CHAPTER 3: ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION MEASURES

CHAPTER 3 - ENVIRONMENTAL EVALUATION

Strikeouts and underlines indicate changes made from the DEIR.

3-1 INTRODUCTION

The purpose of this chapter is to provide the reader with the information necessary to understand and evaluate the potential environmental impacts due to implementation of the proposed Pasadena City College *Master Plan 2010*. In accordance with the State CEQA Guidelines (§15128 and §15143), this program EIR focuses on the impacts identified in the NOP and during project Scoping as needing further analysis (aesthetics, air quality, biology, cultural resources, geology/soils, hazards/hazardous materials, noise, public services, traffic/transportation, and utilities/service systems). Impacts that were determined to be not significant in the NOP include agricultural resources, land use/planning, mineral resources, population/housing, and recreation. However, to help understand the relationship of *Master Plan 2010* to the surrounding community, this chapter does include discussions about land use/planning, population/housing, and recreation.

To assist the reader, each EIR environmental impact category is discussed separately. These discussions include a description of the environmental setting, the criteria used to determine significance of potential effects, the potential environmental impacts of the proposed project, mitigation measures, and any unavoidable significant adverse effects that would remain after implementation of the proposed mitigation measures.

The environmental setting discussions contain a description of the physical environmental conditions in the vicinity of the project, as it existed at the time the Notice of Preparation was distributed. The significance criteria identified for each environmental impact category are based on the definitions that have been developed and established by the Pasadena Area Community College District, various public agencies, or professional organizations and are consistent with CEQA regulations. The environmental impact analyses focus on the potentially significant effects that could occur during project construction and/or operation. As required by CEQA, mitigation measures are identified to reduce or eliminate significant adverse impacts to the extent feasible.

The analyses presented in this chapter are based on a projected enrollment of up to about 34,000 students[1] in the 2010-2011 academic year and rounded upward to 35,000 to avoid potentially underestimating impacts. For comparison, there were almost 30,00 students enrolled in the Fall 2002 semester.

[1] Although Master Plan 2010 cites a projected enrollment of 34,300, the PCC Board has adopted a policy limit of 33,000. This limit was developed in recognition of the physical and operational constraints of the PCC campus and facilities and to avoid attempting to function at total peak loading.

3-2 AIR QUALITY

3-2.1 Environmental Setting

The Southern California region in general has a Mediterranean climate characterized by warm, dry summers and mild winters with most of the rainfall occurring between the months of November and April.

The California Air Resources Board (CARB) divides the state into air basins that share similar meteorological and topographical features. The proposed project is located in the South Coastal Los Angeles County Source-Receptor Area. Los Angeles County is within the South Coast Air Basin (Basin), a 6,600-square-mile area comprised of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties. The Basin's climate and topography are highly conducive to the formation and transport of air pollution. Peak ozone concentrations in the Basin over the last 2 decades have occurred at the base of the mountains around Azusa and Glendora in Los Angeles County and at Crestline in the mountain area above the City of San Bernardino. Peak ozone concentrations, as well as the number of days that the ozone standards were exceeded, decreased in the Basin throughout the 1990s. Carbon monoxide (CO) concentrations also dropped significantly throughout the Basin as a result of strict new emission controls and reformulated gasoline sold in winter months.

a. Regulatory and Planning Requirements

Regionally, the South Coast Air Quality Management District (SCAQMD) and the Southern California Association of Governments (SCAG) have responsibility under state law to prepare the Air Quality Management Plan (AQMP) for the South Coast Air Basin. The AQMP contains measures to meet state and federal requirements. When approved by CARB and the federal Environmental Protection Agency (EPA), the AQMP becomes part of the State Implementation Plan (SIP).

Federal Attainment Status

The South Coast Air Basin is the nation's only "extreme" ozone non-attainment area; however, the San Joaquin Valley Air Pollution Control District Board has requested that the EPA "bump up" the Valley from "severe" to "extreme." The Clean Air Act allows "extreme" areas until 2010 to achieve the national 1-hour ozone standard. The Clean Air Act set the deadlines for CO and PM_{10} (particulate matter less than 10 microns in diameter) attainment in the Basin at 2000 and 2005, respectively. EPA regulations specify that a CO standard is attained when there are two years of data with no more than one exceedance at any one station. Although there were no exceedances of any CO standard in 2001, there were two exceedances of the national 8-hour standard at the South Central Los Angeles County monitoring station in 2000. All other stations met the 2-year attainment standard in 2001. Although 2002 data have been released by the DAQMD, preliminary data indicate that the 8-hour standard was met at all stations in 2002. The national nitrogen dioxide (NO2) standard was regularly exceeded in Los Angeles County until

1992. As a result, the Basin was the only area in the nation still designated an NO2 non-attainment area when the EPA redesignated it attainment in 1998.

In July 1997, the EPA promulgated stricter standards for ozone and fine particulates less than 2.5 microns in diameter (PM2.5), with up to 15 years allowed for attaining the PM2.5 standard. Attainment of the new 8-hour ozone standard would not be required until after the 1-hour standard is achieved. The PM_{10} standard was revised, but the existing PM_{10} standard remains in effect until attainment is achieved. Until there has been sufficient monitoring for the EPA to designate the PM2.5 attainment status for each region, the PM_{10} standard will remain the particulate standard of reference.

State Standards

California standards are generally stricter than national standards, but have no penalty for non-attainment. California and national ambient air standards are shown in Table 3-1.

Regional Planning to Meet Standards

Regionally, the SCAQMD and the Southern California Association of Governments (SCAG) prepare the AQMP. The agencies adopted new plans in 1989 to meet national standards and in 1991 to meet state standards. The SCAQMD revised these attainment plans in 1994 and 1997. The EPA approved the 1994 AQMP in 1996 as part of the SIP. The SCAQMD revised the 1997 AQMP in 1999 to address EPA concerns. The revised plan, now known as the 1999 AQMP, was approved by the EPA on May 10, 2000 and replaced the 1994 AQMP as the federally enforceable SIP for the air basin. The SCAQMD and SCAG have revised the 1999 AQMP, and are expected to adopt the new revision later in 2003.

b. Existing Air Quality

The SCAQMD is responsible for monitoring air quality in the South Coast Air Basin, and for adopting controls, in conjunction with the CARB, to improve air quality. Overall air quality has improved considerably throughout the Basin since 1990. These improvements have occurred despite extensive population growth in the Basin during the past decade.

The EPA has adopted new standards for 8-hour ozone and fine particulates ($PM_{2.5}$). Neither standard is operational in the South Coast Air Basin until the 1-hour ozone standard is achieved and the EPA completes its database on existing $PM_{2.5}$ concentrations. The EPA expects to finalize the 8-hour ozone implementation procedures in 2003 and designate non-attainment areas in late 2003 or early 2004. The agency expects to designate $PM_{2.5}$ non-attainment areas in 2004 or 2005.

In the interim, the SCAQMD is monitoring levels of both $PM_{2.5}$ and 8-hour concentrations of ozone. The proposed project is located in Source Receptor Area (SRA) 8, the West San Gabriel Valley. Readings for SRA8 for the past 5 years, together with the applicable state and national standards, are shown in Table 3-2. PM_{10} readings are from SRA 9, the East San Gabriel Valley, because PM_{10} is not monitored in SRA 8. Where they are available, the 8-hour ozone and the $PM_{2.5}$ concentrations in SRA 8 are shown for information purposes.

Table 3-1: Ambient Air Quality Standards

Air Pollutant	State Standard	National Standards		Health Effect
		Primary	Secondary	
Ozone (O_3)	0.09 ppm, 1-hr. avg.	0.12 ppm, 1-hr. avg. 0.08 ppm, 8-hr. avg.	0.12 ppm, 1-hr. avg.	Aggravation of respiratory and cardiovascular diseases; Impairment of cardiopulmonary function
Carbon Monoxide (CO)	9.0 ppm, 8-hr. avg. 20 ppm. 1-hr. avg.	9 ppm, 8-hr. avg. 35 ppm, 1-hr. avg.	9 ppm, 8-hr. avg. 35 ppm, 1-hr. avg.	Aggravation of respiratory diseases (asthma, emphysema)
Nitrogen Dioxide (NO_2)	0.25 ppm, 1-hr. avg.	0.0534 ppm, annual avg.	0.0534 ppm, annual avg.	Aggravation of respiratory illness
Sulfur Dioxide (SO_2)	0.25 ppm 1-hr. 0.04 ppm, 24-hr avg.	0.03 ppm, annual avg. 0.14 ppm, 24-hr. avg.	0.50 ppm, 3-hr. avg.	Aggravation of respiratory diseases (asthma, emphysema)
Suspended Particulate Matter (PM_{10})	50 $\mu g/m^3$, 24-hr avg. 30 $\mu g/m^3$ AGM	150 $\mu g/m^3$, 24-hr. avg. 50 $\mu g/m^3$ AAM	150 $\mu g/m^3$, 24-hr. avg.; 50 $\mu g/m^3$ AAM	Increased cough and chest discomfort; Reduced lung function; Aggravation of respiratory and cardio-respiratory diseases
Sulfates (SO_4)	25 $\mu g/m^3$, 24-hr. avg.			Increased morbidity and mortality in conjunction with other pollutants
Lead (Pb)	1.5 $\mu g/m^3$, monthly avg.	1.5 $\mu g/m^3$, calendar quarter	1.5 $\mu g/m^3$	Impairment of blood and nerve function; Behavioral and hearing problems in children
Hydrogen Sulfide (H_2S)	0.03 ppm, 1-hr. avg.			Toxic at ve7ry high concentrations
Vinyl Chloride	0.010 ppm, 24-hr. avg.			Carcinogenic
Visibility-Reducing Particles	In sufficient amount to reduce prevailing visibility to less than 10 miles at relative humidity less than 70%, 1 observation			

Notes:

ppm = parts per million by volume; $\mu g/m^3$ = micrograms per cubic meter.

AAM = annual arithmetic mean; AGM = annual geometric mean.

Source: California Air Resources Board, November 2002.

Table 3-2: Summary of Air Quality Data at West San Gabriel Valley (SRA) Monitoring Station

Pollutant Standards	1997	1998	1999	2000	2001
Ozone (O_3)					
State standard (1-hr. avg. 0.09 ppm)					
National standard (1-hr avg. 0.12 ppm)					
National standard (8-hr avg. 0.08 ppm)					
Maximum 1-hr concentration (in ppm)	0.14	0.17	0.12	0.16	0.16
Maximum 8-hr concentration (in ppm)	0.11	0.14	0.10	0.13	0.12
Days state standard exceeded	24	31	15	19	28
Days national 1-hr standard exceeded	5	14	0	7	1
Days national 8-hr standard exceeded	8	17	4	14	9
Carbon Monoxide (CO)					
State standard (1-hr. avg. 20 ppm)					
National standard (1-hr avg. 35 ppm)					
State standard (8-hr. avg. 9.0 ppm)					
National standard (8-hr avg. 9 ppm)					
Maximum concentration 1-hr period (in ppm)	8.0	8.0	9.0	8.0	7.0
Maximum concentration 8-hr period (in ppm)	6.0	6.3	6.6	6.1	5.00
Days state/national 1-hr standards exceeded	0	0	0	0	0
Days state 8-hr standard exceeded	0	0	0	0	0
Days national 8-hr standard exceeded	0	0	0	0	0
Nitrogen Dioxide (NO_2)					
State standard (1-hr avg. 0.25 ppm)					
National standard (0.0534 AAM in ppm)					
Annual arithmetic mean (in ppm)	0.0341	0.0351	0.0379	0.0296	0.0345
Percent national standard exceeded	0	0	0	0	0
Maximum 1-hr concentration	0.17	0.16	0.16	0.17	0.15
Days state standard exceeded	0	0	0	0	0
Suspended Particulates (PM_{10})[1]					
State standard (24-hr. avg. 50 $\mu g/m^3$)					
National standard (24-hr avg. 150 $\mu g/m^3$)					
Maximum 24-hr concentration	116	87	103	94	106
Percent samples exceeding state standard	40	40	35	42	38
Percent samples exceeding national standard	0	0	0	0	0
Suspended Particulates (PM2.5)					
National standard (24-hr avg. 65 $\mu g/m^3$)					
Maximum 24-hr concentration	NM	NM	73	66	78.1
Percent samples exceeding national standard			1.0	1.5	0.9

Notes:

[1] Readings are from SRA 9 – East San Gabriel Valley. PM_{10} is not monitored in SRA8.
ppm = parts per million
$\mu g/m^3$ = micrograms per cubic meter
NM = Not Monitored

Source: SCAQMD Air Quality Data--1997 through 2001.

Summary of Existing Air Quality

Ozone concentrations and the number of standard exceedances in SRA 8 have remained relatively constant since 1997. No carbon monoxide or nitrogen dioxide standard was exceeded during the period. Particulate levels vary from year to year, but the national PM_{10} standard was not exceeded in any year. The state PM_{10} standard was exceeded approximately 40 percent of the time. The national $PM_{2.5}$ standard was slightly exceeded in each of the three years it was measured.

3-2.2 Environmental Impacts

a. Significance

A project's air quality impacts can be separated into short-term impacts due to construction and long-term permanent impacts from project operations. Determination of significant impact is the responsibility of the lead agency, which is the PACCD.

PACCD relies on significance thresholds recommended by the SCAQMD in its *CEQA Air Quality Handbook*, as revised in November 1993 and approved by the SCAQMD's Board of Directors. The SCAQMD is currently in the process of preparing a new air quality handbook, to be titled the *AQMD Air Quality Analysis Guidance Handbook*. Chapters 2, 3, and 4, which are related to air quality background information and the roles of regulatory agencies, are now available on the SCAQMD's web page at *www.aqmd.gov*. Other chapters will be posted on the web page as they become available. The SCAQMD's revisions at the time this analysis was prepared do not include new significance thresholds or analysis methodologies.

The SCAQMD's emission thresholds apply to all federally regulated air pollutants except lead, which is not exceeded in the Basin and does not contribute to exceedances of other federally regulated pollutants. Construction and operational emissions are considered by the SCAQMD to be significant if they exceed the thresholds shown in Table 3-3.

Table 3-3: Emission Thresholds of Significance

Pollutant	Construction		Operations
	pounds/day	tons/quarter	pounds/day
Carbon Monoxide (CO)	550	24.75	550
Sulfur Oxides (SO_x)	150	6.75	150
Particulate Matter (PM_{10})	150	6.75	150
Nitrogen Oxides (NO_x)	100	2.5	55
Reactive organic compounds (ROC)	75	2.5	55

Source: South Coast AQMD CEQA Air Quality Handbook, 1993.

Carbon monoxide concentrations in an area that already exceeds national or state CO standards are also considered significant if the increase exceeds one part per million (ppm) averaged over 1 hour or 0.45 ppm averaged over 8 hours.

In addition, the SCAQMD considers potential air quality impacts identified by the California Environmental Air Quality Act to also be significant. Appendix G (Environmental Checklist Form) from the CEQA Guidelines states that, where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to determine if the project would:

- Conflict with or obstruct implementation of the applicable air quality plan.

- Violate any air quality standard or contribute substantially to an existing or projected air quality violation.
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including release in emissions that exceed quantitative thresholds for ozone precursors).
- Expose sensitive receptors to substantial pollutant concentrations.
- Create objectionable odors affecting a substantial number of people.

Ambient air standards are established to protect the average person from health effects associated with air pollution. The standards include an "adequate margin of safety." However, some people are particularly sensitive to some pollutants. These sensitive people include persons with respiratory illnesses or impaired lung function because of other illnesses, the elderly, and children. Facilities and structures where these sensitive people live or spend considerable amounts of time are known as sensitive receptors. Chapter 4 of the SCAQMD's new Air Quality Analysis Guidance Handbook defines land uses considered to be sensitive receptors as long-term health care facilities, rehabilitation centers, convalescent centers, retirement homes, residences, schools, playgrounds, child care centers and athletic facilities.

b. Impacts Discussion

Construction Impacts

Overview: Air quality impacts of a project may occur during construction on both a regional and local scale. Construction impacts include airborne dust from demolition, grading, excavation and dirt hauling and gaseous emissions from heavy equipment, delivery and dirt hauling trucks, employee vehicles, and paints and coatings. These impacts may affect regional pollutants such as ozone if there are numerous vehicle movements required to and from a major construction site, or the impacts may occur very close to the source, such from as carbon monoxide from equipment operation or particulate matter (fugitive dust) from ground-disturbing activities.

The proposed schedule of construction of projects by year is shown in Table 3-4. These data are used in determining the periods of peak activity.

Based on this schedule, there would be several peak periods for construction. These include:

- Third quarter of 2003 when ground would be broken for the Parking Structure. This would occupy the largest land area of any proposed structure and therefore site-grading would disturb the largest amount of surface area.
- Second quarter of 2004 when construction would continue on the Parking Structure, ground would be disturbed for the Industrial Technology Building, and the remodeling of Building W would be underway.
- Third quarter of 2010 when the Athletic Field would be built and remodeling would be underway in Buildings R, E. and Z, as well as the Boiler House.

Table 3-4: Construction Schedule	
Construction Activity	**Period**
Parking Structure	June 2003 to June 2004
Industrial Technology	April 2004 to June 2006
Campus Center	June 2006 to May 2008
Arts Building	May 2008 to January 2010
V Building Remodel	June 2006 to January 2007
W Building Remodel	June 2003 to January 2005
R Building Remodel	January 2010 to December 2010
Boiler House Remodel	January 2010 to December 2010
E Building Remodel	January 2010 to December 2010
Z Building Remodel	January 2010 to December 2010
Athletic Field	May 2010 to December 2010
Utility Upgrade	May 2003 to December 2010
East Campus Gateway	April 2004 to August 2004
West Campus Gateway	May 2008 to August 2008

Source: Pasadena City College, 2003.

The second quarter of 2004 was selected as the peak quarter because activity would be underway on two large new projects and because vehicles and trucks would have higher emissions than they would in 2010 (air quality emissions are expected to be less in the future due to ever-cleaner fuels and equipment). The total amount of dirt disturbed could be less in that quarter, but fugitive dust mitigation measures are the same for all time segments whether or not the emissions exceed SCAQMD thresholds for $PM_{10.}$ This is because all activities would occur near sensitive receptors and thus it is required that all feasible mitigation be applied in order to protect health.

Construction impacts were assessed in accordance with procedures contained in the SCAQMD *CEQA Air Quality Handbook* (1993), updated with current California Air Resources Board emission factors.

❑ Demolition

The T and K Buildings would be demolished to make room for the proposed Arts Building. The existing CC, J and JJ Buildings would be demolished to make room for a new CC Building. The existing tennis courts would be demolished to make room for the proposed new Industrial Technology Building. Parking Lot 5 would be demolished to make room for the proposed Parking Structure and Athletic Field.

Several buildings are scheduled for rehabilitation and reuse. This would entail some demolition of interior walls and partitions. Some classroom buildings contain asbestos (see Section 3-6, Table 3-14). Prior to demolition of any portion of any structure, the contractor would comply with requirements of SCAQMD Rule 1403 regarding asbestos control during demolition and

renovation. This rule ensures that asbestos is removed and encapsulated prior to demolition so that no asbestos fibers are released to the atmosphere. The SCAQMD *CEQA Air Quality Handbook* states that asbestos emissions from a project are fully mitigated and not significant when the project is in compliance with Rule 1403.

❑ Grading and Excavation

Soil would be disturbed during grading and excavation or while storing project-related equipment. Table A9-9 of the SCAQMD CEQA Handbook states that there would be 26.4 pounds of PM_{10} for each acre of graded surface. The analysis assumes that an area equivalent to the footprints of the Parking Structure and the Industrial Technology Building are exposed on the peak day. Peak day emissions are shown in Table 3-5; peak quarter emissions in Table 3-6.

Table 3-5: Maximum Daily Construction Emissions (in pounds per day)

Source Category	Pollutant				
	Carbon Monoxide (CO)	**Reactive Organic Compounds (ROC)**	**Oxides of Nitrogen (NOx)**	**Oxides of Sulfur (Sox)**	**Particulate Matter (PM_{10})**
Earthmoving/Grading (Fugitive Dust)					148
Dirt Piling					87
Diesel-Powered Equipment	41	29	112	10	9
Trucks	19	2	9	0	0
Employee Vehicles	31	2	2	0	0
MAXIMUM DAILY CONSTRUCTION EMISSIONS	91	33	123	10	244
SCAQMD Significance Thresholds for Construction	550 lb/day	75 lb/day	100 lb/day	150 lb/day	150 lb/day
Significant?	NO	NO	YES	NO	YES

Source: JHA Environmental Consultants, LLC, 2003.

❑ Dirt Loading

Based on a formula contained in Table A9-9-F in the South Coast Air Quality Management District CEQA Handbook (1993), each loader or dozer generates 21.8 pounds of PM_{10} an hour. The analysis assumes that there would be one dozer working an average of 4 hours per day throughout the 65-day quarter removing and loading or stockpiling excavated soil and debris. No emissions are assumed for PM_{10} emissions lost in transport because the analysis assumes loads are fully mitigated by measures described in the mitigation section (section 3-2.3). Peak day emissions are shown in Table 3-5; peak quarter emissions in Table 3-6.

Table 3-6: Peak Quarter Construction Emissions (in tons per quarter)					
Source Category	**Pollutant**				
	Carbon Monoxide (CO)	**Reactive Organic Compounds (ROC)**	**Oxides of Nitrogen (NOx)**	**Oxides of Sulfur (Sox)**	**Particulate Matter (PM_{10})**
Earthmoving/ Grading					4.49
Dirt Piling					2.83
Diesel-Powered Equipment	1.33	0.94	3.63	0.33	0.31
Trucks	0.63	0.06	0.31	0	0.01
Employee Vehicles	1.01	0.10	0.08	0	0.01
MAXIMUM QUARTER CONSTRUCTION EMISSIONS	2.97	1.10	4.02	0.33	7.65
SCAQMD Significance Thresholds for Construction	24.75 tons/qtr	2.5 tons/qtr	2.5 tons/qtr	6.75 tons/qtr	6.75 tons/qtr
Significant?	NO	NO	YES	NO	YES

Source: JHA Environmental Consultants, LLC, 2003.

❑ Equipment

Heavy-duty equipment emission estimates are derived from formulas contained in Tables A9-8-A and B in the SCAQMD *CEQA Air Quality Handbook* (1993). The analysis assumes there would be three dozers and six pieces of miscellaneous heavy-duty equipment. All equipment is assumed to operate 8 hours a day. Water is assumed to be available on the site; therefore, no water trucks are included in the total. Peak day emissions are shown in Table 3-5; peak quarter emissions in Table 3-6.

❑ Trucks

The analysis assumes there would be approximately 20 heavy-duty truck trips a day throughout the 65-day quarter to bring supplies and equipment and 10 light duty truck trips daily to service the construction. All trips are assumed to average 10 miles each way. Emissions were calculated with the California Air Resources Board emission factors, EMFAC 2002. Peak day emissions are shown in Table 3-5; peak quarter emissions in Table 3-6.

❑ Employee Vehicles

The analysis assumes there would be a maximum of 100 construction employees on the peak day and throughout the peak quarter. Worker vehicle trips are assumed at the regional average vehicle ridership (AVR) of 1.135 and trip length of 11.2 miles each way listed in the SCAQMD *CEQA Air Quality Handbook* (1993). Emissions were calculated with the California Air Resources Board emission factors, EMFAC2002. Peak day emissions are shown in Table 3-5; peak quarter emissions in Table 3-6.

❑ Odors

There are no known sources of odors on the site that would be released during construction.

❑ Toxics

There are no known sources of toxic emissions on site. As noted in Section 3-6.2b, it is assumed that hazardous materials that are stored, used or generated at individual sites (as listed in Table 3-13) will be removed prior to initiating construction activities. As noted under demolition, asbestos in existing buildings undergoing renovation would be encapsulated and disposed of in accordance with SCAQMD regulations so as to prevent exposure to hazardous material.

❑ Sensitive Receptors

Students are considered to be sensitive receptors. Therefore, all feasible mitigation measures must be employed to reduce fugitive dust emissions, even when total PM_{10} emissions are below SCAQ MD significance thresholds.

All emissions shown in Air Resources Board emission factors, EMFAC2002. Peak day emissions are shown in Table 3-5 and Table 3-6 are rounded.

Summary of Construction Impacts Without Mitigation

Without mitigation, there would be significant air quality emissions of NOx and PM_{10}.

Operation Impacts

❑ Regional

Traffic

The traffic analysis (Section 3-13) estimates that there would be 7,700 additional daily trips created by an 5,000 additional students. Emissions from this traffic were estimated with the California Air Resources Board model, URBEMIS2001, updated with trip estimates from the traffic analysis. URBEMIS does not estimate utility emissions from colleges. Emissions are shown in Table 3-7.

Utilities

Utility emissions were calculated consistent with procedures in the SCAQMD *CEQA Air Quality Handbook* (1993). Electricity emissions were calculated with Table A9-11-B; natural gas emissions with Table A9-12-B. Emissions are shown in Table 3-7.

Table 3-7: Net Increase in Operational Emissions (in pounds per day)				
Source Category	**Pollutant**			
	Carbon Monoxide (CO)	**Reactive Organic Compounds (ROC)**	**Oxides of Nitrogen (NOx)**	**Particulate Matter (PM_{10})**
Traffic Emissions	863	83	95	53
Natural Gas Emissions	--	--	1	--
Electricity Emissions	1	--	7	--
TOTAL PROJECT EMISSIONS	864	83	103	53
SCAQMD Significance Thresholds for Operation	550lb/day	55 lb/day	55 lb/day	150 lb/day
Significant?	YES	YES	YES	NO
Note: Traffic emissions calculated with California Air Resources Board model URBEMIS (2001). Utility emissions: SCAQMD CEQA Handbook 1993, Tables A9-11 A and B; Tables A9-11 A and B. -- Less than 0.5 pounds				

Source: JHA Environmental Consultants, LLC, 2003.

❑ Local

Traffic

The potential impact of project-generated traffic on local air quality was evaluated, based on traffic at intersections and roadway segments projected to 2010 and future carbon monoxide concentrations in Pasadena forecast by the SCAQMD. The SCAQMD has determined that all areas of the air basin will comply with all state and national carbon monoxide concentrations before 2010. All areas are currently well below state and national 1-hour standards

The SCAQMD Handbook states that no intersection would experience a CO hotspot in an area if the intersection functions at LOS C or better. This approach is conservative since both CO emissions from individual automobiles and background CO concentrations have substantially declined since the 1993 Handbook was issued. They are expected to decline further by 2010. For Pasadena, the SCAQMD projects that the 8-hour CO concentration in 2010 will be 4.8 ppm.

The traffic analysis (Section 3-13.2b, Table 3-34) indicates that before mitigation five intersections would experience significant traffic impacts. Of these, all but one, Bonnie Avenue and Colorado Blvd. would be mitigated to less than significant. That intersection would experience LOS A in the peak AM hour and LOS C in the peak PM hour. Neither LOS would result in a CO hotspot, even when background levels are added. After traffic mitigation the other four intersections, Hill Avenue and Del Mar Boulevard, Bonnie Avenue and Del Mar Boulevard, Allen Avenue and Colorado Boulevard and Allen Avenue and Del Mar Boulevard, would have an LOS equal to or better than existing LOS without the project. Therefore, there would be no increase in CO concentrations and CO impacts would be less than significant after required traffic mitigation. In summary, all five intersections would produce less than significant impacts.

Significance of Regional Impacts Before Mitigation

Based on SCAQMD significance thresholds, the project would result in significant emissions of CO, ROC and NOx.

Significance of Local Impacts Before Mitigation

No additional air quality mitigation is required because traffic mitigation will reduce local carbon monoxide concentrations to less than significant levels.

Consistency with the AQMP

The project does not add growth to the region. Rather it provides educational services to populations already forecast for the Pasadena subregion by the Southern California Association of Governments and incorporated in the adopted 1999 AQMP. Therefore, although operational emissions exceed SCAQMD significance thresholds, the emissions have been accounted for and control measures have been identified to reduce Basin emissions to levels that meet required standards.

3-2.3 Mitigation Measures

Construction Mitigation Measures

❑ Fugitive Dust Emissions

PACCD will require that contractors implement the following measures to control fugitive dust. These measures would reduce PM_{10} emissions from grading and dirt piling by 60 percent.

AQ-1 Moisten soil not more than 15 minutes prior to moving soil and three times a day or four times a day under windy conditions in order to maintain soil moisture of 12 percent.

AQ-2 On the last day of active operations prior to a weekend or holiday, apply water or a chemical stabilizer to maintain a stabilized surface.

AQ-3 Water excavated soil piles hourly or cover piles with temporary coverings.

AQ-4 Cease grading during periods when winds exceed 25 miles per hour.

AQ-5 Moisten excavated soil prior to loading on trucks.

AQ-6 Apply cover to all loads of dirt leaving the site or leave sufficient freeboard capacity in truck to prevent fugitive dust emissions en route to disposal site.

AQ-7 Sweep streets to remove dirt carried out by truck wheels.

❑ Gaseous Emissions

PACCD will require that contractors implement the following measure reduce emissions from equipment. This measure would reduce emissions by approximately 10 percent.

AQ-8 Turn off equipment when not in use for longer than 5 minutes.

PACCD will require that contractors implement the following measures wherever feasible to reduce gaseous emissions from equipment. They would also reduce toxic emissions from diesel equipment. No reduction credit is taken because of the uncertainty regarding scheduling and applicability to construction requirements.

AQ-9 Use bio-diesel fuel in all onsite diesel-powered equipment, if available.

AQ-10 Use alternatively fueled (compressed natural gas (CNG), liquefied natural gas (LNG), dual-fuel or electric) construction equipment, if available.

(REVISED) AQ-11 .To the extent feasible, minimize truck idling on site and locate staging areas away from locations where students are congregated and away from residential areas. This Measure is to be implemented in coordination with Traffic-1, which requires the development of a traffic management program during construction activities and approval of that plan by the City of Pasadena..

The peak day and peak quarter construction emissions after mitigation measures are shown in Table 3-8 and Table 3-9, respectively.

Table 3-8: Maximum Daily Construction Emissions After Mitigation (in pounds per day)

Source Category	Pollutant				
	Carbon Monoxide (CO)	**Volatile Organic Compounds (VOC)**	**Oxides of Nitrogen (NOx)**	**Oxides of Sulfur (SOx)**	**Particulate Matter (PM_{10})**
Emissions Before Mitigation	91	33	123	10	244
Earthmoving/ Grading (Fugitive Dust) (60% reduction)					89
Dirt Piling (60% reduction)					52
Diesel-Powered Equipment (10% reduction)	4	3	12	1	1
MAXIMUM DAILY CONSTRUCTION EMISSIONS AFTER MITIGATION	87	30	111	9	102
SCAQMD Significance Thresholds for Construction	550 lb/day	75 lb/day	100 lb/day	150 lb/day	150 lb/day
Significant?	NO	NO	YES	NO	NO

Source: JHA Environmental Consultants, LLC, 2002.

Table 3-9: Peak Quarter Construction Emissions After Mitigaiton (in tons per quarter)

Source Category	Pollutant				
	Carbon Monoxide (CO)	**Volatile Organic Compounds (VOC)**	**Oxides of Nitrogen (NOx)**	**Oxides of Sulfur (SOx)**	**Particulate Matter (PM_{10})**
Maximum Emissions Before Mitigation	2.97	1.10	4.02	0.33	7.65
Earthmoving/ Grading (60% reduction)					2.69
Dirt Piling (60% reduction					1.70
Diesel-Powered Equipment (10% reduction)	0.13	0.09	0.36	0.03	0.03
Maximum Quarter Construction Emissions After Mitigation	2.84	1.01	3.66	0.30	3.23
SCAQMD Significance Thresholds for Construction	24.75 tons/qtr	2.5 tons/qtr	2.5 tons/qtr	6.75 tons/qtr	6.75 tons/qtr
Significant?	NO	NO	YES	NO	NO

Source: JHA Environmental Consultants, LLC, 2003.

Operational Mitigation Measures

❑ Regional

AQ-12 PCC shall provide carpool and transit information to students, faculty and staff.

❑ Local

Impacts are not significant after implementation of required traffic mitigation and do not require air quality mitigation.

3-2.4 Unavoidable Significant Adverse Impacts

Construction

After mitigation there would still be significant adverse impacts from NOx emissions, based on the assumption that equipment would be operated on each of the 65 days in a quarter. These emissions could be further reduced by limiting hours of operation of heavy-duty equipment, or if fewer days of operation per quarter than were assumed in the analysis were to occur.

Operation

There would be no significant local impacts on air quality. Transportation management could reduce estimated operating emissions but they would remain significant based on SCAQMD thresholds. However, these emissions have been accounted for in the adopted AQMP and State Implementation Plan and mitigation measures have been included in the AQMP.

3-3 BIOLOGICAL RESOURCES

3-3.1 Environmental Setting

PCC is located within an urbanized area. The vast majority of land on which Pasadena City College is situated has been used for educational purposes for over nearly a century.

a. Methods for Biological Resources Inventory

The Pasadena City College *Master Plan 2010* project description and project maps were reviewed to ascertain potential habitat suitability of the campus and adjacent areas for native plant and wildlife species, including sensitive species. The campus and surrounding area are completely built out urban areas. Potential open space and habitat is limited to street plantings and landscaping on residential and commercial property. There is no undisturbed natural open space within at least one-half mile of the PCC campus.

With this in mind, it was determined that the potential for the campus to support habitat for any sensitive species was limited. Thus, only a California Natural Diversity Data Base (CNDDB) search was conducted. The results of the CNDDB search were that there were no Federal or State Listed Endangered, Threatened, Candidate, or Species of Concern located on or near the campus. Data did show the possibility of species in the general area, but there is very little likelihood that they would actually exist on the PCC campus since it is a long-disturbed and heavily-managed environment.

Areas of the campus that would be affected by construction have been surveyed by PCC staff and lists developed for plant materials or trees that would be displaced by construction, depending on the final footprint of proposed building. This information is included in Section 3-3.2d.

b. Description of Existing Resources

Vegetation and Wildlife Habitat

PCC campus is well landscaped with ornamental shrubs and trees, some of which include native species, though there are no longer any original native plant communities. All vegetation on campus is subject to regular maintenance. The periodic disturbances around trees and shrubs limits the likelihood that they would provide habitat, except for animals that have adapted to urban settings, such as squirrels.

Additionally a California Natural Diversity Database (CNDDB) search was conducted for the campus and surrounding area. Two plant species, Parish's Gooseberry and Orcutt's Linathus were found in the general area, but the PCC campus does not provide suitable habitat for them to exist there. There are numerous mature trees on the PCC campus, some of which would be likely to provide habitat for small mammals (e.g., squirrels) and birds.

Wildlife

All land on the campus is either landscaped or built-out with buildings, parking areas, and pedestrian walkways. As noted above, the CNNDB search did not indicate the presence of endangered or threatened wildlife species or habitat on the campus. However, there is a potential for migratory birds to make use of trees on the campus as temporary habitat, and there may be other animals that have adapted to the human environment.

3-3.2 Environmental Impacts

a. Significance Criteria

A primary objective of CEQA is to disclose to decision-makers and the public the "significant" environmental effects of proposed activities. The CEQA Guidelines include a checklist to assist in the determination of "significance." In accordance with the CEQA Guidelines and checklist, and for the purposes of this EIR, the proposed project would have a significant impact on biological resources if it would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service;

- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service;

- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrologic interruption, or other means;

- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nurseries;

- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or

Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

b. Environmental Laws Governing Biological Resources

Federal Endangered Species Act

Species listed as endangered and threatened by the U.S. Fish and Wildlife Service (USFWS) under the Federal Endangered Species Act (FESA) are protected under Section 9 of FESA, which forbids any person to "take" an endangered or threatened species. "Take" is defined in Section 3 of the Act as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." The U.S. Supreme Court ruled in 1995 that the term "harm" includes destruction or modification of habitat. Sections 7 and 10 of the Act may authorize "incidental take" for otherwise lawful activity (a development project, for example) if it is determined that the activity would not jeopardize the species' survival or recovery.

California Endangered Species Act

The California Endangered Species Act (CESA), enacted in 1970, provides protection to endangered and threatened species in California. The definition of "take" under CESA does not include "harm" or "harass" as does FESA; thus, no provisions to protect habitat are included. Sections 2081 and 2090 provide for consultation by project proponents with the California Department of Fish and Game (CDFG) regarding measures to minimize impacts on species listed by CESA.

Migratory Bird Treaty Act and California Fish and Game Code 3503

The federal Migratory Bird Treaty Act (MBTA), first enacted in 1916, prohibits any person to:

"pursue, hunt, take, capture, kill, attempt to take, capture, or kill, possess, offer for sale, sell, offer to barter, barter, offer to purchase, purchase…" any migratory bird.

The list of migratory birds includes nearly all bird species native to the United States; non-native species such as European starlings are not included. The statute was extended in 1974 to include parts of birds, as well as eggs and nests. Thus, it is illegal under MBTA to directly kill, or destroy a nest of, nearly any bird species, not just endangered species. Activities that result in removal or destruction of an active nest (a nest with eggs or young being attended by one or more adults) would violate the MBTA. Removal of unoccupied nests, or bird mortality resulting indirectly from a project, is not considered a violation of the MBTA. California Fish and Game Code 3503, 3503.5, and 3512 also prohibits take of birds and active nests.

c. Other Regulatory Issues

County of Los Angeles

The County of Los Angeles General Plan, Conservation / Open Space and Land Use Element, Significant Ecological Areas, and Oak Tree Protection Ordinances pertain only to unincorporated

areas of the county. Since Pasadena City College is contained entirely within the City of Pasadena, the Los Angeles County Ordinances do not apply.

City of Pasadena

In addition to the aforementioned policies, biological resources in the City of Pasadena are also managed by the general plan and a tree protection ordinance. Although the Pasadena Community College District is not subject to the City of Pasadena plans, policies and ordinances, PACCD has a "good neighbor" policy and often consults with the City and area residents on matters of common interest. The following policies provide a means for considering whether proposed actions are consistent with the City of Pasadena plans.

❑ Land Use Element of the City of Pasadena Comprehensive General Plan

The Land Use Element lists the following policies.

- *Policy 9.1 – Open-Space Corridors:* Development of open-space corridors, easements and acquisition programs and trails shall be established where feasible.

- *Policy 9.4 – Adequate Open Space:* Provide an adequate total quantity and equitable distribution of public or publicly accessible open spaces throughout the City.

- *Policy 9.5 – Stewardship of the Natural Environment:* Encourage and promote the stewardship of Pasadena's natural environment, including water conservation, clean air, natural open-space protection, and recycling. Encourage the use of native, water-conserving, and regionally appropriate landscaping.

❑ City Trees and Tree Protection Ordinance

As previously stated, the PACCD is not subject to city ordinances. The following information is presented to demonstrate the importance of trees and tree protection to area residents; this perspective is shared by the PACCD.

The goal of the ordinance is to preserve and grow Pasadena's canopy cover by protecting native and specimen trees on specified areas of private property and expanding the protection of street trees, and trees on public property. Following are categories of trees that are protected under the ordinance.

