CHAPTER 3 - SETTING, IMPACTS, AND MITIGATION MEASURES

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 Los Angeles Pierce College Facilities Master Plan. In accordance with the *State CEQA Guidelines* (§15128 and §15143), this EIR focuses on the impacts identified in the NOP and during project scoping as needing further analysis (visual resources; agricultural resources; air quality biological resources; historical resources; archaeological resources; paleontological resources; geology/soils/ seismicity; hazardous materials; hydrology and water quality; land use and planning; noise; population and housing; public services; transportation/traffic and parking; and public utilities). A list of the impacts determined to be not significant and the reasons for that determination are provided in Chapter 5.

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 Los Angeles 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 23,252 students in the Fall 2010 semester or 16,423 full-time-equivalent (FTE) students[1] for the 2010-2011 academic year. For comparison, there were 18,118 students enrolled in the Fall 2001 semester and the estimated annual number of FTE students for the 2001-2002 academic year is 13,591. Although it is assumed that total enrollment would increase by approximately 28 percent over the next 8 years, it should be noted that the projected 2010 enrollment is comparable to the peak enrollment in years past. For example, in the Fall of 1981 there were 23,700 students enrolled at the College.

[1] To determine the number of full-time-equivalent (FTE) students, the District calculates the total number of instructional hours for all of the enrollments and divides by 525 hours, which is roughly the number of instructional hours of one student taking five 3-unit classes for two primary terms.

3-2 VISUAL RESOURCES

This section describes the visual setting of the Pierce College campus and provides an evaluation of the potential impacts of the proposed Master Plan on the visual quality and character, views, shading/glare, and artificial light in the project area. A discussion of feasible measures to mitigate or reduce the significant effects on the visual environment is also provided.

3-2.1 Environmental Setting

The Pierce College campus is located in the southwest San Fernando Valley in the Woodland Hills area of the Canoga Park-Winnetka-Woodland Hills–West Hills Community, which is 1 of 35 District Planning Areas that comprise the General Plan of the City of Los Angeles. Historically, the area was an agriculture cattle-oriented community. As surrounding areas began to be developed into residential neighborhoods, the area just north of the Chalk Hills was purchased by the City for development of a college. Pierce College opened in 1947 as an agricultural school. Since then, the surrounding community has been developed with residential, industrial, and commercial uses. It is considered predominantly urban. The campus is bordered by residential land uses to the south and southwest. An adult vocational school is located to the east across Winnetka Avenue and Warner Center (an intensely developed office/industrial park) is located to the west across De Soto Avenue. Residential uses are located north of the campus across Victory Boulevard.

One of the most significant planning and land use issues within the Canoga Park–Winnetka–Woodland Hills–West Hills Community is the preservation of open space. The open space portion of Pierce College is identified as an environmentally sensitive resource by the Community Plan. According to the Community Plan, "Pierce College represents a rare opportunity to preserve a significant, publicly held Open Space." The land use plan map for the Canoga Park-Winnetka-Woodland Hills–West Hills Community shows the campus as open space. Open space is typically defined as land that is free of structures and buildings and/or is natural in character.

Furthermore, the Community Plan identifies Pierce College agricultural land as a "Major Development Opportunity Site." Existing agricultural space at Pierce is considered "one of the few remaining connections to the communities agrarian past." The Community Plan strives to preserve and enhance the positive characteristics of existing land uses including community identity, scale, height, bulk, setbacks, and appearance.

The Pierce College campus is composed of a central cluster of educational and administration facilities, surrounded by large agricultural fields and facilities, surface parking lots, athletic fields and sports facilities, undeveloped rolling hills, and a large Horticulture area. Approximately 200 acres are currently devoted to agricultural use or open space, while 184 acres are currently in non-agriculture use. Existing buildings on the campus contain a total of approximately 585,000 gross square feet of floor space. Approximately 4,119 parking spaces are currently provided on the campus. The northern half of the campus is located on the valley plain; the southern half is situated on the Chalk Hills.

