulates construction activity to prevent disturbances at night and on weekends.

Claremont residents value their quiet residential neighborhoods. However, this quietness can be interrupted by noise generating from property maintenance equipments such as lawnmowers or home repair activities. Such activities conducted at early morning and late evening hours can disturb sleep and affect quality of living. Implementation of the City's noise regulations will help maintain optimal interior and exterior noise levels within residential areas.

Noise and Land Use Compatibility Guidelines

Integral to sustaining our quality of life is ensuring we live in an environment where we can hear ourselves think, enjoy outdoor activities free from excessive or irritating noise, and sleep soundly with our windows open. Students in our schools and at The Colleges deserve and benefit from quiet places to study. Our goals are twofold: 1) to plan land uses that avoid noise/land use conflicts to the greatest extent possible, and 2) to mitigate noise sources that impact our quality of life.

Table 6-5 sets forth the guidelines we use for planning new land uses and the goals we seek to achieve for indoor and outdoor noise environments. Of particular importance are the standards for residential land uses, whereby an exterior noise level of 65 Ldn (70 Ldn for higher-density developments) is considered the maximum acceptable level. This 65 Ldn standard also applies to schools.

Noise Impact Areas – Baseline Conditions

Based on noise measurements obtained during 2003-2004, the City developed noise contour maps that illustrate 24-average noise conditions throughout Claremont. Figure 6-6 is the noise contour map for baseline year 2005.

For the most part, residential neighborhoods in Claremont experience noise environments consistent with the City's guidelines. However, homes along the 10 Freeway and the 210 Freeway are exposed to noise levels at or above 65 Ldn. Residential properties that back up to Foothill Boulevard also lie within the 65 to 70 Ldn contour. Other noise-sensitive uses exposed to higher noise levels include:

- Claremont Adult School
- The Claremont Colleges
- Community Day School
- Mountain View Elementary School
- San Antonio High School
- School of Theology at Claremont
- Mallows Park
- Memorial Park
- Rancho San Jose Park

**Table 6-5
Claremont Land Use/Noise Guidelines**

Property Receiving Noise		Maximum Noise Level (Ldn or CNEL, dBA)	
Type of Use	Zoning Designations	Interior	Exterior ³
Residential	Hillside	45	65
	Rural		
	Very Low		
	Low		
	Low Medium	45	65 / 70 ¹
	Medium		
	High		
Commercial and Office	Professional Commercial	--	70
	Neighborhood		
	Limited		
	Major		
	Highway		
	Freeway		
	Professional Office	50	70
Business Park	Business Park	55	75
Public/Institutional	Schools	50	65
	All others	50	70
Open Space	Active Open Space	--	70
	Passive Open Space	--	70 / 65 ²