- *Landmark trees*, a tree that is designated as a landmark under chapter 2.75 of the City of Pasadena codes. It will have historic, or cultural significance and importance to the community due to any of the following factors: It is one of the largest or oldest trees of the species located in the City of Pasadena; it has historical significance and is of importance to the community due to an association with a historic building, site, street, person or event; or it is a defining landmark or significant outstanding feature of the neighborhood;

- *Specimen trees*, which are trees of more than 25 inches diameter at breast height (dbh) that possess a distinctive form, size, age or location, or an outstanding tree of a desirable specimen; and

- *Native trees*, a tree of more than 8 inches with a height of 4.5 feet above natural grade that is one of the following species: Coast live oak (Quercus agrifolia), Canyon oak (Quercus chysolepis), California sycamore (Plantanus racemosa), Engelmann oak (Quercus enfelmannii), California walnut (Junglans californica), Scrub oak (Quercus berberidifolia), Valley oak (Quercus lobata), California bay (Umbrellularia californica), Black cotton wood (Populus trichocarpa), Arroyo willow (Salix lasioepis), and California buckeye (Aesculus californica).

d. Impacts Discussion

In evaluating the impacts of the proposed Master Plan improvements, two types of impacts were considered: direct impacts and indirect impacts. Direct impacts are long-term and directly remove a resource such as trees and other vegetation or breeding habitat for wildlife species. Mortality (killing) of an animal that could result from such activities would also be considered a direct impact. Indirect impacts would include the potential loss of habitat used for foraging by some wildlife species, or high noise levels and project lighting that may affect wildlife populations in the project vicinity. The discussion of potential impacts below first considers direct and indirect impacts due to project construction, then impacts due to project operation (i.e., human use of the campus, traffic, noise). The "significance" determination of these impacts, as described below, is based upon whether the impact would be considered "substantial" as defined in the criteria above. Resources are discussed in the same order they are addressed in the Environmental Setting section.

Direct Impacts Due to Project Construction

❑ Vegetation and Wildlife Habitat

As stated above, no endangered or threatened species are known to exist on the PCC campus. There are no wetlands or riparian habitat that would be affected. The campus is not part of a migratory wildlife corridor or flyway. Additionally, no habitat conservation plans or tree ordinances apply to the campus.

Construction of the proposed project would require removal of some vegetation, including trees. The precise number and types of vegetation that would potentially be removed are not known, since detailed plans for each building have not yet been developed. PCC has begun an evaluation of potentially-affected trees to determine their general health, structural integrity and life-expectancy. This information would be considered in the design of individual facilities, so that the design process can consider whether there are tree resources that can be retained. Depending on the final footprint of each building, some mature vegetation may need to be removed. Table 3-10 lists the trees and shrubs that could potentially be removed at the various construction sites on campus. PCC has indicated that any trees lost to the construction process would be replaced at a minimum ratio of 2:1. Replacement trees would be chosen for

compatibility with the overall campus landscape and particular site conditions; replacement trees might not be of the same species as the ones removed.

Table 3-10: Trees and Shrubs Subject to Removal

Location	Type	Number
Arts Building	Pinus pinea " Itallian stone pine"	2
	Olea Europaea " Olive"	1
	Pittosporum ungulatum	5
	Cupressus forbesli	1
	Laurus nobilis " grecian laurel"	1
	Cedrus Atlantica	1
	Cupressus sempervirens	12
	Grevillea robusta "silk oak"	1
	Eucalyptus citriodora	4
Campus Center	Ginko biloba " maidenhair tree"	7
	Podocarpus gracilior " fern pine"	3
	Juniperous chinensis "torulosa"	3
	Liquidambar sryraciflua	8
Parking Structure	Quercus Ilex "holly oak"	28
	Quercus agrifolia "coast live oak"	1
	Magnolia grandeflora	1
	Ceratonia siliqua	1
	Quercus	1
Soccer Field	Quercus Ilex "holly oak"	15
Industrial Technology	Juniperous chinensis "torulosa"	5

Source: Pasadena City College, 2003.

Because the potentially affected materials are horticultural plantings of common types of trees and shrubs and new plantings would be provided, their removal would not be considered a significant impact and no mitigation is required. Nonetheless, PCC will:

- replace horticultural trees that are removed as part of project construction at a minimum ratio of 2 to 1. Replacement trees shall possess a canopy upon planting and be a minimum size of 5 gallons. PCC will also consider relocating existing horticultural trees.

- ensure protection of trees adjacent to construction sites through adherence to tree-protection procedures that will be developed to reflect current industry practices.

Construction of the proposed parking structure would entail removal of one Coast live oak, which is identified in the City of Pasadena tree ordinance as a protected native tree. However, since PCC is not subject to the city ordinance, removal of the live oak would not be a violation of the ordinance. In addition, as noted above, PCC has committed to replacement of trees removed by construction at a 2 to 1 ratio.

❑ Wildlife

Project construction would not result in direct removal or disturbance of wildlife habitat on campus other than the removal of some trees that serve as feeding, roosting, and breeding habitat for birds. However, direct mortality of some wildlife species that inhabit the campus (such as squirrels) may occur during project construction, although none of these would be species that are endangered, threatened or rare. More mobile species such as birds may also be affected by project construction, but indirectly (see Indirect Impacts due to Project Construction). Removal or destruction of one or more active nests of birds listed by the MBTA, whether nest damage was due to tree removal or to other construction activities, would be considered a violation of the MBTA, as discussed above, and a significant direct impact.

Indirect Impacts Due to Project Construction

❑ Vegetation and Wildlife Habitat

Trees and other horticultural vegetation in the vicinity of construction activity may experience temporary insignificant indirect impacts due to dust generated from the construction area. Indirect impacts due to erosion, siltation, and runoff during project construction are not expected to be significant since construction activities in these areas would be limited and Best Management Practices would be implemented to minimize erosion and siltation. Construction limits for individual sites would be established to avoid roots of nearly trees to the extent possible.

❑ Wildlife

Construction dust, noise, and vibration, and increased human presence (construction workers) during construction may result in indirect effects on wildlife on the campus, and may result in temporary avoidance of these areas by some birds and other wildlife species. However, because construction in these areas would be limited, no significant indirect impacts on wildlife are anticipated.

❑ Sensitive Species

Because there are no sensitive species on the PCC campus, indirect impacts on sensitive species are not anticipated.

Direct and Indirect Impacts Due to Project Operation

❑ Vegetation and Wildlife Habitat

Following project construction, aside from regular maintenance of campus vegetation, no direct impacts on vegetation are anticipated.

❑ Wildlife

Following construction, project operation (increased human use of the campus) would not be expected to result in any direct significant impacts on wildlife species. Although student enrollment and the number of employees on the campus are expected to increase as Master Plan improvements are implemented, noise levels and activities that may affect wildlife are not expected to be substantially greater than current conditions. Thus, indirect impacts of project operation on wildlife are not expected to be significant.

❑ Sensitive Species

Increased human use of the campus is not expected to substantially alter its potential for use by sensitive species.

3-3.3 Mitigation Measures

BR-1 In order to avoid violations of the MBTA or Fish and Game Code 3503, Pasadena City College shall attempt to limit grubbing and removal of trees and buildings during the bird breeding season (approximately March 1 to September 1, and as early as February 1 for raptors). If the bird breeding season cannot be avoided, PCC shall retain a qualified ornithologist to initiate surveys of the construction zone 30 days prior to the initiation of construction and weekly thereafter, with the last survey not more than three days prior to the initiation of construction, to minimize the potential for nesting following the survey and prior to construction. If the ornithologist detects any occupied nest or nests of native birds within the construction zone, PCC will conspicuously flag off the area(s) supporting bird nests, providing a minimum buffer of 300 feet between the nests and limits of construction (500 feet for raptors). The construction crew will be instructed to avoid any activities in this zone until the bird nests are no longer occupied, per a subsequent survey by the ornithologist.

3-3.4 Unavoidable Significant Adverse Impacts

No unavoidable significant adverse impacts on biological resources are anticipated due to construction or operation of the Pasadena City College *Master Plan 2010*.

3-4 CULTURAL RESOURCES

3-4.1 Environmental Setting

a. Historic Resources

Pasadena City College was an outgrowth of Pasadena High School, which was first established at the site in 1912-13. The old citrus ranch on which the high school was constructed was known as the Rose Villa (Harkness) Ranch, so-named because of its showcase, nearly half-mile long rose hedge. The property was originally part of the vast acreage associated with the San Gabriel Mission and probably served as pastureland for the mission livestock. The mission was established within the territory of the Gabrielino Indians, who were the first occupants of the Rose Villa-East Pasadena area where PCC is now located.

In 1833, secularization of the entire mission system throughout California occurred. The Mexican government divided up the San Gabriel Mission property into ranches, and in 1835, deeded the subject property to Juan Mariné (and wife Eulalia Perez de Guillén). This rancho, which became known as the Rancho San Pasqual, occupied a large portion of present-day Altadena, Pasadena, and San Marino. Its boundary with the abutting Rancho Santa Anita (east) was a diagonal line originating in Eaton Canyon that ran in a southwesterly direction through the southeastern-most corner of the Pasadena City College campus.

Due to the marginal quality of the soil, the area was utilized primarily for pasture and saw limited agricultural cultivation through the eighteenth and most of the nineteenth centuries. Prior to the founding of Pasadena in 1874, the largest farm in the vicinity was Sunny Slope Ranch of Leonard Rose. Rose, an immigrant from Germany, eventually transformed the ranch into one of the largest vineyards and commercial wineries in the San Gabriel Valley, producing brandy, sherry, port and other dessert wines for shipment to New York City during the years between 1867 and the late 1880s. During the mid-1880s, Rose subdivided a portion of Sunny Slope Ranch located roughly one mile east of the present-day PCC. He named this tract Lamanda Park after his wife Amanda. This village was a railroad stop on the Santa Fe Railroad. It became the nucleus of what became known later as East Pasadena, and served as a disembarkation point for guests staying at the Sierra Madre Villa Hotel—one of the earliest resort hotels in Pasadena.

Prior to annexation in 1906, the Rose Villa and Lamanda Park/East Pasadena neighborhoods were beyond the eastern city limits of Pasadena. The area was still sparsely settled at the turn-of-the-century and was primarily open land, its tone set by Harkness Ranch—a citrus orchard. The Lafayette Reitz Ranch (1903) at 387 S. Hill (south of Del Mar Boulevard) was one of the last properties acquired for agricultural use. Residential development along S. Hill Avenue began slowly thereafter. The establishment of Caltech to the southwest, construction of large homes on S. Hill in the early 1910s, and development in 1912-13 of Pasadena High School at Colorado Boulevard near Hill Avenue sparked the urbanization of the neighborhood. The construction of a tract of speculative homes in the South Holliston-Hill Avenue portion of the neighborhood by the G. Lawrence Stimson Company (circa 1916) was prompted by these pioneer activities and marked the transformation of the Rose Villa neighborhood from a semi-rural to a suburban setting.

At a cost of $632,000, Pasadena High School was one of the most expensive public facilities built in Pasadena at the time, and a confident assertion of community's future. The school plant was consciously designed to serve as a community center for the entire community. The designer was the prolific architect Norman F. Marsh (1871-1955). Marsh, a specialist in public school facility and church design, authored the early showcase buildings in Venice of America and at the University of Redlands. The original architecture was executed in the Beaux Arts Classical Revival style popular for public buildings during that era. Although built a decade later in 1923, the architectural treatment of Calvary Community Church at 1555 E. Colorado Boulevard (a Pasadena city landmark) reflects the original architecture of the school and was designed to harmonize with it. The campus focused on three key buildings (currently, Buildings C, D and E) named for educator Horace Mann (Building C), social reformer Jane Addams (Building D) and naturalist Dr. Louis Agassiz (Building E).

When first acquired in 1912, the property on which the high school was constructed was considered the far frontier of Pasadena. However, like much of the Los Angeles region, Pasadena grew rapidly during the first three decades of the twentieth century. This led to the construction of hundreds of homes in the neighborhoods adjoining the campus during the late 1910s and 1920s, slowly transforming the community over succeeding decades into a decidedly densely developed urban setting. This dramatic increase in population triggered a corresponding demand for new school facilities. In 1900, Pasadena schools had a combined enrollment of 4,000, compared to an enrollment of approximately 10,000 by 1920—a roughly two-and-a-half fold increase. The high school itself accounted for a large portion of the total with an enrollment of 1,700. As the community grew in size interest in community education led, in 1915, to the creation of an adult education curriculum at Pasadena High School, and ultimately to the inauguration of the Pasadena Junior College District in 1924. In 1928, Pasadena City College took over the high school property and began a four-year curriculum on a 6-4-4 plan basis (i.e., Grades 11-14).

During the 1930s, Pasadena City College saw a burgeoning of its enrollment in response to the Great Depression. The enrollment reached 4,125 during the 1932-32 academic year. Those who might have entered the job market during more prosperous times opted to continue their education. At the same time, due to the economic downturn, state revenues for education spending shrank. The 1933 Earthquake compounded this crisis. In response to the passage of the Field Act, all public school facilities had to be rebuilt in conformance with new state earthquake safety standards. At the conclusion of the 1933-34 academic years classes were moved into tents, the gymnasiums, and St. Phillip's Church. Buildings C, D and E were then essentially rebuilt. The work was completed in mid-1937, and the dedication of the buildings occurred during mid-October of that year.

The architects for the remodel and rebuilding of Building C were Cyril Bennett in association with Marston & Maybury, Architects; the architects for Buildings D and E were Bennett and Haskell. Bennett and Haskell were also responsible for the formal site plan that linked the three buildings and introduced the Mirror Pool. J. Cyril Bennett (1891-1957), principal of the firm of Bennett and Haskell (firm dates: 1923-1934) is a significant Pasadena area architect, whose key works include the rebuilt Pasadena City College campus, Pasadena Civic Auditorium (with Edwin Bergstrom), Pasadena Masonic Temple, and the First Trust Building (at Colorado Boulevard and Madison Avenue). Bennett was in partnership with Fitch Haskell (1883-1942?),

another equally significant local architect who was one of the first architects practicing in Pasadena to be trained at the Ecole des Beaux Arts (Paris)—the model for the American architectural design training during the early twentieth century.

Marston & Maybury, Architects are an equally significant Pasadena architectural firm. Sylvanus Marston (1883-1946) in association with Garrett Van Pelt (1879-1974) and Edgar Maybury designed numerous landmark residential, commercial and institutional buildings in Pasadena, including the Hill Avenue Library (55 S. Hill Avenue; 1925), Turner & Stevens Mortuary, the Pacific Asia Museum, and Westminster Presbyterian Church.

The remodeled buildings were designed in the WPA Moderne style—an architectural style popularly employed for public buildings during the 1930s combining an updated version of Classical Revival featuring a flattened handling of Classical ornament, Art Deco ornament, and recessed vertically-banded windows (see Figure 3-1). Because of their architectural quality and historical associations, these buildings may be eligible for inclusion on both the National Register of Historic Places and the California Register of Historical Resources per California Public Resource Code SS5024.1, Title 14 CCR, Section 4852, criteria A and C because:

1. they embody the distinctive characteristics of the WPA Moderne architectural style and best represent the early history of Pasadena City College as an educational institution in Pasadena.

2. are significant examples of the campus planning and architectural work of notable Pasadena architectural firms.

In addition, the overall landscape design for the open space inn front of Buildings C, D and E is the work of Charles Gibbs Adams – a significant Pasadena area landscape architect.

The preservation and protection of historic and cultural resources is one the key goals expressed in the City of Pasadena General Plan. A documentation search was completed during Fall 2002 in order to identify significant historic and/or architectural resources within a one-half mile radius of Pasadena City College. Sources included the California Office of Historic Preservation Historic Property Data file of historic/architectural resources, *Architecture in Los Angeles: An Architectural Guide* (Gebhard and Winter; 1994), and verbal information obtained from the City of Pasadena Office of Design and Historic Preservation regarding designated City landmarks. These sources identify a number of historic resources on or near the Pasadena City College campus. They are listed in Table 3-11.

Figure 3-1: WPA Modern Style Buildings

Source: Myra L. Frank & Associates, Inc., 2002.

Table 3-11: Historic Resources Within One Half Mile of Pasadena City College

Building	Architect	Date	Significance
55 S. Hill Avenue (at Green Street) Hill Avenue Branch Public Library	Van Pelt & Maybury	1925	City Landmark
151 S. Hill Avenue St. Phillip The Apostle Catholic Church	Roland E. Coate	1949	City Landmark
162 N. Hill Avenue Hillcrest Laundry Building		1927	Potentially Natl. Register Eligible
1304 E. Colorado Boulevard "Foothill Blvd." Road Marker	None	c.1900	Natl. Register Listed
1285 E. Colorado Boulevard Howard Austin Motor Company	The Austin Company	1927	Natl. Register Listed
1305 E. Colorado Boulevard Holliston Avenue Methodist Church	John C. Austin & Haskell	1900 1923	Natl. Register Listed
1555 E. Colorado Boulevard Calvary (Baptist) Community Church	Robert Orr	1923	City Landmark
48 N. Catalina Avenue Hartnetiaux Court (Bungalow Court)		1922	Natl. Register Listed
65 N. Catalina Avenue Sanborn House	Greene & Greene	1903	Natl. Register Listed
239 S. Catalina Avenue Charlotte Perkins Gilman House		Circa 1880	City Landmark
85 S. Allen Avenue Longfellow-Hastings House	Orson S. Fowler	1893	Natl. Register Listed
1201 E. California Boulevard California Institute of Technology	Hunt & Grey Bertram G. Goodhue Goodhue Associates Gordon Kaufmann	1908 1917 1926-30 1930-38	Deemed Natl. Register Eligible

Sources: California Office of Historic Preservation Historic Property Data file of historic/architectural resources, 2002; Architecture in Los Angeles: An Architectural Guide (Gebhard and Winter, 1994); and verbal information obtained from the City of Pasadena Office of Design and Historic Preservation, 2002.

Several buildings on the campus of Pasadena City College are considered historic resources by the City of Pasadena (see Table 3-12). These resources were previously documented as part of the Pasadena Architectural/Historical Inventory (1987) and the Implementation and Phasing For Pasadena City College Master Plan (Meyer and Allen Associates; August 1989).

Table 3-12: Historic Resources on the Pasadena City College Campus

Building	Architect	Date	Level of Significance
Building C (Horace Mann Building)	Norman F. Marsh (original) Cyril Bennett; Marston & Maybury (redesign)	1912 1935	Potentially National Register Eligible
Building D (Jane Addams Building)	Norman F. Marsh (original) Bennett & Haskell (redesign)	1912 1935	Potentially National Register Eligible
Building E (Louis Agassiz Building)	Norman F. Marsh (original) Bennett & Haskell (redesign)	1912 1935	Potentially National Register Eligible
Building FB (Boiler House)	John C. Austin & F. Ashley	1924	City Landmark Eligible
Building O (Observatory)	Frederick Kennedy, Jr.	1930	City Landmark Eligible
Building HH/L (Harbeson Hall/ Student Services)	Bennett & Bennett, Archts. (Cyril and Edward Bennett)	1948	City Landmark Eligible

Source: Myra L. Frank and Associates, Inc., 2002.

It should be noted that of the historic resources on the PCC campus, *Master Plan 2010* would potentially affect only Building FB (the Boiler House).

b. Archaeological Resources

Pasadena City College is depicted on the Mt. Wilson Quadrangle, 1:24,000-scale, USGS topographic map within the boundaries of Rancho San Pasqual. Situated at an elevation ranging from approximately 790 feet to 750 feet above mean sea level, the topography of the main campus includes primarily gently sloping land as well as an area at the northwest edge of the campus characterized by a moderately steep drop in elevation. The land is improved with parking lots, landscaped open space and school buildings. None of the land is unimproved or open space. Currently, areas surrounding the campus have been fully developed into housing tracts and commercial business districts.

Vegetation on the campus consists of small areas of open space planted with introduced grass species, and ornamental landscaping. Prior to historical development, however, the project area and the larger San Gabriel Valley were an open, relatively dry, grassland savannah. Water sources included the Arroyo Seco (about 2.5 miles west) and springs along the base of the San Gabriel Mountains. Spring-fed Eaton Wash originates from the hills northeast of the PCC campus and flows no closer than approximately 1.5 miles to the east. It has been concluded that no creeks, flood control, and other drainages flowed through the PCC property. The property was farmed and improved as an orchard for several decades prior to the establishment of a school on the property. Due to the campus' mildly sloping topography and the fact that all portions of the campus have been graded, built upon, or modified in some way for more than a century, the potential for encountering archaeological remains was considered moderately low. Therefore, no archaeological survey of the campus was performed.

Cultural chronologies for the Los Angeles Basin and San Gabriel Valley have been developed by Wallace (1955) and Warren (1968). The Millingstone Period, dating back more than 6,000 years ago, is characterized by a generalized plant collecting economy that was supplemented by hunting and fishing; sites attributed to this period appear to have been occupied by small groups of people. The Intermediate Period dates from approximately 3,000 to 1,000 years ago; sites attributed to this period indicate an increased reliance on coastal resources, as well as a continued reliance on hunting and collecting. Additionally, the advent of the bow and arrow and increased reliance on the mortar and pestle used to process hard nuts such as the acorn typify this period. The Late Period, beginning about 1,000 years ago, is characterized by increasing cultural complexity in both economic and social spheres. In general, occupation sites tend to be larger and contain a more varied artifact assemblage; there also appears to have been more intensive exploitation of local resources within the coastal, mountain, and interior environments. Social contacts and economic influences were accelerated through trade and political and ceremonial interactions.

The project study area is situated in a general region that was inhabited by the Uto-Aztecan Gabrielino cultural group. The total area of the Gabrielino mainland territory exceeded 1,500 square miles and included the San Gabriel Valley. At the time of Spanish contact, the Gabrielino were one of the wealthiest, most populous, and powerful ethnic nationalities in southern California. They were credited with an elaborate material culture and expert craftsmanship in quarrying and manufacturing steatite (soapstone) objects and constructing the plank canoe.

A literature and records search was conducted at the South Coastal Central Archaeological Information Center housed at the Department of Anthropology, California State University, Fullerton. The objective of this search was to identify any previously recorded cultural properties within a half-mile radius of PCC. Results of this search indicate that three cultural resources studies have been conducted within a half-mile radius. Of these, none was located within the boundaries of Pasadena City College. However, the significance and exact location of these investigations is unknown due to insufficient locational information. The results of this search indicate that no prehistoric or historical archaeological sites or isolated artifacts have been previously recorded within the boundaries of PCC or within a half-mile radius of the project area.

Inspection of the historic Mt. Wilson and Pasadena Quadrangles USGS 15'-series topographic maps indicates that the subject locality was only partly developed in 1896. The Santa Fe Railroad ran east-west through this area of Pasadena within 1/2 mile north of where PCC is presently located. Several east-west and north-south roads also traversed this locality, including both Hill and Allen Avenues, and Colorado Boulevard/Foothill Road with a few structures located along some of the more prominent roads.

In addition to the archaeological literature and records search, the Native American Heritage Commission (NAHC) was contacted to solicit pertinent cultural resources information available in the Sacred Lands Files for the project study area. In a reply in October 2002, the NAHC stated that a records search of the Sacred Land Files failed to indicate the presence of Native American cultural resources in the immediate vicinity of the project area (Wood 2002). The NAHC did, however, recommend that 11 individuals and/or organizations that may have knowledge of cultural resources in the project area be contacted by letter. During late October

2002, letters of inquiry were sent to these 11 individuals/organizations as recommended by the NAHC. On October 24, 2002, the Director of Facilities Services at PCC received a facsimile-transmitted letter from Samuel Dunlap of the Gabrielino/Tongva Tribal Council who recommended that project mitigation measures include archaeological monitoring that specifically incorporates a Native American component during the construction process (see Appendix B of this EIR).

c. Paleontological Resources

The topography of the campus consists overwhelmingly of nearly flat and gently north-south sloping terrain, varying in elevation from approximately 790 to 750 above sea level, and having an average slope ratio of approximately 1:15. Only in the southwestern portion of the campus is there a pronounced drop in elevation from west to east.

A paleontological records search was conducted by the Vertebrate Paleontology staff of the Natural History Museum of Los Angeles County during August 2002. A review of the information provided in the records search indicated that no paleontological localities are recorded within either the boundaries of Pasadena City College or any nearby localities from the same sedimentary rock units (McLeod 2002). According to the records search report, the entire proposed project area has a surficial deposits of soil and older Quaternary fan deposits of gravel and sand derived from the San Gabriel Mountains. Such deposits generally do not contain significant fossil vertebrate remains in the uppermost layers, especially when they have been previously disturbed by development. Shallow excavations are therefore unlikely to encounter any significant vertebrate fossil remains. However, there is a possibility that deeper excavations could uncover significant fossil vertebrates of Quaternary age. Professional monitoring of deep excavation activities was therefore recommended.

3-4.2 Environmental Impacts

a. Significance Criteria

According to Section 21084.1 of CEQA a project that causes a substantial or potentially substantial adverse change in the significance of an historic and/or archaeological resource is considered to have a significant effect on the environment, as explained in the following excerpt from the CEQA Guidelines:

Substantial adverse change in the significance of an historic an/or archaeological resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical/archaeological resource would be materially impaired (§ 15064.5[b]1).

The significance of an historical/archaeological resource is materially impaired when a project:

- demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for inclusion in the California Register of Historical Resources; or

- demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to Section 5020.1 (k) of the Public Resources Code or its identification in an historical resources survey meeting the requirements of Section 5024.1 (g) of the Public Resources Code, unless reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or

- demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register of Historical Resources as determined by a lead agency for purposes of CEQA.

Per Section 15064.5 of the 2002 *CEQA Guidelines* when a project will have an impact on an archaeological site, the lead agency shall first determine that the archaeological site is an historical resource per CEQA. A project that causes a substantial adverse change in the significance of a historical resource may have a significant effect on the environment. Generally, an archaeological or historical shall be considered historically significant if the resource meets any of the criteria for listing on the California Register of Historical Resources, including the following:

(A) is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

(B) is associated with the lives of persons important in our past;

(C) embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or

(D) has yielded, or may be likely to yield, information important in prehistory or history.

The cited statutes and guidelines specify how cultural resources are to be managed in the context of projects, such as those in the proposed Master Plan. Briefly, archival and field surveys must be conducted and identified cultural resources must be inventoried and evaluated in prescribed ways. Prehistoric and historical resources deemed "historically significant" must be considered in project planning and development. Any proposed project that may affect "historically significant" cultural resources must be submitted to the State Historic Preservation Officer for review and comment prior to project planning and pre-construction approval by the responsible state agency.

b. Impacts Discussion

The Pasadena City College *Master Plan 2010* is unlikely to cause a significant adverse change to historic, archaeological or paleontological resources. The proposed plan consists primarily of infrastructure upgrades and the interior renovation of existing buildings, as well as the limited demolition of buildings that are products of the recent past (i.e., 40 years old or less) evaluated as part of this analysis and not deemed to qualify as historic resources.

The project would neither demolish historic resources nor cause significant adverse change to the character-defining features of the historic buildings on campus. Only one historic building, the Boiler House, would be affected by *Master Plan 2010*. The Master Plan proposes an interior renovation in the building, to be reconfigured to create a new small Theatre Arts lab and venue. A 99-seat theater with related scene shop, dressing rooms, green room, lobby, and foyer could be constructed within the existing building. This interior construction is not expected to have an adverse impact on the character-defining features of the building (i.e., its exterior elements) that would make it eligible as a City of Pasadena Landmark or eligible for listing on the California Register. It is assumed that if renovation work at the Boiler House were to affect the exterior appearance of the building, exterior work would be done in conformance with the Secretary of the Interior's Standards for Rehabilitation. Under CEQA, if work is done in conformance with the Secretary of the Interior's Standards for Rehabilitation, the potential impacts are deemed to not be significant.

New construction will occur at locations currently occupied by non-historic buildings, or that are currently parking lots. Based upon the records searches conducted as part of this evaluation, no archaeological or paleontological resources are known to be present at PCC. The likelihood of encountering such resources is considered low due to the re-grading and other ground-disturbing physical changes that have occurred on all portions of the campus over time. Areas that would be disturbed to implement the various projects of *Master Plan 2010* have all been disturbed by previous construction. The proposed projects included in *Master Plan 2010* are therefore unlikely to cause significant adverse change to such resources. However, the fact that no archaeological or paleontological resources are known to be present does not preclude their existence. In the event such resources are present deep excavation/ground-disturbing activities could disturb or destroy them, resulting in a potentially significant impact. Accordingly, mitigation measures to deal with unanticipated discoveries are appropriate.

3-4.3 Mitigation Measures

PACCD will cause all construction contracts to include the following conditions to ensure that potential significant impacts to historic properties, or any archaeological or unique paleontological resources that may be present, would be reduced to a level of insignificance.

HR-1 If renovation of the Boiler House affects the exterior of the buildings, all such exterior changes will be accomplished in accordance with the Secretary of the Interior's Standards.

AR-1 If buried cultural resources are uncovered during construction, all work shall be halted in the vicinity of the archaeological discovery until a qualified archaeologist can visit the site of discovery and assess the significance of the archaeological resource.

AR-2 In the event of an accidental discovery of any human remains in a location other than a dedicated cemetery, the steps and procedures specified in Health and Safety Code 7050.5, CEQA 15064.5(e), and the Public Resources Code 5097.98 shall be implemented.

AR-3 Provisions for the disposition of recovered prehistoric artifacts shall be made in consultation with culturally affiliated Native Americans.

(ADDED) AR-4 PACCD shall retain an on-call qualified archeologist to assist PACCD in implementing the above measures.

(REVISED) PR-1 PACCD will monitor all subsurface excavations. If paleontological materials are encountered, PACCD shall cause a qualified paleontologist to monitor all remaining excavation work that would extend 10 feet in depth, or more into the ground. The monitor shall be empowered to temporarily halt or divert excavation equipment to allow removal of abundant or large specimens. Monitoring may be reduced if the potentially fossiliferous units, previously described, are not found to be present or, if present, are determined by qualified paleontologic personnel to have a low potential to contain fossil resources.

PR-2 Recovered specimens shall be prepared to a point of identification and permanent preservation, including washing of sediments to recover small invertebrates and vertebrates.

PR-3 Recovered specimens shall be curated into a professional, accredited scientific institution with permanent retrievable storage.

PR-4 A report of findings, with an appended itemized inventory of specimens, shall be prepared. The report and inventory, when submitted to Pasadena City College, would signify completion of the program to mitigate impacts to paleontologic resources.

(ADDED) PR-5: PACCD shall retain an on-call qualified paleontologist to assist PACCD in implementing the above measures.

3-4.4 Unavoidable Significant Adverse Impacts

No significant adverse impacts to historic resources would result from the proposed Master Plan.

No Native American human remains are known to exist on the campus and the likelihood of encountering remains is low given that the limited construction proposed as part of the Master Plan would occur in areas already disturbed by prior construction. In the unlikely event that Native American human remains are discovered during project-related construction activities, there would be unavoidable significant adverse impacts to these archaeological resources. Implementation of the mitigation measures referenced in Section 3-4.3 would reduce impacts to these and other archaeological resources to a level of insignificance.

No unavoidable adverse impacts on archaeological or paleontologic resources would occur after implementation of the mitigation measures specified above.

3-5 GEOLOGY/SOILS/SEISMICITY

3-5.1 Environmental Setting

a. Regional Setting

The seismicity of southern California is dominated by the intersection of the north-northwest trending San Andreas fault system and the east-west trending Transverse Ranges fault system. Both systems are responding to strain produced by the relative motions of the Pacific and North American Tectonic Plates. This strain is relieved by right lateral strike slip faulting on the San Andreas and related faults and by vertical, reverse slip or left lateral strike slip displacement on faults in the transverse ranges. The effects of this deformation include mountain building, basin development, deformation of Quaternary marine terraces, widespread regional uplift, and generation of earthquakes.

b. Project Site

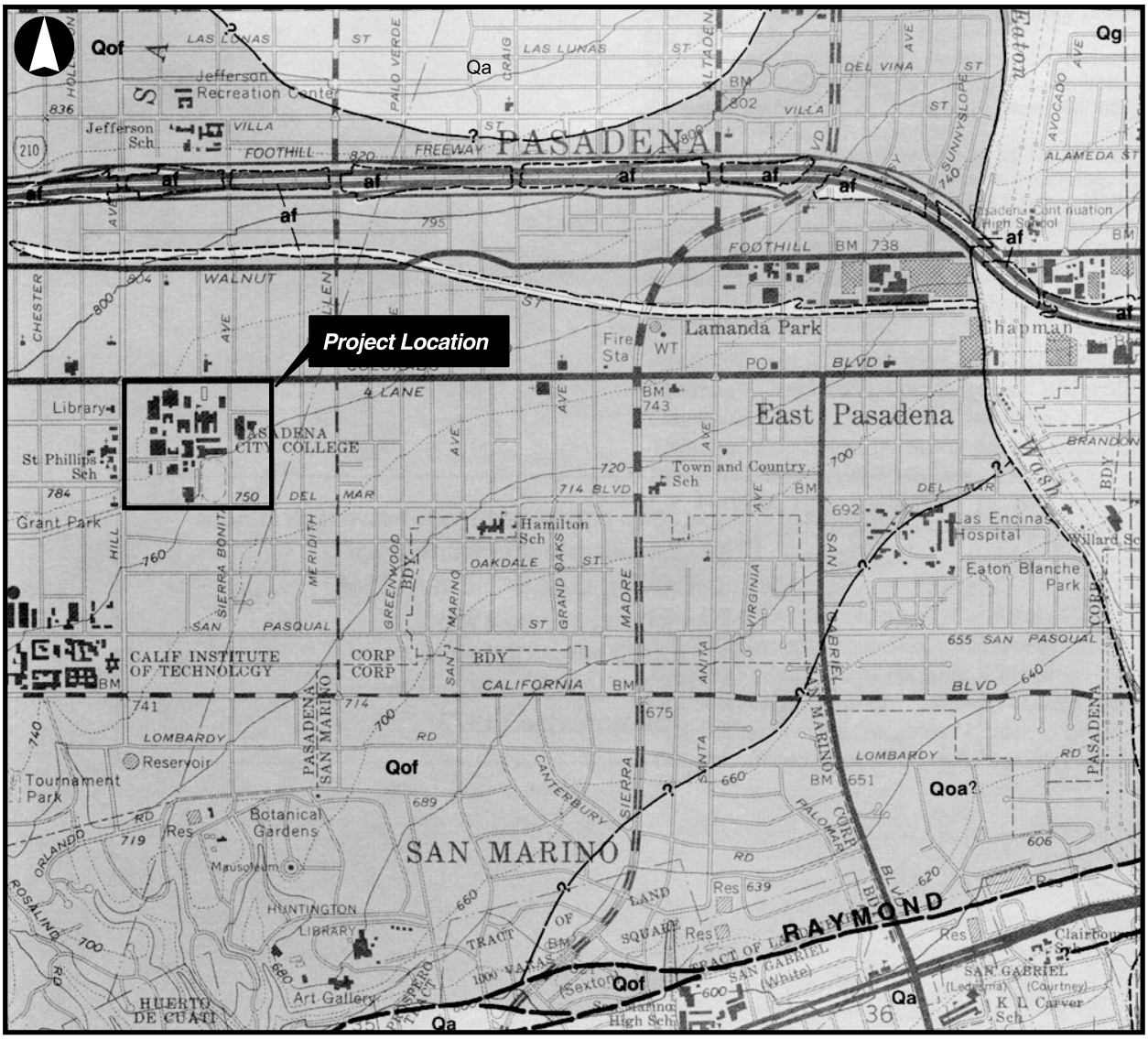
Physiography

Pasadena City College is located in a fully developed area to the south of the San Gabriel Mountains. Current land uses include residential, commercial, institutional, and service-oriented businesses. The area is typically characterized by low relief, with elevations within the Pasadena City College campus ranging from approximately 750 feet (mean sea level datum) along the southeastern boundary of the campus to 790 feet near the northwestern boundary of the campus. Areas of higher relief to the north of the project vicinity include the San Gabriel Mountains, notably Mount Wilson which lies approximately 6.5 miles to the northeast. Pasadena City College is located on the USGS 7.5-Minute Mt. Wilson topographic quadrangle.

Geology

The project area is underlain predominantly by Holocene alluvial fan gravels and sands from the San Gabriel mountains (Dibblee 1998). Localized areas of artificial fill are expected to underlie the developed portion of the campus (buildings, roads, etc.). Figure 3-2 shows the underlying geology of the area.

Figure 3-2: Geologic Map



Source: Thomas W. Dibblee, Jr., 1998.

Legend

af	Artificial fill
Qg	Gravel and sand of stream channels, and alluvial fan outwash from major canyons
Qa	Alluvium of valley areas
Qof	Alluvial fan gravel and sand, from San Gabriel Mountains
Qoa	Low terrace remnants of alluvial gravel and sand

Soils

According to the City of Pasadena General Plan EIR from December 1993, the soils in the Pasadena City College area belong to the Ramona loam association. These soils are stony, gravelly, or sandy loams formed on alluvial fans south of the San Gabriel Mountains. The Ramona loam consists of fairly porous material, has at least 6 feet of recognizable soil profile, and is generally well drained. Permeability is rapid, runoff is slow, and erosion hazard is slight because of the gravelly surface layer and low topographic relief. The sandier portions of the soils are moderately dense and relatively well compacted at depth. The Ramona loam is underlain by an adobe hardpan layer approximately 4 feet below the ground surface, which may impede downward percolation of water. Ramona soils are slightly expansive and very slightly corrosive to uncoated steel or concrete. Expansive soils are those that have the tendency to expand when saturated. They are moderate to low in strength, with medium to low compressibility, and are slightly susceptible to seepage.

Mineral Resources

No mineral resources have been identified in the proposed project area (County of Los Angeles General Plan, 1993).

Seismicity

The project area will be subject to ground shaking associated with earthquakes on faults of both the San Andreas and Transverse Ranges fault systems. Active faults of the San Andreas system are predominantly strike-slip faults accommodating translational movement. The Transverse Ranges fault system consists primarily of blind reverse and thrust faults accommodating tectonic compressional stresses in the region. Blind faults have no surface expression and have been located using subsurface geologic and geophysical methods. This combination of translational and compressional stresses gives rise to diffuse seismicity across the region.

Active reverse or thrust faults in the Transverse Ranges include blind thrust faults responsible for the 1987 Whittier Narrows Earthquake and 1994 Northridge Earthquake, and the range-front faults responsible for uplift of the Santa Monica and San Gabriel Mountains. The range-front faults include the Malibu Coast, Santa Monica-Hollywood, Raymond, and San Fernando-Sierra Madre faults. Active right lateral strike slip faults in the Los Angeles Area include the San Andreas, Whittier-Elsinore, Palos Verdes, Newport-Inglewood, and San Gabriel faults, all associated with the San Andreas fault system.

Both the Transverse Ranges and western Los Angeles Basin are characterized by numerous geologically young faults. These faults can be classified as historically active, active, potentially active, or inactive, based on the following criteria (CDMG 1999a):

- Faults that have generated earthquakes accompanied by surface rupture during historic time (approximately the last 200 years) and faults that exhibit aseismic fault creep are defined as Historically Active.

- Faults that show geologic evidence of movement within Holocene time (approximately the last 11,000 years) are defined as Active.