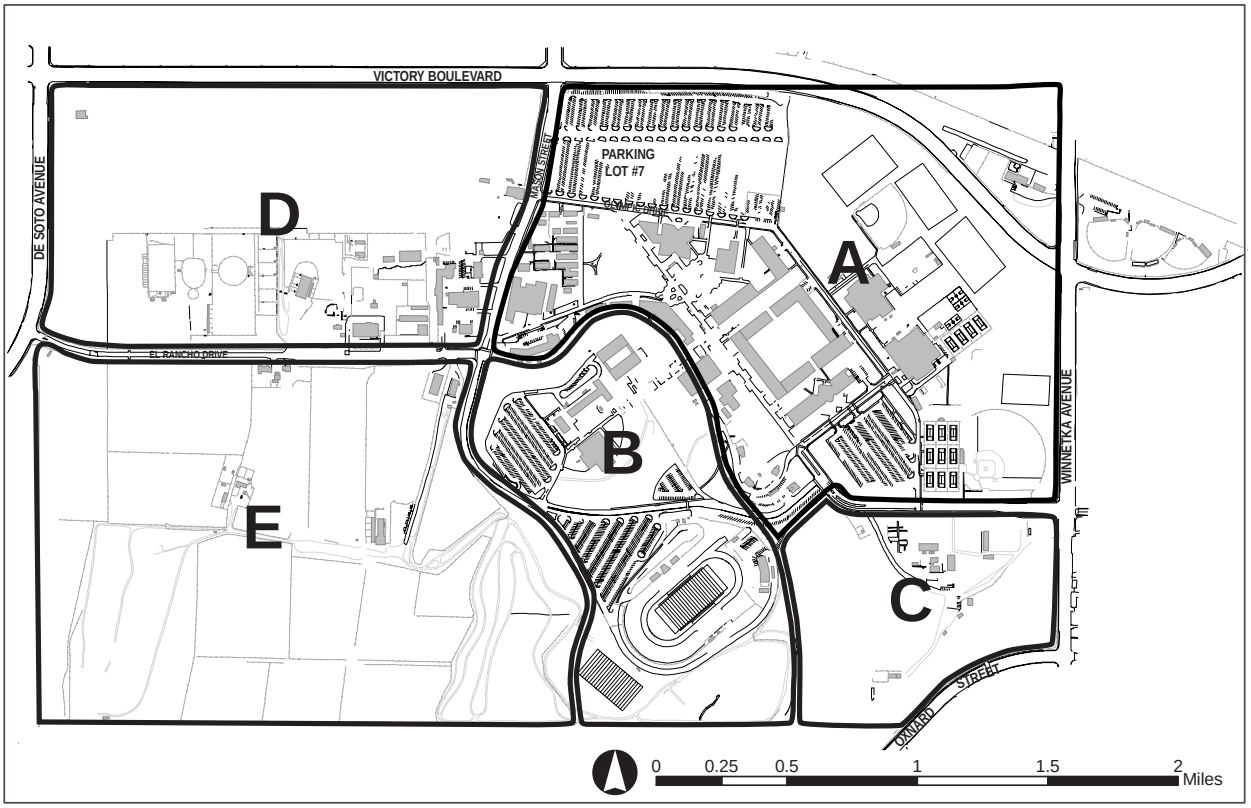
For clarification purposes in describing the existing visual setting and evaluating visual impacts, the Pierce College campus has been subdivided into five "landscape units," or areas of

discussion. Each landscape unit is defined by variation in visual resources, including natural and built features. The landscape units (see Figure 3-1) are as follows:

- Landscape Unit A – Northeast Corner of Campus – Developed Main Campus
- Landscape Unit B – Central Campus – Developed Upper Campus
- Landscape Unit C – Southeast Corner of Campus – Horticulture Area
- Landscape Unit D – Northwest Corner of Campus –Agricultural Area
- Landscape Unit E – Southwest Corner of Campus – Undeveloped Rolling Hills

In order to evaluate the specific visual resources and viewer sensitivity of the campus, each landscape unit is analyzed in terms of visual quality and character, scenic vistas and views, shading/glare, and artificial light. A qualitative, descriptive approach is used to evaluate the visual resources objectively. The criterion used for each evaluation is presented at the beginning of each section.