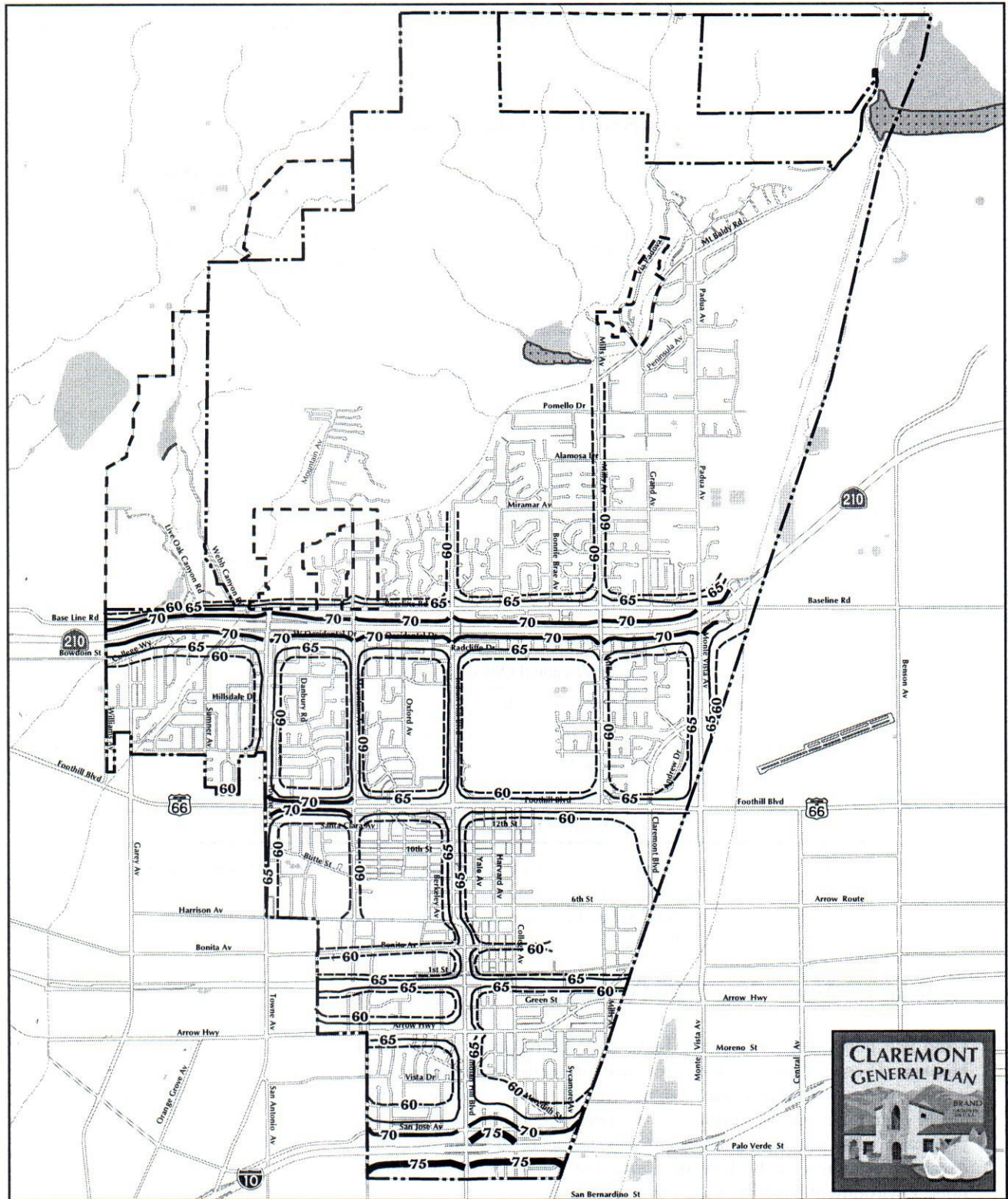
¹ Maximum exterior noise levels up to 70 dB CNEL are allowed for Multiple-Family Housing.

² Where quiet is a basis required for the land use.

³ Regarding aircraft-related noise, the maximum acceptable exposure for new residential development is 60 dB CNEL.

Noise Impact Areas -- Year 2025 Conditions

Land use policy set forth in the Land Use, Community Design, and Heritage Preservation Element provides for some moderate growth with the inclusion of mixed use designations. Thus, any change in noise levels over time will be attributable to increased traffic volumes and projected land use development activity. Figure 6-8 shows noise exposure contours in the City of Claremont for the projected future noise environment based on future traffic volumes.



Noise Contours

- 60 CNEL
- 65 CNEL
- 70 CNEL
- 75 CNEL

- - - - - City Boundary
 - - - - - Sphere of Influence

Source: Wieland Associates, 2005.



Figure 6-8

Future Noise Contours

CLAREMONT GENERAL PLAN

Noise Goals and Policies

The goals and policies regarding community noise aim to abate noise and preserve high quality of life for Claremont residents. The City will maintain a peaceful environment by identifying noise impacts and mitigating noise problems through acoustical treatments and appropriate land use policies.

Transportation-Related Noise

Transportation routes represent the predominant noise source in Claremont. Sounds emitted from rail, aircraft, and automobiles can be mitigated through sound barriers and a stricter adherence to noise level requirements. Since most transportation-related noise problems are regional or outside the City's jurisdiction, the City will negotiate/work with responsible agencies to address noise concerns.

Goal 6-11 **Work with other agencies to minimize the impact of transportation-related noise, including noise associated with freeways, rail lines, and airports.**

Policy 6-11.1 Require development which is, or will be, affected by railroad noise to include appropriate measures that will minimize adverse noise effects to the City's future residents.

Policy 6-11.2 Encourage existing City vehicles and equipment to the extent practical to reduce or eliminate unnecessary noise.

Policy 6-11.3 Participate with federal, state, and local government agencies in the development and implementation of noise abatement programs.

Policy 6-11.4 Support the efforts of local property owners and residents to reduce noise impacts associated with the 10 and 210 Freeways.