- Faults that show geologic evidence of movement within the Quaternary (approximately the last 2,000,000 years) are defined as Potentially Active.

- Faults that show direct geologic evidence of inactivity during all of Holocene time or longer may be classified as Inactive.

Although it is difficult to quantify the probability that an earthquake will occur on a specific fault, this classification is based on the assumption that if a fault has moved during the Holocene epoch, it is likely to produce earthquakes in the future. Blind thrust faults do not intersect the ground surface, and thus they are not classified as active or potentially active in the same manner as faults that are present at the earth's surface. Blind thrust faults are seismogenic structures and thus the activity classification of these faults is predominantly based on historic earthquakes and microseismic activity along the fault.

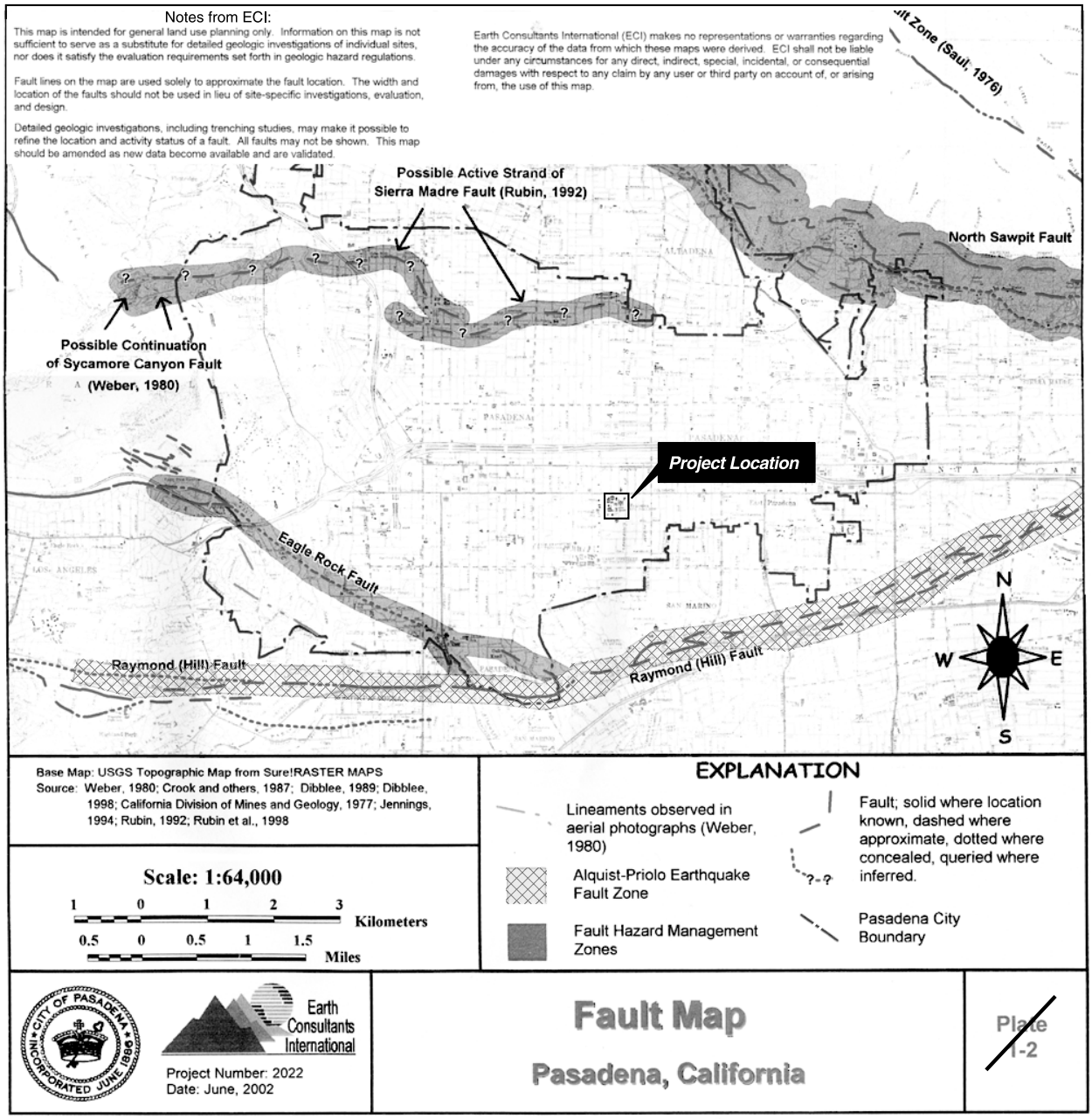
The Pasadena City College campus is located in an area with many major active faults in the vicinity. The major active faults in the project area include the Raymond Hill, San Gabriel, San Fernando, San Jacinto and Whittier-Elsinore faults. Figure 3-3 shows the locations of faults in the area of PCC.

According to the Pasadena City College EIR from November, 1989, the Raymond Fault located approximately 1.4 miles to the south-southeast of Pasadena City College is the closest active fault to the project area. The Raymond Fault has a known length of about 11 miles traversing from Monrovia Canyon on the east to the Arroyo Seco on the west, and is a high-angle reverse fault thrusting basement rocks over alluvial sediments. Numerous geomorphic features along its entire length (such as fault scarps, sag ponds, springs, and pressure ridges) attest to the fault's activity during the Holocene epoch. The most recent fault movement, based on radiocarbon dating, occurred sometime between 2,160 +- 105 and 1,630 +- 100 years before present. The Raymond Fault has been included in an Alquist Priolo Special Studies Zone.

The San Jacinto fault zone, located approximately 45 miles to the east of the Pasadena City College campus, is considered the most active fault in southern California. According to the City of Pasadena General Plan EIR (December, 1993), this fault zone has produced three major earthquakes in the last 100 years. These earthquakes had estimated Richter Magnitudes (M)9 of M7.0 in 1899, M6.8 in 1918 and M6.3 in 1923. The epicenters were located 87 miles, 78 miles and 55 miles, respectively, east-southeast of Pasadena.

The closest potentially active fault is the Sierra Madre Fault Zone located approximately 3.2 miles northeast of the campus. Other nearby potentially active faults include the Verdugo, Santa Monica-Hollywood, and Duarte Faults located 3.5 miles west-northwest, 5 miles west-southwest, and 7 miles east of the site, respective.

Figure 3-3: Fault Location Map



Source: *Technical Background Report to the Safety Element of the General Plan, City of Pasadena, California*, Earth Consultants International, 2002.

According to the United States Geological Survey, the probability of at least one large earthquake (Magnitude 7 [M7] or greater) in one of the major regional fault zones during the next 30 years is at least 60 percent. There is about a 20 percent chance of an M7.0 earthquake occurring within the San Jacinto fault zone during the next 30 years and about a 30 percent chance of an M7.5 earthquake occurring within the San Andreas fault zone during the same timeframe. (Source: Working group on California earthquake probabilities, Probabilities of large earthquakes occurring in California on the San Andreas fault, United States Geological Survey Open File Report 88-398, 1988, 62 pages).

3-5.2 Environmental Impacts

a. Significance Criteria

Geologic conditions were evaluated with respect to the impacts the project may have on the local geology, as well as the impact specific geologic hazards may have upon project facilities. The significance of these impacts was determined on the basis of CEQA statutes, guidelines, and appendices; thresholds of significance developed by local agencies; government codes and ordinances; and requirements stipulated by California Alquist-Priolo statutes. Significance criteria and methods of analysis were also based on standards set or expected by agencies for the evaluation of geologic hazards.

The impact assessment was developed based on geologic and geotechnical engineering evaluation of specific geohazards. The assumptions and justification for site-specific assessments are explained in the text.

For the purposes of the analyses in this EIR, the proposed project would have a significant impact of the geologic environment if it would:

- Destroy unique geologic features or geologic features of unusual scientific value for study or interpretation;
- Result in the loss of accessibility of known mineral and/or energy resources of local, regional, or statewide value;
- Substantially accelerate geologic processes, such as erosion; or
- Substantially alter topography beyond what would result from natural erosion and deposition.

For the purposes of the analyses in this EIR, the geologic environment would have a significant impact on the proposed project if it would expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death resulting from:

- Ground rupture due to presence of an active earthquake fault in the project area;
- Earthquake-induced strong ground shaking and/or seismic-related ground failure including liquefaction, settlement, lateral spreading and/or surface cracking;

- Exposure to corrosive soils;
- Earthquake-induced flooding; or
- Slope failure.

b. Impacts Discussion

Construction Impacts

❑ Geologic and Mineral Resources

The project area is a fully developed urban area and is underlain by artificial fill and alluvium throughout. Therefore there are not any unique geologic features in the area that would be destroyed. No mineral resources are located in the project area.

❑ Accelerated Erosion

As a result of grading and excavation activities during construction periods, soils on the project site would be exposed to wind and water erosion. The implementation of standard storm water pollution control Best Management Practices would reduce soil erosion impacts to a less than significant level. Erosion control measures that shall be implemented as part of Best Management Practices would include the placement of sandbags around basins; use of proper grading techniques; appropriate sloping, shoring, and bracing of the construction site; and covering or stabilizing topsoil stockpiles. Construction industry standard storm water Best Management Practices can be found in the State of California Storm Water Best Management Practice Handbook, Construction Activity.

❑ Alteration of Topography

The project area is relatively flat. Since development would be designed to fit into the existing campus, substantial alteration of the topography would not occur.

❑ Unstable Slopes

The areas where construction of new facilities is planned are relatively flat or have already been graded for existing buildings. Any new slopes created by construction would be stabilized by appropriate temporary and permanent measures during construction, in compliance with current building codes and OSHA standards, thereby reducing the impact to less than significant.

Operational Impacts

❑ Ground Rupture

The project area is not located within an Alquist-Priolo Earthquake Fault Zone (CDMG 1977) and no known active faults cross through the project area or within the immediate vicinity of the project area. Therefore, primary ground rupture is not anticipated.

❑ Strong Ground Shaking

Seismic shaking could cause significant damage to all aboveground structures and moderate damage to pavement, roads, and underground utilities. Strong earthquake-induced ground shaking could be triggered by seismic activity on any of the faults listed in section 3-5.1, resulting in significant damage to structures in the proposed project area.

The ground motion hazard described above is not unusual for the San Gabriel Valley area. This hazard would represent a less than significant impact since design and construction of the proposed project would conform to all applicable provisions established in the office of the California State Architect, which follows guidelines set forth in the 1998 California Building Code (CBC). The CBC is based on the 1997 Uniform Building Code (UBC) and sets forth regulations concerning proper earthquake design and engineering. In addition, construction would conform to the 1997 UBC's earthquake design criteria for Seismic Zone 4.

❑ Liquefaction Potential

The Pasadena City College campus does not lie within a zone of liquefaction potential as defined by the California Division of Mines and Geology (CDMG 1999b).

❑ Unsuitable Soil Conditions

Soil characteristics that could have significant impact on design of new buildings and facilities for the project are corrosion, compaction, and expansion. Corrosive soils could damage buried utilities and foundations. Loose alluvial soils and undocumented fills may be subject to compaction or settlement due to changes in foundation loads or in soil moisture content. Changes in soil moisture could result from rainfall, landscape irrigation, utility leakage, roof drainage, and/or perched groundwater. Expansion potential of soil within the project area could vary from very low for soils developed in sandy materials to moderate for soils developed on lean clay units. The alluvium in several areas on campus is moderately expansive. Expansive soils are characterized by their ability to undergo significant volume change (shrink and swell) due to variation in soil moisture content. Potential impacts could include unacceptable settlement or heave of structures, concrete slabs supported-on-grade, and pavements supported on these types of soil. The impact from unsuitable soils would pose a less than significant impact provided that appropriate mitigation measures are implemented in design and construction of proposed projects. Mitigation measures would be determined for each proposed facility on information obtained from site-specific geotechnical investigations.

❑ Slope Failure

The areas on campus proposed for new and redevelopment projects do not contain any significant slopes and no significant slopes are proposed for the project; therefore, slope failures are not anticipated. Minor slopes may be created during construction of projects located in the southern portion of the campus. Created and altered slopes would be stabilized by appropriate OSHA methods, reducing any impact from slope failure to less than significant.

❑ Earthquake-Induced Flooding

According to the Los Angeles County Safety Element (1990), the project area is not located within a flood or inundation hazard zone.

3-5.3 Mitigation Measures

a. Construction Mitigation

PACCD will cause all contracts for construction to include the following provisions to minimize potentially significant hazards to construction workers from unstable temporary slopes.

GE-1 All earthwork and grading shall meet the requirements of State of California codes and shall be performed in accordance with the recommendations in the Geotechnical Investigation conducted for each proposed project at the PCC campus.

GE-2 All excavation and shoring systems shall meet the minimum requirements of the Occupational Safety and Health Administration (OSHA) standards.

GE-3 The project will comply with the requirements of Sections 401, 402, and 404 of the Clean Water Act and NPDES program. Compliance will include all necessary permits and a Storm Water Pollution Prevention Program.

b. Operational Mitigation

PACCD will cause all contracts for construction to include the following provisions to minimize potentially significant impacts from strong seismic ground shaking, unsuitable soils, and soil liquefaction.

GS-1 Geotechnical investigations shall be performed by qualified licensed professionals before final design of any structures and recommendations provided in these reports should be implemented, as appropriate.

GS-2 Ground Shaking. Design and construction of structures for the proposed project shall conform to all applicable provisions of the office of the California State Architect, which follows guidelines set forth in the 1998 California Building Code (CBC). The CBC is based on the 1997 Uniform Building Code (UBC) and sets forth regulations concerning

proper earthquake design and engineering. In addition, design and construction shall conform to the 1997 UBC's earthquake design criteria for Seismic Zone 4.

GS-3 Liquefaction. If liquefiable soils are identified by geotechnical investigations for project structures, then mitigation should be implemented. Appropriate mitigation, which could include the use of piles, deep foundations, dynamic densification, ground improvement, grouting, or removal of suspect soils, is dependent on site-specific conditions, which would be identified by the geotechnical investigation.

GS-4 Unsuitable Soil Conditions. The geotechnical investigation of proposed facilities would fully characterize the presence and extent of corrosive, expansive, or loose compactable soil. Based on the collected data, appropriate mitigation would be designed. Mitigation options could include the following: removal of unsuitable subgrade soils and replacement with engineered fill, installation of cathodic protection systems to protect buried metal utilities, use of coated or nonmetallic (i.e., concrete or PVC) pipes not susceptible to corrosion, construction of foundations using sulfate resistant concrete, support of structures on deep pile foundation systems, densification of compactable subgrade soils with in-situ techniques, and placement of moisture barriers above and around expansive subgrade soils to help prevent variations in soil moisture content.

3-5.4 Unavoidable Significant Adverse Impacts

There are no unavoidable significant geologic or seismic impacts. Proper design of the planned projects would mitigate the impacts of strong ground shaking, unsuitable soils, and liquefaction potential.

3-6 HAZARDOUS MATERIALS

This section identifies hazardous materials known to be located on and near the PCC campus and discusses the potential for contamination to result from implementing *Master Plan 2010.*

3-6.1 Environmental Setting

Existing and past land use activities can be used as indirect indicators of hazardous material storage and use at individual sites. For example, many current or past industrial sites are known or suspected to have soil or groundwater contamination resulting from the use of hazardous substances. In addition to containing hazardous materials, industrial sites can be the source of contaminated groundwater plumes that originate from leaking underground tanks or from surface runoff and migration of hazardous substances. Other hazardous materials sources include pesticides and herbicides that have been applied to agricultural lands or improperly used in landscape maintenance. In the case of PCC, most of the land on which the main campus is situated has been in use for educational purposes for nearly a century. Two parcels at the northeast corner of the campus that were added in the 1990's were previously subjected to hazardous remediation. Land uses that adjoin the campus include some uses that would indicate the possible presence of hazardous materials. In addition to indirect indicators, there are numerous databases that identify sources of hazardous materials, as well as reporting programs that are required for agencies or businesses that handle hazardous materials. A review of land uses, databases and reporting programs was conducted to identify known hazardous materials within 1.25 miles of PCC; the results are reported below.

a. Land Use/Site Conditions

Pasadena City College Campus

PCC's curriculum includes several programs that may use hazardous materials or generate hazardous waste. These programs include biological sciences (lab testing), the arts (photography and printing), and industrial technology (automotive wastes). Additionally, PCC operates infrastructure facilities and grounds maintenance programs which involve the use of hazardous materials. Consequently, there are known locations of hazardous materials at various buildings on the campus, as shown in Table 3-13. PCC operates the handling, storage, and disposal activities of these locations in compliance with all applicable state and federal hazardous materials regulations. In addition to trained PCC staff who oversee the program, a hazardous waste contractor is responsible for gathering and disposing of hazardous waste materials.

There are 11 facilities containing hazardous materials associated with the programs or functions that these facilities serve. Many of the chemicals stored at PCC are in the form of off-the shelf products that one can find in a hardware store and are stored in small quantities on an as-needed basis. However, PCC also operates laboratories that are associated with biology, chemistry, dentistry, veterinary medicine, and nursing. Additionally, the industrial technology shops use hazardous materials and generate hazardous wastes. All chemicals used on campus are disclosed

within PCCs emergency action plan. Table 3-13 lists the 11 building and specific locations and types of hazardous materials found on the PCC campus.

Table 3-13: Hazardous Materials at Pasadena City College

Building	Location	Type of Material	Building Affected by Master Plan?
C	Vault Room and Stage workshop	Paints	Will not be altered.
CC	Second floor	Chemicals	Will be demolished and rebuilt
E	First floor	Chemicals	Will not be altered
FB	Exterior	Chemicals	Interior alternation
FC	First floor	Chemicals	Will not be altered
FS	First floor	Chemicals	Will not be altered
R	All floors	Chemicals	Will be altered
T	First floor	Chemicals; Generated waste (1)	Will be demolished and rebuilt
U	All floors	Chemicals; Generated Waste (1)	Will not be altered
V	First floor	Chemicals, Generated Waste (1)	Will be demolished and rebuilt
Z	First floor	Chemicals	Will be altered

Note:

1- All generated waste are currently disposed of by a licensed hazardous materials firm.

Source: Emergency Business Plan, Pasadena Area Community College District, January 2000.

Some buildings at PCC also contain asbestos. Table 3-14 lists the buildings on campus that contain asbestos and highlights those that would be affected by the proposed Master Plan.

Table 3-14: Asbestos Locations of the Pasadena City College Campus		
Building	**Contains Asbestos?**	**Buildings to be Altered/Renovated under Master Plan 2010?**
CC	Yes	Will be demolished.
C	Yes	Will not be altered.
D	Yes	Will not be altered.
E	Yes	First floor will be renovated.
G	Yes	Will not be altered.
J	Yes	Will be demolished.
K	Yes	Demolished.
P	Yes	Will not be altered.
T	Yes	Will be demolished.
U	Yes	Will not be altered.
V	Yes	Will be renovated.
W	Yes	Will be renovated.

Source: Asbestos Inspection Report, CF Environmental, Inc, June 2001.

Surrounding Area

Land uses immediately surrounding the PCC campus consist of residential, retail, commercial, and public service. Sites within one-quarter mile of the campus that include hazardous materials are Minit Lube at 1603 E. Colorado Boulevard, Jiffy Lube at the corner of Hill Avenue and Walnut Avenue, Unocal service station at 200 N. Hill Avenue, Chevron service station at the corner of Hill Avenue and Colorado Boulevard, and the Pasadena Ford dealership at 1365 E. Colorado Boulevard.

b. Environmental Database Review

An electronic database search of listings maintained by federal, state, and local agencies was conducted for the following: 1) sites with known or suspected hazardous material contamination or that use hazardous or toxic materials and regulated wastes, 2) discharge or spillage incidents, 3) discharge permits, 4) landfills, and 5) storage tanks was performed by Environmental Data Resources, Inc., in 2002. The principal regulatory directories reviewed by Environmental Data Resources, Inc., including the date last updated, are listed below in Table 3-15.

Table 3-15: Principal Regulatory Agency Databases Searched	
Regulatory Agency Database	**Date Last Updated**
Federal	
National Priority List (NPL)	October 2002
Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS)	August 2002
Comprehensive Environmental Response, Compensation, and Liability Information System – No Further Remedial Action Planned (CERCLIS-NFRAP)	September 2002
Resource Conservation and Recovery Act Information System (RCRIS), (includes RCRA Generators)	September 2002
RCRA Corrective Action Sites (CORRACTS)	May 2002
California State	
Annual Work Plan (AWP, formerly Bond Expenditure Plan, by Cal EPA)	October 2002
CALSITES (formerly ASPIS, by Cal EPA)	October 2000
CORTESE – Hazardous Waste Substance Site List	April 2001
Leaking Underground Storage Tanks Information System (LUST, by SWRCB)	July 2002
Underground Storage Tank Registration Database (UST, by RWQCB; and FID, by Cal EPA)	January 2002 and October 1994
Solid Waste Information System (SWIS)	August 2002
Hazardous Waste Information System (HAZNET, by Cal EPA)	December 2000
Local	
Site Mitigation List (by Community Health Services)	February 2002
Underground Storage Tank Leak List (LUST, by RWQCB Region 4)	August 2001
Spill, Leaks, Investigation, and Clean-Up Cost Recovery Listing (SLIC, by RWQCB Region 4	August 2002
List of Solid Waste Facilities	January 2002
HMS: Street Number List	August 2002
San Gabriel Valley Areas of Concern	August 2002

Source: Environmental Data Resources, Inc., December 2002.

The database was reviewed for sites listed as potential or known dischargers of hazardous materials that could potentially affect the PCC site. The database search included sites within a 1.25-mile distance from the PCC campus. A total of 23 sites were identified within the search radius, although only 13 sites, (two of which are on the PCC campus), were shown to occur within one-quarter mile of the project site boundaries. Table 3-16 shows the results of the database search within one-quarter mile of PCC.

Table 3-16: Database Results within One-Quarter Mile of the Pasadena City College Campus

I.D. Number	Site Name (per Database)	Address	Type	Notes
1	Pasadena City College	1364 E. Green Street	GEN	This site has been remediated and is now used as a parking lot
B5	Pasadena City College Shops	1364 E. Green Street	GEN	This site has been remediated is now used as a parking lot
C6	Pasadena City College	205 S. Meredith Street	GEN	Property is no longer owned by PCC
A2-A4	Minit Lube	1603 E. Colorado Blvd.	GEN	
B11-B13	Pasadena Lincoln Mercury	1339 Green Street	Hist UST, GEN	
D8-D10	Unocal Corp SS 1099	20 N. Hill Avenue	Hist UST, GEN	
C7	Softouch Dental Care	215 S. Meredith Avenue	GEN	
Total = 13 reporting sites				

Notes:

ID Number = Environmental Information Data Site I.D. Number.

Type of facility

UST = Registered Underground Storage Tanks, including tanks listed with state and local agencies.

LUST = Leaking Underground Storage Tank Incident Reports, including tanks listed with SWRCB.

GEN = Hazardous Waste Generator, includes RCRIS, CORTESE, HAZNET, and other local agency hazardous waste listings.

Source: Environmental Data Resources, Inc., December 2002.

c. Applicable Regulation, Plans and Standards

Hazardous substances are defined by state and federal regulations to protect public health and the environment. Hazardous materials have certain chemical, physical, or infectious properties that cause them to be considered hazardous. The California Code of Regulations (CCR), Title 22, Chapter 11, Article 2, Section 66261 provides the following definition:

> A hazardous material is a substance or combination of substances which, because of its quantity, concentration, physical, chemical or infectious characteristics, may either (1) cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (2) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported or disposed of or otherwise managed.

According to Title 22 (Chapter 11, Article 3, CCR), substances having a characteristic of toxicity, ignitability, corrosivity, or reactivity are considered hazardous. Hazardous wastes are hazardous substances that no longer have a practical use, such as material that has been abandoned, discarded, spilled, contaminated, or is being stored prior to proper disposal.

Toxic substances may cause short-term or long-lasting health effects, ranging from temporary effects to permanent disability, or death. For example, toxic substances can cause eye or skin irritation, disorientation, headache, nausea, allergic reactions, acute poisoning, chronic illness, or other adverse health effects if human exposure exceeds certain levels (the level depends on the substance involved). Carcinogens (substances known to cause cancer) are a special class of toxic substances. Examples of toxic substances include most heavy metals, pesticides, and benzene (a carcinogenic component of gasoline). Ignitable substances are hazardous because of their flammable properties. Gasoline, hexane, and natural gas are examples of ignitable substances. Corrosive substances are chemically active and can damage other materials or cause severe burns upon contact. Examples include strong acids and bases such as sulfuric (battery) acid or lye. Reactive substances may cause explosions or generate gases or fumes. Explosives, pressurized canisters, and pure sodium metal (which reacts violently with water) are examples of reactive materials.

Other types of hazardous materials include radioactive and biohazardous materials. Radioactive materials and wastes contain radioisotopes, which are atoms with unstable nuclei that emit ionizing radiation to increase their stability. Radioactive waste mixed with chemical hazardous waste is referred to as "mixed wastes." Biohazardous materials and wastes include anything derived from living organisms. They may be contaminated with disease-causing agents, such as bacteria or viruses.

Soil that is excavated from a site containing hazardous materials would be a hazardous waste if it exceeded specific CCR Title 22 criteria. Remediation (cleanup and safe removal/disposal) of hazardous wastes found at a site is required if excavation of these materials is performed; it may also be required if certain other activities are proposed. Even if soil or groundwater at a contaminated site do not have the characteristics required to be defined as hazardous wastes, remediation of the site may be required by regulatory agencies subject to jurisdictional authority. Cleanup requirements are determined on a case-by-case basis by the agency taking lead jurisdiction. California Environmental Protection Agency (Cal EPA) – Department of Toxic Substances Control administers a voluntary cleanup program (VCP) to allow project developers to implement remedial measures prior to site development regardless of responsibility for the contamination or cleanup.

Hazardous Waste Requirements

The federal Resource Conservation and Recovery Act (RCRA) of 1976 established a program administered by the U.S. Environmental Protection Agency (EPA) for the regulation of the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA was amended in 1984 by the Hazardous and Solid Waste Act, which affirmed and extended the "cradle to grave" system of regulating hazardous wastes. The use of certain techniques for the disposal of some hazardous wastes was specifically prohibited by the Hazardous and Solid Waste Act.

Individual states may implement hazardous waste programs under the RCRA with EPA approval. California has not yet received this EPA approval; instead, the California Hazardous Waste Control Law is administered by the California Environmental Protection Agency (Cal EPA) to regulate hazardous wastes. While the California Hazardous Waste Control Law is generally more

stringent than RCRA, until the EPA approves the California program, both the state and federal laws apply in California.

The California Hazardous Waste Control Law lists 791 chemicals and about 300 common materials that may be hazardous; establishes criteria for identifying, packaging, and labeling hazardous wastes; prescribes management controls; establishes permit requirements for treatment, storage, disposal, and transportation; and identifies some wastes that cannot be disposed of in landfills.

Hazardous Material Worker Safety

The California Occupational Safety and Health Administration (Cal/OSHA) is the primary agency responsible for worker safety in the handling and use of chemicals in the workplace. Cal/OSHA standards are generally more stringent than federal regulations. The employer is required to monitor worker exposure to listed hazardous substances and notify workers of exposure (8 CCR Sections 337-340). The regulations specify requirements for employee training, availability of safety equipment, accident-prevention programs, and hazardous substance exposure warnings.

3-6.2 Environmental Impacts

The principal environmental impacts involving hazardous waste that could arise from implementation of *Master Plan 2010* would be the mobilization of contaminants due to construction activities. Disturbance of hazardous materials could occur during demolition or remodeling activities, during excavation, or during above-ground construction, resulting in exposure of workers and the general public. If contaminated soil is found that exceeds regulatory limits for construction backfill, onsite treatment, or transport to offsite processing facilities would be necessary. Contaminated soil removed from the construction area would need to be transported according to state and federal regulations and be replaced by imported soil approved for backfill. Similar concerns and processes could apply if contaminated groundwater were encountered.

a. Significance Criteria

For the purposes of this EIR, impacts of the project on the environment would be considered significant if:

- Construction of the proposed project causes soil contamination, including flammable or toxic gases, at levels exceeding federal, State and local hazardous waste limits established by 40 CFR Part 261 and Title 22 CCR 66261.21, 66261.22, 66261.23 and 66261.24.

- Construction activities would result in mobilizing contaminants, creating potential pathways of exposure to humans and/or other sensitive receptors.

The presence of contaminated soils and/or groundwater within the proposed project site would be considered significant if:

- Workers and/or the public would be exposed to contaminated or hazardous materials during project construction activities and such exposure exceeds permissible exposure levels set by the California Occupational Safety and Health Agency (CAL-OSHA) in CCR Title B and the Federal Occupational Safety and Health Administration (OSHA) in Title 29 CFR Part 1910.

b. Impacts Discussion

Construction Impacts

For each of the individual construction projects included in *Master Plan 2010*, it is assumed that hazardous materials that are stored, used or generated at individual sites (see Table 3-13) will be removed prior to initiating construction activities. Hazardous materials would be transferred to other locations at PCC as appropriate, and the Emergency Business Plan would be modified periodically to reflect these changes.

Demolition or remodeling of structures could result in the exposure and mobilization of asbestos-containing material, lead-based paints, or other hazardous materials that may remain from past construction practices, which could result in potentially significant impacts. Similarly, parking lots would need to be demolished to create the new parking structure and gateways, resulting in disturbance of asphalt and concrete. Once demolition is completed, excavation activities at those buildings slated for replacement (Buildings CC, J, JJ, K, and T), and excavation for the parking structure, have the potential to encounter contaminated soils or groundwater. Contaminated soils or groundwater could result in potentially significant impacts. The construction and remodeling processes at the various sites may also involve hazardous materials, with an accompanying potential for significant impacts.

To assure that the identification, handling, transport and disposal of hazardous materials is accomplished in accordance with federal and state regulations and procedures, and that potential impacts are reduced to less than significant levels, PACCD will adopt mitigation measures to be included in all construction contracts.

Operational Impacts

As individual improvements in *Master Plan 2010* are completed and brought "on-line", PCC will periodically update its Emergency Business Plan so that each new facility would function in accordance with federal and state requirements. Accordingly, no significant hazardous materials impacts are predicted as a result of operation of the proposed Master Plan projects.

3-6.3 Mitigation Measures

The following mitigation measures would provide an assessment of actual or potential site contamination, resulting in the development of appropriate safeguards and methods to reduce potential risk prior to construction. Some of the mitigation measures outlined below must be accomplished prior to construction of each proposed project to allow development of appropriate worker protection and waste management plans that address proper handling, treatment, and

storage of hazardous waste from individual project sites prior to construction. Measures are also provided to govern hazardous materials during the construction process.

HM-1: PACCD will cause all contracts for construction to include the following provisions. (1) All work will be accomplished in accordance with the most current and applicable federal and state regulations for the identification, handling, transport, disposal, and remediation of hazardous materials. All work will be overseen by qualified professionals. (2) A thorough review of available environmental records and a site-specific inspection shall be completed to identify the presence or absence of hazardous materials. Record reviews shall identify data to confirm the remediation of onsite and offsite contamination of former LUST sites, or agency certified closure of the site. A detailed site inspection of hazardous material storage areas in or near proposed project areas shall be performed to determine if leaks or spills may have caused potential environmental contamination. Results of the record review and inspections will be presented in a report to PACCD. (3) For all hazardous materials that are identified, the contractor will prepare a plan for removal, handling, and disposal that meets applicable federal and state regulations. Such plans will be submitted to PACCD for review before activities by the contractor are initiated. (4) For those hazardous materials that cannot be identified prior to beginning construction (e.g., contaminated soils or groundwater that would be exposed during excavation), the contractor will prepare a plan for the procedures that will be applied at such sites. This plan will address identification, testing, monitoring, handling, treatment, disposal, and other all applicable procedures as specified in federal and state regulations and procedures. The plan will also include provisions for modification to respond to unforeseen circumstances, such that all work by the contractor will remain in conformity with federal and state requirements. This plan will be presented to PACCD for review and approval before activities by the contractor are initiated. (5) For all new construction activities, the contractor will prepare a plan for the procedures that will be applied at such sites. This plan will address identification, testing, monitoring, handling, treatment, disposal, and other all applicable procedures as specified in federal and state regulations and procedures. The plan will also include provisions for modification to respond to unforeseen circumstances, such that all work by the contractor will remain in conformity with federal and state requirements. This plan will be presented to PACCD for review and approval before activities by the contractor are initiated. (6) Upon direction from PACCD, the contractor will submit copies of all plans to local, state and federal regulatory agencies for review and approval.

HM-2: If the review preformed under HM-1 indicates contamination may have spread to a proposed project area on campus, an investigation shall be designed and performed to verify the presence and extent of contamination at the site. A qualified and approved environmental consultant shall perform the review and investigation. The investigation shall include collecting samples for laboratory analysis and quantification of contaminant levels within the proposed excavation and surface disturbance areas. Subsurface investigation for high potential sites shall determine the appropriate plan for worker protection and hazardous material handling and disposal procedures appropriate for the subject site. Upon direction from PACCD, the contractor will submit copies of the investigation and plan for review and approval by the Los Angeles County Fire

Department, Health Hazardous Materials Division, Department of Toxic Substances Control, or other appropriate agencies prior to construction.

HM-3: Construction activities that require dewatering may require treatment of contaminated groundwater prior to discharge. Where dewatering is required, the contractor will develop a plan for the gathering, testing, monitoring, disposal, and all other applicable procedures as specified in federal and state regulations and procedures. The plan will also identify all necessary permits, including but not limited identifying discharge points, quantities, and groundwater treatment. This plan will be presented to PACCD for review and approval before activities by the contractor are initiated. Upon direction from PACCD, the contractor will submit copies of plans to local, state, and federal regulatory agencies for review and approval. The contractor will also be responsible for obtaining all necessary permits on behalf of PACCD and notifying regulatory agencies, such as California EPA, the Regional Water Quality Control Board (RWQCB), and the Los Angeles County Fire Department, Health Hazardous Materials Division in advance of construction.

HM-4: For areas with contaminated soil determined to be a hazardous waste, the contactor will provide documentation that such soil shall be excavated by personnel who have been trained through the OSHA-recommended 40-hour safety program (29 CFR1910.120), and develop an approved plan for excavation, control of contaminant releases to the air, and offsite transport or onsite treatment. The contractor shall prepare and submit health and safety plans prepared by a qualified and approved industrial hygienist to protect the public and all workers in the construction area. Upon direction from PACCD, the contractor will submit copies of plans for review and approval by the appropriate agencies, such as the Los Angeles County Fire Department, Health Hazardous Materials Division, California Department of Toxic Substances Control, or other appropriate agencies prior to construction.

HM-5: The contactor will use standard dust suppression procedures in all construction areas (including areas of demolition, remodeling, and new construction) to reduce airborne emissions of contaminants and reduce the risk of exposure to workers and the public.

3-6.4 Unavoidable Significant Adverse Impacts

There would be no unavoidable significant adverse hazardous material impacts. The proper handling, disposal, and remediation of hazardous materials would mitigate the impacts of on-campus use of miscellaneous chemicals, asbestos-containing material and lead-based paint, and contamination resulting from proposed construction activities.

3-7 HYDROLOGY AND WATER QUALITY

3-7.1 Environmental Setting

The City of Pasadena and its surrounding basin (cumulatively referred to as the Los Angeles Basin) lies within a climatic zone characterized by seasonal rainfall, predominantly during the winter months. Precipitation can vary from year to year, but on average the Los Angeles Basin receives 10 to 11 inches of rainfall. In the spring, summer, and fall seasons there is typically no more than a trace amount of precipitation. Mountains surrounding the basin reach elevations that, in the winter months, can be capped with snow. Snowmelt from mountains in the Angeles National Forest contribute to recharging of the basin's groundwater and replenishing the numerous reservoirs built to hold the seasonal runoff.

a. Surface Water Resources

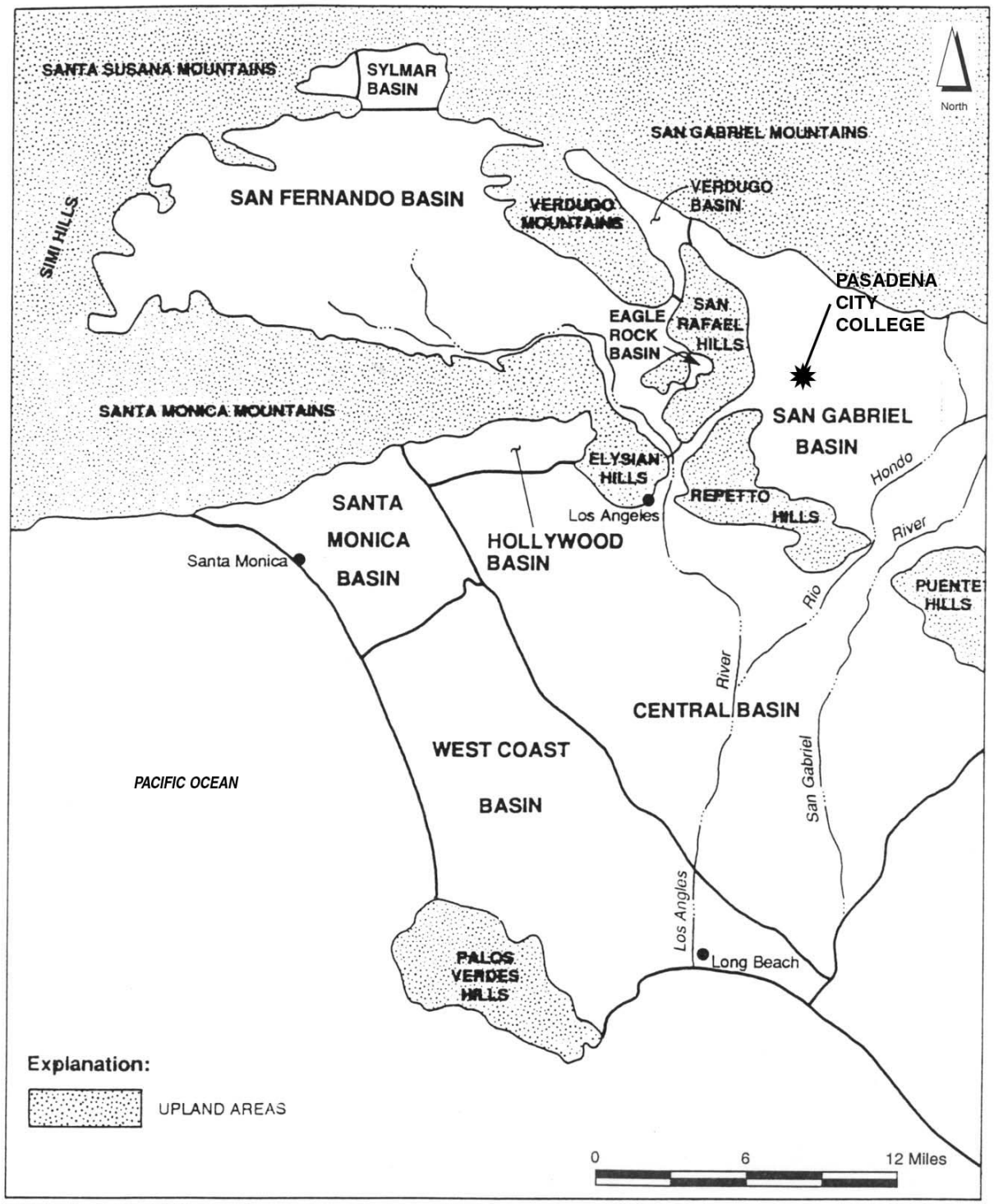
Surface waters that drain the surrounding mountains and the upper basin range from small creeks to large rivers such as the Los Angeles and the Santa Ana Rivers. See Figure 3-4. Historically, the major rivers of the basin were prone to flooding; causing damage to towns built nearby. To control the flooding, the United States Army Corp of Engineers (ACOE) channelized the Los Angeles River in 1938. Today, most of the surface waters of Los Angeles County are either fully channelized or controlled by some flood control measure.