Figure 3-1: Landscape Units



Sources: Psomas, 2002; Myra L. Frank & Associates, Inc., 2002.

a. Visual Quality and Character

The visual quality and character of Pierce College is defined by the natural (geologic, topographic, biologic) and built (classrooms, buildings, recreational) environment. Visual

quality is evaluated based on the relative degree of vividness, intactness, and unity. Overall, Pierce College is considered to have a high visual quality because the natural and built features within it are considered vivid, relatively intact, and exhibit a high degree of visual unity. Pierce College has been identified as an important and valued aspect of the community because of its expansive agricultural and undeveloped open space, which have become symbols of the "old" San Fernando Valley. There are some areas of the campus, however, where the visual quality lacks vividness, intactness, and possesses a low degree of visual unity. Additionally, at least 50 percent of the buildings on campus are more than 40 years old and many suffer from deferred maintenance. Over 10 percent of the buildings on campus are temporary structures.

The visual quality and character of each landscape unit is described below.

Landscape Unit A – Northeast Corner of Campus – Developed Main Campus

Landscape Unit A (see Figure 3-2) consists of the central campus core, including over 30 permanent and 17 temporary structures. The area is generally flat and defined on the west by Mason Street, on the north by Victory Boulevard, on the east by Winnetka Avenue, and on the south by Brahma Drive and the base of the Chalk Hills. Landscape Unit A also includes a small strip of College-owed land north of Victory Boulevard where the Child Development Center is located.

Figure 3-2: Landscape Unit A - The Mall

Permanent structures within this landscape unit are aligned with the campus Mall, the main pedestrian corridor of the campus, which runs southeast to northwest and is parallel to the base of the Chalk Hills. These structures have brick, wood, or stucco exteriors and are characterized by four building types (Spanish Mission architectural style, generic classroom buildings, large volume buildings, temporary structures).

The oldest buildings on campus (the business office/student store and faculty offices) are located south of the mall. They are characterized by their Spanish Colonial/Mission Revival architectural theme, which was part of the original master plan concept for Pierce College campus (1947-1954). Generally, these buildings have white stucco exteriors, wood detailing along portico/porch edges, heavy bases, and red tile roofs. Metal heating and ventilation equipment is visible on the roofs of many of the structures. The visual quality and character of these structures is considered to be largely intact and of high quality. One of these buildings, the Business Office/Student Store Building, may be eligible for inclusion on the California Register of Historical Resources (see Section 3-6 Historic Resources). Ten small structures (faculty offices) situated along the northwest base of the Chalk Hills also appear eligible for inclusion on the California Register of Historical Resources (see Figure 3-3). Historically, they were used as student dormitories.

Figure 3-3: Landscape Unit A - Spanish Colonial/Mission Revival Cottages

Structures to the north of the Mall generally have an architectural style characteristic of local public schools (see Figure 3-4). They tend to be generic double-loaded classroom buildings (rooms exit toward the building perimeter instead of toward a central hallway) with exterior circulation along arcades at the building edges. These buildings have stucco exteriors, minimal

detailing, and low sloped conventional roofs, which extend beyond the edge of the building to create the elaborate covered walkway system and a strong horizontal cantilevered appearance. The "Quad" Buildings, which act as the central focal point of campus and home to a majority of the classroom spaces, are made up of seven linear structures that face one another forming a central courtyard enclosed on all four sides.

Figure 3-4: Landscape Unit A – Administration Building

While similar in style to one another, these structures are considered to be of medium visual quality. Despite their cantilevered roofs, they lack the vividness and quality of the older Spanish Colonial/Mission Revival style buildings on campus. Furthermore, metal heating and ventilation equipment is visible on the roofs of many of these structures and most of the buildings are in fair to poor condition.

There are also several large volume buildings (library, industrial technology labs, and campus gyms) located throughout the central campus core area. These buildings have more than one level and have an architectural style that is characterized as "big-box" architecture. They generally have sweeping cantilevered rooflines, stucco exteriors, and are at least 20 to 30 feet tall. These buildings also show signs of wear and deterioration and are considered to be of medium visual quality.

Another building type on campus is the temporary structure. There are 17 temporary (trailer) structures or bungalows located south of Parking Lot 7 along the east side of Mason Street. These structures are surrounded by asphalt paving (see Figure 3-5). They range from 800 to 3,000 square feet in size and have a white plaster or wooden finish, low sloping roofs, and wooden or concrete entrance ramps. There are three additional trailers on the south side of the gymnasium buildings. Two are used as the on-campus police headquarters and one is abandoned. These buildings are considered to be of low visual quality because of their temporary feel, lack of design features, and poor quality materials.