Policy 6-11.5 Work with and monitor the efforts of the Los Angeles County Metropolitan Transportation Authority and other responsible agencies to minimize any noise impacts associated with Gold Line operations.

Policy 6-11.6 Work with Southern California Regional Rail Authority so that noise intrusions from operation of Metrolink trains are minimized in neighborhoods along the commuter line.

Policy 6-11.7 Encourage the operators of Cable Airport (City of Upland) and Brackett Field (City of La Verne and the County of Los Angeles) to ensure that the users of the airports know and obey the flight-pattern requirements and altitude restrictions.

Policy 6-11.8 Encourage the installation of noise-mitigating equipment and noise-attenuation devices at Ontario International Airport, and encourage full evaluation of noise impacts on major changes related to operations at Ontario International Airport.

Policy 6-11.9 Continue to work with Los Angeles World Airport and Federal Aviation Administration officials to minimize noise impacts from aircraft take-offs from Ontario International Airport. Efforts should include ensuring established flight patterns are adhered to utilizing technically more advanced, less noisy aircraft.

Policy 6-11.10 Persuade operators of helicopters within the Claremont planning area to modify operational procedures, to the extent possible, to reduce noise levels produced by helicopters.

Non-Transportation Noise Sources

Goal 6-12 Minimize the impact of excessive noise levels throughout the community, and adopt appropriate noise level requirements for all land uses.

Policy 6-12.1 Use noise contour maps and noise/land use compatibility criteria in planning and development decisions.

Policy 6-12.2 Develop standards and encourage private property owners to locate, screen, and/or buffer equipment in order to reduce noise impacts on surrounding areas.

Policy 6-12.3 Minimize noise from property maintenance equipment, construction activities and other non transportation noise sources by enforcing designated construction and maintenance hours.

Policy 6-12.4 Require mitigation of any potential noise impacts before allowing mining of aggregate resources.

TITLE 16 ZONING

Chapter 16.154 ENVIRONMENTAL PROTECTIVE STANDARDS

16.154.020 NOISE AND VIBRATION STANDARDS

A. Declaration of Policy

In order to control unnecessary, excessive, and annoying noise and vibration in the City of Claremont, it is hereby declared to be the policy of the City to prohibit such noise and vibration generated from or by all sources as specified in this section.

B. Decibel Measurement Criteria

Any decibel measurement made pursuant to the provisions of this section shall be based on a reference sound pressure of 20 micro-pascals as measured with a sound level meter using the “A” weighted network (scale) at slow response.

C. Designated Noise Zones

The properties hereafter described are hereby assigned the following noise zones:

NOISE ZONE I: All single, double and multiple family residential properties.

NOISE ZONE II: All commercial properties.

NOISE ZONE III: All manufacturing or industrial properties.

D. Exterior Noise Standards

1. The Base Noise Level is the ambient noise level or the Ambient Base Noise Level, whichever is higher. The Ambient Base Noise Levels are as follows:

Noise Zone	Maximum Allowable Type of Land Use	Time Interval	Exterior Noise Level
I	Single, double or multiple family residential (RS, HC, RR, AV, H or RM)	10:00 p.m. to 7:00 a.m.	55
		7:00 a.m. to 10:00 p.m.	60
II	Commercial (CP, CN, CL, CH, CV & CF)	10:00 p.m. to 7:00 a.m.	60
		7:00 a.m. to 10:00 p.m.	65
III	Industrial (B/IP)	Anytime	70

Each of the noise limits above shall be reduced 5 dBA for noise consisting of impulse or simple tone noise.

2. It shall be unlawful for any person at any location within the incorporated area of the City to create any noise or allow the creation of any noise on the property owned, leased, occupied, or otherwise controlled by such person, which causes the noise level when measured on the property line of any other property to exceed the basic noise level as adjusted below:

Basic Noise Level for a cumulative period of more than 15 minutes in any one hour; or

Basic Noise Level plus 5 dBA for a cumulative period of more than 10 minutes in any one hour; or

Basic Noise Level plus 14 dBA for a cumulative period of more than 5 minutes in any one hour; or

Basic Noise Level plus 15 dBA at any time.

3. If the measurement location is a boundary between two different noise zones, the lower noise level standard shall apply.

4. If the intruding noise source is continuous and cannot reasonably be discontinued or stopped for a time period whereby the ambient noise level can be determined, the measured noise level obtained while the noise is in operation shall be compared directly to the allowable noise level standards as specified respective to the measurement location's designated land use and for the time of day the noise level is measured.