Pasadena City College is located within the Los Angeles-San Gabriel Hydrologic Unit designated by the Los Angeles Regional Water Quality Control Board (RWQCB) Los Angeles Region Water Quality Control Plan (1994). This hydrologic unit covers 1,608 square miles and is drained by three major rivers—the Los Angeles, the Rio Hondo, the San Gabriel—and Ballona Creek. Within this hydrologic unit, the plan designates Watershed Management Areas (WMAs). PCC is located within the Los Angeles River Watershed. Figure 3-5.

According to the Los Angeles River WMA Summary (December 2001) prepared by the RWQCB, the majority of the receiving waters in the Los Angeles River Watershed Management Area (LARWMA) are impaired due to point and non-point sources. The impairments are due to a complex mix of permitted dischargers under the City of Los Angeles National Pollutant Discharge Elimination System (NPDES) general permit and non-point source polluted runoff from residential, industrial, and other urban activities in the middle and lower watershed. Dischargers permitted under the NPDES general permit or individual permits for discharging to the LARWMA include the following:

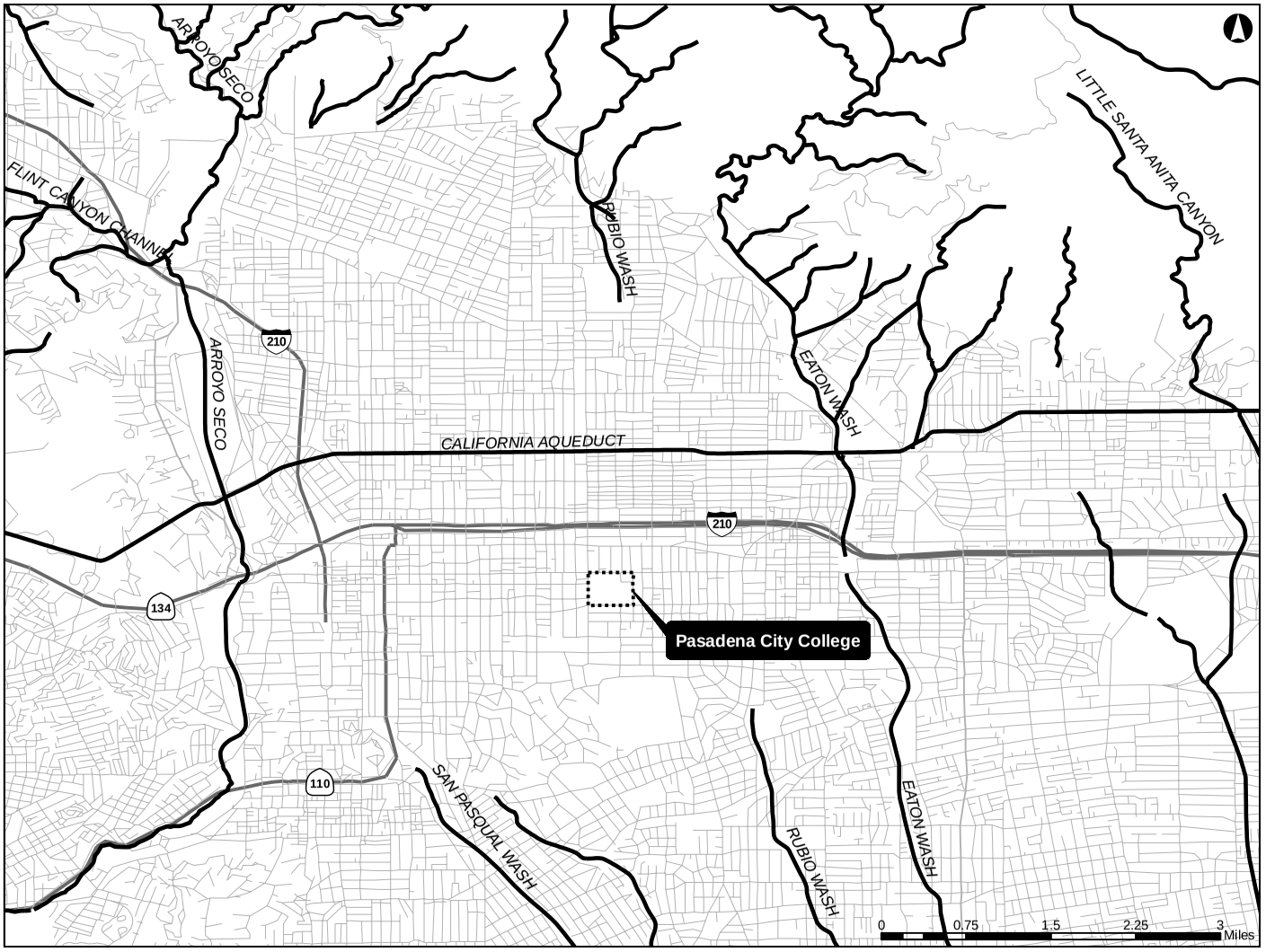
- Seven major industrial dischargers;
- Four Publicly Owned Treatment Works (POTW);
- Thirty minor discharges and 110 dischargers covered by the general stormwater level permit.

Figure 3-4: Regional Watersheds



Sources: California Division of Water Resources, 1961; Los Angeles Watermaster, 1993.

Figure 3-5: Local Watershed



Sources: U.S. Census Bureau TIGER Data, 1995; Myra L. Frank & Associates, Inc., 2002.

b. Groundwater

Los Angeles County has three major groundwater basins; the San Fernando Valley, the San Gabriel Valley, and the Los Angeles Coastal Plain. The San Gabriel Valley is further divided into smaller groundwater basins; Verdugo, EagleRock, and San Gabriel Basins. Pasadena City College is located over the San Gabriel Basin. See Figure 3-5.

As mentioned above, several rivers drain the Los Angeles Basin. Many of these rivers contribute to the recharge of the underground aquifers that lie beneath the basin. In the San Gabriel Basin, the aquifer is actively recharged using man-made spreading grounds. During the dry season, the Rio Hondo is used for groundwater recharge for the San Gabriel Basin.

Because several surface waters within the watershed are impaired, groundwater resources have been affected by polluted recharge waters. Additionally, groundwater quality in the LARWMA has been adversely affected by leaking underground storage tanks that contaminate the groundwater with petroleum hydrocarbons and volatile organic compounds. Other sources of groundwater impairment are septic systems, leaching of industrial chemicals, and seawater intrusion.

c. Floodplains

A review of Floodplain Insurance Rate Map (FIRM) panel number 0650500000A, prepared by the Federal Emergency Management Agency (FEMA), reveals that the project site lies within an area delineated as Zone D

Zone D defines areas where there are possible but undetermined flood hazards. In areas designated as Zone D, no analysis of flood hazards has been conducted. Mandatory flood insurance purchase requirements do not apply, but coverage is available. The flood insurance rates for properties in Zone D are commensurate with the uncertainty of the flood risk.

3-7.2 Environmental Impacts

Construction and operational impacts on surface water were assessed based on the potential for degradation of water quality and increased runoff that may result in flooding. Adverse effects on water quality were determined through review of local, state, and federal guidelines and permit requirements.

Federal regulations for discharge of pollutants into surface waters are defined under the Clean Water Act, Section 401 and 305(b). Projects that would contribute polluted runoff are required to obtain National Pollutant Discharge Elimination System (NPDES) permits, which are granted by the State Water Resources Control Board and the Los Angeles Regional Water Quality Control Board (RWQCB).

Previously prepared environmental documents and reports produced by the Los Angeles Department of Public Works (LADPW) and RWQCB provided information to determine the

local groundwater setting. FEMA maps revealed floodplain information necessary to assess potential adverse effects.

a. Significance Criteria

For the purposes of this EIR, the proposed project would have a significant effect on water quality if it:

- Produces substantial amounts of polluted runoff;
- Violates any water quality standards or waste discharge requirements;
- Substantially degrades the water quality of surface or groundwater resources;
- Interferes with groundwater recharge resulting in a substantial lowering of the local groundwater table level or aquifer volume;
- Places structures within a 100-year flood zone, or;
- Substantially increases surface runoff that results in flooding onsite or offsite.

b. Impacts Discussion

Surface Water Resources

Pasadena City College currently discharges landscape irrigation and stormwater runoff to City of Pasadena and County of Los Angeles stormdrains. Discharges include runoff from athletic fields, common areas, impervious surfaces (e.g., buildings and walkways), and parking lots. The Master Plan proposes to demolish three structures, build new facilities, reconfigure and increase the amount of open space, and transform an existing parking lot into a five-story parking structure.

According to *Master Plan 2010*, virtually no new space would be required for the construction of the proposed projects. Existing structures would be renovated or would be demolished and replaced with a new structure within the general confines of the existing building's footprint. Additionally, the proposed location for the parking structure on Bonnie Avenue is an existing at-grade parking lot.

To be in compliance with the Los Angeles County NPDES Municipal Separate Storm Sewer System (MS4) permit, construction of parking lots of 5,000 square feet or more, or with 25 or more parking spaces, are subject to Standard Urban Storm Water Mitigation Plan (SUSMP) requirements. Additionally, the redevelopment of buildings, creating an addition of at least 5,000 square feet of new impervious surfaces, would also be subject to SUSMP requirements to install Best Management Practices (BMPs) under the general NPDES permit. Implementation of a SUSMP minimizes, to the maximum extent possible, polluted discharge to receiving waters from new or redevelopment projects.

As stated in *Master Plan 2010*, neither 5,000 square feet of new development would be added to the campus nor would its implementation require the addition of any "new" parking lots. Implementation of additional BMPs would not be required to be in compliance with the county NPDES permit to treat stormwater runoff from new impervious surfaces. PCC has an existing MS4 permit under the county general permit and based on the proposed improvements under the Master Plan, no new permits are required.

Surface water impairments are of concern within the LARWMA, as mentioned above in the settings discussion. Untreated stormwater discharge to an impaired water body, as identified in the 303(d) list, would have a significant adverse effect on those surface waters. Consequently, untreated discharge would also be in violation of the Los Angeles Regional Water Quality Control Board's Total Trash Maximum Daily Load (TMDL) pollutant attainment schedule.

Stormwater and irrigation drainage from the PCC campus flows at a one to two percent grade, in a north to south direction, through City of Pasadena and County of Los Angeles stormdrains. These stormdrains transport campus runoff into the Alhambra and Rubio Washes, both of which discharge into the Rio Hondo River. The Rio Hondo River is identified as an impaired water body for several pollutants including trash, dissolved metals, ammonia, and coliform.

Installation of BMPs recommended by the county SUSMP are intended to meet not only the requirements of the NPDES permit, but also the Waste Load Allocation set by the Los Angeles Regional Water Quality Control Board. The existing BMPs for the PCC campus have been approved by the county as indicated by their active NPDES permit.

Groundwater

Development of the Pasadena City College Master Plan would not require on-site pumping of groundwater resources for either construction or operational phases of the Master Plan. Water, both current and future allocations, are and will be provided to PCC by the Pasadena Department of Water and Power (PWP) and the Metropolitan Water District of Southern California (MWD). The PWP receives 54 percent of its water from MWD and 46 percent from local surface and groundwater resources.[2] Of the 46 percent supplied locally, 43 percent was extracted from the Raymond Basin, a groundwater resource underlying Pasadena, Altadena, La Cañada Flintridge and portions of San Marino and Arcadia.

All stormwater and irrigation runoff is directed to existing stormdrains, via gravity, and transported away from campus to receiving waters. BMPs installed on campus remove, to the maximum extent possible, pollutants generated on the campus from the stormwater runoff. The runoff is not allowed to pool, which would potentially leach pollutants into underlying groundwater systems.

Based on the identified significance criteria, implementation of the Master Plan would have no adverse effects on groundwater resources.

[2] Pasadena Water and Power, Annual Report, 2001.

Floodplains and Drainage

Pasadena City College is delineated as being an area with undetermined flood hazard, which means that it is not in a defined 100-year flood hazard zone. The potential exists that the project area could have a risk of flooding, but it has yet to be determined whether it is a 100-or 500-year floodplain, as no analysis has been completed at this time. Construction and operation of the proposed Master Plan projects would take place predominantly within PCC's existing boundary, and therefore, the construction and operation of the Master Plan would not place structures into a 100-year flood zone delineated by FEMA.

Historically, pooling or flooding has not been an issue on the PCC campus. The natural north to south grade of the campus ensures that irrigation and stormwaters flow, via gravity, toward stormdrains that eventually discharge waters into the Rio Hondo and/or Los Angeles Rivers. Neither construction nor operation of the Master Plan would substantially alter the grade of the campus landscape and therefore the plan's implementation would not result in increased flooding onsite or offsite. Based on the defined impact criteria, the Master Plan would have no adverse effects on floodplains.

3-7.3 Mitigation Measures

a. Surface Water Resources

Construction and operation of the *Master Plan 2010* would not have an adverse effect on groundwater resources and therefore no mitigation measures are recommended.

b. Groundwater

Construction and operation of the *Master Plan 2010* would not have an adverse effect on groundwater resources and therefore no mitigation measures are recommended.

c. Floodplains and Drainage

Because the implementation of the *Master Plan 2010* would have no impacts on floodplains, based on the defined impact criteria, no mitigation measures are recommended.

3-7.4 Unavoidable Significant Adverse Impacts

The proposed Master Plan would have no adverse effects on hydrology and water quality, and therefore, there are no unavoidable impacts to these resources. All construction would occur in compliance with permits intended to prevent significant impacts to hydrology and water quality.

3-8 LAND USE AND PLANNING

3-8.1 Environmental Setting

Pasadena City College is located in the south central potion of the City of Pasadena, in the County of Los Angeles. The main campus encompasses a total land area of approximately 53 acres, not including offsite facilities. The main campus is bounded to the north by Colorado Boulevard, the City's primary commercial arterial, to the south by Del Mar Boulevard, to the east by Bonnie Avenue, and to the west by Hill Avenue. PCC has two facilities not located on the main campus: the Community Education Center at 3035 East Foothill Boulevard, the Child Development Center at 1324 East Green Street. *Master Plan 2010* does not include any proposed changes to the Community Education Center or Child Development Center.

Existing land uses on the Pasadena City College main campus include academic buildings and classrooms, a library, a cafeteria, a student lounge, a bookstore, an art gallery, plant facilities, academic administration facilities, a sports stadium, Men's and Women's gymnasiums, athletic fields, tennis courts, a swimming pool, outdoor recreation courts, and parking.

Land uses to the north of the campus include one and two story commercial buildings containing a variety of businesses, as well as residential units. The five-story Calvary Baptist Church is located directly north of PCC. The church was built in 1923 in the Beaux Arts style to architecturally complement PCC's original buildings (which were subsequently replaced by Moderne-style buildings). The residential area to the north of PCC consists predominantly of multifamily units. There are also a number of motels located along this stretch of Colorado Boulevard. Two churches are located to the west of the campus in Hill Avenue, Knox Presbyterian and Saint Phillip's Catholic Church. In addition, the historic Hill Avenue Branch Library is located across from the campus, on Hill Avenue.

One- and two-story single-family residential uses exist immediately south of the campus, across Del Mar Boulevard, in a well-established neighborhood. There are also residences located to the east of the campus, across Bonnie Avenue. Nine of these are owned by PCC.

There are four schools located in close proximity to the PCC campus: Saint Philip the Apostle Parish School at 161 S. Hill Avenue, Calvary Christian and Odyssey Charter Schools at 1555 Colorado Boulevard, and Grace Christian Academy at 73 North Hill Avenue.

a. Land Use Plans and Policies

Several land use plans are applicable within the land use study area for the proposed project. However, because PCC is a special district, it is not subject to local land use authority. PCC works in a cooperative manner with local authorities to be consistent with land use plans where feasible and when consistent with PCC's responsibilities.

A brief description of the purposes, goals, and policies for each of these planning documents follows.

SCAG Regional Comprehensive Plan and Guide

The Southern California Association of Governments (SCAG) is designated by the federal government as the region's Metropolitan Planning Organization (MPO) and Regional Transportation Planning Agency (RTPA). SCAG has sought to address regional planning concerns through various documents, including the 1996 Regional Comprehensive Plan and Guide (RCPG) and the recently approved CommunityLink21 - 2001 Regional Transportation Plan Update (2001 RTP Update).

The RCPG "[i]s intended to serve the region as a framework for decision making with respect to the growth and changes that can be anticipated during the next 20 years and beyond." In addition, the RCPG "describe[s] how the region will meet certain federal and state requirements with respect to Transportation, Growth Management, Air Quality, Housing, Hazardous Waste Management, and Water Quality Management."

The RCPG addresses regional growth and infrastructure issues related to the proposed project in its Growth Management Chapter (GMC). The GMC states: "Much of the existing infrastructure is currently obsolete due to deferred maintenance or due simply to aging and the rapid pace of recent changes. The currently obsolete infrastructure will need replacement and repair." The following policies in the GMC are relevant to the proposed project:

- Policy 3.03: The timing, financing, and location of public facilities, utility systems, and transportation systems shall be used by SCAG to implement the region's growth policies.

- Policy 3.05: Encourage patterns of urban development and land use, which reduce costs on infrastructure construction and make better use of existing facilities.

- Policy 3.09: Support local jurisdictions' efforts to minimize the cost of infrastructure and public service delivery, and efforts to seek new sources of funding for development and provision of services.

- Policy 3.10: Support local jurisdictions' actions to minimize red tape and expedite the permitting process to maintain economic vitality and competitiveness.

- Policy 3.12: Encourage existing or proposed local jurisdictions' programs aimed at designing land uses that encourage the use of transit and thus reduce the need for roadway expansion, reduce the number of auto trips and vehicle miles traveled, and create opportunities for residents to walk and bike.

- Policy 3.13: Encourage local jurisdictions' plans that maximize the use of existing urbanized areas accessible to transit through infill and redevelopment

- Policy 3.14: Support local plans to increase density of future development located at strategic points along the regional commuter rail, transit systems, and activity centers.

- Policy 3.16: Encourage developments in and around activity centers, transportation corridors, underutilized infrastructure systems, and areas needing recycling and redevelopment.

- Policy 3.18: Encourage planned development in locations least likely to cause environmental impact.

- Policy 3.21: Encourage the implementation of measures aimed at the preservation and protection of recorded and unrecorded cultural resources and archaeological sites.

- Policy 3.23: Encourage mitigation measures that reduce noise in certain locations, measures aimed at preservation of biological and ecological resources, measures that would reduce exposure to seismic hazards and minimize earthquake damage, and development of emergency response and recovery plans.

- Policy 3.27: Support local jurisdictions and other service providers in their efforts to develop sustainable communities and provide, equally to all members of society, accessible and effective services such as: public education, housing, health care, social services, recreational facilities, law enforcement, and fire protection.

Pasadena General Plan

The City of Pasadena General Plan (General Plan) is intended to satisfy the California state requirement that each city prepare and adopt a comprehensive, long-term general plan for its future development. The General Plan, prepared in 1976, and maintained by the Department of City Planning, is a dynamic, comprehensive, long-range declaration of purposes, policies, and programs for the development of the City of Pasadena.

The Comprehensive General Plan Revision Program, begun in 1992, is a direct response to the growth management issues that preoccupied the city during much of the 1980's. The central philosophy of the revision program was to develop a unified vision for the future of the City, shaped and driven by community values and reflecting the input of Pasadena residents. The reorganized Comprehensive General Plan will be reduced to the seven elements required by State law (Land Use, Mobility, Housing, Open Space, Conservation, Noise, and Safety), plus an element devoted to economic development and an element dealing with health and human services.

The General Plan currently consists of the following 16 elements: Land Use, Circulation, Housing, Open Space, Conservation, Noise, Seismic and Safety, Urban Design, Public Facilities, Historical/Cultural, Cultural/Recreational, Economic Development and Employment, Social Development, Neighborhood Enhancement, Scenic Highways, Energy, and Growth Management. The Growth Management Initiative (GMI), approved by voters in 1989, is also a part of the General Plan.

For those citywide elements currently in progress or pending approval by the City Planning Commission and the City Council, it is assumed that the previous plan elements they are intended to supersede remain in effect.

The General Plan contains seven guiding principles, each relevant to the proposed project:

1. Growth will be targeted to serve community needs and enhance the quality of life.

2. Change will be harmonized to preserve Pasadena's historic character and environment.

3. Economic vitality will be promoted to provide jobs, services, revenues, and opportunities

4. Pasadena will be promoted as a healthy family community.

5. Pasadena will be a city where people can circulate without cars.

6. Pasadena will be promoted as a cultural, scientific, corporate, entertainment, and educational center for the region.

7. Community participation will be a permanent part of achieving a greater city.

The Land Use Element of the General Plan aims to create mixed-use urban environments by targeting higher density development in specific areas. There are several strategies advocated for targeted growth, all of which aim to provide safe and well-designed public spaces, to preserve the city's heritage, to ensure the accessibility of human services, and to foster the stewardship of the natural environment. Specific Plans determine precise land use patterns within defined boundaries. The East Colorado Boulevard Specific Plan is one of these specific plans.

East Colorado Boulevard Specific Plan

The General Plan divides the City of Pasadena into seven specific plan areas. Within each specific plan area, the city has established specific goals and policies regarding the long-term intensity and mix of desired land uses. The East Colorado Boulevard Specific Plan (Specific Plan) is approximately three miles in length and runs through the city in an east-west direction. The Specific Plan includes all parcels with frontage on Colorado Boulevard, with the exception of Pasadena City College, and runs between Catalina Avenue and Sycamore Avenue. The Specific Plan also includes all parcels with frontage on North Allen Avenue between Colorado Boulevard and the 210 Freeway. A map of the Specific Plan Area is shown on Figure 3-6.

The entire frontage along Colorado Boulevard is zoned General Commercial (GC), except for some parcels near El Nido Avenue, which are designated General Industrial (IG) and Planed Development, Colorado-El Nido (PD-18). Multi-family residential and commercial uses are zoned along North Allen Avenue. Existing land uses within the planning area include automobile sales showrooms, general commercial and retail businesses, and residential uses. A map of the Land Uses within the Specific Plan Area is shown on Figure 3-7.

Figure 3-6: Specific Plan Area

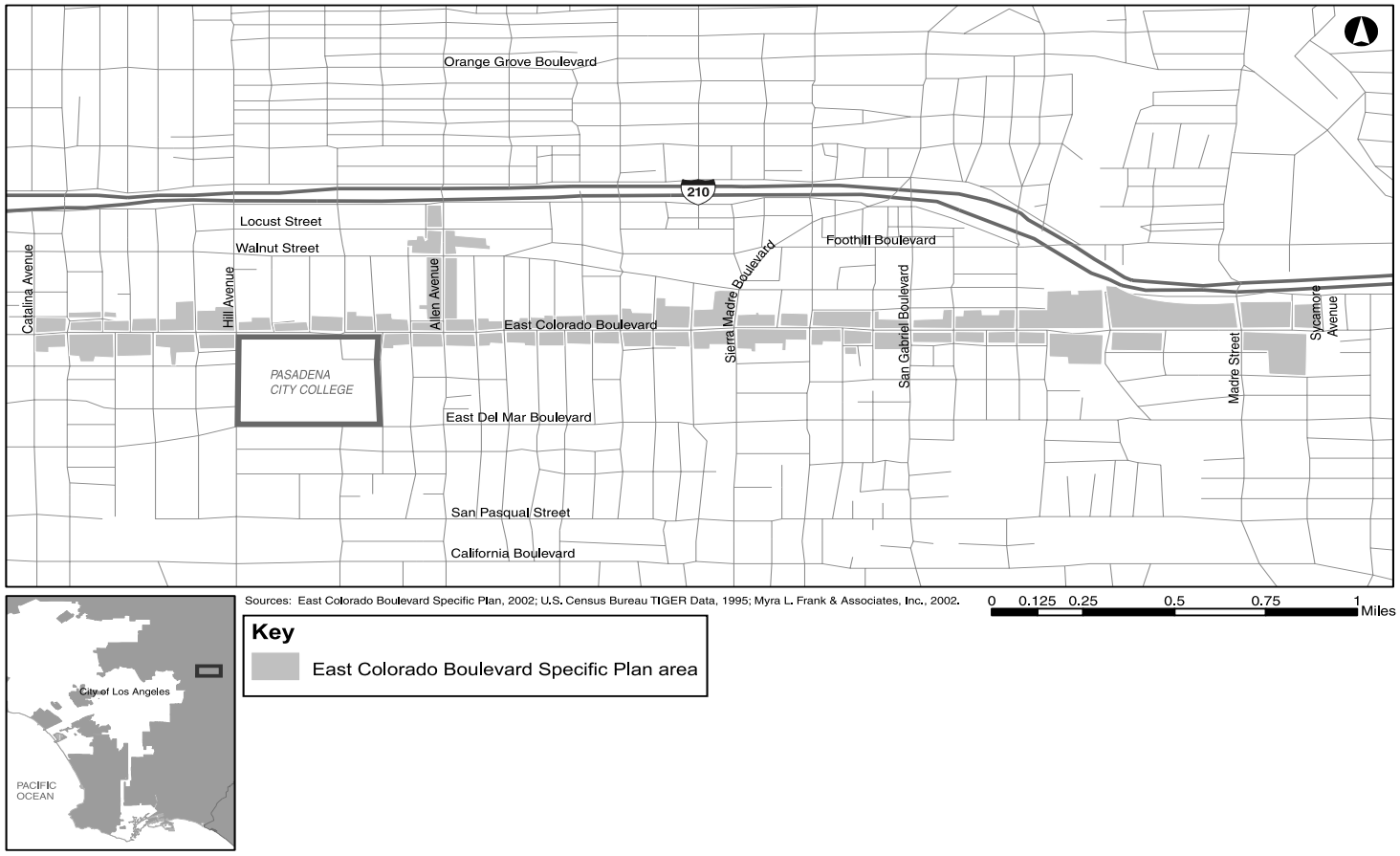
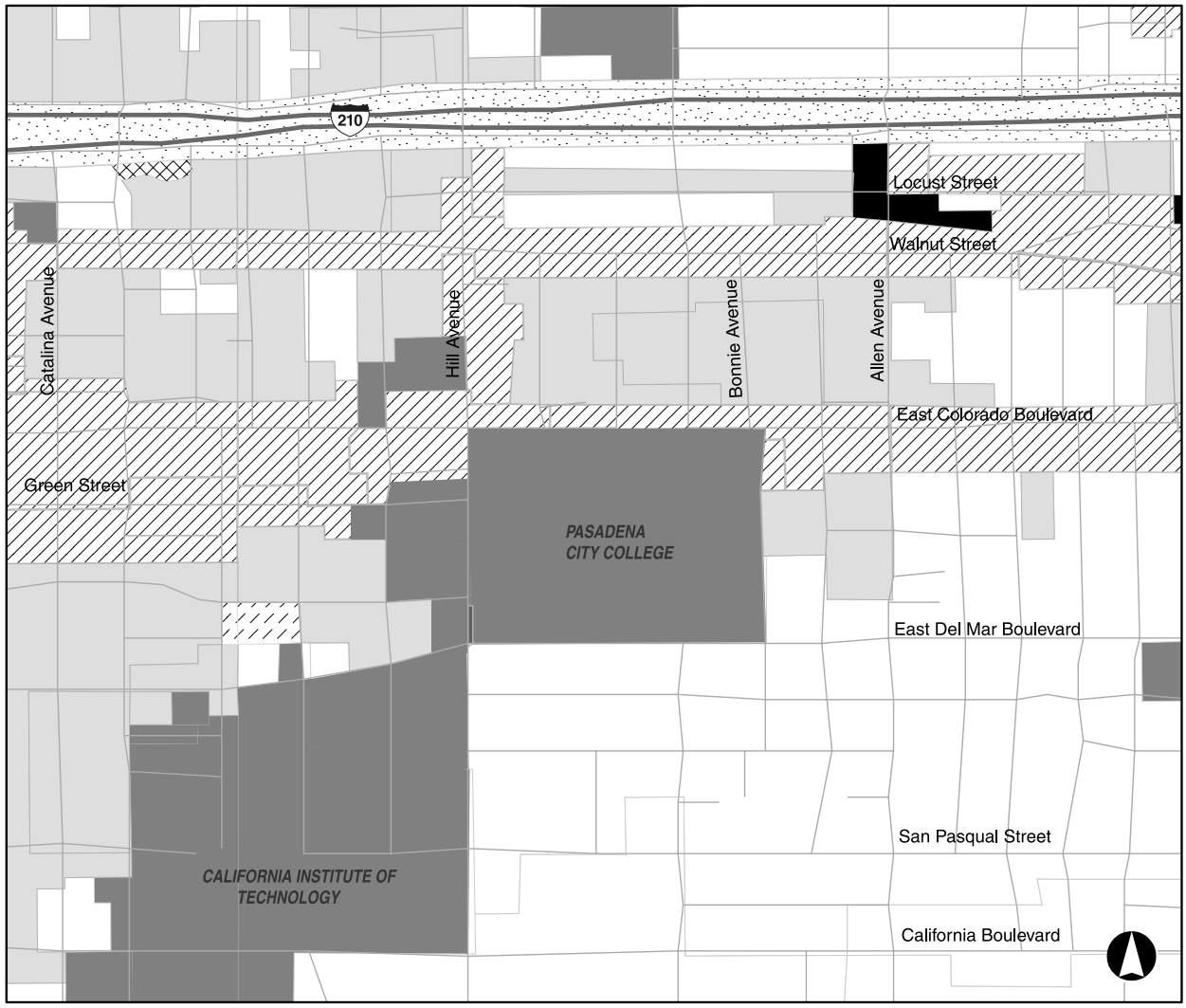
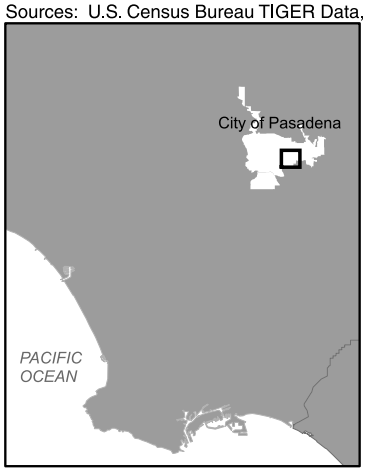


Figure 3-7: Specific Plan Land Uses



Sources: U.S. Census Bureau TIGER Data, 1995; Myra L. Frank & Associates, Inc., 2002.

0 0.1 0.2 0.3 0.4 Miles



Land Use

- Transportation & Utilities
- Commercial
- Medium to High Density Residential
- Low Density Residential
- Public Facilities & Institutions
- Industrial
- Open Space & Recreation
- Vacant

The Specific Plan is divided into six sub-areas with a variety of land uses and characteristics: Mid-City; the College District; the Gold Line; Route 66; Lamanda Park; and, City Edge. PCC is located within to the College District. This district runs from Hollister Avenue to Allen Avenue and is greatly influenced by PCC. Although PCC is not under city jurisdiction, the presence of PCC is important to the overall goals of the Specific Plan.

The south side of Colorado Boulevard within the College District is owned and maintained primarily by PCC. It provides an excellent example of landscaping and the use of street trees. Concepts for this district would strengthen pedestrian connections by widening the sidewalks and adding additional landscaping and street furniture.

It has been determined that uses within the College District be college-and neighborhood-serving. Therefore, restaurants, cafes, office supply stores, banks, motels, and bookstores would all be appropriate uses here. The Specific Plan also notes that the construction of a parking area within this district should be considered, since many people within this area would be walking from PCC. The Specific Plan objectives also include beautifying the streetscape by installation of trees and street and median landscaping

Pasadena City College Master Development Plan

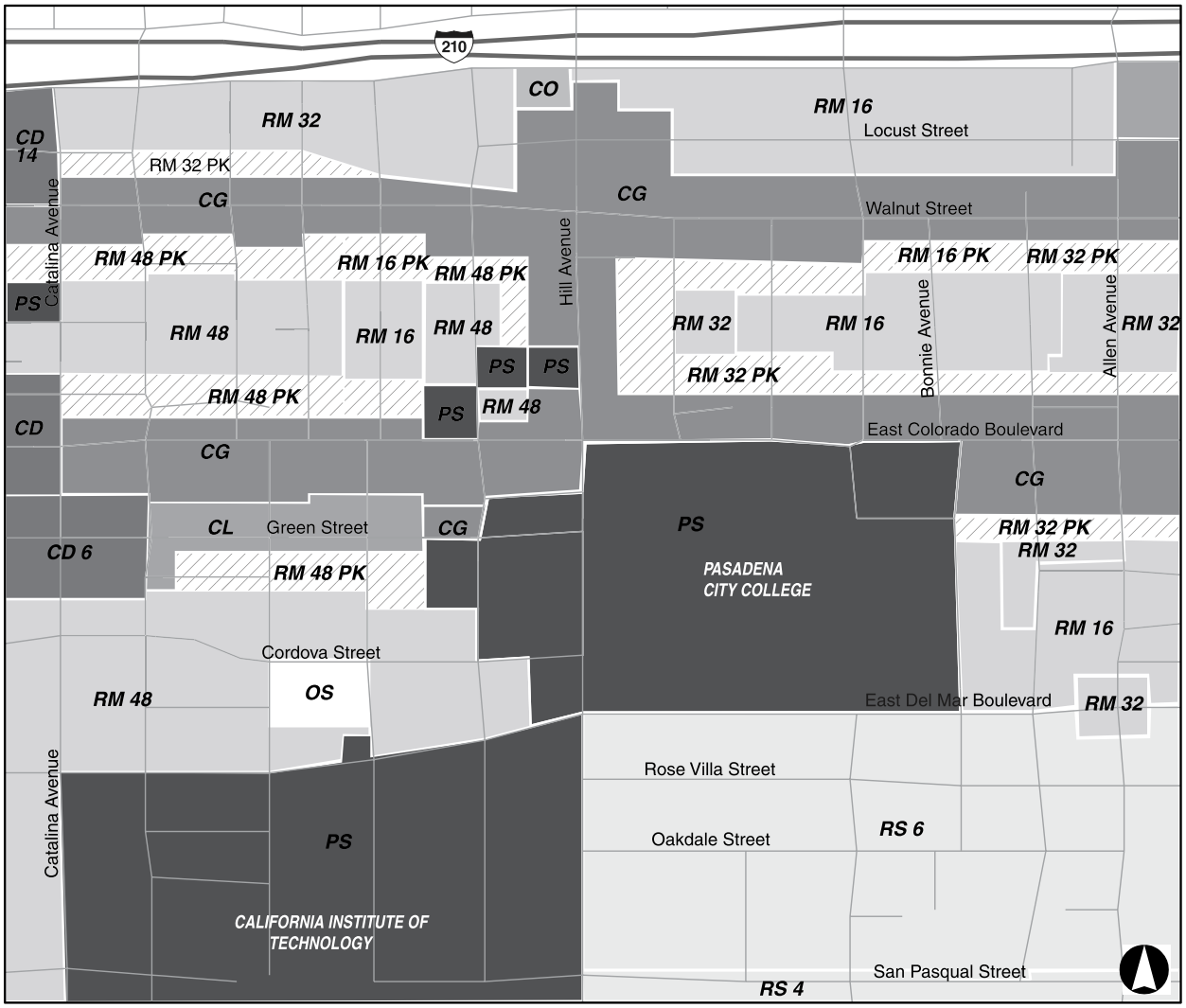
As stated above, Pasadena City College encompasses approximately 53 acres in the south central portion of Pasadena. The Pasadena City College Master Development Plan (the Master Plan), established for Pasadena City College and encompassing the same area as the college, is bounded by Colorado Boulevard to the north, Del Mar Boulevard on the south, Hill Avenue on the west, and Bonnie Avenue on the east. PCC's Board of Trustees is the Lead Agency and the City is a Responsible Agency for the Master Plan. It is within the city's jurisdiction to approve street vacation zone changes, and circulation and parking improvements, all of which are actions necessary for the implementation of the Master Plan.

One of the major objectives of the Master Plan is to provide PCC with a guide for future development projects at the campus and a basis for preparation of its future construction plans and related project planning guides, and to provide the basis for agreements between the city and PCC regarding future campus development.

Pasadena Planning and Zoning Code

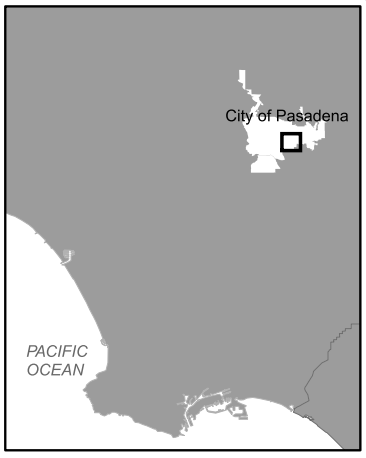
The Pasadena Planning and Zoning Code regulates land use and development throughout the City. It is intended to be the means by which the general land use policies in the various plans are implemented. The Zoning Code identifies the uses that are allowed on parcels within the city. Figure 3-8 shows a map of current local area zoning.

Figure 3-8: Zoning Map



Sources: U.S. Census Bureau TIGER Data, 1995; Myra L. Frank & Associates, Inc., 2002.

0 0.1 0.2 0.3 0.4 Miles



City of Pasadena Zoning Map

- RS 1- RS 6: Single Family Residential District
- RM 12- RM 48: Multi-Family Residential District
- CO: Commercial Office District
- CL, CL 1: Limited Commerical District
- CG, CG 1: General Commercial District
- CD 1- CD 16: Central District & Subdistricts
- OS: Open Space
- PS: Public & Semi-Public District
- PK: Parking District

Pasadena City College is zoned by the City of Pasadena as PS (Public and Semi-Public District). PS is a specific zoning category created by the City for institutional uses including colleges and universities, convalescent facilities, hospitals, parks and recreational facilities, schools, utilities, and other public and semi-public uses. The PS District restricts land uses and requires that development standards for new construction be specified by a conditional use permit or by an approved Master Development Plan. However, because PCC is a state-created agency, it is exempt from local land use and building regulations.

Two parcels located in the northeast quadrant of the campus are currently shown as zoned General Commercial. These zoning designations applied to properties that previously occupied these parcels, but the parcels were acquired by PCC for the development of the library and adjacent parking. Zoning on parcels adjacent to the campus on the south and west sides, reflects existing land use patterns. The area to the south is zoned R-6, (Single Family Residential); the area to the west is zoned RM-48 (Multiple-Family Residential). A Parking District zone has been overlaid on the residential area immediately north of the Colorado Boulevard commercial district. The residential area to the north of campus is zoned RM-32 (Multiple-Family Residential). Most of the area to the east of campus is zoned RM-16 and RM-32 (both areas being Multiple-Family Residential). A Parking district zone overlies the first 200 feet of Bonnie Avenue, south of Colorado Boulevard. This zone places a 36-foot height restriction on parking structures.