Figure 3-5: Landscape Unit A - Bungalows

Landscaping and vegetation within Landscape Unit A, including various types of shrubs and trees, are concentrated along the walkways, courtyard, and park areas. The largest (and oldest) trees on campus are located along and at the northwest terminus of the mall. The trees provide shading, and along with other campus vegetation, are considered to be of high visual quality and important to the aesthetic setting of the Pierce College campus.

Located along the northeastern edge of the campus (between the central core of buildings and the campus boundary), there are large playing fields (Kelley baseball field, tennis courts, handball courts, outdoor basketball courts, softball diamonds, a soccer field, and a putting green). These

areas of the campus are identified by the Community Plan as "public facilities," rather than open space.

Parking near the campus core is concentrated in three parking areas. Parking Lot 7 is located between Victory Boulevard and the campus core on the north edge of campus east of the main entrance to the campus. Parking Lot 1 is located to the southeast of the campus core near the east entrance to the College and adjacent to four tennis courts. Parking Lot 3 is much smaller than the other two lots and is less frequently used. This parking lot is located south of Brahma Drive adjacent to Landscape Unit C, the Horticulture area. All of these parking lots are in fair to poor condition.

There are also signs located throughout the campus, which serve as way finding symbols. The signs are considered to be insufficient and in need of rehabilitation and alteration. They also are lacking in visual quality.

Landscape Unit B – Central Campus – Developed Upper Campus

Landscape Unit B is defined geographically by a hill south of the central campus core. This hill, unlike the other rolling hills on the campus, which symbolize the southern sections of campus, has been developed with academic-related facilities. Visually, Landscape Unit B is at a higher elevation and therefore the five buildings (four linear classroom buildings and one large volume building) that are located on the hill are generally more visually prominent than other structures on the campus.

The linear classroom buildings are orthogonally aligned with the buildings at the base of the Chalk Hills (toward the northeast), but are visually separated from them by the steepness of the slope and by large trees at the base of the hills. Similar in style to the more conventional buildings (the Quad Buildings), these structures are exclusively stucco with metal windows, minimal detailing, and low sloped conventional roofs. The rooflines extend beyond the walls to create exterior circulation arcades. They are considered to be of medium visual quality.

The Performing Arts Building, which is the most visually prominent building on campus, is located along the ridge of the hill (see Figure 3-6). It is characterized as a large volume building with a steep-sloped roof (facing southeast). Due to its location at the top of the hill, it is visible to many neighboring areas (on and off campus). Although it is the newest building on campus, it is considered to be of medium visual quality.

Toward the south of Landscape Unit B, there are three parking lots and the campus stadium. The parking lots are considered to be in poor condition (loose gravel and cracked pavement). Stadium Way, which bisects the parking lots, provides access to the 5,000-seat Shepard Stadium, which is landscaped so as to appear partially embedded within the hill. Adjacent to the stadium is a cross-country running course, a field house, and field house annex. All of these structures are considered to be in sound condition, but lack vividness and unity with the rest of campus.

Southwest of the stadium there is also a large practice field and southeast of the stadium is Pine Hill, which rises up to the southern edge of the campus. The slope of the hill, which is within campus boundaries, remains undeveloped. The ridge of the hill, which is beyond the campus

border, is visually dominated by landscaping elements (trees, shrubs, etc.) of private residential properties immediately to the south.

Figure 3-6: Landscape Unit B – Chalk Hill

Landscaping within Landscape Unit B is less extensive than in other areas of the campus. The slopes on and around the performing art center and the stadium have an unfinished appearance. There are few planters, trees, and grassy areas. The slopes of these hills are currently unmanaged and are considered to be of low visual quality.

Landscape Unit C – Southeast Corner of Campus – Undeveloped Horticulture Area

Landscape Unit C, which encompasses approximately 37 acres in the southeast corner of the campus, is bordered by Brahma Drive to the north, Winnetka Avenue to the east, Oxnard Street to the south and the base of the Chalk Hills to the west. The topography is relatively flat (at the same elevation as the core campus) but rises gradually to the south and west toward the Chalk Hills (Landscape Unit B). This area is the most densely vegetated area on campus (see Figure 3-7).