The reasonableness of temporarily discontinuing the noise generation by an intruding noise source shall be determined by the Director or his/her duly authorized deputy for the purpose of establishing the existing ambient noise level at the measurement location.

E. Interior Noise Standards

1. The interior Ambient Noise Level or the Ambient Base Noise Level is defined as:

Noise Zone	Type of Land Use	Time Interval	Allowable Interior Noise Level
All	Residential	10:00 p.m. to 7:00 a.m.	37 dBA
		7:00 a.m. to 10:00 p.m.	47 dBA

Each of the noise limits specified above shall be reduced by 5 dBA for impulse or simple tone noise.

2. It shall be unlawful for any person at any location within the incorporated area of the City to create any noise or to allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such person which causes the noise level when measured within any other residential dwelling unit in any noise zone to exceed the Interior Basic Noise Standard in the manner described in Section 16.154.020.D.2.

3. If the intruding noise source is continuous and cannot reasonably be discontinued or stopped for a time period whereby the ambient noise level can be determined, the same procedures specified in Section 16.154.020.D.2 shall be deemed proper to enforce the provisions of this section.

F. Exemptions

The following activities shall be exempted from the provisions of this chapter:

1. City approved and/or sponsored activities conducted at public parks, facilities, and/or playgrounds, and on public or private school or college grounds including, but not limited to, athletic and school entertainment events between the hours of 7:00 a.m. and 10:00 p.m.
2. Occasional outdoor gatherings, dances, shows, and sporting and entertainment events provided said events are conducted pursuant to a permit or license issued by the City relative to the staging of said events.
3. Any mechanical device, apparatus, or equipment used, related to or connected with emergency machinery, vehicle, work, or warning alarm or bell provided the sounding of any bell or alarm on any building or motor vehicle shall terminate its operation within 30 minutes in any hour of its being activated.
4. Noise sources associated with or vibration created by construction, repair, remodeling or grading of any real property, or during authorized seismic surveys, provided:
 - a. Activities take place between the hours of 7:00 a.m. and 8:00 p.m. weekdays and Saturdays, excluding national holidays; and
 - b. Noise levels, as measured on residential properties, do not exceed 65 dBA for a cumulative period of more than 15 minutes in any one hour, 70 dBA for a cumulative period of more than 10 minutes in any one hour, 79 dBA for a cumulative period of more than 5 minutes in any one hour or 80 dBA at any time; and
 - c. Any vibration created does not endanger the public health, welfare, and safety.

Only that construction, repair, remodeling and grading activity that does not exceed the noise levels set by Section 16.154.020.D may occur on Sundays and national holidays.

5. All mechanical devices, apparatus or equipment associated with agricultural operations provided:
 - a. Operations take place between 7:00 a.m. and 8:00 p.m. weekdays and Saturdays, excluding national holidays, and operations do not take place on Sundays or national holidays, or
 - b. Such operations and equipment are utilized for protection or salvage of agricultural crops during periods of potential or actual frost damage or other adverse weather conditions, or

c. Such operations and equipment are associated with agricultural pest control through pesticide application provided the application is made in accordance with permits issued by or regulations enforced by the California Department of Agriculture.

6. Noise sources associated with the maintenance of real property provided said activities are approved by the Director and take place between the hours of 7:00 a.m. and 8:00 p.m. on any day except Sunday, or between the hours of 9:00 a.m. and 8:00 p.m. on Sunday. Lawn mowers, edgers, and similar lawn and garden maintenance equipment shall be exempted only until January 1, 1980.

7. Any activity to the extent regulation thereof has been preempted by state or federal law.

G. Schools, Churches, Libraries, Health Care Facilities—Special Provisions

It shall be unlawful for any person to create any noise which causes the noise level at any school, hospital or similar health care institution, church, or library while the same is in use, to exceed the noise standard specified in Section 16.154.020.D prescribed for the assigned noise zone in which the school, hospital, church or library is located without the written consent of the affected institution.

H. Special Provisions

1. Air Conditioning and Refrigeration

Until January 1, 1980, the noise standards enumerated in Sections 16.154.020.D and 16.154.020.E shall be increased 5 dBA where the alleged intruding noise source is an air conditioning or refrigeration system or associated equipment which was installed prior to the effective date of the ordinance.