3-8.2 Environmental Impacts

a. Significance Criteria

For the purposes of the analyses in this EIR, the proposed Pasadena City College *Master Plan 2010* would have a significant environmental impact on land use and planning if it would:

- Result in new land uses that are incompatible with land uses and development in the vicinity; or

- Conflict with any applicable adopted land use plan, policy, or regulation of an agency with jurisdiction over the project.

b. Impacts Discussion

As detailed in the project description in Chapter 2 of this EIR, and summarized in Table 3-4, construction associated with implementation of *Master Plan 2010* is expected to occur through 2010. Construction activities would include demolition of various existing structures, excavation and grading of specific sites on campus, construction of new facilities, and renovation and modernization of existing facilities. These types of construction activities would result in some temporary, localized, site-specific disruptions to land uses in the area primarily related to: construction-related traffic changes from trucks and equipment in the area; possible partial and/or complete street and lane closures; access disruptions to facilities and parking; increased noise and vibration; and changes in air emissions.

Academic land uses and other sensitive uses such as residences in the area would be most susceptible to the foregoing temporary construction impacts. Generally, however, these are not considered to be significant adverse impacts because they are short-term in nature and are commonly experienced in an urban setting like the proposed project area. If, however, construction activities were to become protracted or certain site-specific factors were present (e.g., unusually sensitive land uses such as senior citizens' housing), then the corresponding impacts would likely be considered more substantial.

In the area of the proposed project site, potentially sensitive land uses include: on campus academic classroom buildings, and residences located near the campus. These land uses would temporarily be subject to the indirect effects of construction activities described above. Considering the temporary nature of construction activities, the measures proposed to mitigate potential indirect effects (i.e., noise, air emissions, and traffic), the potential construction impacts to sensitive land uses in the project vicinity would be less than significant.

The following sections of this document provide more detailed information on these types of potential construction impacts, if any, as they may indirectly affect land uses in the proposed project area: 3-2 Air Quality, 3-9 Noise, 3-10 Population and Housing; 3-11 Public Services; 3-12 Public Utilities; 3-13 Traffic; 3-14 Visual Resources.

Compatibility with Existing Land Uses

Implementation of the Master Plan includes development and construction throughout the campus. The entire campus is currently zoned Public and Semi-Public District. Currently the campus consists of academic and support facilities, athletic facilities (including a gymnasium, an aquatic center, and a stadium), surface parking areas, a parking structure, and open space. Other uses of the campus include a monthly flea market, Fire Department practice drills, Pasadena Unified School District football games, and several events related to the annual Rose Parade.

❑ Public Facilities Land Use

Proposed development on the would campus include renovation and modernization of existing facilities; construction of new academic facilities, a parking structure, and an athletic field; and new and expanded landscaping. The renovation, modernization, new construction, and landscape projects would be compatible with existing academic land uses on the campus.

The proposed new Arts Building would address the future needs of music and art programs by properly accommodating both programs in a modern facility designed for new technology-oriented instruction and, where needed, for updated industry-specific equipment. The building will include a number of "smart classrooms" and computer lab facilities that will be jointly shared by the two disciplines. Outdoor spaces for ceramics and sculpture course instruction, student gathering and art display would be developed as part of the building program. The site for the new facility would be created through the removal of the existing Music building (K Building) and the existing technology building (T Building).

The Printing Technology, Building Construction, Automotive Technology, Machine Shop Technology, Welding, and Screen Printing programs are currently located in the T and V

Buildings. Because the current academic and training spaces are inadequate to utilize the technology required by these programs, it was determined that a new Industrial Technology Building should be constructed. Moving the Industrial Technology facilities to a new location would also provide a central campus site for the needed proposed new Arts Building. The proposed new Industrial Technology building would also provide better service access and outdoor storage yards needed by several of these programs. Finally, it would resolve the current conflicts between student walkways and trucks accessing their campus destinations.

A five-floor parking structure, with the one level below grade, would be located on Bonnie Avenue, about mid-way between Colorado Boulevard and Del Mar Boulevard. The proposed structure will provide about 3,000 spaces. In addition, a multipurpose athletic field will be located at the corner of Bonnie Avenue and Del Mar Boulevard.

The existing Campus Center (CC Building), along with the existing Bookstore and Bank (Buildings J and JJ), will be demolished in order to create a more functional Campus Center, a Campus Café, Campus Security Office, Associate Student offices, student copy center, and coffee bar. In conjunction with this project, the driveway between Parking Lots 1 and 2 would be removed, thereby allowing the new building to have immediate adjacency to parking, and allowing a direct link between the parking lots and the Campus Center functions.

A series of projects have been proposed to create and reconfigure unused and underutilized building spaces. This would create new classroom and laboratory spaces needed to accommodate current new long-term student enrollment as well as the secondary effects associated with the construction of the proposed Arts Building. The following retrofit projects are anticipated:

- E Building Remodel and Retrofit: Currently, the Photography department is in the first floor of the E Building, in substandard conditions. Upon construction of the Arts Building, that current space can be reconfigured into 5 classrooms and offices, resulting in 6,000 square feet of "new" space.

- FB Building Remodel: Plans call for a portion of the Boiler House to be reconfigured into a 99-seat theater to stage small-scale plays and productions.

- R Building Remodel and Retrofit: When the Art Division relocated into its new facility, spaces on the first, third and fifth floors of the R Building would be reconfigured into 13 classrooms and offices. This would result in gaining 31,250 square feet of "new" space.

- V Building Remodel: 10,876 square feet of Engineering and Technology Division space would be reconfigured to accommodate general classrooms and the Architecture Program.

- W Building Remodel and Retrofit: Renovation would result in 7,108 square feet for 11 new classrooms, 790 square feet of office space, 300 square feet of storage, and 8,575 square feet in the Fitness Center.

- Z Building Remodel and Retrofit: This space is currently used by the Art Division for its ceramics program. Upon vacation, this area would be reconfigured into 3 classrooms and offices.

In addition to the reconstruction projects, the Master Plan envisions a series of utility, landscape and gateway projects that would increase the functionality of the campus, as well as beautify and enhance the pedestrian and vehicular circulation of the main campus. The proposed project are as follows:

- Utility Upgrades: In order to properly service new buildings, and to improve service to existing ones, the utility grid on campus must keep pace. This project would allow for adequate electrical, water, gas, sewage, heating, air conditioning, and low voltage/signal systems.

- East Campus Gateway: A major combined pedestrian/vehicular entrance is planned at the east edge of the campus that would simultaneously improve circulation along Bonnie Avenue, create a student drop-off area, and provide a temporary bus parking area for the band and athletic teams adjacent to the proposed athletic field, the stadium, and to the proposed Arts Building.

- West Campus Gateway: Similar in form and function to the East Campus Gateway, this project would improve the operational efficiency of the Hill Avenue/Green Street intersection, provide a student drop-off facility adjacent to the proposed new Campus Center entrance, and create a welcoming landscaped entry and face to the community in the most visible public area of the campus.

- Campus Landscaping/Hardscaping: Enhanced shrub, tree, signage, and hardscaping improvements would serve to beautify currently weak campus elements and continue the improvement process that has been underway for the past several years.

Consistency with Local Plans

Established in 1924, Pasadena City College is an important part of Pasadena's history and future. Current enrollments place it among the top 10 community colleges in the California Community College system. Regionally, PCC is recognized for its many outstanding departments and the depth and variety of its course offerings. PCC is also a major community center, hosting a variety of public activities and events throughout the year. The East Colorado Boulevard Specific Plan recognizes the need for targeted development in the area, additional parking, and streetscape beautification. The proposed *Master Plan 2010* fulfills these goals by targeting growth within the boundaries of the PCC campus, as well as providing additional parking, and planning for gateway and landscaping enhancements, to both enhance traffic circulation and beautify the campus.

Consistency with Regional Plans

The proposed Master Plan is consistent with SCAG's Regional Comprehensive Plan and Guide (RCPG), since the proposed Master Plan is consistent with the policies (3.03, 3.05, 3.09, 3.10, 3.12, 3.13, 3.14, 3.16, 3.18, 3.21, 3.23, 3.27) of the Growth Management Chapter of the RCPG.

Consistency with Planning and Zoning

Jurisdiction and authority over the PCC campus and its development rests with the Pasadena Area Community College District. However, it is the desire of PACCD to be consistent with the land use planning polices of the City of Pasadena General Plan when possible. Redevelopment within the campus, including planned utility upgrades and gateway enhancements are consistent with the general purposes of the city's zoning ordinance in that they promote a safe, effective traffic circulation system and ensure that the service demands of the new development would not exceed the capacities of existing streets, utilities or public services.

The proposed renovation and modernization projects would not change the existing land use of the campus and thus would be consistent with existing land uses.

As noted above, PCC is zoned by the city as a public and semi-public district. This zone permits use for colleges and universities, cultural institutions such as libraries, child day care centers, government offices, maintenance and service facilities, public safety facilities, public and private schools, and utilities. Development projects on the campus described above are for academic and educational purposes and fulfill PCC's educational mission and goals. For purposes of the zoning code, these facilities are college and university buildings and utility structures. As such there are no conflicts with existing city zoning designations.

3-8.3 Mitigation Measures

Since no significant impacts are anticipated, no mitigation measures are necessary.

3-8.4 Unavoidable Significant Adverse Impacts

Implementation of the Master Plan would result in no significant adverse impacts to existing land use and planning.

3-9 NOISE

3-9.1 Environmental Setting

a. Fundamentals of Noise

Sound is mechanical energy transmitted by pressure waves in a compressible medium such as air. Sound ranges in intensity by more than one million times within the range of human hearing. The intensity of sound is quantified using a logarithmic scale. When sound becomes excessive or unwanted, it is referred to as noise.

In order to evaluate the sensitivity of noise, an A-weighted decibel scale is used to calculate noise levels in terms of dBA. Because the human ear is more sensitive to high frequencies, the dBA scale de-emphasizes low frequencies. Human hearing extends from approximately 3 dBA to 140 dBA. A 10-dBA increase is judged by most people as a doubling of the perceived noise level. The smallest change that can be heard by most people is about 2 to 3 dBA. Table 3-17 shows typical maximum noise levels for common outdoor activities at specified distances. Note that the typical noise level of a noisy urban area is about 80 dBA.

Table 3-17: Typical Noise Levels

Common Outdoor Activities	Noise Level (dBA)
Jet Flyover at 1,000 ft.	110
Gas Lawn Mower at 3 ft.	100
Diesel Truck at 50 ft.[1]	90
Noisy Urban Area, Daytime	80
Commercial Area	70
Heavy Traffic at 300 ft.	60
Quiet Urban Area, Daytime	50
Quiet Urban Area, Nighttime	40
Quiet Rural Area, Nighttime	30

Note:

[1] Diesel Truck is assumed to be traveling at 50 mph.

Sources: Caltrans, 1998; Acentech, Inc., 2003.

Proposed construction activities would occur over several phases, each lasting several months. Because of the nature of construction activity, the number, type, and loudness of equipment would vary throughout the construction periods. For example, during the initial weeks of construction of the parking structure or athletic field, the existing parking lot would be demolished and the material trucked away to an appropriate landfill or recycling center. Earthen fill could be trucked away or hauled in to establish the design grade. During this period, trucks would be handling fill material, while heavy construction equipment (e.g. scrapers, water truck and loader) would also be working on the site.

The noise levels at noise sensitive receptors during construction would vary with the number, type and location of construction equipment and activity. Typical ranges of noise levels from construction equipment measured at 50 ft are presented on Figure 3-9. These noise level ranges would be approximately 6 dB less at 100 feet.

To account for fluctuations over time, noise levels are commonly evaluated using two time-average noise descriptors: Leq and CNEL. Leq, the equivalent steady state sound level over a given period of time, accounts for moment-to-moment fluctuations in A-weighted sound levels associated with noise sources during a given period of time. The Community Noise Equivalent Level (CNEL) represents an energy average of the A-weighted noise levels (usually Leq levels) over a 24-hour period. Evening and nighttime noise levels are given more weight to account for the increased human sensitivity to noise during these normally quiet periods of the day. Evening (7 p.m. to 10 p.m.) Leq levels are adjusted by 5 dBA. Nighttime (10 p.m. to 7 a.m.) Leq noise levels are adjusted by 10 dBA. Daytime (7 a.m. to 7 p.m.) noise levels are not adjusted when calculating CNEL.

b. Existing Conditions

PCC is located in an urban environment. That environment is subject to noise from a wide range of sources, including traffic, business and commercial activities, educational activities, and residential activities.

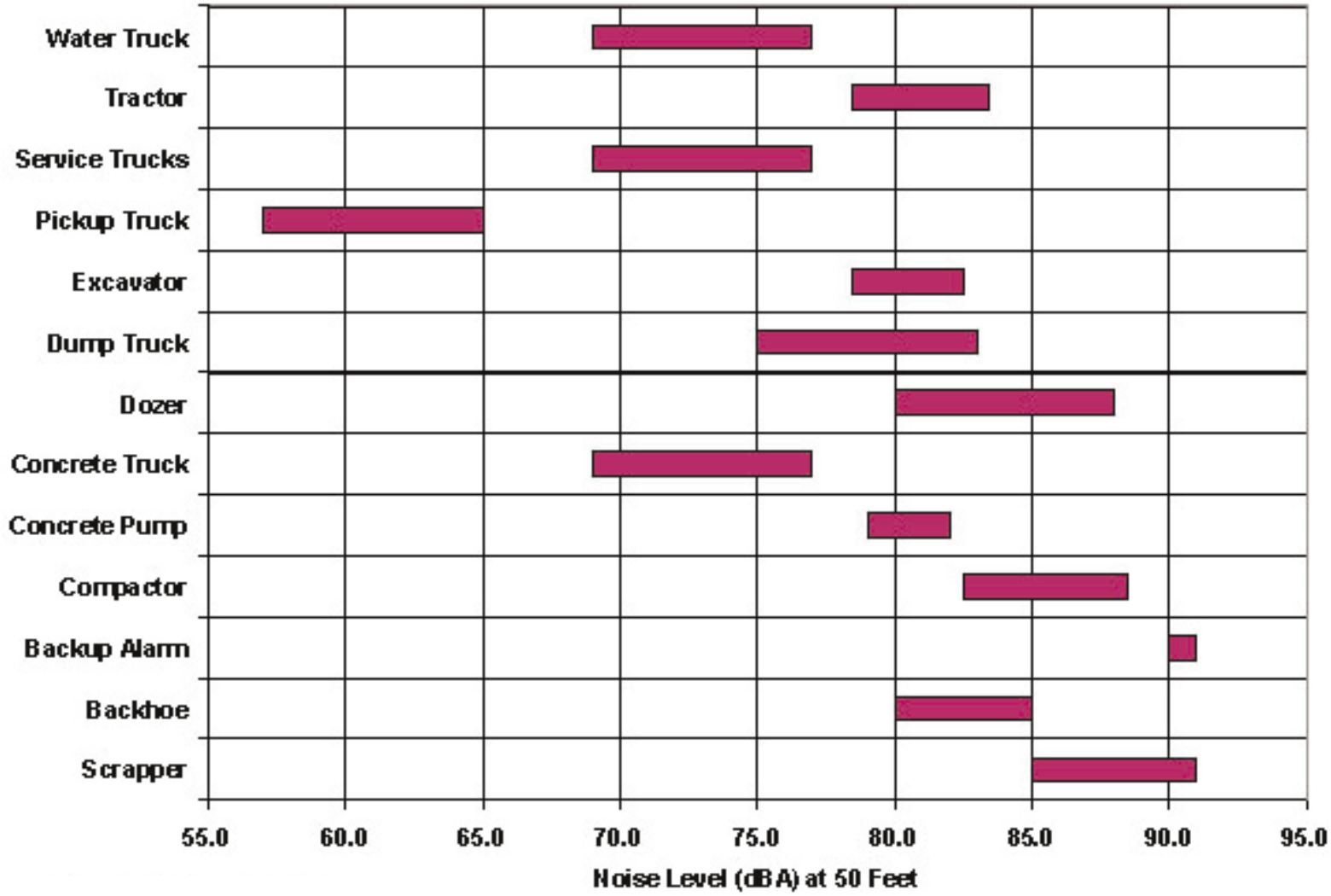
In response to concerns raised as the Scoping meeting for this *Master Plan 2010* EIR about noise from the proposed athletic field, a noise impact analysis was conducted. The area of the noise study was the southeast corner of the campus, the proposed locations for the athletic field.

Noise measurements were taken near the proposed athletic field to establish ambient (average existing) noise levels. Measurements were made in the front yards at two residential locations across from the proposed field site (now part of Parking Lot 5) over a period spanning from Thursday 23 January to Saturday 24 January 2003. Measurements were taken at 1652 Del Mar Boulevard and at 818 Bonnie Avenue.

The distance from the east property line of PCC to the west property boundary of residential lots on Bonnie Avenue is about 75 feet now (accounting for sidewalks on both sides of the street), and would be at least 55 feet under the proposed Master Plan. This distance is important for two reasons. (1) The boundary of the property of a noise-sensitive receptor (such as a residence) is the point at which noise impact is typically conducted. (2) Since noise attenuates (lessens) with distance, the noise levels for equipment shown in Table 3-17 would be slightly less for each foot beyond the 50-foot data point reported in the table. The difference in noise levels at a distance of 65 feet would usually be a reduction of about 2 decibels, and a reduction of less than 3 decibels at 75 feet. The actual attenuation would vary depending on the particular characteristics of sound that is generated.

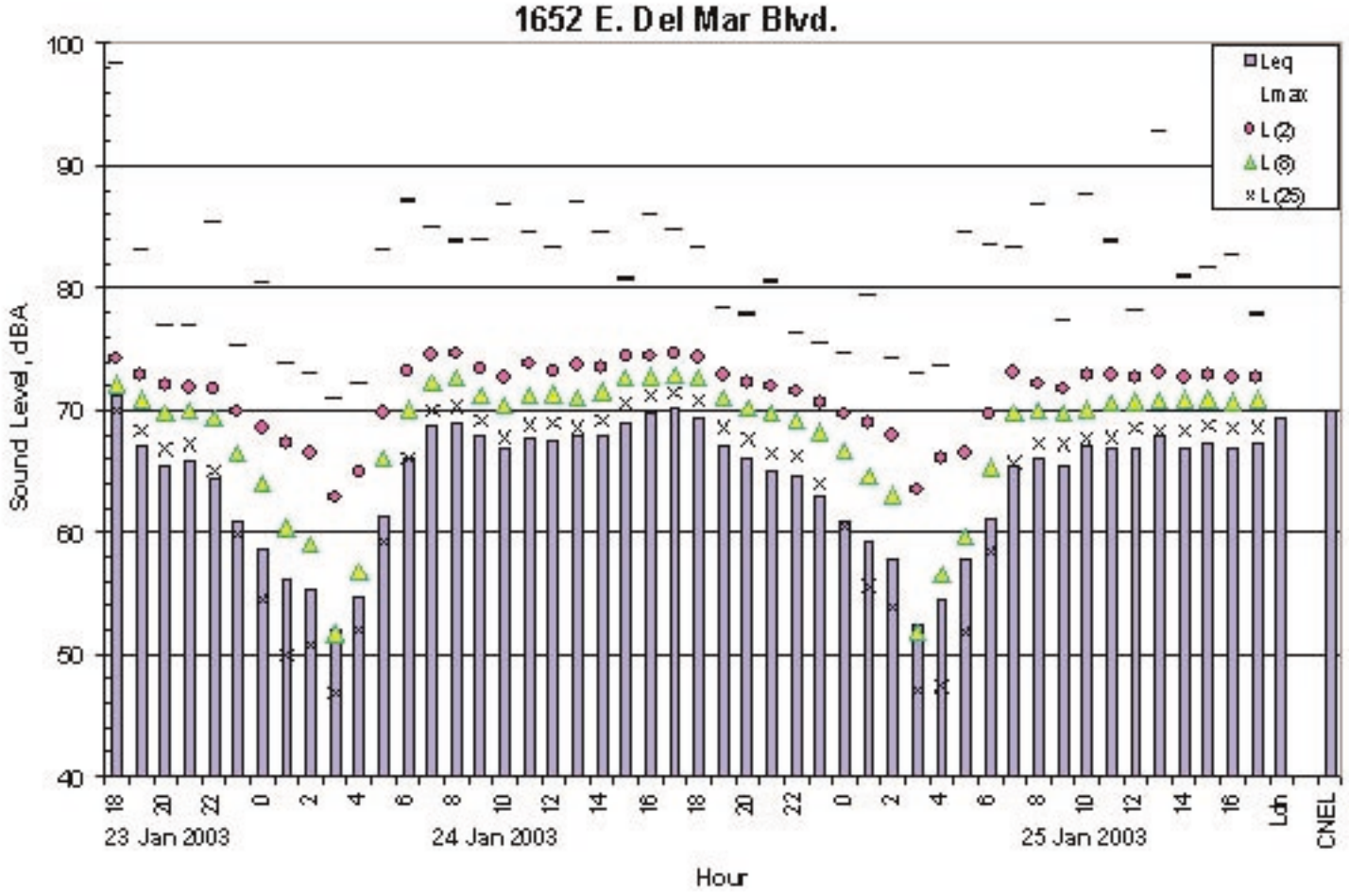
The results of the measurements are presented in Figure 3-10 and Figure 3-11. Community noise levels are constantly fluctuating and the measurement results reflect the time variability in the noise.

Figure 3-9: Typical Noise Levels for Construction Equipment



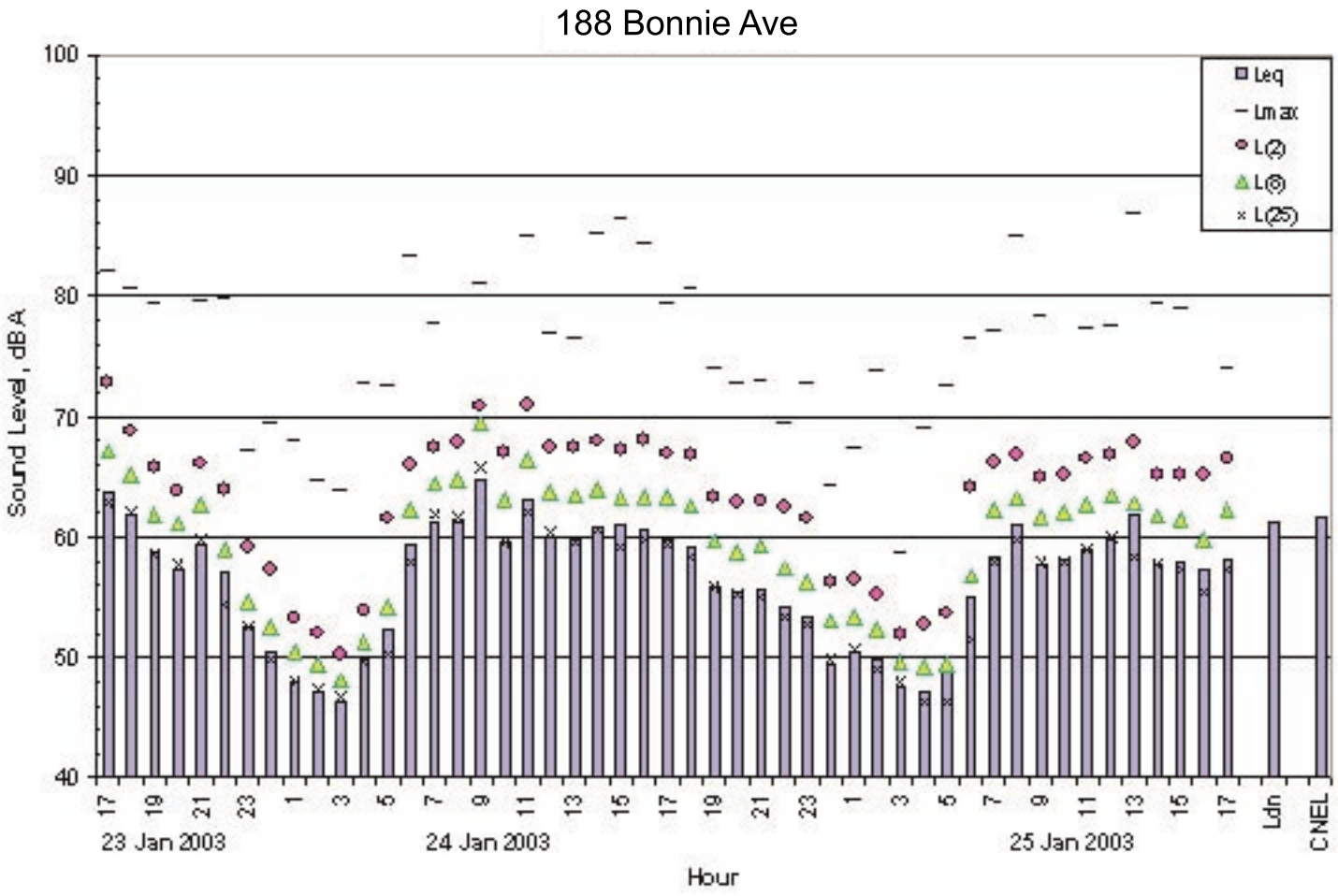
Source: Acentech Incorporated, 2002.

Figure 3-10: Noise Measurements at 1652 Del Mar Boulevard



Source: Acentech Incorporated, 2002.

Figure 3-11: Noise Measurements at ~~818~~ 188 Bonnie Avenue



Source: Acentech Incorporated, 2002.

Each figure presents the following hourly noise levels:

- Leq — the energy average level for the hour
- Lmax — the maximum level observed during the hour
- L(2) — the level exceeded 2 percent of the hour » 1 minute per hour
- L(8) — the level exceeded 8 percent of the hour » 5 minutes per hour
- L(25) — the level exceeded 25 percent of the hour = 15 minutes per hour.

The maximum levels at each of the measurement locations are about the same since the noise source was mainly street traffic. The exception may be those hours where a truck traveled on E. Del Mar Boulevard resulting in higher maximum levels. Since E. Del Mar Boulevard is a much heavier traveled street compared to Bonnie Avenue, the other statistical levels are higher for areas adjacent to it compared to areas on Bonnie Avenue.

For the purposes of this analysis it is assumed that the energy equivalent level (Leq) is the "average ambient level." The existing CNEL values along Del Mar Boulevard and Bonnie Avenue are in the normally acceptable range for residential land use if windows remain closed. The ambient noise level, Leq, changes throughout the day. For the purposes of this evaluation the average daytime Leq was used. Table 3-18 summarizes the measurement results.

Table 3-18 : Summary of Ambient Noise Levels

Measurement Description	1652 E. Del Mar Blvd.	818 S Bonnie Ave.
CNEL, dBA	70	62
Daytime Leq, dBA	65 to 76, average = 68	55 to 65, average = 60

Source: Acentech. Inc., 2002.

3-9.2 Environmental Impacts

a. Significance Criteria

The criteria of significance for assessing frequently occurring events in this EIR are shown in Table 3-19. These criteria are the similar to those of the City of Pasadena with regard to the types of activities that are addressed; the individual limits are slightly different (i.e., amplified equipment can be used 1 hour earlier).

Table 3-19: Noise Impact Criteria for Frequently Occurring Events	
Activity	**Limit**
Machinery, Equipment, Fans, and Air Conditioning	Ambient + 5 decibels
Construction Equipment	Prohibited at night from 10 p.m. to 7 a.m. Maximum noise level limited to 85 decibels measured at 100 ft.
Amplified Sound	Limited to ambient + 15 decibels to only occur between 7 a.m. to 10 p.m., except on Sundays and legal holidays when the hours are from 10 a.m. to 10 p.m.

Using these criteria, the threshold of impact for assessing whether construction equipment would have a significant impact would be 73 dBA for the residence on Del Mar Boulevard and 65 dBA for the residence on South Bonnie Ave (ambient noise levels at each respective location + 5 decibels). Similarly, the threshold of impact for assessing whether amplified sound would have a significant impact would be 83 dBA for Del Mar Boulevard and 65 dBA for South Bonnie Avenue (ambient noise levels at each respective location + 15 decibels).

b. Impacts Discussion

Construction Impacts

A review of Figure 3-10.1 shows that many of the equipment types listed would exceed the construction noise impact thresholds calculated for this area of the proposed practice field (73 dBA and 65 dBA) at distances up to 50 feet. [3]. Equipment shown on the figure that could exceed the impact thresholds include tractors, dump trucks, concrete trucks, dozers, compactors, backhoes, and scrapers. In addition, back-up alarms would typically exceed the criteria. Since construction activities would exceed the threshold of impact, significant noise impacts could occur during construction and mitigation measures are required.

Operational Impacts

Potential noise sources were identified that would occur during operation of the proposed athletic field that could potentially generate noise levels in excess of the impact thresholds. The potential impacts from the operation of the proposed practice field will include noise from outdoor activities. Activities could occur any time from 7 a.m. to 10 p.m. on any day of the week. Soccer and intramural games may take place in the evenings and on weekends. The noise sources associated with sports activities include yelling by athletes and spectators, whistles, and megaphones.

[3] As previously noted, noise attenuates over distance. If the Master Plan were implemented, the property line of the nearest noise-sensitive receptor would be approximately 55 feet from the proposed east curb of Bonnie Avenue adjacent to the proposed athletic field (the closest point which construction would occur). Noise levels for the equipment listed in Figure 3-10.1 could thus be attenuated by less than 1 decibel.

The average voice, ranging from conversational level to shouting, would produce an A-weighted sound level measured at 100 feet of from less than 45 dBA to over 60 dBA. Based upon measurements near practice fields at other schools, typical noise levels at 100 feet are between 50 and 65 dBA depending upon the type of activity, and the position and loudness of the athletes and spectators. Assuming a 50 percent usage and the noisiest condition of 65 dBA, a CNEL of 62 dBA would result at 100 feet from the practice field. Combining this with the existing ambient noise presented in Table 3-18 would increase noise levels by 1 to 3 dBA at the nearest residential locations. This does not represent a significant adverse effect.

Other possible sources of noise at the practice field include marching band practice, portable amplified sound systems (e.g. megaphones or bullhorns) and whistles, either of which could be used during either band or sporting activities.

Typical megaphones or bullhorns increase voice levels by 20 to 40 dBA (many have a variable volume control and the level is somewhat dependent upon voice level used). This means that under "ideal" conditions the maximum level from megaphones or bullhorns could approach 90 dBA in the front yards of the nearest residences. Noise from megaphones or bullhorns could exceed the levels allowed in the "ambient + 15 dB" criterion (by 15 dB on Bonnie Avenue and by 7 dB on E Del Mar Boulevard) and result in a significant adverse effect to residential land uses.

Noise from marching band practice would vary considerably depending upon a number of things including the music and number of members in the band playing at one time. The noise level could also approach 85 dBA at these residential land uses. This would exceed the "ambient + 5 dB" criterion (by 20 dB on Bonnie Avenue and by 12 dB on E. Del Mar Boulevard) and result in a significant adverse effect to residential land uses.

Since amplified sound and band practice could result in noise levels that represent a significant adverse effect, mitigation measures are proposed in Section 3-10.3.

3-9.3 Mitigation Measures

To mitigate potential noise impacts during construction activities, PACCD will require construction contractors to comply with the following measures.

CN-1: Limit construction activities the hours between 7 a.m. and 6 p.m. No nighttime activities will be conducted.

CN-2: Use the least noisy equipment that can accomplish the activity.

CN-3: Keep all equipment in good working condition with high quality mufflers.

CN-4: Advise operators to use only the necessary power to accomplish the activity and to keep all equipment powered down or turned off when not in use.

CN-5: Use adjustable back-up alarms at the lowest setting that safety requirements will permit.

REVISED CN-6: Limit the need for equipment to back up by planning on-site truck routes and loading points.

To mitigate potential noise impacts during operation of the athletic field, PCC will implement the following noise control measures.

REVISED NC-1: The volume of PCC amplification equipment to be used on the field will be set to allow a maximum amplification increase of 20 decibels.

NC-2: Portable speakers used at the field will be oriented away from residential areas to take advantage of the typical sound directivity pattern of portable speakers.

NC-3: Permits issued for the use of the athletic field will require the use of PCC amplification equipment and the operation of that equipment by PCC personnel.

3-9.4 Unavoidable Significant Adverse Impacts

Construction noise could exceed the noise impact criteria even after mitigation measures are imposed. Such exceedances could occur as a result of wind conditions, or if ambient noise levels on a particular day are lower than the measured levels.

Noise from the operation of the athletic field could exceed the noise impact criteria even after mitigation measures are imposed. It should be noted that activity on the athletic field that would be most likely to yield high noise levels would be band practice. Band practice occurs primarily during the Fall; during the majority of the year band practice would not be the source of potential noise. When practice does occur, the band is normally oriented to face north (the same orientation as when they perform). This orientation would help reduce the potential for noise impact to residences along Bonnie Avenue. Potential noise impact to residences along Del Mar Boulevard would be reduced when the orientation of the band is to the north.

The potential for reducing noise from the athletic field with a noise wall was investigated. Using the noise levels from the band as the worst-case scenario, a noise wall of 35 feet in height was calculated to be necessary to reduce noise levels to a less than significant level (i.e., to yield a 20 decibel reduction). Such a wall would have significant visual impacts, including likely damage to trees along the southeast perimeter of the campus. Damage would be likely to occur to tree roots from the deep foundation that would be required. Additionally, tree canopies would be affected. The potential reduction in noise levels for shorter walls was also calculated. A 7-foot wall, which is likely the limit of what might be considered before visual impacts become a concern, would produce only a 7-decibel reduction in noise. This would not be sufficient to reduce noise levels to a less than significant level. Constructing a wall of this height would also be likely to damage trees roots.

3-10 POPULATION AND HOUSING

The population and housing study area that has been delineated for the proposed project area encompasses those census tracts from the 2000 Census of Population and Housing (U.S. Department of Commerce, Bureau of the Census 2000) that include and surround the proposed project site. Figure 3-12 illustrates the location of the census tracts in the study area in relation to the proposed project.

Data from the 2000 Census have been aggregated at the census tract level in order to assess the general characteristics of the study area. Regional comparisons have been made to the County of Los Angeles and the City of Pasadena 2000 Census data. In addition, projected population and housing forecasts in the County of Los Angeles and City of Pasadena generated by the Southern California Association of Governments (SCAG) have also been reviewed.

3-10.1 Environmental Setting

a. Population

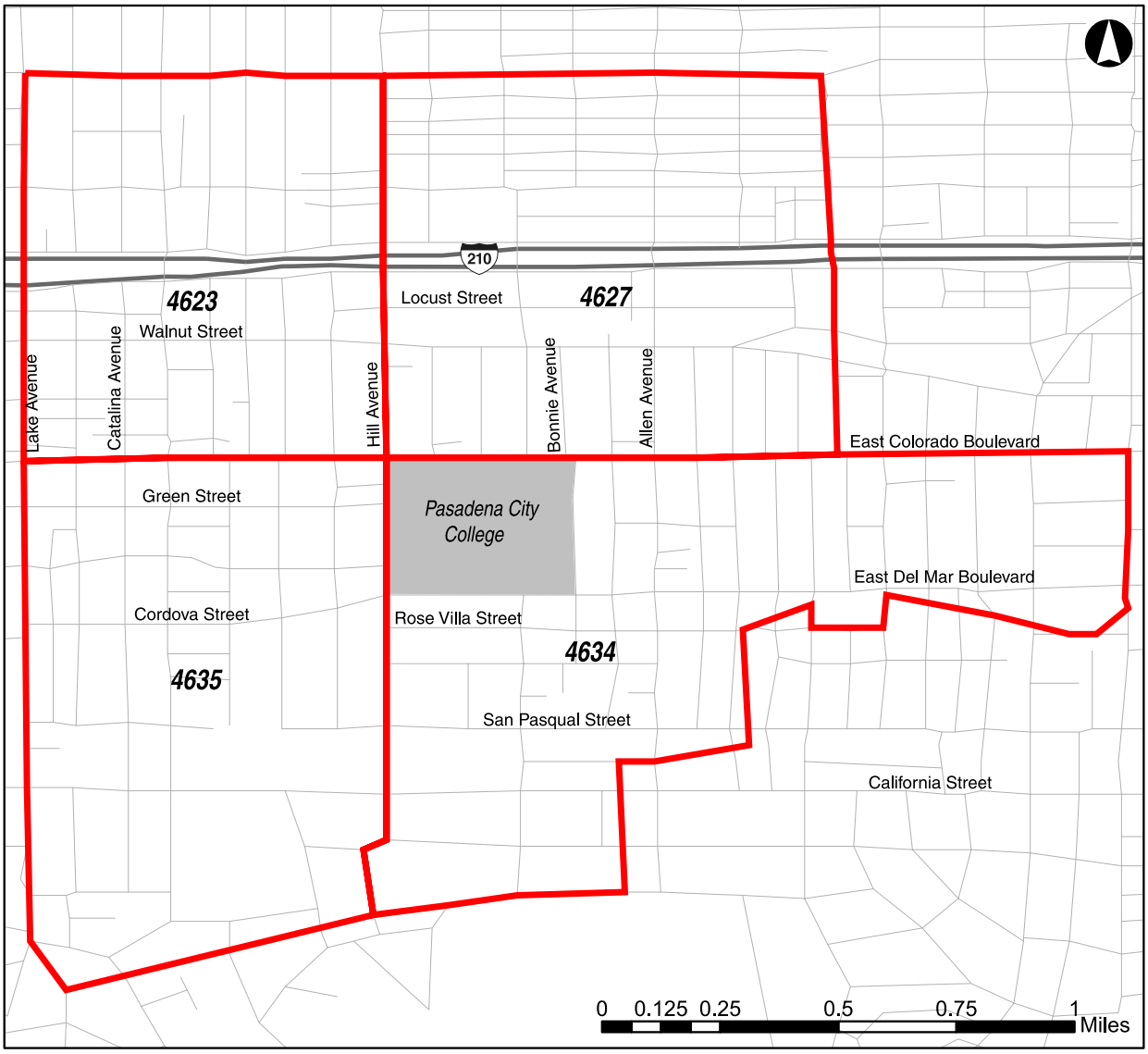
The proposed project is located entirely within the existing boundaries of the Pasadena City College campus, in the City of Pasadena and the County of Los Angeles. The population of the City totaled 133,871 persons in the 2000 Census. Persons of White, non-Hispanic origin represented the largest segment of the City's population at 51,998 persons or about 38.8 percent of the total. This is slightly higher than the proportion of the second largest group in the City, Hispanic and Latino persons, who totaled 44,804 persons, or 33.5 percent. Table 3-20 summarizes the characteristics of the existing regional population in 2000.