Landscape Unit C is characterized by numerous trees and shrubs and few structures. The area is covered with dense vegetation of varying types and includes an arboretum, palm tree forest, viticulture area, grove of trees, and a nature walk (Braille Trail). In the center, there is a classroom building (Spanish Colonial/Mission Revival design), a lath house, a steel frame greenhouse, and various small shops and storage facilities. The classroom building, lath house, and greenhouse appear eligible for inclusion on the California Register of Historical Resources (see Section 3-6, Historic Resources). The classroom building is bordered by a large lawn area

and a well-maintained botanical garden. There is also a small parking lot accessible via a roadway, which curves through large overgrown trees and shrubs.

The Pierce College Master Plan identifies the Horticulture area, including this grouping of buildings, as a memorable space that has a high visual quality. Together, the grouping of buildings and surround landscaping, have a sense of unity, vividness, and intactness.

Figure 3-7: Landscape Unit C - Horticulture Area

Landscape Unit D – Northwest Corner of Campus – Agricultural Area

The northwest corner of campus is known as "Pierce Farm" because of its historic use as farmland, and its continued sense of openness (see Figure 3-8). Bordered by El Rancho Drive to the south, Victory Boulevard to the north, Mason Street to the east, and De Soto Avenue to the west, the entire northern half of this area contains large open fields, which are currently used to grow dry farmed hay and green grass. The southern half contains various smaller fields and pastures, an equestrian area, three classroom buildings, and the main center for campus maintenance facilities (including various small buildings). A small section of this area houses a collection of folk art statues (Old Trapper's Lodge). Numerous trees surround the Folk Art Park on all sides. Old Trapper's Lodge is listed as a California State Historical Landmark.

Because the open farmland along the northwestern edge of campus borders two main off-campus thoroughfares (Victory Boulevard and De Soto Avenue), it is highly visible to local commuters

and from neighborhoods to the north. Given the rapidly growing urban environment in which Pierce College is located, the open farmland is considered an asset to the both the campus and to the community. The area is often referred to as the "last vestige" of open space in the immediate locale and as a symbol of the "old" San Fernando Valley. Visually, the area is considered an important visual resource to the community.

Figure 3-8: Landscape Unit D - Agricultural Fields

The existing equestrian center encompasses approximately 20 acres and includes a small red barn, open arena, various stables and animal shelters, roping arenas, ovals, round pens, and teaching rings. There is also a 5,000-sf one-story classroom building (Agricultural Sciences) along the north side of El Rancho Drive built in the Spanish Colonial/Mission Revival theme. It has a white stucco exterior, wood detailing, heavy base, and red tile roof. Like many of the other structures in the equestrian center, the building has deteriorated due to deferred maintenance.

Individually, the Agricultural Sciences Building is considered to be of medium visual quality and Old Trapper's Lodge is considered to be of high visual quality. However, the equestrian center as a whole lacks unity, vividness, and intactness and is therefore considered to be of low to medium visual quality.

East of the equestrian center, at the corner of El Rancho Drive and Mason Street, is the Plant Facilities area of the campus. The area contains a basic wood framed one-story classroom/facilities management building (Agricultural Engineering), three metal quonset hut

structures, various pieces of machinery, and farm equipment. One of the quonset huts was historically used as a classroom and was originally known as Exposition Hall, the site of the opening day orientation activities at Pierce College.[2] Although not architecturally noteworthy, this particular quonset hut may be historically significant due to its close association with the key school-wide academic activities during the first year of the College's existence. This structure may be eligible for inclusion on the California Register of Historical Resources (See Historic Resources, Section 3-6). The existing Plant Facilities area is of low to medium visual quality.

North of the Plant Facilities is the Soils Lab (northwest horticulture) Building. The structure has no specific architectural importance and does not relate, other than in color schemes (blue door, red roof, white stucco exterior), to any other building on campus. The building is of low visual quality.

Landscape Unit E – Southwest Corner of Campus – Undeveloped Rolling Hills

The southwest corner of campus is the largest area of open space on campus (see Figure 3-9).

Figure 3-9: Landscape Unit E - Undeveloped Rolling Hills

The area is characterized by undeveloped agricultural fields located along the rolling Chalk Hills bordered by the southern campus edge to the south, El Rancho Drive to the north, the developed area of the Chalk Hills to the east, and Bella Vista apartment complex, currently under construction along De Soto Avenue to the west. This area of campus has the highest elevations and is visible to areas in all directions. Visually, the undeveloped hills and ridgelines are considered to have high visual quality and are considered part of the "Pierce Farm." Similar to

[2] The quonset huts have been relocated several times since originally constructed and further research is required to determine, if possible, which of the remaining quonset huts was originally known as Exposition Hall.

landscape unit D, the area is considered to be an important open space resource for the community and one of the few remaining open space areas in the San Fernando Valley.