2. Solicitors—Use of Loud Noise, etc., to Advertise Goods, etc.

No solicitor or any person on his or her behalf shall shout, cry out or use any device or instrument to make sounds for the purpose of advertising.

3. Animal Noises

See Section [6.12.190](#) of the Claremont Municipal Code.

4. Radios, Television Sets, Musical Instruments and Similar Devices

No person shall operate or permit the operation or playing of any device which reproduces, produces or amplifies sound, such as a radio, musical instrument, drum, phonograph, or sound amplifier, in such a manner as to create a noise disturbance:

a. Across any real property boundary or within Noise Zone I, between the hours of 10:00 p.m. and 7:00 a.m. on the following day (except for activities for which a permit has been issued by the City).

b. At 50 feet (15 meters) from any such device, if operated on or over any public right-of-way.

5. Loading and Unloading for Nonresidential Uses

No person shall cause the loading, unloading, opening, closing, or other handling of boxes, crates, containers, building materials, garbage cans, or similar objects between the hours of 10:00 p.m. and 7:00 a.m. the following day in such a manner as to cause a noise disturbance across a residential real property boundary or within Noise Zone I.

6. Vehicle Repairs and Testing

No person shall cause or permit the repairing, rebuilding, modifying, or testing of any motor vehicle, motorcycle, or motorboat in such a manner as to create a noise disturbance between the hours of 10:00 p.m. and 8:00 a.m. the following day across a residential real property boundary or within Noise Zone I.

7. Airport and Aircraft Operations

a. The Director shall consult the nearby airport proprietors to recommend changes in airport operations to minimize any noise disturbance which the airport owner may have authority to control in his or her capacity as proprietor.

b. Nothing in this section shall be construed to prohibit, restrict, penalize, enjoin, or in any manner regulate the movement of aircraft which are in all respects conducted in accordance with, or pursuant to, applicable federal laws or regulations.

8. Railroads

The City does hereby adopt all provisions of the Railroad Noise Emission Standards (CFR, Chapter 1, Part 20, 41FR2184, January 14, 1976) and shall enforce them as indicated therein.

9. Motor Vehicles

(See Section [10.52.010](#) of the Claremont Municipal Code for special routing of vehicles in excess of 10,000 gvw.)

(See Section [10.48.010](#) of the Claremont Municipal Code for sections on speed control.)

The City does hereby adopt all provisions of the State Motor [Vehicle Code](#) pertaining to noise emissions including, not but limited to: Sections 23130, 23130.5, 27150.1, 27150.7, 27151, 27160, 27502, 27503, 38275, and 38280 and shall enforce them as indicated therein.

10. Tampering

The following acts or the causing thereof are prohibited:

The removal or rendering inoperative by any person other than for the purposes of maintenance, repair, or replacement, of any noise control device or element of design or noise label of any product identified under Section 4.3.6.* The Director may, by regulation, list those acts which constitute violation of this provision.

* U. S. Environmental Protective Agency Model Comm. Noise Control Ordinance, 9/1975 Document EPA 550/9-76-003.

11. Administration

The preceding list of provisions are individually exclusive and inclusive. Any act creating or permitting the creation of a noise disturbance as defined by this title, not otherwise excluded by the preceding section of this title, shall constitute a violation of this title and shall be abated as such.

I. Noise Level Management

For enforcement of applicable provisions herein decibel values are a basis of violation, the City will establish a procedure for measurement including equipment, technique, calibration and other items that may be appropriate.

J. Vibration

Notwithstanding other sections of this chapter, it shall be unlawful for any person to create, maintain or cause any ground vibration which is perceptible without instruments at any point on any affected property adjoining the property on which the vibration source is located. For the purpose of this chapter, the perception threshold shall be presumed to be more than 0.05 inches per second RMS vertical velocity.

K. Proposed Developments

Each department whose duty it is to review and approve new projects or changes to existing projects that result or may result in the creation of noise shall consult with the Director prior to any such approval. If at any time the Director has reason to believe that a standard, regulation or action, or proposed standard, regulation or action of any department respecting noise does not conform to the provisions as specified in this chapter, the Director may request such department to consult with him or her on the advisability of revising such standard or regulation to obtain conformity.