According to the SCAG 2001 Regional Transportation Plan, the population of the City of Pasadena in 2010 is projected to be 157,031 persons, an increase of about 17.3 percent over the current population. SCAG projections for the census tracts surrounding the proposed project area are as follows: tract 4623 shows a 10.4 percent increase in population by 2010; tract 4627 shows a 4.6 percent growth rate; tract 4634 shows a 5.0 percent growth rate; and, tract 4635 shows a growth rate of 15.8 percent

b. Housing

According to the 2000 Census, there were 54,114 housing units in the City of Pasadena in the year 2000. About 95.8 percent of the units were occupied. An average of 2.51 persons resided in each occupied unit. Of the total occupied units in the City, 54.3 percent were renter-occupied and the remaining 45.7 percent were owner-occupied. Table 3-21 and Table 3-22 summarize the characteristics of the existing regional housing in 2000.

Figure 3-12: Study Area Census Tracts



Sources: U.S. Census Bureau TIGER Data, 1995; Myra L. Frank & Associates, Inc., 2002.

Table 3-20: Existing Regional and Local Population Characteristics - Race/Ethnicity (2000)

Area	Total Population	White	Percent	Black	Percent	Native American	Percent	Asian	Percent	Native Hawaiian/ Pacific	Percent	Other Race	Percent	Two or More Races	Percent	Hispanic/ Latino	Percent
County of Los Angeles	9,519,338	2.946,145	30.9	891,194	9.4	26,141	0.27	1,123,964	11.8	24,376	0.26	18,859	0.2	245,172	2.6	4,243,487	44.6
City of Pasadena	133,871	51,998	38.8	18,672	13.9	340	0.25	13,261	9.9	101	0.08	249	0.2	4,446	3.3	44,804	33.5
*Study Area**	*24,189*	*9,940*	*41.1*	*2,365*	*9.8*	*45*	*0.2*	*3,745*	*15.5*	*10*	*0.04*	*89*	*0.4*	*1,133*	*4.7*	*6,862*	*28.4*
Census Tract 4623	7,657	1,894	24.7	1,285	16.8	38	0.5	833	10.9	0	0	31	0.4	276	3.6	3,300	43.1
Census Tract 4627	5,500	2,124	38.6	471	8.6	7	0.1	748	13.6	0	0	29	0.5	275	5.0	1,846	33.6
Census Tract 4643	5,636	2,803	49.7	360	6.4	0	0	924	16.4	10	0.2	24	0.4	337	6.0	1,178	20.9
Census Tract 4635	5,396	3,119	57.8	249	4.6	0	0	1,240	23.0	0	0	5	0.09	245	4.5	538	10.0

Note: Area consists of the four Census Tracts within and adjacent to the proposed project area (See Figure 3-12).

Source: Census 2000.

Table 3-21: Existing Regional And Local Housing Characteristics – Occupancy (2000)

Area	Total Units	Occupied Units	Percent	Vacant Units	Percent	Persons Per Household
County of Los Angeles	3,270,909	3,133,774	95.8	137,135	4.2	2.98
City of Pasadena	54,114	51,827	95.8	2,287	4.2	2.51
*Study Area**	*11,032*	*10,557*	*95.7*	*475*	*4.3*	*2.22*
Census Tract 4923	3,256	3,128	96.1	128	3.9	2.42
Census Tract 4927	2,260	2,165	95.8	95	4.2	2.51
Census Tract 4934	2,711	2,616	96.5	95	3.5	2.15
Census Tract 4935	2,805	2,648	94.4	157	5.6	1.79

Note: Area consists of the four Census Tracts within and adjacent to the project site (See Figure 3-12).

Source: Census 2000.

Table 3-22: Existing Regional And Local Housing Characteristics – Tenure (2000)

Area	Occupied Units	Owner Occupied Units	Percent	Renter Occupied Units	Percent
County of Los Angeles	3,133,774	1,499,694	47.9	1,634,080	52.1
City of Pasadena	51,827	23,670	45.7	28,157	54.3
*Study Area**	*10,557*	*3,240*	*30.7*	*7,317*	*69.3*
Census Tract 4923	3,128	562	18.0	2,566	82.0
Census Tract 4927	2,165	851	39.3	1,314	60.7
Census Tract 4934	2,616	991	37.9	1,625	62.1
Census Tract 4935	2,648	836	31.6	1,812	68.4

Note: *Study Area consists of the four Census Tracts within and adjacent to the project alignment (See Figure 3-12).

Source: Census 2000.

According to the SCAG 2001 Regional Transportation Plan, the number of households in the City of Pasadena is projected to be 54,647 in 2010. This is about 1 percent greater than in 2000. SCAG projections of local housing are as follows: census tract 4623 is estimated to grow by 0.2 percent by 2010; tract 4627 is estimated fall by less than 1 percent; tract 4634 is expected to decrease by 2.6 percent; and, tract 4635 is expected to grow by 3.8 percent.

c. Study Area Context

Pasadena City College is located east of Los Angeles and south of the San Gabriel Mountains. The Pasadena General Plan contains development and growth policies that reflect a commitment to maintain the current quality of life and the stability of neighborhoods within its planning area,

while providing new housing opportunities. One of the fundamental premises of the plan is to target higher density development into specific areas in order to protect residential neighborhoods and to create mixed-use urban environments oriented to transit and pedestrian activity.

d. Population

The population of the project study area in the 2000 Census totaled 24,189 persons. The population in the area was predominantly White, non-Hispanic, at approximately 41.1 percent of the total population. This project study area White, non-Hispanic population is about the same as found in the city as a whole, at 38.8 percent. The next largest group was Hispanic/Latino persons, at approximately 28.4 percent of the total population in the study area. This percentage is about 5 percent lower than the city as a whole. The African American population was found to be at a lower proportion of the study area than within the city in its entirety, as well; 9.8 percent within the study area, as compared to 13.9 percent in the city overall. Table 3-20, above, summarizes the characteristics of the existing study area population in 2000 as compared to the city as a whole.

e. Housing

The 2000 Census documented a total of 11,032 housing units in the project study area. Approximately 95.7 percent of all the housing units in this area were occupied, leaving approximately 4.3 percent of the units vacant, a percentage very similar to the city as a whole. The average number of persons per household within the study area was slightly lower than the city as a whole, at 2.22 persons. Approximately 30.7 percent of the occupied units were owner-occupied, a much lower proportion than in the city as a whole. Table 3-21 and Table 3-22, above, summarize the characteristics of the existing study area housing in 2000.

3-10.2 Environmental Impacts

a. Significance Criteria

For the purposes of this draft EIR, a significant impact to population and housing would potentially occur if the proposed project:

- Substantially increase the population or employment so as to require new infrastructure and/or housing, the construction of which could cause significant environmental impacts; or

- Would induce growth that exceeds levels anticipated under local land use plans and results in a substantial adverse physical change in the environment.

b. Impacts Discussion

Construction Impacts

Construction of the proposed Master Plan improvement projects is expected to take place over the next 7 years, through 2010. The number of construction workers employed and working on-site would vary over the course of the construction period. However, based on the $150 million overall construction cost, it is estimated that total construction employment would be approximately 2,760 full-time one-year jobs, over the course of 7 years.

Because construction workers commute to a job site that often changes many times throughout the course of a year, they are not likely to relocate their households as a consequence of construction work opportunities to any significant degree. In addition, many workers are highly specialized and move among job sites as dictated by the need for their skills. Also because of the highly specialized nature of most construction projects, workers are likely to be employed on the job site only as long as their skills are needed to complete a particular phase of the construction process.

The Los Angeles metropolitan area has a large pool of construction labor from which to draw. Therefore, it is reasonable to assume that most project-related construction workers would not relocate their households as a result of working on the proposed Master Plan improvement projects. Construction-phase employment, therefore, would not result in a significant increase to the local or regional population. Thus, no significant adverse environmental impacts are expected as a result of construction employment.

Operational Impacts

Population and Housing Growth

Currently approximately 1,525 staff members are employed at PCC. The proposed project is estimated to increase the number of employees by about 200 persons, for a total of 1,735 employees in 2010.

The approximately 200 additional on-campus employees expected as a result of the proposed project are not anticipated to substantially increase the demand for additional housing in the study area, since employees could reside in any community in the Los Angeles area, in which there is more than sufficient housing stock for 200 employees Therefore, the proposed project would not have a significant effect upon housing demand in the study area and would not require the construction of new infrastructure or housing.

One of the primary objectives of the proposed project is to provide facilities to allow Pasadena City College to support anticipated increased enrollment through the year 2010. In the Fall 2002 semester, there were just about 30,000 students enrolled at PCC. *Master Plan 2010* planning is based on a projected enrollment for the Fall 2010 semester of 34,312 total students.

Because no on-campus housing is currently provided, nearly all of the students commute to PCC from within and around the PCC district, which includes Altadena, Arcadia, La Cañada Flintridge, Pasadena, San Marino, Sierra Madre, South Pasadena and Temple City; as well as portions of El Monte and Rosemead. Because no student housing has been planned, it is anticipated that the students in 2010 would continue to commute to PCC from the greater Pasadena area. Therefore, the proposed project would not have a significant effect upon housing demand within the study area, nor would it require the construction of new housing.

This proposed project is neither intended, nor expected, to induce any significant change in the location, distribution, or rate of either local or regional population and housing growth. Rather, it is designed to provide additional educational facilities to accommodate anticipated increases in enrollment, which, in turn, are based on adopted regional population projections in SCAG's RTP. The proposed enrollment increase of about 13 percent is less than SCAG's projected population increase for Pasadena. Therefore, the proposed project would not induce substantial development that would not otherwise occur and would not cause a significant impact to the environment as a result of increases in employment, population, or housing demand. The proposed project would also not induce growth that exceeds levels anticipated under the Pasadena General Plan.

3-10.3 Mitigation Measures

Because the proposed Master Plan would not result in any adverse impacts to population and housing impacts, no mitigation measures would be required.

3-10.4 Unavoidable Significant Adverse Impacts

The proposed project would not create any unavoidable significant adverse impacts.

3-11 PUBLIC SERVICES

3-11.1 Environmental Setting

a. Police Protection

Security and law enforcement services for Pasadena City College are provided by Pasadena City College Police and Safety Services. Campus Police Officers receive the same training as municipal officers or county deputy sheriffs and they have the same authority on or about the campus as municipal police officers or county deputy sheriffs. The Pasadena City College Police force is comprised of nine police officers including, a Police Chief, a Lieutenant Sergeant, and six patrol officers. Pasadena City College also employs five dispatchers, one parking technician, and 140 College Service Officers (cadets), who receive specialized training in campus police and safety operations. Campus Police Officers utilize vehicle and foot patrols on a daily basis. Cadets patrol campus from 6:00 a.m. to 10:30 p.m. in two shifts with approximate 20 cadets per shift. Additionally, there are 69 emergency phones located in buildings throughout campus, 57 emergency phones located in campus parking facilities, approximately 100 security cameras located throughout campus, and 2 elevated observation posts that are moved around campus parking lots.

PCC has a formal memorandum of understanding with the Pasadena Police Department to request assistance for incidents that require resources not available at Pasadena City College. PCC will summon the assistance of other agencies to provide services for incidents that require special services.

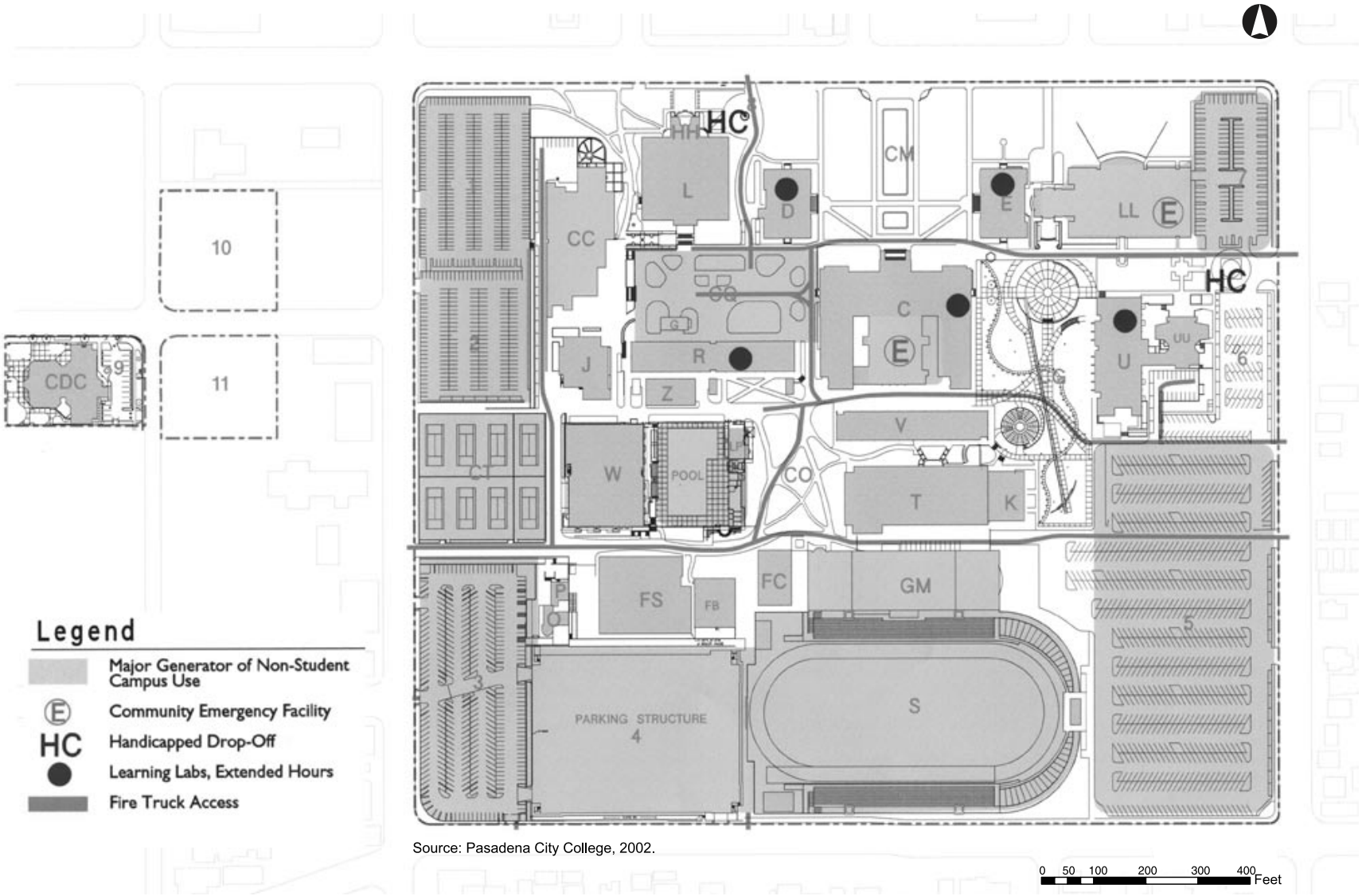
During 2001, campus offenses consisted of 10 motor vehicle thefts, 3 aggravated assaults, and 1 burglary. One arrest was made for a weapons violation.

Police protection for the area outside of the campus is provided by the Pasadena Police Department. The Pasadena police department is staffed by 236 sworn officers and 119 non-sworn personnel serving approximately 130,000 residents. Pasadena City College is located within the Central Community Service Area, which is bounded by the Pasadena city limit to the north, Altadena Drive to the east, the Pasadena city limit to the south, and Lake Avenue to the west. The Pasadena Police Department has one central station located at 207 North Garfield Avenue in Pasadena and two satellite stations in the Northwest Community Service Area that are staffed part time.

b. Fire Protection

Fire Services for PCC are provided by the Pasadena Fire Department. Table 3-23 lists the Pasadena Fire Stations that serve Pasadena City College. Figure 3-13 shows existing emergency access routes on campus.

Figure 3-13: Current Emergency Access Routes



Source: Pasadena City College, 2002.

Table 3-23: Fire Stations Within 1 Mile of Pasadena City College				
Station	**Location**	**Distance (Miles)**	**Equipment**	**Staffing**
No. 32	2424 East Villa Street, Pasadena	1 mile	1 Engine Company 1 Truck Company 1 Paramedic	10
No. 33	515 North Lake Street, Pasadena	1 mile	1 Engine Company 1 Paramedic	6
No. 34	1360 East Del Mar Boulevard, Pasadena	0.25 mile	1 Engine Company	5

Source: City of Pasadena. Arroyo Seco Master Plan EIR, 2002.

c. Schools

Districts in the Pasadena Area Community College District

The following school districts are located within the Pasadena Area Community College District boundaries. Graduates from high schools in these districts are eligible to enroll at PCC.

❑ Pasadena Unified School District

The Pasadena Unified School District (PUSD) serves the communities of Pasadena, Altadena, and Sierra Madre. There are 30 schools in ~~PACCD~~ the District, including 20 regular elementary schools, 3 middle schools, 3 high schools, 3 voluntary or magnet schools and 1 continuation high school. A Districtwide Facilities Master Plan is being implemented to renovate, modernize, and expand all existing school sites.

As of October 2001, PUSD total student enrollment was an estimated 23,583. District enrollment has remained stable over the past 10 years, growing by 6 percent or 1,485 students. Optimal capacity for ~~PACCD~~ the District is 25,670.

❑ San Marino Unified School District

The San Marino Unified School District serves an area less than four square miles which includes the city of San Marino and a small unincorporated area to the east. There are four schools in ~~PACCD~~ the District, including two elementary schools, one middle school and one high school. Within ~~PACCD~~ the District 3,100 students are enrolled in grades Kindergarten through Twelve. San Marino High School has 1,089 students. In the 2000-2001 school year, 98 percent of graduating seniors from San Marino High School were accepted by colleges or universities.

❑ La Canada Unified School District

The La Cañada Unified School District serves 4,300 students in Kindergarten through 12th grade. ~~PACCD~~ The District operates six schools, including three elementary schools, a 7-12th grade

high school, one continuation school, and a small high school for students with special needs. Ninety-eight percent of graduating high school seniors enroll in post-secondary schools.

❑ Arcadia Unified School District

The Arcadia Unified School District operates 10 schools within the city of Arcadia, including 6 elementary schools, 3 middle schools, and 1 high school. As of October 2001, district enrollment was estimated at 9,789 students. After graduation, 32 percent of students from Arcadia High School choose to attend a community college.

❑ South Pasadena Unified School District

The South Pasadena Unified School District is comprised of 3 elementary schools, 1 middle school, and 1 high school serving approximately 4,000 students in the community of South Pasadena.

❑ Temple City Unified School District

The Temple City Unified School District is located in the west San Gabriel Valley, and includes within its boundaries most of unincorporated Temple City, as well as small portions of San Gabriel and Arcadia. ~~PACCD~~ The District operates one high school, one alternative junior academy, one intermediate school, four elementary schools, and an adult education school. District enrollment for the 2000-2001 academic year was estimated at 5,551.

❑ El Monte Union High School District

El Monte Union High School District is comprised of 6 high schools serving approximately 9,569 students in the communities of El Monte and Rosemead.

❑ Schools in the Project Vicinity

Table 3-24 lists the public schools operated by the Pasadena Unified School District that are within approximately 0.5 mile of Pasadena City College.

Table 3-24: Public Schools Within Approximately 0.5 Mile of Pasadena City College

School (All PUSD)	Location	Distance (Miles)	2000-2001 Enrollment	Capacity
Hamilton Elementary	2089 Rose Villa Street, Pasadena	0.5 miles	685	600
Jefferson Elementary	1500 East Villa Street, Pasadena	0.5 miles	840	810

Sources: www.pasadena.k12.ca.us, November 2002. Pasadena Land Use & Mobility Elements EIR 1993.

Table 3-25 lists private schools that are located within 0.5 mile of Pasadena City College.

Table 3-25: Private Schools Within Approximately 0.5 Mile of Pasadena City College

School	Location
Calvary Christian School	1555 East Colorado Boulevard, Pasadena
Odyssey Charter	1555 East Colorado Boulevard, Pasadena
St. Philip The Apostle School	161 South Hill Avenue, Pasadena
Grace Christian Academy	73 North Hill Avenue, Pasadena
Source: Myra L. Frank & Associates, Inc., 2002.	

d. The Los Angeles County Office of Education (COE)

The Los Angeles County Office of Education (COE) is a regional provider of services to students within the proposed project area and throughout the County of Los Angeles. The COE operates educational programs and supports local school districts with academic, business, administrative, and consulting services. Services include but are not limited to: regionalized special education transportation services, updating and improving business techniques, computer applications, teaching strategies, and administration. The COE also represents school districts on appropriate matters before state government and may also provide other educational and/or support services as required or deemed necessary.

In addition to providing educational services to the County's general population, the COE administers programs that are of benefit to those who are unable to attend conventional school facilities; such as the physically and mentally handicapped, wards of the Juvenile Court, preschool children, and students in job training programs.

e. Recreation Facilities and Parks

The City of Pasadena Department of Public Works, Parks and Natural Resources Division maintains one park within 0.5 mile of the Pasadena City College campus. Grant Park is located at 232 S. Michigan Avenue, approximately 0.25 miles from Campus. PCC's recreational facilities, including tennis courts, swimming pool, stadium and gymnasium are used by the general public and various sports organizations, as well as students and faculty.

3-11.2 Environmental Impacts

a. Significance Criteria

Police and Fire Protection

For the purposes of the analyses in this EIR, the proposed *Master Plan 2010* would have a significant permanent environmental impact on public services if it:

- Creates a substantial need for additional police services requiring new or altered police facilities to maintain acceptable service ratios or response times, the construction of which would cause a substantial adverse physical change in the environment; or

- Substantially diminishes the level of police protection services, thereby posing a significant hazard to public safety and security.

Schools

For the purposes of the analyses in this EIR, the proposed Master Plan 2010 would have a significant permanent environmental impact on public schools if:

- The students generated by the project exceed existing enrollment capacities, thereby creating a substantial need for new or altered facilities, the construction of which would cause a substantial adverse physical change in the environment; or

- The physical effects of the project substantially affect the health, safety, or education of students at local schools.

Recreation Facilities and Parks

For the purposes of the analyses in this EIR, the proposed Master Plan 2010 would have a significant permanent environmental impact on public park and recreational facilities if it:

- Creates a substantial need for additional recreation facilities and/or parks to keep current facilities from becoming overburdened, the construction of which would cause a substantial adverse physical change in the environment; or

- Increases the use of existing neighborhood or regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.

b. Impacts Discussion

Police Protection

The proposed Master Plan includes new construction projects, renovation projects, and demolition projects. During construction, renovation, or demolition, police protection services could be adversely affected due to diminished access as a result of possible street closures or restriction of pedestrian access to those areas of the campus under construction. However, given that potential impacts would be temporary and that Pasadena City College Police and Safety Services is located within campus boundaries, impacts would not be significant. PCC would provide levels of security on a per capita basis similar to what currently exists. It is unlikely that additional new or altered police protection facilities, other than those included in the master plan, would be required to accommodate the modest increase in demand for police protection services generated from increased student enrollment and employees through 2010. With the accompanying increase in on-campus security, it is not likely that there would be a substantial increase in demand upon City of Pasadena services or facilities.

All construction would occur within the existing campus boundary. Impacts to adjacent streets and neighboring communities serviced by the Pasadena Police Department would be likely be limited to a potential increase in traffic from construction vehicles. This potential traffic increase would be temporary and intermittent, and impacts on police services would not be significant.

Although growth in the number of students attending PCC is expected, impacts to the surrounding community would be minimal because the majority of the incoming students reside in cities that comprise the community college district prior to their college attendance.

Increased enrollment and employment at PCC would generate additional traffic and increase congestion and could this potentially affect initial response times in the area. However, the traffic analysis reported in Section 3-13 indicates that overall traffic volumes and intersection functions would be reduced to less than significant levels after mitigation, so response times should not be significantly increased.

Fire Protection

During construction of projects included in the Master Plan, fire protection services could be adversely affected if emergency vehicle access is impeded due to street or lane closures within the campus boundaries. There is also the possibility of temporary disruption of water service during construction activities. However, given that the potential impacts would be temporary and construction would comply with local fire code requirements, impacts would not be significant.

The Existing emergency access routes shown in Figure 3-13 will be revised periodically by PCC to accommodate emergency vehicles both during construction and after construction.

Implementation of the Master Plan could increase the number of fire emergencies and place additional demands on existing fire protection services. Since the Master Plan proposes an increase of less than 5,000 total gross square feet of new building space, the increase in fire

emergencies and demand for fire protection services is not expected to be substantial. Implementation of the Master Plan would demolish existing facilities that do not meet current fire codes. Potential fire hazards would be reduced as existing facilities are renovated and brought into compliance with current fire codes. All new construction would comply with current fire codes.

Consequently, it is not anticipated that the addition of limited amounts of additional building floor space would create a substantial need for additional fire protection services requiring new or altered fire department facilities, the construction of which would have a significant impact on the environment.

Schools

It is expected that the growth in student population will result in more faculty and staff, which may result in additional demand for public schools in the area. However, this demand would be dispersed throughout the area and is not expected to have a significant impact on any particular school or the school system.

Recreation Facilities and Parks

Despite the increase in students and employees, it is not expected that recreation facilities and parks located in the vicinity of PCC would be overburdened or experience an increase in use that would cause acceleration in the deterioration of these parks because the majority of students are assumed to live within and use facilities in cities that comprise the community college district. The closest city park, Grant Park, is located about one-quarter mile from PCC and is not subject to a high-degree of visibility to PCC students. Grant Park does not provide recreational facilities that are not available at PCC. PCC provides on-campus recreation facilities for its students, faculty and staff and implementation of the Master Plan includes the addition of a new athletic field and a renovation of existing tennis courts on the campus, which would increase the availability of recreational facilities in the area. No adverse impacts to parks or recreation facilities are anticipated.

3-11.3 Mitigation Measures

a. Police Protection

Since no significant impacts are anticipated, no mitigation measures are necessary.

b. Fire Protection

Since no significant impacts are anticipated, no mitigation measures are necessary.

c. Schools

Since no significant impacts are anticipated, no mitigation measures are necessary.

d. Recreation Facilities and Parks

Since no significant impacts are anticipated, no mitigation measures are necessary.

3-11.4 Unavoidable Significant Adverse Impacts

a. Police Protection

Implementation of the Master Plan would result in no significant adverse impacts to police protection services.

b. Fire Protection

Implementation of the Master Plan would result in no significant adverse impacts to fire protection services.

c. Schools

Implementation of the Master Plan would result in no significant adverse impacts to schools.

d. Recreation Facilities and Parks

Implementation of the Master Plan would result in no significant adverse impacts to recreational facilities and parks.

3-12 PUBLIC UTILITIES

3-12.1 Environmental Setting

a. Water Supply

There are two kinds of supply sources for water: natural resources and reclamation. Natural resources may occur outside the greater Los Angeles area, necessitating transport via pipelines and/or aqueducts. Reclaimed water is treated wastewater sufficient for certain types of non-potable uses, and must be conveyed in a separate system to avoid direct human consumption. Water is used for fire control as well as drinking (potable water), flushing, washing, recreational purposes, and other domestic consumption.

Regional Conditions

Water is supplied to the project area by the City of Pasadena Department of Water and Power (PWP), a member agency of the Metropolitan Water District of Southern California (MWD). The MWD is the largest water wholesaler for domestic and municipal uses in Southern California. It obtains its water supplies from two sources: from Northern California's Bay-Delta through the California Aqueduct and from the Colorado River through its own Colorado River Aqueduct.[4]

As an MWD member agency since 1928, PWP actively promotes conservation, and has been a leader in maximizing its own local water resources. Approximately 46 percent of Pasadena's water supply is local ground water (from the Raymond Groundwater Basin) and is pumped out of 12 active wells located throughout Pasadena. The remaining 54 percent of the water is purchased from the MWD and consists of a blend of water from Northern California and the Colorado River. Following treatment, the water is distributed to PWP customers through a pipeline network of 478 miles of mains throughout the city.[5] Demand for water in 2001 for the City of Pasadena and its nearly 160,000 residents was 32,989 Acre Feet (AF). PWP engages in an on-going planning process to assure the future needs of customers can be met.

Local and Onsite Conditions

The existing campus water infrastructure provides a sufficient supply of water to PCC's facilities. There is no major new infrastructure (expansions or upgrades) projects include in *Master Plan 2010*. Very localized changes in water infrastructure may occur in the vicinity of the buildings that are proposed to be reconstructed.

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[4] www.mwd.dst.ca.us/

[5] PWP Annual Water Quality Report, 2001. www.ci.pasadena.ca.us/waterandpower/pdf/PWP%20Water%20Quality%20Report%202002.

PCC employs several water saving devices and practices on its campus. A few of these were identified in the 1989 PCC Master Development Plan and would continue under *Master Plan 2010*:

- Low flush toilets and water-saving appliances (i.e., faucets, shower heads, etc.);
- Water conserving xeriscape landscaping, consisting of low-water consuming vegetation where appropriate;
- Mulch used in landscaped areas would improve the water-holding capacity of the soil, reducing evaporation, and helping to minimize soil compaction; and
- Installation of an efficient irrigation system would minimize runoff and maximize retention of water in plant roots.

b. Wastewater

Wastewater is a generation aspect of utilities, whereas water is the consumption aspect. As such, wastewater is a product that is created and requires disposal. Wastewater flows are directly proportional to water usage. In the case of sewage, the capacity to dispose of waste material is a function both of wastewater treatment capacity (which may occur by law prior to ultimate disposal) and conveyance capacity.

Regional Conditions

The City of Pasadena Department of Sanitation facilities are connected to the Los Angeles County Sanitation District. Wastewater generated in the city is carried via sewage lines to the either the San Jose Creek Sewage Treatment Plant, or directly to the Joint Water Pollution Control Plant in Carson. Reclaimed water (treated water that may be reused for non-potable purposes) is made available for use, whereas all other waste products are ultimately sent through underground pipelines to the Joint Water Pollution Control Plant. From there, treated sewage is discharged into the San Pedro Bay. [6]

Local and Onsite Conditions

The existing sewer system serving PCC is managed by the City of Pasadena Department of Public Works. Sewer mains adjacent to the PCC campus can be found on Del Mar Boulevard and Hill Avenue. All campus buildings are connected either directly or via an internal network on the PCC campus to these sewer mains, which eventually connect to the main lines of the Los Angeles County Sanitation District. According to the City of Pasadena Master Sewerage Plan, 1977 Update, at least four of the sewer mains receiving wastewater from the campus are operating above capacity, meaning they would not be able to accommodate additional flows. However, the available flow rate and capacity data for these mains is very much outdated (from

[6] www.lacsd.org/csdhome1.htm

the 1977 Master Plan), and does not reflect water-saving measures that have since been employed by the city and by PCC. Additionally, the flow rates are not representative of recent residential and commercial development that has taken place. Therefore, use estimates and corresponding flow projections using old calculation factors (for example, 20 gallons per day per student for colleges) may not be accurate, or truly represent existing conditions. Correspondence with Bob Gardner from the Pasadena Department of Public Works confirmed that current flow rates from PCC into the city's sewer system are not known.

Solid Waste

Pasadena City College currently contracts with a private hauler, Southern California Environmental, Inc, for its solid waste disposal. PCC generates approximately 80 tons of solid waste per month. Nearly 15 tons per month of "green" waste (plant matter), and 7 tons per month of paper waste is generated. Green waste is recycled and used as a cover at the Scholl Canyon Landfill. Solid waste is hauled to the Scholl Canyon Landfill in Glendale, which is estimated to reach capacity in eight years.[7] After that date, solid waste would be hauled to other landfills in the area. Paper waste is hauled by a separate private recycling company.[8] PCC also participates in a computer recycling program.

c. Energy

Electricity

Conserving energy and co-generation has become an increasingly important issue within the state of California. While there are many technologies available to generate electricity (such as reciprocating micro-turbines, fuel cells, solar voltaic cells), market demands have increased while overall capacity has decreased. Energy efficiency is a goal for all State and municipal agencies.

Natural Gas

Natural gas is a combustible mixture of simple hydrocarbon compounds, primarily methane, and is used as an industrial and residential fuel. Natural gas consumed in California is tapped at naturally occurring reservoirs, primarily located outside the State, and delivered via high-pressure transmission pipelines to the consumption area. Natural gas is measured in cubic feet.

Regional Conditions

Within the City of Pasadena, electricity is provided by Pasadena Water and Power (PWP). The largest single source of PWP's power supply is natural gas, which provides 50 percent of the city's electricity. Approximately 16 percent is provided by nuclear power plants, 12 percent from renewable sources (solar, wind, biomass/waste, geothermal and small hydroelectric), 11percent from coal, 10 percent from large hydroelectric plants, and the remaining 1 percent from other

[5,6] Conversation with Mark Shagian, Southern California Environmental, Incorporated.

sources.[9] PWP relies on purchased power for 84 percent of its supply, and derives the remaining 16 percent from locally generated power. [10]

The Southern California Gas Company provides gas service throughout Los Angeles County, including the City of Pasadena and PCC.

Local and Onsite Conditions

The PCC campus is serviced by a central power plant providing heating, cooling and electric power. Electricity for PCC is provided by PWP and by on-site cogeneration (natural gas-powered generators). The peak demand for power at PCC is about 2.5 to 2.8 megawatts. PCC now generates about 125 kilowatts, with a goal to increase that amount. The Southern California Gas Company provides gas service to the campus.

As outlined in *Master Plan 2010* the utility grid on campus will be updated to allow for adequate electrical, water, gas, sewage, heating, air conditioning, and low voltage/signal systems in order to properly service new buildings, and to upgrade service to existing facilities. These utility projects will increase the functionality of the campus and provide the necessary infrastructure to accommodate technology advances and to support the functional requirements for modern classrooms.

d. Storm Drains

Please see section 3.8 Hydrology for a detailed discussion of the drainage system serving the Pasadena City College Campus.

3-12.2 Environmental Impacts

a. Significance Criteria

Water Supply

For the purposes of the analyses in this EIR, the proposed *Master Plan 2010* would have a significant environmental impact if it:

- substantially depletes water supplies; or
- requires new water supply or distribution facilities or expansion of existing facilities, the construction of which would cause a substantial adverse physical change in the environment; or
- requires new or expanded water entitlements.

[9] http://www.ci.pasadena.ca.us/waterandpower/power_contentlabel.asp
[10] http://www.ci.pasadena.ca.us/waterandpower/pfd/PWP Annual Report 2000.pdf

Wastewater

For the purposes of the analyses in this EIR, the proposed *Master Plan 2010* would have a significant environmental impact if project-generated wastewater flows would:

- exceed the capacity of the existing sanitary sewer system or treatment plant that serves the project site, thereby requiring new or expanded facilities, the construction of which would cause a substantial physical adverse change in the environment; or
- exceed the capacity of the existing sewer system or treatment plant resulting in sewage spills or overflows that would have a substantial physical adverse effect on public health or the physical environment.

Solid Waste

For the purposes of the analyses in this EIR, the proposed *Master Plan 2010* would have a significant environmental impact if it generated solid waste that:

- exceeded the capacity of the landfill serving the project site; or
- requires or results in new or expanded solid waste disposal facilities, the construction of which would cause a substantial adverse physical change in the environment.

Energy

For the purposes of the analyses in this EIR, the proposed *Master Plan 2010* would have a significant environmental impact if it:

- requires or results in the need for new or expanded offsite distribution systems or power generating facilities, the construction of which would cause a substantial adverse physical change in the environment;
- requires or results in the need for new or expanded natural gas infrastructure, the construction of which would cause a substantial adverse physical change in the environment;
- conflicts with adapted energy conservation plans; or
- results in wasteful, inefficient, and unnecessary consumption of energy.

Storm Drains

For the purposes of the analyses in this EIR, the proposed *Master Plan 2010* would have a significant environmental impact if it:

- Requires or results in the need for new or expanded water drainage facilities.

Please refer to Section 3.8, Hydrology.

b. Impacts Discussion

Water Supply

Consistent with the guidelines set forth in the November 1989 PCC Master General Plan, water saving features (low flush toilets, water saving faucets, shower heads, water efficient landscaping, etc.) in renovated or new facilities will be implemented as part of the individual projects in *Master Plan 2010*.

Other than extensions within the campus utility grid, *Master Plan 2010* does not include plans for major water distribution system projects. It should be noted that projects included in the Master Plan are for renovation of four buildings and replacement of three others with facilities of similar size, so that the net demand for increase in water supply is not expected to be significant. Detailed design of individual buildings has not be undertaken, so a precise demand forecast for water cannot be performed at this time. Correspondence with Pasadena Water and Power (PWP), confirmed that PWP would be able to accommodate any increases in water demand that result from student and employee growth on the PCC campus out to the year 2010.[11] The City of Pasadena's East Colorado Boulevard Specific Plan indicates that existing infrastructure should be able to meet the potential demand. Therefore, the proposed Master Plan would not substantially deplete water supplies, nor require new water entitlements or water distribution facilities for construction or operation of the Master Plan projects. No significant impact is expected.

Wastewater

The proposed projects included in *Master Plan 2010* would eventually accommodate approximately 34,000 students. The Pasadena Department of Public Works has stated that the daily wastewater flow for college campuses is 20 gallons per student. With a peak flow factor of 2.2, the wastewater generated by an additional 5000 students at PCC would be 0.34 cfs.[12] According to the city's 1977 Master Sewerage Plan, at least four existing sewer lines are already operating near or above capacity and would not be able to accommodate the additional flow. An increase of 0.34 cfs would be considered a significant impact under the conditions defined in the 1977 plan. However, as noted above in the Environmental Setting, wastewater data from the City's 1977 Sewerage Master Plan is outdated and unrepresentative of recent residential and commercial changes, city-wide water conservation measures, and new wastewater generation factors for college campuses. The Public Works Department also noted that there are no current data on flows into the city network from PCC.

In contrast to the 1977 Master Sewerage Plan, the City of Pasadena's East Colorado Boulevard Specific Area Plan, issued for review in the Fall 2002, includes the utility network into which PCC facilities discharge, and states that recommended development for the area would allow 750 dwelling units and 650,000 square feet of non-residential development and that "recommendations of the Specific Plan will not require significant service upgrades for any

[11] Ray Barefield, Project Manager, PWP; correspondence via electronic mail, January 23, 2003.
[12] Bob Gardner, Pasadena Department of Public Works, February 2003.

utility or service." Since the proposed new developments included within PCC's Master Plan would be less than 1 percent of the 650,000 square feet cited in the city's specific plan, for which the city has stated that no significant service upgrades are needed, PACCD concludes that implementation of *Master Plan 2010* would not have a significant impact on wastewater facilities.

"The East Colorado Boulevard Specific Plan also states that large developments are required to submit monitored flow measurements to provide information to determine and project future flow requirements. The City of Pasadena uses this data to determine if the costs of improving the link between the development site and the trunk line would be borne by the City or the developer. Implementation of Master Plan 2010 involves removal of the current Buildings CC, J, T and K and their replacement with a new Campus Center (at the site of building CC and J), and a new Arts Building (and the site of Buildings T and K). The Master Plan also includes construction of a new Industrial Technology Building, a multi-level parking structure, and remodeling of several existing buildings (E, FB, R, V, W and Z). Detailed plans for these individual projects have not yet been developed, so PACCD cannot at this time provide data on any net increases in wastewater flow from current conditions to future conditions. As designs are developed, PACCD will provide the City of Pasadena with estimates of the wastewater flows that will be generated by the proposed improvements, and will consult with the City regarding the need for and potential cost of links between PCC facilities and the city's trunk lines."