This area of the campus is the least developed. There are only a few structures in the area including two small residences (900 and 1,700 square feet) and a barn along El Rancho Drive. Both buildings feature asphalt shingle roofs and walls with painted wood finish on the exterior. The west residence is not occupied and is in poor condition. The east residence is occupied by a farm technician who cares for the animals on campus. They are not architecturally significant.

Other buildings located within Landscape Unit E include various small storage facilities (including a quonset hut), animal shelters, a hay canopy, and two small wooden structures (a storage shed and a lath house) in Canyon de Lana. All of these structures are in poor condition.

Canyon de Lana, one of two canyons formed by the rolling hills, is comprised of dense vegetation, a stream, and a shallow pond (see Figure 3-10). It is designated a nature preserve even though much of the vegetation is exotic and is considered a unique and valuable feature for Pierce College and the community.

Figure 3-10: Landscape Unit E - Canyon de Lana

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 its length of exposure to the viewer and the viewer 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, 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.[3] Views from vehicles are generally more fleeting and temporary, but can be considered important.

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.

There are no scenic vistas and views identified in the Canoga Park-Winnetka-Woodland Hills–West Hills Community Plan that are in the immediate vicinity of the campus. The nearest designated scenic highways are the Ventura/Cahuenga Boulevard Corridor and the Mulholland Scenic Parkway, which are located approximately 0.6 and 2.5 miles, respectively, south of the Pierce College campus. Although there are no designated scenic vistas or views in local plans in the immediate vicinity of the campus, important views or view corridors within the campus and from areas adjacent to the campus are described below.

Landscape Unit A – Northeast Corner of Campus – Developed Main Campus

Views of the physical structures in Landscape Unit A (central campus buildings, fencing, playing fields) from off campus are limited by heavy foliage (large mature trees) in and around the central campus area. Views of the central campus core from the south, along the ridgeline of the Chalk Hills and the south campus border are further limited by additional large trees in the Horticulture area, by the hills, and by trees and shrubbery within neighboring residential yards.

Views of the campus (Landscape Unit A) from the north and east are considered temporary because they are generally the views of people traveling east and west along Victory Boulevard or north and south along Winnetka Avenue. These views are dominated by the large grassy playing fields along the northern and eastern perimeter of the campus (see Figure 3-11).

Views from beyond these streets (north of Victory Boulevard and east of Winnetka Avenue) are considered insignificant because there are large brick walls and wooden fences permanently

[3] FHWA, Visual Impact Assessment for Highway Projects, Washington D.C., 1983.

obstructing the residential views (from the north) and student views (from the vocational school to the east).

Figure 3-11: View of Landscape Unit A - Playing Fields – Looking South

The most prominent views of Landscape Unit A are from within the campus. Views up and down the Mall are considered the most important to Pierce College students and faculty. The Mall creates the visual axis for the campus from which all buildings are situated. The trees, shrubs, and other landscape elements along the Mall are also important, as are the other landscaping elements throughout Landscape Unit A. These trees and shrubs are periodically trimmed for safety and security reasons.

Views from within Landscape Unit A toward neighboring areas are limited by campus structures and trees. The most noticeable views are of the developed upper campus.

Landscape Unit B – Central Campus – Developed Upper Campus

Due to the relative elevation increase of Landscape Unit B, the natural and built forms are visible from many areas of campus. Neighborhoods to the north, east, and west have views of the Chalk Hills. Located on the ridge of one of the rolling hills is the Performing Arts Center (see Figure 3-12). Otherwise, views of Landscape Unit B are limited to the south by heavy shrubbery and trees in the yards of many of the residential units whose backyards abut the southern edge of campus.

Figure 3-12: View of Landscape Unit B and the Performing Arts Center from Stadium Way Looking Northwest

Due to the increase in elevation, views from Landscape Unit B include panoramic views of the San Fernando Valley and the Santa Susana Mountains to the north. These provide a backdrop for the other areas of campus to the north (Landscape Units A and D).