L. Noise Variance Procedure

The owner or operator of a noise or vibration source which violates any of the provisions of this chapter may file an application with the Director for a variance from the provisions thereof wherein said owner or operator shall set forth all actions taken to comply with said provisions, the reasons why immediate compliance cannot be achieved, a proposed method of achieving compliance, and a proposed time schedule for its accomplishment. The application shall be accompanied by a fee as established, and amended from time to time, by the City Council. A separate application shall be filed for each noise source; provided, however, that several mobile sources under common ownership, or several fixed sources on a single property, may be combined into one application. Upon receipt of a complete application and fee, the Director shall refer it with his/her recommendations thereof to the Planning Commission at their next available meeting for action thereon in accordance with the provisions of this chapter.

M. Planning Commission Responsibility

The Planning Commission shall evaluate all applications for variance from the requirements of this chapter and may grant said variances with respect to time for compliance, subject to such terms, conditions and requirements as it may deem reasonable to achieve maximum compliance with the provisions of this chapter. Said terms, conditions, and requirements may include, but shall not be limited to limitation on noise levels and operating hours. Each such variance shall set forth in detail the approved method of achieving maximum compliance and a time schedule for its accomplishment. In its determinations said commission shall consider the following:

1. Magnitude of nuisance caused by the offensive noise.
2. The uses or property within the area of impingement by the noise.
3. The time factors related to study, design, financing and construction of remedial work.
4. The economic factors related to age and useful life of the equipment.
5. The general public interest, welfare and safety.

Any variance granted by the Commission shall be by resolution and shall be transmitted to the Director for enforcement. Any violation of the terms of said variance shall be abated as provided for in Chapter 16.026 of this title.

N. Appeals

Appeals may be filed in accordance with existing provisions of City ordinances governing zoning variances.

O. Prima Facie Violation

Any noise exceeding the noise level standards for a designated noise zone as specified in Sections 16.154.020.D and 16.154.020.E or vibration exceeding the standards as specified in Section 16.154.020.J of this chapter, shall be deemed to be prima facie evidence of a violation of the provisions of this chapter.

P. Delay in Implementation—Fixed Noise Source

None of the provisions of this chapter shall apply to a fixed sound source during the period commencing the effective date of this chapter and terminating 90 days thereafter.

Q. Vibration and Climatic Influences

No operation or activity shall create any of the following effects to the extent they are detectable without the use of instruments at any location outside of the lot upon which said operation or activity is conducted.

1. Vibration of the ground.
2. Change of air temperature or humidity.

3. Wind.
 4. Dust or other airborne particulate matter.
 5. Toxic or noxious matter. (08-05)
-

Contact:

City Clerk: 909-399-5460

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CONSTRUCTION NOISE MODELING

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 08/04/2022
 Case Description: CLRM-10

**** Receptor #1 ****

Baselines (dBA)

Description	Land Use	Daytime	Evening	Night
Asphalt Demolition	Residential	60.0	55.0	50.0

Equipment

Description	Impact Device	Spec Usage (%)	Actual Lmax (dBA)	Receptor Lmax (dBA)	Estimated Distance (feet)	Shielding (dBA)
Excavator	No	40	80.7	50.0	0.0	
Front End Loader	No	40	79.1	50.0	0.0	
Excavator	No	40	80.7	50.0	0.0	

Results

Equipment Lmax Leq	Noise Limits (dBA)						Noise Limit Exceedance (dBA)							
	Calculated (dBA)		Day		Evening		Night		Day		Evening		Night	
	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Excavator N/A	80.7	76.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader N/A	79.1	75.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator N/A	80.7	76.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total N/A	80.7	81.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 08/04/2022
 Case Description: CLRM-10

**** Receptor #1 ****

Description	Baselines (dBA)				
	Land Use	Daytime	Evening	Night	
Asphalt Demolition and Rough Grading	Residential		60.0	55.0	50.0

Description	Equipment					
	Impact Device	Spec Usage (%)	Actual Lmax (dBA)	Receptor Lmax (dBA)	Estimated Distance (feet)	Shielding (dBA)
Scraper	No	40	83.6	50.0	0.0	
Compactor (ground)	No	20	83.2	50.0	0.0	
Dozer	No	40	81.7	50.0	0.0	

Equipment Lmax Leq	Results												
	Noise Limits (dBA)						Noise Limit Exceedance (dBA)						
	Calculated (dBA)		Day		Evening		Night		Day		Evening		Night
Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Scraper N/A	83.6	79.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Compactor (ground) N/A N/A	83.2	76.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer N/A	81.7	77.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total N/A	83.6	82.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 08/04/2022
 Case Description: CLRM-10