Solid Waste

Pasadena City College currently produces approximately 80 tons (160,000 pounds) of solid waste per month, approximately 5.58 pounds of waste per student each month. With the possible increase of student population to about 35,000 by 2010, assuming continuation of the current solid waste production rate, PCC could produce about 90 tons of solid waste per month. PCC operates and will continue to operate an aggressive recycling program. It is not expected that increases in solid waste from PCC will exceed the capacity of the landfill serving the site, or of alternate landfills to which waste could be diverted, nor result in the construction of new solid waste disposal facilities. Current tonnage at Scholl Canyon Landfill, the primary site for disposal of solid waste from Pasadena, is 599 tons per day.[13] Accordingly, *Master Plan 2010* it is not expected to have a significant environmental impact on solid waste.

Energy

The majority of power for projects included in *Master Plan 2010* could be provided by PWP, which has indicated its ability to meet the demand associated with *Master Plan 2010*[14]. In addition to the power that PCC now produces through cogeneration, PCC has the option to develop other power resources on campus as it implements individual projects in *Master Plan 2010*. Opportunities include solar photo-voltaic cells on building rooftops or atop the proposed structure, reciprocating micro-turbines, as well as gas-powered cogeneration at new or

[13] Los Angeles County Sanitation Districts website: www.lacsd.org/swaste/facilities/open/schlcyn.htm, February 10, 2003.
[14] Correspondence via electronic mail, January 23, 2003.

remodeled facilities. Preliminary forecasting by PCC indicates there is a potential to generate about 2.5 megawatts of power.

Cogeneration would not be expected to have significant environmental impacts since the equipment that would be used would include the latest technologies to limit effects to the environment. If cogeneration were pursued for individual projects, PCC may be required to undertake a review of expected environmental impacts to determine if an environmental document would be necessary, or if cogeneration could be implemented under the auspices of regulatory permits. If determined necessary, the appropriate environmental document (which would likely be a negative declaration or mitigated negative declaration) would be prepared.

Storm Drains

Please refer to section 3.8, Hydrology, for a more in-depth discussion on campus drainage.

3-12.3 Mitigation Measures

As shown in the discussions above, implementation of the Pasadena City College *Master Plan 2010* would not have any significant impacts on any of the above-mentioned utilities serving the campus, nor the surrounding environment. Therefore, no mitigation measures are recommended.

3-12.4 Unavoidable Significant Adverse Impacts

Since the Pasadena City College *Master Plan 2010* does not include any projects that would have significant impacts and no mitigation measures are required, implementation of the plan would not have any unavoidable significant adverse impacts on any of the above-mentioned utilities serving the campus, nor the surrounding environment.

3-13 TRAFFIC AND PARKING

This chapter describes traffic conditions on the PCC main campus as they existed in the fall of 2002 and the expected impacts to traffic and parking that would arise from implementation of *Master Plan 2010*. One of the main construction elements proposed in *Master Plan 2010* is a new five level parking structure that would be located along Bonnie Avenue, replacing a current surface parking area.

3-13.1 Environmental Setting

A comprehensive data collection effort was undertaken to identify existing transportation and parking conditions within and adjacent to the Pasadena City College campus. The assessment of existing conditions relevant to this study included the street system, traffic volumes and operating conditions, the public transit service, the campus access system, and the existing parking conditions on the Pasadena City College campus.

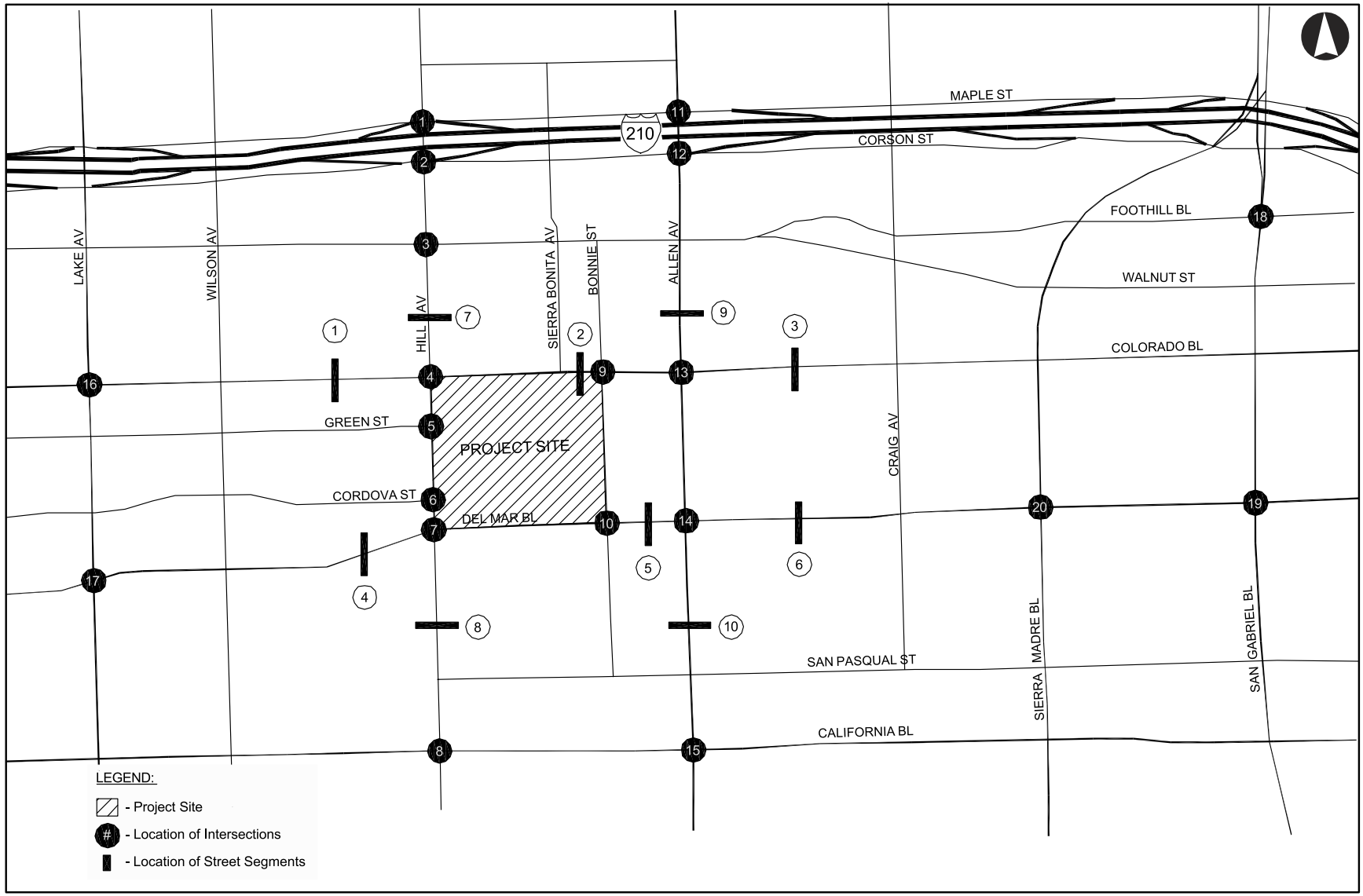
a. Existing Street System

The Pasadena City College main campus is bounded by Bonnie Avenue on the east, Colorado Boulevard on the north, Hill Avenue on the west, and Del Mar Boulevard on the south. The street system within the study area is illustrated on Figure 3-14. Primary regional access to the area is provided by the Foothill Freeway (I-210), which runs east-west approximately 0.5 mile north of the campus. Hill Avenue is a north-south arterial facility providing access to the Foothill Freeway. Another north-south arterial street, Allen Avenue, two blocks from the east side of the campus, also provides access to the Foothill Freeway.

Additional streets serving the campus and the surrounding study area include Lake Avenue, Sierra Madre Boulevard, and San Gabriel Boulevard in a north-south direction, and Foothill Boulevard, Walnut Street, Green Street, Cordova Street, and California Boulevard in an east-west direction.

Table 3-26 provides data about the key roadways in the vicinity of the campus. Diagrams of the existing intersection lane configurations for the 20 study intersections of the surrounding street system are contained in Appendix C.

Figure 3-14: Street System Within the Study Area



Source: Kaku Associates, Inc., 2002.

Table 3-26: Street Characteristics							
Segment			**Lane**		**Median Type**	**Parking Restrictions**	
Name	**From**	**To**	**NB/EB**	**SB/WB**		**NB/EB**	**SB/WB**
Lake Av	California Blvd	Del Mar Blvd	2	2	RM	RZ, 1 HR PA 9am-6pm, RZ, 1HR PA 9am-6pm	1 HR PA 9am-6pm, Construction
	Del Mar Blvd	Cordova St	2	2	RM	RZ, 1 HR PA 9am-6pm	1 HR PA 9am-6pm, SL 35
	Cordova St	Green St	2	2	RM	1 HR PA 9am-6pm, RZ	1 HR PA 9am-6pm, SL 30
	Green St	Colorado Blvd	3	2	RM/DY	NSAT	1 HR PA 9am-6pm, SL 30
	Colorado Blvd	Walnut St	3	3	DY/2LT	RZ, NSAT, NPAT 7am - 5 pm	NSAT 7am-7pm, RZ
Hill Av	California Blvd	San Pasqual St	1	1	SDY	RZ, 2 HR PA 8am-4pm	RZ, PA
	San Pasqual St	Del Mar Blvd	1	1	SDY	RZ, 2 HR PA 8am-4pm, NPAT	2 HR PA 9am-6pm
	Del Mar Blvd	Cordova St	1	2/1	SDY	NSAT	NSAT, 2 HR PA 8am-4pm, RZ
	Cordova St	Green St	2	2	2LT	NSAT	1 HR PA, 15 min PA 9a-6pm
	Green St	Colorado Blvd	2	2	DY	NSAT	RZ
	Colorado Blvd	Walnut St	2	2	DY	RZ, 1 HR PA 9am-6pm, SL 30	RZ, 1 HR PA 9a-6pm, RZ, SL 30
	Walnut St	Corson St	2	2	DY/RM	NSAT, SL 35	NSAT, SL 35
	Corson St	Maple St	2	2	RM	NSAT, SL 35	NSAT
Allen Av	California Blvd	San Pasqual St	1	1	SDY	PA, SL 30	PA
	San Pasqual St	Del Mar Blvd	1	1	SDY	PA, NPAT 8am-4pm, SL 30	RZ, 2 HR PA 9am-4pm
	Del Mar Blvd	Colorado Blvd	1	1	SDY	RZ, 2 HR PA 9am-6pm, RZ	RZ, 2 HR PA 9am-6pm, SL 30
	Colorado Blvd	Walnut St	2	2	DY	RZ, 2 HR PA, NSAT 7-9am - 4-6pm	NSAT 7-9m-4-6pm, 2 HR PA 9am-6pm
	Walnut St	Corson St	2	2	2LT/RM	RZ, 2 HR PA 9am-6pm	PA 2am-6pm, PA
	Corson St	Maple St	2	2	RM	NSAT	NPAT
Sierra Madre Blvd	California Blvd	San Pasqual St	2	2	RM	PA, SL 30	PA
	San Pasqual St	Del Mar Blvd	2	2	RM	PA	RZ, PA
	Del Mar Blvd	Colorado Blvd	2	2	RM	RZ, NPAT 7am-5pm, PA, Left PA, SL 35	Left PA, BL, PA

Table 3-26: Street Characteristics							
Segment			**Lane**		**Median Type**	**Parking Restrictions**	
Name	**From**	**To**	**NB/EB**	**SB/WB**		**NB/EB**	**SB/WB**
	Colorado Blvd	Walnut St	2	2	RM	RZ, 2HR PA 9am-6pm, BKL	PA, RZ
	Walnut St	Foothill Blvd	3	3	RM	PA, BKL	PA, BKL
San Gabriel	California Blvd	San Pasqual St	2	2	DY	RZ, PA	RZ
	San Pasqual St	Del Mar Blvd	2	2	DY	RZ, PA, SL 35	RZ, PA
	Del Mar Blvd	Colorado Blvd	2	2	DY	RZ, PA, NPA 7am-5pm	RZ, PA
	Colorado Blvd	Walnut St	2	2	DY	2 HR PA 9am-6pm, SL 35	RZ, PA, 2 HR 9am-6pm, RZ
	Walnut St	Foothill Blvd	2	2	RM	PA	RZ, PA
California Blvd	San Gabriel Blvd	Sierra Madre Blvd	1	1	2LT	PA, BKL, SL 30	BKL, PA
	Sierra Madre Blvd	Allen Av	1	1	DY	PA, BKL, SL 30	BKL, PA
	Allen Av	Hill Av	1	1	2LT	2 HR PA 9am-6pm	2 HR PA 9am-6pm
	Hill Av	Lake Av	1	1	2LT	1 HR, 2 HR PA 9am-6pm, NPA 7am-5pm, SL 30	PA, RZ, 2 HR 9am-6pm, SL 35
Del Mar Blvd	San Gabriel Blvd	Sierra Madre Blvd	2	2	DY	NPA 7-9am-4-6pm, BKL	NPA 7-9am-4-6pm, PA
	Sierra Madre Blvd	Allen Av	2	2	DY	RZ, NPA 7-9am-4-6pm, NPA 7am-5pm	NPA 7a-9am-4-6pm, PA
	Allen Av	Hill Av	2	2	DY	RZ, NPA except Permit, NSAT, PA	PA, BKL, 2 HR PA 11am-4PM, SL 35
	Hill Av	Lake Av	2	2	DY	RZ, NSAT, 2 HR PA 9am-4pm, NPA 7-9am-4-6pm	RZ, NSAT, 2 HR PA 9am-6pm, NSAT
Colorado Blvd	San Gabriel Blvd	Sierra Madre Blvd	2	2	RM	2 HR, 1 HR PA 9am-6pm, SL 30	1 HR PA 9am-6pm, NPAT, 1 HR PA 2 HR PA 9am-6pm
	Sierra Madre Blvd	Allen Av	2	2	2LT	2 HR PA 9am-6pm, PA	2 HR PA 9am-6pm
	Allen Av	Bonnie St	2	2	2LT	1 HR PA 9am-6pm, RZ	1 HR PA 9am-6pm
	Bonnie St	Hill Av	2	2	2LT	RZ, 1 HR PA 9am-6pm, RZ	1 HR PA, RZ
	Hill Av	Lake Av	2	2	2LT	1 HR PA 9am-6pm, RZ, 1 HR PA 9am-6pm	RZ, 1 HR PA 9a-6pm, RZ, NSAT

Table 3-26: Street Characteristics

Segment			Lane		Median Type	Parking Restrictions	
Name	**From**	**To**	**NB/EB**	**SB/WB**		**NB/EB**	**SB/WB**
Foothill Blvd / Walnut St	San Gabriel Blvd	Sierra Madre Blvd	2	2	DY	2 HR, 1 HR PA 9am-6pm	1 HR PA 9am-6pm, RZ, SL 35
	Sierra Madre Blvd	Allen Av	2	2	DY	1 HR PA 9am-6pm, RZ, 1 HR PA 9am-6pm, SL 30	1 HR PA 9am-6pm, PA, SL 30
	Allen Av	Bonnie St	2	2	DY	2 HR PA, RZ	2 HR PA, 1 HR PA 9am-6pm, SL 30
	Bonnie St	Hill Av	2	2	DY	1 HR PA 9am-6pm	1 HR PA 9am-6pm, SL 30
	Hill Av	Lake Av	2	2	DY/2LT	RZ, NSAT, 2 HR PA 9am-6pm	RZ, 2 HR PA 9am-6pm, NSAT, SL 30

Notes:
BKL = Bike Lane
DY = Double Yellow
Left PA = Left Side Parking Allowed Along The Median
NPAT = No Parking Allowed
NPA (Specific Time) = No Parking Allowed Between Specific Times
NSAT = No Stopping Any Time
PA = Parking Allowed
RM = Raised Median
RZ = Red Zone
SDY = Single Dashed Yellow
SL = Speed Limit
SL(##)s = Speed Limit During School Time

Source: Kaku Associates, Inc., January 2003.

b. Peak Hour Traffic Volumes

Weekday morning (AM) and evening (PM) peak period intersection turning movement counts were conducted at the 20 study intersections in June and August of 2002. The 20 intersections were those that would be mostly likely to be subject to impact from traffic increases associated with implementation of *Master Plan 2010*. The intersections are listed in Table 3-27. The data for existing conditions for these intersections are shown in Table B-1 of the Traffic and Parking Study in Appendix C.

Table 3-27: Locations of Turning Movement Counts

Hill Ave. & Maple St.	Allen Ave. & Maple St.
Hill Ave. & Corson St.	Allen Ave. & Corson St.
Hill Ave. & Walnut St.	Allen Ave. & Colorado Blvd.
Hill Ave. & Colorado Blvd.	Allen Ave. & Del Mar Blvd.
Hill Ave. & Green St.	Allen Ave. & California Blvd.
Hill Ave. & Cordova St.	Lake Ave. & Colorado Blvd.
Hill Ave. & Del Mar Blvd.	Lake Ave. & Del Mar Blvd.
Hill Ave. & California Blvd.	Foothill Blvd. & San Gabriel Blvd.
Bonnie St. & Colorado Blvd.	Del Mar Blvd. & San Gabriel Blvd.
Bonnie St. & Del Mar Blvd.	Del Mar Blvd. & Sierra Madre Blvd.

Source: Kaku Associates, Inc., January 2003.

Levels of Service (LOS) were calculated for each of the 20 intersections. LOS is a qualitative measure used to describe the condition of traffic flow at an intersection. The levels of service range from excellent conditions at LOS A to overloaded conditions at LOS F. An intersection's volume to capacity ratio (V/C) is used to assess the level of service at signalized intersections. The definitions for LOS and V/C are shown in Section 3-13.2.a, below.

Table 3-28 summarizes the existing weekday AM and PM Peak Hour V/C ratios and corresponding LOS's for the 20 study intersections. Seven of the 20 intersections shown in Table 3-13.3 currently operate at LOS E or F during one or both of the AM and PM Peak Hours, as follows:

- Hill Avenue & Maple Street (North frontage road of I-210)
- Hill Avenue & Corson Street (South frontage road of I-210)
- Hill Avenue & Walnut Street
- Hill Avenue & Del Mar Boulevard
- Hill Avenue & California Boulevard
- Allen Avenue & Colorado Boulevard
- Lake Avenue & Colorado Boulevard.

Table 3-28: Existing Conditions Peak Hour Levels of Service				
Intersection	**Existing Conditions**			
	AM Peak		**PM Peak**	
	V/C	**LOS**	**V/C**	**LOS**
Hill Ave. & Maple St.	0.970	E	0.740	C
Hill Ave. & Corson St.	0.798	C	0.941	E
Hill Ave. & Walnut St.	0.895	D	1.012	F
Hill Ave. & Colorado Blvd.	0.727	C	0.748	C
Hill Ave. & Green St.	0.455	A	0.571	A
Hill Ave. & Cordova St.	0.557	A	0.630	B
Hill Ave. & Del Mar Blvd.	0.706	C	0.934	E
Hill Ave. & California Blvd.	0.794	C	0.992	E
Bonnie St. & Colorado Blvd.	0.371	A	).621	B
Bonnie St. & Del Mar Blvd.	0.731	C	0.677	B
Allen Ave. & Maple St.	0,525	A	0.782	C
Allen Ave. & Corson St.	0.469	A	0.629	A
Allen Ave. & Colorado Blvd.	0.678	B	0.908	E
Allen Ave. & Del Mar Blvd.	0.781	C	0.751	C
Allen Ave. & California Blvd.	0.809	D	0.878	D
Lake Ave. & Colorado Blvd.	0.896	D	0.906	E
Lake Ave. & Del Mar Blvd.	0.732	C	0.850	D
Foothill Blvd. & San Gabriel Blvd.	0.745	C	0.853	D
Del Mar Blvd. & San Gabriel Blvd.	0.631	B	0.831	D
Del Mar Blvd. & Sierra Madre Blvd.	0.721	C	0.775	C

Source: Kaku Associates, Inc., 2002.

In addition, traffic volumes were measured at the 10 locations listed in Table 3-29. The data for these intersections are shown in Table 7 of the Traffic and Parking Study in Appendix C.

Table 3-29: Locations of Traffic Volume Counts	
Colorado Blvd. between Wilson Ave. and Hill Ave.	Del Mar Blvd. between Allen Ave. and Craig Ave.
Colorado Blvd. between Sierra Bonita Ave. and Bonnie Ave.	Hill Ave. between Walnut St. and Colorado Blvd.
Colorado Blvd. between Allen Ave. and Craig Ave.	Hill Ave. between Del Mar Blvd. and California Blvd.
Del Mar Blvd. between Wilson Ave. and Hill Ave.	Allen Ave. between Walnut St. and Colorado Blvd.
Del Mar Blvd. between Bonnie Ave. and Allen Ave.	Allen Ave. between Del Mar Blvd. and California Blvd.

Source: Kaku Associates, Inc., 2002.

Traffic Signals

All intersections included in the traffic analysis are signalized and are operated by the City of Pasadena.

Transit Service

The PCC campus is currently served by the Los Angeles County Metropolitan Transportation Authority (MTA), the City of Los Angeles Department of Transportation (LADOT), Foothill Transit, and the Pasadena Area Rapid Transit System (ARTS). The following transit lines serve the study area:

- MTA Line 177 - This bus line serves La Cañada Flintridge, Pasadena, Monrovia, and Duarte. In the study area, the bus runs along Hill Avenue on the west side of campus.
- MTA Line 181 - This bus line serves Hollywood, Glendale, Eagle Rock, Pasadena, and Altadena. In study area, the bus runs along Colorado Boulevard and ends just east of Hill Avenue.
- MTA Line 188 - This east-west bus line serves Altadena, Pasadena, Arcadia, and Duarte. In the study area, the bus runs along Colorado Boulevard on the north side of the campus.
- MTA Line 256 - This bus line serves Commerce, East Los Angeles, El Sereno, Highland Park, Pasadena, and Altadena. In the study area, the bus runs along Colorado Boulevard and turns north at Hill Avenue.
- MTA Line 267 - This bus line serves El Monte, Temple City, Arcadia, Pasadena, and Altadena. In the study area, the bus runs along Del Mar Boulevard on the south side of the campus.
- MTA Line 401 - This bus line serves Altadena, Pasadena, and Los Angeles. In the study area, the bus runs along Colorado Boulevard on the north side of the campus and turns north at Allen Avenue.
- FOOTHILL TRANSIT Line 187 - This bus line serves Claremont, Montclair, and Pasadena. In the study area, the bus runs along Colorado Boulevard on the north side of the campus.
- ARTS 10 - This bus line provides local service within the City of Pasadena. The bus travels westbound on Colorado Boulevard and eastbound on Green Street between Hill Avenue and Orange Grove Boulevard. It provides service to Pasadena City College, the Playhouse District, Civic Center, and Old Pasadena.

In addition, PCC provides a shuttle service that connects from the main campus to the CEC on Foothill Boulevard. Non-teaching staff are required to park at the CEC facility and to use the shuttle for access to the main campus.

Circulation

Vehicular access to the Pasadena City College main campus parking facilities is via the parking lot driveways on Hill Avenue to the west, Del Mar Boulevard to the south and Bonnie Avenue to the east. Parking lot 8 is a handicap drop-off area located on Colorado Boulevard. Access to parking lots 9, 10 and 11 is provided from Holliston Avenue and Green Street. The following is a description of the parking lot access points for the main campus:

Lot 1 Driveways - There are two unsignalized driveways from parking lot 1 directly onto Hill Avenue at the western side of campus, north of Del Mar Boulevard and south of Colorado Boulevard.

Lot 2 Driveways - There is a gated driveway from staff parking lot 2 onto Hill Avenue at the western side of campus, north of Del Mar Boulevard and south of Colorado Boulevard.

Lot 3 Driveways - There are two driveways that access parking lot 3. One is an extension of Cordova Street on Hill Avenue at the east side of campus. It is a signalized driveway. The other is an unsignalized driveway on Del Mar Boulevard at the south side of the campus.

Lot 4 Driveway - There is an unsignalized driveway from parking lot 4 onto Del Mar Avenue at the south side of campus between Hill Avenue and Bonnie Avenue.

Lot 5 Driveways - There are two unsignalized driveways from parking lot 5 onto Bonnie Avenue at the east side of campus, north of Del Mar Boulevard and south of Colorado Boulevard.

Lot 6 Driveways - There is an unsignalized driveway from parking lot 6 onto Bonnie Avenue at the east side of campus, south of Colorado Boulevard.

Lot 7 Driveways - There is a gated driveway from staff parking lot 7 onto Bonnie Avenue at the east side of campus, south of Colorado Boulevard. Staff parking lot 7 provides internal access to student parking lot 6.

Parking

On-street parking conditions on the streets included in the traffic study are described in Table 3-26. For the four streets which bound the PCC main campus, the following conditions apply:

- Colorado Boulevard: 2-hour parking allowed between 9 a.m. and 6 p.m., both sides of the street.
- Bonnie Avenue: No parking on east side; some areas of hourly parking zones on west side.
- Del Mar Boulevard: Mostly no parking on north side; no parking during rush hours and no parking expect by permit in other hours on south side.
- Hill Avenue: No parking on the east side; 1-hour and 2-hour parking zones on west side.

PCC provides eight parking lots on the main campus, and three additional lots (Lots 9, 10 and 11) on Holliston Avenue. Parking Lots 1, 2, and 3 are surface parking areas located adjacent to Hill Avenue. Lot No. 4 is a 5-level parking structure, with access provided off Hill Avenue, through Lot 3. Lots 5, 6, and 7 are surface parking areas located adjacent to Bonnie Avenue. Lot 8 is a handicap drop off area located off Colorado Boulevard.

The total parking provided at the main campus and on Holliston is 4,653 spaces, broken out as follows:

Student Parking	3,790
Staff	734
Handicapped	77
Visitors	129

3-13.2 Environmental Impacts

a. Significance Criteria

Potential impacts to intersections in the study area were analyzed using the Intersection Capacity Utilization (ICU) method to determine the intersection volume-to-capacity (V/C) ratio and corresponding level of service for each study intersection. The ICU method is also used by the City of Pasadena to analyze intersection conditions. Although PACCD is not subject to local ordinances, the City of Pasadena's procedures for analyzing traffic impacts have been determined to be a reasonable method for analyzing the potential impacts of *Master Plan 2010* for this EIR.

A capacity of 1,600 vehicles per lane per hour was assumed in the capacity calculations, which is also consistent with the city's policy for analysis. At the intersection of Colorado Boulevard and Hill, the capacity of the lanes accommodating right turn vehicles was reduced to 1,200 vehicles per lane per hour in order to account for the effects of the heavy pedestrian movements at this intersection.

Table 3-30 describes the criteria for LOS and V/C Ratio used in the ICU method.

Table 3-30: Levels of Service Definitions		
Level of Service	**Volume/Capacity Ratio**	**Definitions**
A	0.000 – 0.600	EXCELLENT. No vehicle waits longer than one red light and no approach phase is fully used
B	0.601 – 0.700	VERY GOOD. An occasional approach phase is fully utilized; many drivers begin to feel somewhat restricted within groups of vehicles.
C	0.701 – 0.800	GOOD. Occasionally drivers may have to wait through more than one red light; backups may develop behind turning vehicles.
D	0.801 – 0.900	FAIR. Delays may be substantial during portions of the rush hours, but enough lower volume periods occur to permit clearing of developing lines, preventing excessive backups.
E	0.901 – 1.000	POOR. Represents the most vehicles intersection approaches can accommodate; may be long lines of waiting vehicles through several cycles.
F	> 1.000	FAILURE. Backups from nearby locations or on cross streets may restrict or prevent movement of vehicles out of the intersection approaches. Tremendous delays with continuously increasing queue lengths.

Source: Transportation Research Board, Highway Capacity Manual, Special Report 209, 1994.

The criteria of significance in this EIR for assessing if project-related increases in V/C ratio would result in a significant impact are shown in Table 3-31. These criteria are the same as those used by the City of Pasadena.

Table 3-31: Impact Criteria for Change in V/C Ratio	
Intersection Level of Service Under Current Conditions	**Project-Related Increase in V/C**
A	0.06
B	0.05
C	0.04
D	0.03
E	0.02
F	0.01

The criteria in this EIR for determining whether the change in average daily traffic (ADT) on a street segment would be a significant impact are shown on Table 3-32. These criteria are similar to those used by the City of Pasadena in that the threshold for physical mitigation measures is a 5 percent increase in ADT.

Table 3-32: Impact Criteria for Changes in Average Daily Traffic

ADT Growth on Street Segment	Required Traffic Mitigation
0.0% - 2.4% ADT Growth	Staff Review with City of Pasadena
2.5% - 4.9% ADT Growth	"Soft" Mitigation Measures: TDM, Rideshare, etc.
5.0% - 7.4% ADT Growth	Soft Mitigation Measures Physical Mitigation Measures
7.5% + ADT Growth	Soft Mitigation Measures Physical Mitigation Measures

b. Impacts Discussion

Construction Period Impacts

During the construction period, there is the potential for significant traffic and parking impacts to occur. These temporary impacts could arise as traffic patterns change as the access to/from and use of parking lots change over the construction period, during the delivery of construction materials, or if accidents occur. These temporary impacts are typical for construction projects in urban areas. Because of the number of variables that could occur during the years of construction, the locations and magnitudes of potential impacts cannot be forecasted. The normal means for dealing with temporary traffic, parking and circulation impacts is to develop a traffic management plan (or a series of plans) to outline ways in which traffic, material deliveries, and other matters related to construction will be managed during the various phase of construction. Such a plan can reduce the uncertainties that can contribute to traffic impacts. In addition, temporary impacts are usually not considered significant. Throughout the construction period, PACCD will develop and implement a series of traffic management plans to minimize the impacts of construction. The traffic management plans should be sufficient to ensure that traffic and parking impacts during the construction period are less than significant.

Long Term Impacts

The traffic impact analysis conducted for *Master Plan 2010* is included in Appendix C. The analysis compares the forecasted levels of service at each study location under cumulative conditions for 2010, both with and without the proposed project to determine potential impacts using the significance criteria shown in Table 3-30.

In order to properly evaluate potential impacts of the proposed project at full build-out of Master Plan 2010 on the area street system, it was necessary to develop estimates of future traffic conditions in the study area both with and without the project. Future (Year 2010) traffic volumes were first estimated for the study area without the project. These future forecasts reflect traffic increases due to general regional growth and traffic expected to be generated by other

specific developments in the vicinity of the project. They represent cumulative base (no project) conditions. The additional amount of traffic expected to result from implementation of the Master Plan was then estimated and separately assigned to the surrounding street system. The sum of the cumulative base and project-generated traffic represents the cumulative plus project conditions.

The cumulative base traffic projections reflect growth in traffic over existing conditions from two primary sources: growth in the existing traffic volumes to reflect the effects of overall regional growth and development outside the study area; and traffic generated by specific related projects located within, or in the vicinity of the study area. These traffic forecasts capture the expected increase in traffic in the area resulting from development projects approved by the City of Pasadena. The cumulative base traffic projections were estimated for this study based on the EMME/2 computer model developed for the analysis of the Pasadena General Plan Mobility Element by Kaku Associates, Inc. (Kaku Associates, Inc. performed the traffic analysis for this EIR.)

❑ Traffic Projections for Master Plan 2010

Determination of the traffic characteristics for the proposed *Master Plan 2010* involved a three-step process. This process included the estimation of project trip generation, trip distribution, and trip assignment.

Project Trip Generation: Future traffic volumes were projected for the Pasadena City College main campus (including the nearby campus parking lots) for full build-out of the campus Master Plan by 2010. For analysis purposes, an enrollment of 35,000 on-campus students was used. This figure is about 800 students higher than the forecast published in the Master Plan, and is used in order conduct a very conservative evaluation of impacts, with a margin for extra traffic to potentially occur.

The trip generation rate was derived through the empirical trip generation rate from the traffic study conducted by Kaku Associates, Inc. for Trade Tech College and Pierce College Master Plan in the Los Angeles metropolitan area. An empirical trip generation rate is necessary to reflect the unique traffic patterns that occur at non-residential college campuses. Students can and often do make more than one round trip per day. Using the empirical trip generation rate, 5,000 new FTE students would be expected to generate approximately 7,700 net new trips per day. Approximately 650 net new trips would occur during the morning peak hour, and 650 net new trips would result during the evening peak hour. Detailed data on the estimated number of trips associated with the proposed Master Plan project is summarized in Table 4 of the Traffic and Parking Study in Appendix C.

Trip Distribution: The geographic distribution of project traffic depends on several factors, including the layout of the street system, turning restrictions, and other travel characteristics. The distribution of trips approaching/departing the campus for this study is based on the EMME/2 computer model developed for the analysis of the Pasadena General Plan Mobility Element. The distribution of trips adjacent to campus is based primarily on the location of the parking facilities and the distribution of available parking spaces for each parking lot. Based on the location of parking facilities, the campus was divided into three zones and assigned with the new net trips. Zone 1 is located on the northwest part of campus, including Lots 1, 2, 9, 10, and 11; Zone 2 is

located on the southwest, including Lots 3 and 4; Zone 3 is located on the east, including Lots 5, 6, and 7. Since the Master Plan proposes to build a new parking structure to replace the surface parking on the southeast corner of the campus, the distribution of parking spaces will be different from the existing situation. Table 3-33 summarizes the parking changes and the percentage distributions of campus parking in 2010. The data about "Project Only" reflect the change in trips that are bound for parking facilities in the three zones. Zone 1 would have a 6 percent reduction, Zone 2 would have a 12 percent reduction, while Zone 3 would have a 17 percent increase associated with the operation of the proposed parking structure on Bonnie Avenue.

Table 3-33: Trip Assignments by Parking Distribution

Scenario	Zone	Parking Percent Assigned	Daily Trips	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Existing	1	17	7,880	479	186	665	426	239	665
	2	59	27,286	1,658	645	2,303	1,474	829	2,303
	3	21	11,034	671	261	931	596	335	931
	Total	*100*	*46,200*	*2,808*	*1,092*	*3,900*	*2,496*	*1,404*	*3,900*
Year 2010	1	11	5,988	5,988	364	143	505	323	182
	2	48	25,635	1,558	606	2,164	1,385	779	2,164
	3	41	22,278	1,354	537	1,881	1,204	677	1,881
	Total	*100*	*53,900*	*3,276*	*1,274*	*4.550*	*2,912*	*1,638*	*4,550*
Project Only	1	-6	-1,892	-115	-45	-160	-102	-57	-160
	2	-12	-1,652	-1,652	-100	-39	-89	-50	-139
	3	17	11,244	683	266	949	607	342	949
	Total	*0*	*7700*	*468*	*182*	*650*	*416*	*234*	*650*

Source: Kaku Associates, Inc., 2003.

After trips were assigned, which represent where traffic would be moving to and from with the proposed parking structure in place, an analysis was conducted to see how this shift in movement patterns would affect the intersections and street segments in the study area. This was done by comparing forecasts of 2010 conditions with *Master Plan 2010* projects in place against a forecast of conditions without those projects. The conditions for 2010 without the project are shown in Table B-2 in the Traffic and Parking Study in Appendix C. The conditions for 2010 with the project ate shown in Table B-4 of Appendix C.

Table 3-34 shows data for traffic conditions with/without the proposed Master Plan projects for the 20 intersections in the study area. This table also reflects the results of mitigation measures defined in Section 3-13.3. The column titled "Year 2010 Cumulative Base" shows the forecasted traffic that would occur in the area as a result of growth in background traffic volumes (i.e., the expected growth in traffic if no new sources and destinations were added) along with the growth in traffic from planned and approved projects (described in Chapter 2, Section 2-6). The column titled " Year 2010 Cumulative Plus Project" adds the traffic associated with *Master Plan 2010* to that 2010 Cumulative Base; comparing the two columns enables one to see the effect that the Master Plan projects would have on area traffic.

Table 3-34: Comparison of Year 2010 Traffic Conditions – Cumulative Base, Cumulative Base Plus Project, and Cumulative Plus Project with Mitigation – Peak Hour Levels of Service

Intersection	Peak Hour	Year 2010 Cumulative Base		Year 2010 Cumulative Plus Project				Year 2010 Cumulative Plus Project with Mitigation			
		V/C	LOS	V/C	LOS	Increase in V/C	Significant Impact ?	V/C	LOS	Increase in V/C	Significant Impact ?
1. Hill Ave & Maple St	AM	1.065	F	1.074	F	0.009	NO	[a]	[a]		
	PM	0.798	C	0.809	D	0.011	NO	[a]	[a]		
2. Hill Ave & Corson St	AM	0.895	D	0.906	E	0.011	NO	[a]	[a]		
	PM	1.060	F	1.068	F	0.008	NO	[a]	[a]		
3. Hill Ave & Walnut St	AM	0.941	E	0.949	E	0.008	NO	[a]	[a]		
	PM	1.066	F	1.075	F	0.009	NO	[a]	[a]		
4. Hill Ave & Colorado Blvd	AM	0.811	D	0.808	D	-0.003	NO	[a]	[a]		
	PM	0.786	C	0.818	D	0.032	NO	[a]	[a]		
5. Hill Ave& Green St	AM	0.467	A	0.495	A	0.028	NO	[a]	[a]		
	PM	0.616	B	0.614	B	-0.002	NO	[a]	[a]		
6. Hill Ave & Cordova St	AM	0.575	A	0.571	A	-0.004	NO	[a]	[a]		
	PM	0.659	B	0.649	B	-0.010	NO	[a]	[a]		
7. Hill Ave & Del Mar Blvd	AM	0.768	C	0.779	C	0.011	NO	0.738	C	-0.030	NO
	PM	1.020	F	1.058	F	0.038	YES	0.944	E	-0.076	NO
8. Hill Ave & California Blvd	AM	0.842	D	0.861	D	0.019	NO	[a]	[a]		
	PM	1.052	F	1.061	F	0.009	NO	[a]	[a]		
9. Bonnie Ave & Colorado Blvd	AM	0.396	A	0.591	A	0.195	YES	0.594	A	0.198	YES[b]
	PM	0.677	B	0.816	D	0.139	YES	0.772	C	0.095	YES[b]
10. Bonnie Ave & Del Mar Blvd	AM	0.740	C	0.889	D	0.149	YES	0.770	C	0.030	NO
	PM	0.767	C	0.801	D	0.034	NO	0.800	C	0.033	NO
11. Allen Ave & Maple St	AM	0.604	B	0.622	B	0.018	NO	[a]	[a]		
	PM	0.906	E	0.910	E	0.004	NO	[a]	[a]		
12. Allen Ave & Corson St	AM	0.537	A	0.542	A	0.005	NO	[a]	[a]		
	PM	0.731	C	0.737	C	0.006	NO	[a]	[a]		
13. Allen Ave & Colorado Blvd	AM	0.763	C	0.797	C	0.034	NO	0.795	C	0.032	NO
	PM	1.028	F	1.038	F	0.010	YES	1.037	F	0.009	NO
14. Allen Ave & Del Mar Blvd	AM	0.899	D	0.937	E	0.038	YES	0.840	D	-0.059	NO
	PM	0.861	D	0.894	D	0.033	YES	0.859	D	-0.002	NO
15. Allen Ave & California Blvd	AM	0.885	D	0.905	E	0.020	NO	[a]	[a]		
	PM	0.957	E	0.971	E	0.014	NO	[a]	[a]		
16. Lake Ave & Colorado Blvd	AM	0.930	E	0.929	E	-0.001	NO	[a]	[a]		
	PM	0.938	E	0.943	E	0.005	NO	[a]	[a]		

Table 3-34: Comparison of Year 2010 Traffic Conditions – Cumulative Base, Cumulative Base Plus Project, and Cumulative Plus Project with Mitigation – Peak Hour Levels of Service

Intersection	Peak Hour	Year 2010 Cumulative Base		Year 2010 Cumulative Plus Project				Year 2010 Cumulative Plus Project with Mitigation			
		V/C	LOS	V/C	LOS	Increase in V/C	Significant Impact ?	V/C	LOS	Increase in V/C	Significant Impact ?
17. Lake Ave & Del Mar Blvd	AM	0.806	D	0.814	D	0.008	NO	[a]	[a]		
	PM	0.935	E	0.954	E	0.019	NO	[a]	[a]		
18. San Gabriel Blvd & Foothill	AM	0.798	C	0.806	D	0.008	NO	[a]	[a]		
	PM	0.914	E	0.918	E	0.004	NO	[a]	[a]		
19. San Gabriel Blvd & Del Mar	AM	0.722	C	0.740	C	0.018	NO	[a]	[a]		
	PM	0.955	E	0.974	E	0.019	NO	[a]	[a]		
20. Sierra Madre & Del Mar	AM	0.800	C	0.815	D	0.015	NO	[a]	[a]		
	PM	0.870	D	0.878	D	0.008	NO	[a]	[a]		

Notes:

[a] =No mitigation required.