Landscape Unit C – Southeast Corner of Campus – Horticulture Area

Landscape Unit C, located in the southeast corner of campus, is heavily covered in foliage (see Figure 3-13). Views of the few structures in this area from other areas on and off campus are limited due to large trees and dense foliage. The heavy foliage blocks views of the area from Winnetka Avenue (east) and Oxnard Street (southeast). The only readily available views of Landscape Unit C are from Landscape Units A and B, which are somewhat limited by the large number of trees.

Views from within Landscape Unit C are considered important, as this area contains a botanical garden and an educational nature trail with Braille markers.

Figure 3-13: Views of Landscape Unit C - Horticulture Area

Landscape Unit D – Northwest Corner of Campus – Agricultural Area

Views of the large open agricultural fields within the northwest corner of campus (Landscape Unit D) are considered important to the community (see Figure 3-14). The Canoga Park-Winnetka-Woodland Hills–West Hills Community Plan identifies this area of campus as an environmentally sensitive resource and "One of the few remaining connections to the community's agrarian past." Motorists traveling east and west along Victory Boulevard and north and south along De Soto Avenue have clear views of the fields.

Views of Landscape Unit D are also visible to neighboring residential properties to the south of the campus. While many of their views are partially obstructed by yard landscaping, the properties to the south have exclusive panoramic views of the densely developed San Fernando Valley with the open agricultural fields in the foreground. Similar views are available to students and faculty from higher elevations (Landscape Units B and E) within the campus.

Views of Landscape Unit D are obstructed from within the central campus core. Campus Plant Facilities and Maintenance buildings are located between the campus core and the open fields and form a barrier obstructing views of the fields from the campus core.

Views of the campus from Warner Center, which is located southwest and west of the campus, may also be considered important. Views are provided from the upper stories of the taller commercial structures in Warner Center.

Figure 3-14: View of Landscape Unit D Looking North

Landscape Unit E – Southwest Corner of Campus – Undeveloped Rolling Hills

Similar to Landscape Unit D, views of the southwest corner of campus (Landscape Unit E) are considered equally important to the community and to the campus (see Figure 3-15). Landscape Unit E, which is almost entirely undeveloped and devoid of any significant amount of vegetation (with the exception of the Canyon de Lana area), is considered a scenic resource to the neighboring communities. The Canoga Park–Winnetka–Woodland Hills–West Hills Community Plan identifies the open spaces of Pierce College as important. The rolling hills also offer a feeling of openness that is available to neighboring residential properties immediately south of the campus. The residences that directly border the campus currently have panoramic views of the Pierce College campus, the San Fernando Valley, and the Santa Susana Mountains in the distant background. Views from the south are partially obstructed by trees and shrubs within their properties.

Views from Landscape Unit E include panoramic views of other areas of the campus, the San Fernando Valley, and the Santa Susana Mountains to the north. These views are available to students and faculty who use the pedestrian trails that border Canyon de Lana.

Figure 3-15: View of Landscape Unit E Looking Southeast

c. Shading/Glare

This subsection describes the existing shading/glare conditions for all five landscape units of the Pierce College campus.

The natural and built features at Pierce College do not currently create shadow patterns or glare that negatively affect any on-campus or off-campus properties. Many of the buildings on campus have limited air conditioning equipment and, therefore, rely heavily on shading provided by trees for cooling purposes.

The roofs of many of the structures on campus, especially within the central campus core, were designed to extend beyond the building footprint creating covered walkways that block the sun's rays from the facades.

The largest concentrations of trees on campus occur in the central campus core (Landscape Unit A), Horticulture area (Landscape Unit C), and Canyon de Lana (within Landscape Unit E). Landscape Units B (at the top of the hill) and D (agriculture area) contain fewer trees than the other landscape units. Trees in these areas are grouped along campus roadways and near buildings. They provide minimal amounts of temporary shading.

Because the large trees in the Horticulture area are located immediately adjacent to the campus perimeter, they create shadow patterns that extend across Winnetka Boulevard in the late afternoon. No other off-campus properties are significantly affected by shadow patterns created by features on campus.