**** Receptor #1 ****

Baselines (dBA)

Description	Land Use	Daytime	Evening	Night
Rough Grading	Residential	60.0	55.0	50.0

Equipment

Description	Impact Device	Spec Usage (%)	Actual Lmax (dBA)	Receptor Lmax (dBA)	Estimated Distance (feet)	Shielding (dBA)
Scraper	No	40	83.6	50.0	0.0	
Compactor (ground)	No	20	83.2	50.0	0.0	
Dozer	No	40	81.7	50.0	0.0	

Results

Equipment Lmax Leq	Noise Limits (dBA)						Noise Limit Exceedance (dBA)							
	Calculated (dBA)		Day		Evening		Night		Day		Evening		Night	
	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Scraper N/A	83.6	79.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Compactor (ground) N/A N/A	83.2	76.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer N/A	81.7	77.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total N/A	83.6	82.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 08/04/2022
 Case Description: CLRM-10

**** Receptor #1 ****

Description	Baselines (dBA)			
	Land Use	Daytime	Evening	Night
Rough Grading and Fine Grading	Residential		60.0	55.0 50.0

Description	Equipment				
	Impact Device	Spec Usage (%)	Actual Lmax (dBA)	Receptor Lmax (dBA)	Estimated Distance Shielding (dBA)
Scraper	No	40	83.6	50.0	0.0
Grader	No	40	85.0	50.0	0.0
Scraper	No	40	83.6	50.0	0.0

Equipment Lmax Leq	Results						Noise Limits (dBA)								Noise Limit Exceedance (dBA)						
	Calculated (dBA)		Day		Evening		Night		Day		Evening		Night		Day		Evening		Night		
	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	
Scraper N/A	83.6	79.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader N/A	85.0	81.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Scraper N/A	83.6	79.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total N/A	85.0	84.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 08/04/2022
 Case Description: CLRM-10

**** Receptor #1 ****

Baselines (dBA)

Description	Land Use	Daytime	Evening	Night
Fine Grading	Residential	60.0	55.0	50.0

Equipment

Description	Impact Device	Spec Usage (%)	Actual Lmax (dBA)	Receptor Lmax (dBA)	Estimated Distance (feet)	Shielding (dBA)
Grader	No	40	85.0	50.0	0.0	0.0
Scraper	No	40	83.6	50.0	0.0	0.0
Dozer	No	40	81.7	50.0	0.0	0.0

Results

Equipment Lmax Leq	Noise Limits (dBA)						Noise Limit Exceedance (dBA)							
	Calculated (dBA)		Day		Evening		Night		Day		Evening		Night	
	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Grader N/A	85.0	81.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Scraper N/A	83.6	79.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer N/A	81.7	77.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total N/A	85.0	84.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 08/04/2022
 Case Description: CLRM-10

**** Receptor #1 ****

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Utilities Trenching	Residential	60.0	55.0	50.0

Description	Impact Device	Spec Usage (%)	Actual Lmax (dBA)	Receptor Lmax (dBA)	Estimated Distance (feet)	Shielding (dBA)
Excavator	No	40	80.7	50.0	0.0	
Front End Loader	No	40	79.1	50.0	0.0	
Front End Loader	No	40	79.1	50.0	0.0	

Equipment	Noise Limits (dBA)						Noise Limit Exceedance (dBA)							
	Calculated (dBA)		Day		Evening		Night		Day		Evening		Night	
	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Excavator	80.7	76.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	79.1	75.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	79.1	75.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	80.7	80.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 08/04/2022
 Case Description: CLRM-10

**** Receptor #1 ****

Description	Baselines (dBA)			
	Land Use	Daytime	Evening	Night
Building Construction and Paving	Residential		60.0	55.0 50.0

Description	Equipment					
	Impact Device	Spec Usage (%)	Actual Lmax (dBA)	Receptor Lmax (dBA)	Estimated Distance (feet)	Shielding (dBA)
Grader	No	40	85.0		50.0	0.0
Scraper	No	40		83.6	50.0	0.0
Pavement Scarafier	No	20		89.5	50.0	0.0