[b] = Impact still exists, but operates at acceptable level.

Source: Kaku Associates, Inc., 2003.

The forecast indicated that the following 12 study intersections would operate at LOS E or F during one or both peak hours under year 2010 cumulative base conditions (i.e., without the proposed Master Plan projects):

- Hill Avenue & Maple Street
- Hill Avenue & Corson Street
- Hill Avenue & Walnut Street
- Hill Avenue & Del Mar Boulevard
- Hill Avenue & California Boulevard
- Allen Avenue & Maple Street
- Allen Avenue & Colorado Boulevard
- Allen Avenue & California Boulevard
- Lake Avenue & Colorado Boulevard
- Lake Avenue & Del Mar Boulevard
- San Gabriel Boulevard & Foothill Boulevard
- San Gabriel Boulevard & Del Mar Boulevard.

When the effect of adding in the proposed Master Plan projects was analyzed, it was found that project traffic would result in V/C increases large enough to result in significant impacts at five of the 20 study intersections during one or both of the peak hours. Two of these intersections (Bonnie Street/Colorado Boulevard and Bonnie Avenue/Del Mar Boulevard) would operate at acceptable levels of service (LOS D or better), and the other three intersections (Hill Avenue and Del Mar Boulevard, Allen Avenue and Colorado Boulevard, and Allen Avenue and Del Mar Boulevard) are forecast to operate at an unacceptable LOS E or worse during a peak hour. Based on the impact criteria set out in Table 3-30, those intersections would require mitigation. After mitigation, impacts at these intersections would be less than significant.

In addition to analyzing impacts at intersections, 10 street segments (listed in Table 3-13.3) were also analyzed to assess the change in ADT which would occur with implementation of *Master Plan 2010*. The details of the assessment are shown in Table 7 of the Traffic and Parking Study in Appendix C. The results of the analysis are that 3 of the 10 street segments showed an increase in ADT in excess of the significance criterion for physical mitigation listed in Table 3-32, as follows.

- Colorado Boulevard between Sierra Bonita Avenue and Bonnie Avenue (7.1 % increase)
- Del Mar Boulevard between Bonnie Avenue and Allen Avenue (5.0% increase)
- Allen Avenue between Del Mar Boulevard and California Boulevard (5% increase).

All other segments had increases in ADT for which soft mitigation measures would reduce impacts to less than significant levels. Proposed soft and physical measures are defined in Section 3-13.3.

3-13.3 Mitigation Measures

a. Construction Period

Since there is the potential for significant impacts during the construction period, the following preventative measure will be implemented.

(REVISED) TRC-1: During the construction period, PACCD will periodically develop and implement traffic management plans. The plans will address the length and timing of any street or driveway closures, detours, changes in access to campus facilities, and any necessary coordination with police and fire departments. The plans will address construction staging and access, both on the PCC campus and in areas adjoining the campus. The plans will also include means for notifying the public about the plan, which may include newspaper notices, signs, mailings, and/or postings on the websites of PCC and other organizations. The plans will include identification of a contact person and means for contacting that person at PCC. The traffic management plans will be submitted to the City of Pasadena (Transportation and Public Works Departments) for approval or concurrence on those elements of the plan which affect City streets or activities outside of the PCC boundary.

b. Long Term Impacts

Transportation Demand Management Measures

PACCD will implement the following Transportation Demand Management Measures to address forecasted traffic impacts on street segments.

TDM-1: Rideshare Program. PCC has implemented a rideshare program for employees. The rideshare matching service provided by MTA will be extended to students in the near future.

TDM-2: Free Shuttle Service. A free shuttle is available for students wishing to travel between the Community Education Center (CEC) at 3035 E. Foothill Blvd and the PCC main campus, including PCC students parking at CEC. The shuttle runs along Foothill Blvd, Bonnie Avenue and Colorado Blvd and departs approximately every 30 minutes from each campus, between 7 a.m. and 10:30 p.m. weekdays. The shuttle will also stop at the Allen Avenue Gold Line light rail station after it opens in 2003.

TDM-3: Staff Shuttle. PCC non-teaching staff do not park on the main campus or at the Holliston Street lots. Free shuttle service is provided between remote parking at the CEC on Foothill Boulevard and the main campus. Additional remote parking, covered by shuttle service, is planned for a site on Kinneloa Street.

TDM-4: Public Transit. To encourage students to take public transit, PCC is cooperating with MTA to develop more programs for students, including discount monthly passes and custom bus routes.

TDM-5: Parking Access Management. To increase traffic safety and to reduce project traffic impacts on Bonnie Avenue due to the new parking structure, the installation of a 3-way stop sign is proposed at the intersection of the new parking structure exit driveway and Bonnie Avenue.

Implementation of these TDM is expected to result in a 3 percent reduction in ADT.

Intersection Improvements

The following changes to intersections would be made, subject to the concurrence of the City of Pasadena as owners of the streets:

IIM-1: Hill Avenue & Del Mar Boulevard – Widen northbound and southbound legs of the intersection to provide dual left-turn lanes at the southbound approach on Hill Avenue.

IIM-2: Bonnie Avenue & Colorado Boulevard – Restripe the northbound approach lane to provide dual left-turn lanes to improve the intersection level of service from D to C during the PM peak hour. After this change, this intersection is still impacted, but it will operate at an acceptable level (LOS A for AM peak and LOS C for PM peak hour).

IIM-3: Bonnie Avenue & Del Mar Boulevard – Restripe westbound approach lane on Del Mar Boulevard to provide a right-turn lane and change the existing right-through lane to through-only at the westbound approach. This requires curb parking prohibition along the north side of Del Mar Boulevard.

Add a left turn arrow to control the eastbound the northbound left turn movement. Work with the City to monitor the need to lengthen the eastbound to northbound left turn lane. The lane can be lengthened from its existing 60-foot length to 140 feet by eliminating two on-street parking spaces along the south curb. The elimination of the remaining on-street space on the south curb would allow Del Mar to be striped with a two-way-left-turn lane between Bonnie and Sierra Bonita Avenue. The need for the left turn lane extension would be monitored by the City after the opening of the Bonnie parking structure. If required by the City, PCC would restripe the street to provide the longer left turn lane or the continuous two-way-left-turn lane.

IIM-4: Allen Avenue & Colorado Boulevard – Use campus TDM program described above to reduce total net trips by an estimated 3 percent during the AM and PM peak hour.

IIM-5: Allen Avenue & Del Mar Boulevard – Widen southbound approach on Allen Avenue to provide one right-turn lane and change the existing right-through lane to through-only at the southbound approach. A 3 percent reduction of total net trips by TDM program also applies to this intersection.

IIM-6: Hill Avenue & Colorado Boulevard – Although not specifically impacted by the new traffic added by the Master Plan implementation, the traffic signal at this intersection should be modified to add left turn arrows on all four approaches. Protective/permissive left turn phases would improve the overall operation and safety of the intersection.

3-13.4 Unavoidable Significant Adverse Impacts

The effect of implementing the above mitigation measures would be the reduction of impacts for the three street segment where impacts were identified (Colorado Boulevard between Sierra Bonita Avenue and Bonnie Avenue; Del Mar Boulevard between Bonnie Avenue and Allen Avenue; and Allen Avenue between Del Mar Boulevard and California Boulevard) to less than significant levels. The measures would also reduce identified impacts at four intersections to less than significant levels (Hill Avenue/Del Mar Boulevard, Bonnie Avenue/Del Mar Boulevard; Allen avenue/Colorado Boulevard; Allen Avenue/ Del Mar Boulevard).

After mitigation, the intersection of Bonnie Avenue and Colorado would have a V/C increase of 0.198 in the AM Peak Hour, which exceed the criterion of an LOS A intersection (0.06) and have a V/C increase of 0.095 in the PM Peak Hour, which exceeds the criterion of an LOS C intersection (0.04). However, the traffic analysis indicates that the intersection would function at LOS A in the AM Peak Hour and at LOS C in the PM Peak Hour. Because the intersection will function at high levels of service (LOS A and LOS C), PACCD has determined that the residual V/C impact would not be a significant impact. The City of Pasadena typically does not require mitigation when intersections function at these levels and is expected to concur with PACCD's determination.

3-14 VISUAL RESOURCES

This section describes the visual setting of the PCC main campus and provides an evaluation of the potential impacts of the proposed master plan to PCC's visual quality and character, and the effect of artificial light and shading/glare in the project area. It should be note that the descriptions of visual resources include qualitative value judgments, which may differ from those of individual readers. A discussion of feasible measures to mitigate or reduce significant effects on the visual environment is also provided.

3-14.1 Environmental Setting

PCC is located in the east-central portion of the Pasadena community in what is sometimes referred to as the Rose Villa neighborhood. The main campus is bordered on the north by Colorado Boulevard; on the west by Hill Avenue; on the south by Del Mar Boulevard; and on the east by Bonnie Avenue.

The main campus is composed of a tight central cluster of educational and administrative buildings, bordered by athletic fields, surface parking lots and parking structures. Approximately 60 percent (roughly 31 acres) of the campus is currently occupied by academic buildings and ancillary green space (e.g., landscape planters, trees, lawn, walkways), while approximately 10 percent (roughly 6 acres) is improved as athletic fields (baseball field, football field/track, soccer fields, fenced tennis courts). The remaining acreage (roughly 16 acres) is devoted to parking—approximately 30 percent of the total acreage.

In order to facilitate a description of the existing visual setting and evaluation of visual impacts, the Pasadena City College campus has been subdivided into three "landscape units," or discussion focus areas. Each landscape unit is defined by its differences in visual resources, including natural and built features. The landscape units are as follows:

- Landscape Unit A – Essentially the northernmost buildings on campus, the lawn and landscape features seen along Colorado Boulevard, including, Harbeson Hall (Building L/HH), Buildings C, D and E, and Shatford Library.

- Landscape Unit B – Essentially the core of the campus including the Campus Center Building (CC) and all buildings framing the Quad, the Sculpture Garden and Commons, including Buildings FB, FC, G, GM, J, R, Z, W, M, T, U and V.

- Landscape Unit C – Essentially the outside western, southern and eastern borders of the campus, including the stadium/track, tennis courts, and Parking Lots 1-7 inclusive.

In the following subsections, each landscape unit is analyzed with reference to viewer sensitivity in terms of visual quality and character, scenic vistas and views, shading/glare, artificial light, and the presence of special visual attributes.

In addition to understanding the physical features of the visual environment at PCC discussed in the following subsections, it is also useful to understand PCC's visual environment within the

wider context of the city of Pasadena. Although PCC is not legally subject to compliance with the city's General Plan or specific plans, PCC staff does participate on planning committees to discuss issues of mutual interest. From the city's perspective, and as a way the campus comprises the College District portion of the City of Pasadena East Colorado Boulevard Specific Plan. Aesthetic and cultural resource issues, as seen from a citywide perspective, are part of the 1993 EIR for the update to the Pasadena Land Use and Mobility Elements of the General Plan. Preservation and enhancement of visual resources are articulated in a series of objectives within the Land Use and Mobility Elements. The policies include:

- Preservation of the character and scale of Pasadena's established residential neighborhoods.
- Preservation of Pasadena's traditional design character and scale by requiring that new development be both compatible with the scale of adjacent development and protect the privacy and access to light and air of surrounding properties.
- Shaping development to improve the environment for the public, while reflecting the distinctiveness of the region, locality, and special characteristics of the existing design fabric in the immediate surroundings.
- Promoting the stewardship of Pasadena's natural environment, including the use of native, water conserving and regionally appropriate landscaping.
- Promoting the protection of historic and cultural resources and the adaptive reuse of historic buildings.

The Pasadena General Plan identifies three primary categories of visual resources, including the city's numerous historic buildings; mature parkway trees; and views of the San Gabriel Mountains along some of the key north-south streets (i.e., Lake, Fair Oaks, and N. Orange Grove Avenues). While there are policies in the Pasadena General Plan for designation of scenic corridors, only one street or corridor has been officially adopted as a scenic highway (i.e., Angeles Crest Highway). None of the streets adjoining Pasadena City College is deemed to be nor officially designated as a scenic corridor or highway. Nor has any other type of noteworthy scenic resource been officially designated and/or recommended for protection by city ordinance.

Along with the preservation of neighborhood design character and the protection of mature parkway trees, the preservation and protection of historic and cultural resources is one the key goals expressed in the City of Pasadena General Plan. The California Office of Historic Preservation Historic Property Data file and City of Pasadena's list of designated landmarks identify a number of historic resources on or near the PCC campus, including five buildings on the PCC campus that are deemed historically significant and are potentially eligible for the National Register, including Buildings C, D, E, HH, and O/P.

a. Visual Quality and Character

The visual quality and character of Pasadena City College is defined by the natural (geologic, topographic, biologic) and built (classrooms, buildings, recreational) environment. Visual quality is evaluated based upon the relative degree of vividness, intactness, and unity. Overall,

Pasadena City College is considered to have a moderately high visual quality because a number of the natural and built features within it are considered vivid and relatively intact, and exhibit a moderately high degree of visual unity.

The visual quality and character of each landscape unit is described as follows:

Landscape Unit A – Colorado Boulevard Campus Interface

This landscape focus area consists of the five buildings and landscaped open space that front on to Colorado Boulevard, including (from east to west) Shatford Library, Buildings E, C, D and HH/L. This portion of the campus has a stately, formal design character embodied by the broad lawn areas, and the axial spatial arrangement of Buildings E, C and D in relation to one another and to the Mirror Pools. This axial site planning is one of the principal unifying visual elements of the campus bordering Colorado Boulevard, and is underscored by the double rows of carrotwood trees on each lateral side of the Mirror Pools, as well as the placements of mature pine trees, and Canary Island and Mexican fan palms (see Figure 3-15). The core buildings in this grouping (Buildings E, C and D) include the three oldest buildings on campus. Originally constructed in 1912-13, all three were completely remodeled during 1935 in response to the 1933 Earthquake (Building C was rebuilt). The remodeled buildings were designed in the WPA Moderne style—an architectural style popularly employed for public buildings during the 1930s, and characterized by symmetrical massing, a melding of flattened, abstracted Classical Revival with Art Deco ornamentation, and recessed vertically-banded window groupings (see Figure 3-16). Because of their architectural quality and historical associations these buildings embody the early history of PCC as an educational institution in Pasadena, and were previously noted in the City of Pasadena Architectural and Historical Resources Inventory of Colorado Boulevard (1987) as being significant historic resources. They appear eligible for inclusion on both the National Register of Historic Places and the California Register of Historical Resources. The landscape design in the central portion of Landscape Unit A is the work of noteworthy landscape architect, Charles Gibbs Adams. Landscape at the eastern end of the unit, near the library, is less formal in appearance. Landscaping at the western end of the unit is also less formal.

The key visual resources in Landscape Unit A include its architectural design (Buildings L/HH, C, D, E, and Shatford Library), and its landscape design and site planning. All buildings in this focus area are well maintained and attractive. From a qualitative perspective, views in this location are considered vivid and intact and were found to exhibit a high degree of visual unity. Moreover, because of their visibility from Colorado Boulevard, the visual resources comprising Landscape Unit A are likely to be considered significant by the residents of Pasadena.

Figure 3-15: Building C Mirror Pools

Figure 3-16: Buildings C to D Looking Southwest

Landscape Unit B – Campus Core

Landscape Unit B consists of the landscaped outdoor areas and all the buildings at the core of the campus. These areas are buffered from outside the campus by the buildings themselves, and downward topographic changes north-to-south and west-to-east. Consequently, although fleeting views of the tallest buildings on campus framing these open spaces may be glimpsed from off-campus, only persons on the PCC campus see the lower-rise buildings and affiliated outdoor areas. Three loosely rectangular-shaped sub-areas comprise this landscape focus area, including the Sculpture Garden (bounded by the east wall of Building C, Building E, Shatford Library, Armen Sarafian Hall, and Building V); the Quad (bounded by Buildings C, D, L, and R and the Campus Center, and the south walls of Buildings D and L/HH); and the Commons (bounded by Buildings I, R, Z, V, T, the Hutto-Patterson Gym, the Aquatic Center, and Building FB). See Figure 3-17 through Figure 3-20.

The Sculpture Garden is almost completely open to the sky, with few trees. It features a broad smooth concrete promenade that links the adjoining buildings with Parking Lots 5 and 6; a watercourse defined by low, concrete borders; and a raised sitting area/ramada in the plaza in front of Shatford Library. The topography noticeably slopes downward from north to south. In contrast with Landscape Unit A, this focus area has few historic features, and projects instead a modernity of feeling. Views are generally limited to the area within Sculpture Garden itself. The space is intended to be physically traversed (i.e., wide concrete walkways) and functions differently from the landscape features in Landscape Unit A, which are primarily intended to be looked at and appreciated intellectually (viz., wide expanses of lawn, the Mirror Pools). The unpainted, light gray-colored walkways and unpainted concrete forms are visually dominant. From a qualitative perspective, views in this sub-area are considered vivid and cohesive (see Figure 3-21).

The Commons, like the Sculpture Garden, is a large rectangular space almost entirely open to the sky, functioning as a major pedestrian link between the southern and northern portions of the campus. It features broad, burnished unpainted gray concrete walkways that accommodate heavy foot traffic. The Commons links the adjoining buildings with the Student Parking Structure (Parking Lot 4), Robinson Stadium, the Aquatic Center, Building FS, FB and FC, the Hutto-Patterson Gym and academic buildings on the north and east. The landscape design incorporates large, slightly mounded expanses of lawn dotted with large rocks and small, recently planted trees (e.g., Crepe Myrtle and Koelreuteria) of an ornamental nature. Reflecting its recent development, there are almost no mature trees in this sub-area. A casual dining area adjoins the space on the west (abutting the pool). It is an important gathering place on campus, and is designed to look out over the adjoining open space. At present, the landscape here has a formal character that is intended to be looked at and appreciated intellectually. Views are generally limited to the area within the Commons itself. From a qualitative perspective, the views in this sub-area are not vivid and display only moderate visual unity (see Figure 3-22).

Figure 3-17: Sculpture Garden

Source: Myra L. Frank & Associates, Inc., 2002.

Figure 3-18 : The Quad Looking West

Source: Myra L. Frank & Associates, Inc., 2002.

Figure 3-19: The Quad Looking East

Source: Myra L. Frank & Associates, Inc., 2002.

Figure 3-20: Commons Looking North to Building R

Source: Myra L. Frank & Associates, Inc., 2002.

Figure 3-21: Sculpture Garden and Ramada

Source: Myra L. Frank & Associates, Inc., 2002.

Figure 3-22: Commons Looking Southwest

Source: Myra L. Frank & Associates, Inc., 2002.

Due to the higher topography of the Hill Avenue and Colorado Boulevard sides of the campus, The Quad is one of the most precisely defined outdoor spaces at PCC. From a qualitative perspective, it is an area with a moderately high level of vividness and visual unity. Stairs and outdoor sitting areas look out over this sub-area on the west and north. The area is moderately (rather than densely) landscaped with lawn, mature trees (pines, carrotwood, Brisbane Box) that provide shade, but also features newer hedges and Fescue grasses providing heightened visual interest (form, texture). Because of its location adjoining the Campus Center and key academic buildings, The Quad is heavily utilized. The landscape is designed for active use and heavy foot traffic. Views are generally limited to the area within The Quad itself (see Figure 3-23).

Landscape Unit C – Parking Lots, Stadium, Along on the Campus Edges

This landscape focus area consists of all six numbered parking lots and the existing parking structure (Lot No. 4), Robinson Stadium, and the tennis courts that form the outside border of the campus on the west, south and east sides. The asphalt-aggregate pavement in the parking lots is visually dominant on the west and east sides of campus. This hardscape is "softened" visually by parking lot shade trees and the low walls and hedges that serve to partially screen the parked vehicles from the adjoining streets. Mature trees (e.g., magnolias, live oak and carrotwood) have been planted roughly 20 feet on center around much of the perimeter of PCC. In Parking Lots 5-6 on the east (Bonnie Avenue) side of campus a majority of the mature trees are live oak trees that are approximately 20-30 feet in height. These trees provide shade for the parking lots and serve to partially screen the campus from view along the adjoining streets (see Figure 3-24). From a qualitative perspective, in general views within the parking areas looking toward the core of the campus lack vividness and display only nominal visual unity.

b. Scenic Vistas and Views

For the purposes of this proposed project, scenic vistas and views are determined by their perceived importance to a particular viewer or set of viewers. The quality of a scenic vista and view is evaluated by the length of the viewer's exposure to that view as well as the viewer's sensitivity. In general, the length of exposure is determined by the proximity of the viewer to the viewshed, viewing duration, and the overall impression of the view on the viewer. Viewer sensitivity is based on the visibility of resources in the landscape, the number and type of viewers, the frequency of viewing opportunities, and the duration of viewing. Viewer activity, awareness, and expectation also influence visual sensitivity.

Sensitivity depends upon the length of time the viewer has access to a particular view. Residential viewers typically have extended viewing periods and are often concerned about changes in views from their homes. Therefore, visual sensitivity is considered to be high for neighboring residential areas. Visual sensitivity is considered to be less important for commuters and other people driving along surrounding streets. Views from vehicles are generally more fleeting and temporary, but can be considered important. Given the fact that Pasadena is a significant travel and tourism destination, and because of PCC's location on the annual Rose Bowl Parade route, views of the campus from Colorado Boulevard should be considered important.

Figure 3-23: Quad Looking East

Source: Myra L. Frank & Associates, Inc., 2002.

Figure 3-24: Oak Tree Parking Lot 6 Looking North

Source: Myra L. Frank & Associates, Inc., 2002.

The importance of a view to viewers is related to the position of the viewers relative to the resource and the distinctiveness of a particular view. The visibility and visual dominance of landscape elements are usually described with respect to their placement in the viewshed.

No scenic vistas and views at PCC or the adjoining neighborhood are identified in College District portion of the East Colorado Boulevard Specific Plan, or in the Pasadena General Plan. In addition, the nearest designated scenic highway is a portion of Angeles Crest Highway, which is located several miles north in the San Gabriel Mountains. Although there are no designated scenic vistas and highways in the immediate vicinity of campus, important views and view corridors within the campus and from the areas adjacent to the campus are described below.

Landscape Unit A - Colorado Boulevard Campus Interface

Views of the physical structures in Landscape Unit A (Shatford Library, Buildings C, D, E and HH/L) from off-campus are from along that segment of Colorado Boulevard located between Bonnie and Hill Avenues. Views onto this portion of the campus are relatively unimpaired by the mature parkway (magnolia) trees along the street. The formal site planning, attractive, unified architectural treatment and color schemes, the wide expanse of lawn, and the Mirror Pools are the key visual elements in this landscape focus area (see Figure 3-25 and Figure 3-26). Views of the Mirror Pools and the flanking double allee of carrotwood trees are likely to be considered important by the community and by PCC students and staff. Off-campus views from within this landscape focus area are somewhat fragmented due to the height and breadth of the parkway trees on both sides of Colorado Boulevard. Views of the San Gabriel Mountains to the north and of Calvary Community Church—a City of Pasadena Landmark on the north side of Colorado Boulevard— are likely to be important ones for PCC students and staff; while views of the commercial buildings along the north side of Colorado Boulevard would not be considered important (see Figure 3-27).

Because views by pedestrians from within Landscape Unit A are somewhat fragmented due to staggered building placements, the most prominent views of this landscape focus area are from outside the campus along Colorado Boulevard. Also, the nearly continuous "wall" formed by these buildings and their large setback from Colorado Boulevard screen the buildings behind them (in Landscape Unit B) to the south from view.

Landscape Unit B – Campus Core

The core area of the campus is framed by buildings on all four sides. Views within each of the sub-areas (Sculpture Garden, Commons, and The Quad) are of landscape features and campus buildings. In the Sculpture Garden and Commons there are intermittent views of the mountains to the north; within the Quad views of the mountains are nearly completely precluded by the buildings (see Figure 3-28 and Figure 3-29).

Figure 3-25: Campus Front Lawn Area Near Mirror Pool

Source: Myra L. Frank & Associates, Inc., 2002.

Figure 3-26: Campus Front Lawn Look Northeast

Source: Myra L. Frank & Associates, Inc., 2002.

Figure 3-27: View Toward Calvary Community Church

Source: Myra L. Frank & Associates, Inc., 2002.

Figure 3-28 : The Quad Looking Northeast

Source: Myra L. Frank & Associates, Inc., 2002.

Figure 3-29: The Quad Looking West

Source: Myra L. Frank & Associates, Inc., 2002.

Landscape Unit C – Parking Lots, Stadium Along on the Campus Edges

In contrast to Landscape Unit B, the parking lots, parking structure, and stadium that border of the campus on the east, south and west are largely open to view from the abutting streets, affording both views onto campus and from the campus outward to the adjoining neighborhood. Views of the parking lots are currently "softened" by the existence of numerous broadly spreading mature trees—typically 15-25 feet in height—along the border of the campus. In addition, low concrete block walls and/or hedges serve to screen the lower halves of the parked vehicles and some of the headlight/taillights at dusk and at nighttime from view (see Figure 3-30). Residential properties have views of the campus from the south and east, while chiefly institutional uses (i.e., two churches and the public library) have views of the campus from the west. The residential viewer group would be considered as the most likely to be sensitive both to current conditions and to any potential changes to views resulting from the project. Views by staff and students of the adjoining neighborhood are considered less sensitive in nature since it is generally expected that their attention will likely be focused on getting to and from classes, driving, parking and other school-related preoccupations. Their views of the neighborhood are often fleeting while they commute into and off campus and park their vehicles, bicycles, etc (see Figure 3-31).

Figure 3-30: Hedges and Screening Walls—Bonnie Ave. Looking Northwest

Source: Myra L. Frank & Associates, Inc., 2002.

Figure 3-31: View Toward Tennis Courts and Staff Parking Lot 2

Source: Myra L. Frank & Associates, Inc., 2002.

c. Shading/Glare

This subsection describes the existing shading/glare conditions for all three of the landscape units of the PCC main campus.

Natural and built features at PCC do not currently create shadow patterns or glare that negatively affect any on-campus or off-campus properties. With the exception of Student Parking Lot (Parking Structure) 4 and the Stadium, all buildings are located a considerable distance away from the perimeter of the campus and thus do not cast shadows that extend off campus into the adjoining neighborhood. The mature trees that exist around the perimeter of the campus partially screen views of campus buildings and of parking lots, provide shade for pedestrians, and reduce some of the glare that might be generated by parked vehicles. Moreover, no scenic corridors have been identified in proximity to the campus that would potentially be affected by light or glare.

Glare, which is generally the result of sharply reflected light generated from highly finished surfaces, is minimal on campus because of the non-reflective materials used on building exteriors. Essentially all campus buildings have exterior surfaces, such as concrete, brick, and textured concrete block painted/fabricated with neutral colors that have a low potential for glare. Windows of PCC buildings do no generally include large expanses of glass, so they reflect minimal amounts of glare.

d. Artificial Light

This subsection describes the existing ambient light conditions within and adjacent to the PCC main campus. Current nighttime lighting levels vary depending upon the location and type of light fixture. The heaviest concentration of exterior lighting on campus occurs within Landscape Units B and C near campus buildings and in parking areas. Nighttime lighting is provided by a variety of different light standards of differing ages, and generally consists of soft light directed downward to pathways. Parking lots are illuminated by lighting atop tall poles (approximately 20 feet in height). Parking lot lights are shielded so that light is directed downward, rather than horizontally. Automobile headlights of vehicles in parking lots add nominal evening illumination. Properties along both Bonnie and Hill Avenues are currently subject to headlights of vehicles entering and exiting parking lots along those streets. Except when the Stadium is illuminated at night, PCC's exterior light fixtures, interior lighting from inside buildings, and vehicle headlights do not appear to create noticeable spillover onto adjacent streets and neighboring properties since these streets also are subject to light emitting from overhead street lights.

3-14.2 Environmental Impacts

a. Significance Criteria

For the purposes of analysis, the proposed PCC Master Plan would have a significant effect on the aesthetic environment if it:

- substantially degrades the existing visual character or quality of the campus and its surroundings;
- substantially damages significant visual resources such as mature trees and historic buildings;
- would have a substantial adverse affect on a scenic vista or obstruct scenic views;
- would create substantial shade/shadows that affect shadow-sensitive uses (residences or parks);
- creates substantial artificial light that would adversely affect nighttime views of the area, or;
- would result in substantial glare that would adversely affect sensitive views in the area or create potential hazards to motorists.

b. Impacts Discussion

The elements of the Master Plan which involve renovation of existing buildings would not be likely to yield adverse visual impacts since the overall exterior image of those buildings would remain unchanged. Those buildings that would be replaced are not expected to have substantial visual impacts since the replacement structures would be of similar scale as the buildings, which they are replacing, so that the overall visual context would remain the same.

The proposed parking structure on the east side of the campus has the greatest potential to create a visual impact, since it is a large structure that would be placed on an area currently used for surface parking. Particular aspects of the potential impacts of the parking structure are discussed below under Landscape Unit C, Shading/Glare and Artificial Light.

Two important components of the Master Plan address the visual image of the campus. These include the establishment of East Campus and West Campus Gateways and the proposed enhancement of landscaping, hardscape and signage. The new gateways would be major combined pedestrian/vehicular entrances creating student drop-off areas on the east and west side of the campus, as well as temporary bus parking on the eastside of the campus for bands and athletic teams (adjoining the stadium). The objective of the proposed landscape, hardscape and signage improvements is to enhance the attractiveness and visual unity of the campus.

c. Visual Quality, Character, and Resources

Implementation of the proposed Master Plan would include the following categories of work:

- the renovation of existing buildings
- the demolition and replacement of structures
- building a new parking structure and practice athletic field on a current parking area
- various utility and infrastructure improvements
- landscape, hardscape and signage improvements.

The total building area on campus would not greatly increase since the construction program consists primarily of reconfiguring the space within existing buildings and new buildings for the Performing and Communications Arts Division and the Visual Arts and Media Studies Division and Industrial Technology Division which would occupy footprints similar to the buildings that now on those house those programs. The total change in square footage for the renovated and new academic buildings is about 5,000 square feet. The Master Plan also calls for the construction of a new five floor parking structure (the one level occurring below grade) on the eastern portion of the campus, mid-way along Bonnie Avenue between Colorado Boulevard and Del Mar Boulevard.

Landscape Unit A - Colorado Boulevard Campus Interface

No new buildings are proposed within Landscape Unit A. No renovation work is slated for the existing buildings and that all key landscaping features (viz., the Mirror Pools, sidewalk placement, and mature trees) would be preserved. No significant effect to aesthetic resources within Landscape Unit A is therefore anticipated.

Landscape Unit B – Campus Core

Three replacement buildings are proposed within Landscape Unit B to house the Campus Center; Performing and Communications Arts Division and the Visual Arts and Media Studies Division; and the Industrial Technology Division. Buildings T, K, and CC are proposed for demolition, with a replacement structure to be built on each site. Each of the affected buildings is less than 50 years old and none of the buildings appears to be architecturally or historically significant. It is expected that new buildings would be designed to be compatible with existing buildings with respect to overall design character, massing, scale, materials and color. The proposed replacements would be of similar scale and massing as existing buildings, so the overall visual context of the landscape unit would not change. Renovation and infrastructure upgrades of a majority of the buildings within the landscape focus area are also proposed.

Retrofit of the Boiler House (Building FB) and conversion of a portion of the building into a 99-seat theater is also proposed. This building is considered a significant architectural resource,

which is potentially eligible for the California Register of Historical Resources. Since it is anticipated that the proposed renovation work to the Boiler House would not adversely affect its character-defining features, no significant effect to this aesthetic resource within Landscape Unit A is anticipated.

Landscape Unit C – Parking Lots, Stadium Along on the Campus Edges

The Master Plan calls for establishment of campus gateway features on the Hill Avenue and Bonnie Avenue sides of the campus. It is expected that the new gateway features will be designed to be compatible with existing campus design themes, characteristics, massing, scale, materials and color. Since the new gateways would be compatible with the overall image of PCC, their creation would not be a significant (adverse) impact.

Along Hill Avenue, the proposed Gateway is a landscape feature, so the quality of views would improve. Accordingly, this proposed gateway would not be a significant vial impact and no mitigation is required.

Because the proposed five-level parking structure will be sited mid-way between Del Mar and Colorado Boulevards, the visual impact resulting from its height and size to residential neighborhood south of Del Mar Boulevard will be partially mitigated. The parking structure would be shielded from views from neighborhoods to the south of Del Mar Boulevard by the continued existence of mature trees in the parkway along Del Mar and Bonnie and by large-scale plantings around the proposed parking structure that would be included as part of its construction. The plantings around the parking structure are likely to be sufficient in size and density to mask a majority of the parking structure from direct view.

Forty-seven mature trees are estimated to be removed from the current surface parking area (Lot No. 5) in order to provide space for the proposed parking structure and athletic field. The removal of several of the existing trees could be a potentially significant visual effect. However, as noted above, PCC plan for the parking structure includes plantings around the proposed parking structure, so the loss of existing trees is off-set within the proposed Master Plan element and no additional mitigation for the loss of trees in the parking lot would be needed. As noted in the Biology section, PCC will voluntarily ensure that trees that may be removed due to implementation of the Master Plan will be replaced on the main campus at a minimum ratio of 2 to 1.

Residences on the east side of Bonnie would be most directly exposed to changes in their view toward PCC. The current view is of street trees, behind which are parking lots, and then PCC's various buildings. With implementation of the Master Plan, those views would change to include the new parking structure at mid-block, the proposed East Gateway elements on either side of the parking structure, and a new athletic practice field as the southern end of the block. The proposed Gateway is a landscape feature, so the quality of views at the northern end of the block would improve. At mid-block, the proposed parking structure would include large-scale plantings (currently planned to be Canary Island pines) to mask the structure. This masking of the structure by landscape plantings is likely to be sufficient so that views from residences toward PCC is of greenery, similar to that foreground image now provided by street trees. At the southern end of the block, the new athletic field would replace surface parking, resulting in a

view of green, open space. Views at the southern end of the block would thus be improved over current conditions.

Because there would be improvements in views at the northern and southern ends of the Bonnie Avenue, and since the mid-block area includes plantings that would screen the proposed parking structure from direct view, the Master Plan improvements along Bonnie Avenue would not result in significant impact and no mitigation is required.

d. Scenic Vistas and Views

As noted previously in this section, there are no scenic highways/corridors in proximity to PCC so Master Plan 2010 would have no effect on scenic resources. Due to the setback of the academic buildings from the streets, in most cases views of the San Gabriel Mountains can be glimpsed when looking north. Construction of the proposed four-and-a-half story parking structure on the Bonnie Avenue side of the campus would block some northwest views of the mountains in the neighborhood south of Del Mar Boulevard. However, given that this is not a scenic corridor, and because other views of the mountains looking north and northwest would still be available from south of Del Mar Boulevard, no significant effect would result and no mitigation is required.

e. Shading/Glare

There are no elements of the Master Plan that would produce shading or glare in Landscape Unit A. In Landscape Unit B, the replacement buildings would be generally located within areas that are already shaded by extant buildings. It is expected that the replacement buildings would be designed to be compatible with existing campus design themes, characteristics, massing, scale, materials and color, which now serve to limit glare levels.

In Landscape Unit C, the proposed parking structure on Bonnie Avenue could potentially cast shadows across upon some of the nearby homes along the eastside of the street at certain times of the day. However, as this shadowing would be from the west, it might be considered a benefit since it would reduce the amount of heat falling onto the residences from the hot western sun.

Properties along the east side of Bonnie Avenue are now subject to headlights from cars existing parking lots 5, 6 and 7 on the PCC campus. The proposed gateway and parking structure projects would continue this circumstance, so headlights from cars exiting these facilities in the future would not be a change over existing conditions. Accordingly, this would not be a significant impact and mitigation is not required.

f. Artificial Light

The proposed Master Plan would not introduce significant new sources of artificial light that could potentially adversely affect sensitive uses or nighttime views. Lighting for all proposed project elements is assumed to installed in a manner similar to existing conditions on the campus, wherein light fixtures are shielded so that light is directed downward. Although light levels are specific locations on campus may increase as a result of implementing the Master Plan, the

overall future light conditions are expected to be similar to existing conditions. The proposed parking structure has the potential for introducing greater amounts of artificial light. However, it would be placed in an area of the campus that is already well-illuminated at night, so its placement would not be likely to result in a quantum increase in artificial light. Lighting poles and fixtures on the roof of the parking structure will be no more than 20 feet in height . Rooftop lighting also would be shielded so that light would be directed downward. The combination of relatively short poles, along with shields that would direct light downward, would minimize the potential for light to create a nuisance. Lighting on the inside floors of the parking structure would be shielded by coffers (part of the structural system), so that horizontal light is minimized. The design goal of the parking structure is that no internal lights be visible from adjoining areas. In addition to the shielding of light sources, planned vegetation screening would further reduce the potential for lighting to be a nuisance.

The proposed athletic field would also have the potential for introducing greater amounts of artificial light. To help minimize potential light impacts, lighting poles would be limited in height to 40 feet. In addition, lighting fixtures would be highly directional and focused downward.

It should be noted that adjoining areas along Bonnie Avenue and Del Mar Boulevard are already subject to some stray light from existing parking lot fixtures, but substantial amounts of widely dispersed lighting from unshielded (or less shielded) street light fixtures. The incremental increase in light that may occur at nearby properties from the top level of the proposed parking structure and athletic field lighting is not likely to be significant.

3-14.3 Mitigation Measures

No significant visual impacts would occur as a result of the Master Plan since design features that would reduce the potential for visual impacts are incorporated into the design development process and thus no mitigation is required.

3-14.4 Unavoidable Significant Adverse Impacts

No unavoidable significant adverse visual impacts are anticipated as a result of implementing Master Plan 2010.