Equipment Lmax Leq	Results												
	Noise Limits (dBA)						Noise Limit Exceedance (dBA)						
	Calculated (dBA)		Day		Evening		Night		Day		Evening		Night
Lmax Leq	Lmax Leq	Lmax Leq	Lmax Leq	Lmax Leq	Lmax Leq	Lmax Leq	Lmax Leq	Lmax Leq	Lmax Leq	Lmax Leq	Lmax Leq	Lmax Leq	Lmax Leq
Grader	85.0 81.0	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A
Scraper	83.6 79.6	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A
Pavement Scarafier	89.5 82.5	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A
Total	89.5 86.0	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 08/23/2022
 Case Description: CLRM-10

**** Receptor #1 ****

Description	Baselines (dBA)			
	Land Use	Daytime	Evening	Night
Architectural Coating	Residential	60.0	55.0	50.0

Description	Equipment					
	Impact Device	Spec Usage (%)	Actual Lmax (dBA)	Receptor Lmax (dBA)	Estimated Distance (feet)	Shielding (dBA)
Compressor (air)	No	40	77.7	50.0	0.0	

Equipment Lmax Leq	Noise Limits (dBA)						Noise Limit Exceedance (dBA)							
	Calculated (dBA)		Day		Evening		Night		Day		Evening		Night	
	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Compressor (air)	77.7	73.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	77.7	73.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

CLRM-10 - Construction Noise Modeling Attenuation Calculations

Levels in dBA Leq

Phase	RCNM				La Puerta Sports Park to West	
	Reference Noise Level	Residential to North	Residential to East	Residential to South		
	<i>Distance in feet</i>	50	150	270	525	180
Asphalt Demolition		81	71	66	61	70
Asphalt Demolition and Rough Grading		83	73	68	62	72
	<i>Distance in feet</i>	50	390	360	320	330
Rough Grading		83	65	66	67	66
Rough Grading and Fine Grading		85	67	68	69	69
Fine Grading		84	67	67	68	68
	<i>Distance in feet</i>	50	100	100	100	100
Utilities Trenching		81	74	74	74	74
Architectural Coating		74	68	68	68	68
	<i>Distance in feet</i>	50	110	100	120	100
Building Construction, and Paving		86	79	80	78	80
	Maximum dBA Leq	86	79	80	78	80
	Min dBA Leq	74	65	66	61	66

Attenuation calculated through Inverse Square Law: $Lp(R2) = Lp(R1) - 20\text{Log}(R2/R1)$

CLRM-10 - Vibration Damage Attenuation Calculations

Levels in in/sec PPV

<i>Distance in feet</i>	Vibration Reference Level	Residential to South	Residential to East	Residences at 50 feet or greater
	at 25 feet	<i>30</i>	<i>10</i>	<i>50</i>
Vibratory Roller	0.21	0.160	0.830	0.074
Hoe Ram	0.089	0.068	0.352	0.031
Large Bulldozer	0.089	0.068	0.352	0.031
Caisson Drilling	0.089	0.068	0.352	0.031
Loaded Trucks	0.076	0.058	0.300	0.027
Jackhammer	0.035	0.027	0.138	0.012
Small Bulldozer	0.003	0.002	0.012	0.001

CLRM-10 - Vibration Annoyance Attenuation Calculations

Levels in VdB

Equipment	Vibration @ 25	Residential to North	Residential to East	Residential to South	Public Restroom to West
<i>Distance in feet</i>	<i>ft</i>	<i>360</i>	<i>380</i>	<i>330</i>	<i>330</i>
Clam shovel	94	59	59	60	60
Vibratory Roller	94	59	59	60	60
Hoe Ram	87	52	52	53	53
Large Bulldozer	87	52	52	53	53
Caisson Drilling	87	52	52	53	53
Loaded Trucks	86	51	51	52	52
Jackhammer	79	44	44	45	45
Small Bulldozer	58	23	23	24	24

TRAFFIC NOISE MODELING

CLRM-10
Traffic Noise Calculations

Roadway Segment	ADT Volumes				dBA CNEL Increase		
	Existing No Project	Existing Plus Project	Future (Year 2024) No Project	Future (Year 2024) Plus Project	Project Noise Increase	Cumulative Increase	Project Cumulative Contribution
Indian Hill Boulevard between Armstrong Drive and Mt. Carmel Drive	1,850	1,850	1,993	1,993	0.0	0.3	0.0
Miramar Avenue between Forbes Avenue and Mills Avenue	307	460	331	484	1.8	2.0	1.7
Forbes Avenue between Baseline Road and Miramar Avenue	323	782	348	807	3.8	4.0	3.7