Glare, which is the result of sharply reflected light caused by sunlight or artificial light reflecting from highly finished surfaces such as window glass or brightly colored surfaces, is minimal on campus because of the heavy shading and the non-reflective materials used on the building exteriors. Most structures on campus have exterior surfaces, such as stucco, painted metal, brick, or wood, which have a very low potential for glare. The windows, which are guarded from direct sunlight by adjacent covered walkways, reflect minimal amounts of glare.

d. Artificial Light

This subsection describes the existing ambient light conditions within and adjacent to the Pierce College campus. Current nighttime lighting levels vary depending upon location and type of light fixture. The heaviest concentration of exterior lighting on campus occurs within Landscape Units A and B near campus buildings and roadways. Nighttime lighting is limited in the other areas of campus, where there are no buildings or few roadways (the Horticulture area, agriculture fields and rolling hills). Temporary lighting standards have been placed in the playing fields.

Walkways, which are located near buildings, are illuminated by two types of pedestrian scale fixtures: bright white lights along the Mall and yellow lights along other campus walkways. Interior lighting from these buildings creates a minimal amount of spillover.

Campus streets and parking lots are illuminated with streetlights and security lighting. Older light fixtures that cast a more yellow light are located along most campus roadways. Newer streetlights have clear globes and appear much brighter. Both types of lights are visible from off-campus, especially those lights that are located at the top of Chalk Hills near the Performing Arts Center.

Lighting from campus generally does not spill over onto adjacent streets or properties. Automobile headlights traveling along Stadium Way and in parking lots add limited amounts of evening illumination within the campus but generally do not extend onto neighboring properties.

The predominant source of nighttime lighting in the immediate vicinity of the campus is street lighting located along Victory Boulevard and De Soto and Winnetka Avenues. Light from automobile headlights traveling along these streets also contributes to nighttime lighting conditions, as do lights from the vocational school to the east and the commercial properties to the west.

3-2.2 Environmental Impacts

a. Significance Criteria

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

- substantially degrades the existing visual character or quality of the campus and its surroundings,

- substantially damages significant visual resources such as trees, rock outcroppings, and historic buildings,

- would have a substantial adverse affect on a scenic vista or obstruct scenic views,

- creates substantial shade/shadows that affect shadow-sensitive uses (residences or parks),

- creates substantial artificial light that would adversely affect nighttime views in the area, or

- results in substantial glare that would adversely affect sensitive views in the area or create potential hazards to motorists.

b. Impacts Discussion

One of the objectives of the Pierce College Master Plan is to improve the visual image of the campus. This would be done by giving priority to first impressions and high-visibility/high-use areas. New development would be located predominantly in the main and central campus areas (Landscape Units A and B) though some development would also occur in the open space areas of the campus. The following discussion discusses in detail what alterations would be made to the visual environment of each of the five landscape units (defined above) in terms of visual quality and character, scenic vistas/views, shading/glare, and artificial light.

The Pierce College Master Plan contains guidelines for the siting and design of new development. The following specific goals have been identified in the Master Plan.

- celebrate the unique aspects of the campus's physical characteristics by strengthening the underlying structures of the campus; i.e., academic buildings defining quadrangles, the cruciform pedestrian system, and the open feeling (rolling hills) of the campus.

- re-establish Pierce as a center for urban agriculture.

- unify and create a central physical focus for the campus through building development, landscape, consistent and attractive signage, and safe and convenient circulation for vehicles and pedestrians.

- create a central focus for the students and faculty, concentrating common and shared uses that can be offered to students over the day and evening hours.

The nearest scenic highways are the Ventura/Cahuenga Boulevard Corridor and the Mulholland Scenic Parkway. Although both have been identified as important visual resources, neither is located in the immediate vicinity of the campus. The Pierce College Master Plan would not adversely affect views to and from these corridors.

c. Visual Quality, Character, and Resources

Implementation of the proposed Master Plan would include the construction of a number of new buildings, various utility and infrastructure improvements, and the renovation of existing buildings on the campus. Additionally, buildings would be demolished. The total building area on campus would increase by approximately 500,000 square feet and land devoted to agriculture/open space would decrease. Approximately 12 to 13 acres of the 200 acres of open space/agricultural land would be developed for academic related facilities.

Landscape Unit A – Northeast Corner of Campus – Developed Main Campus

Of the many new buildings proposed as part of the Pierce College Master Plan, seven would be constructed within the central education core (Landscape Unit A). Two new student services buildings, one administrative building (Police Center), two new classroom buildings (Agriculture/Science/Nursing Building and Technology Center), and two new student dormitory structures, including a new cafeteria, would be constructed adjacent to and in alignment with the Mall and existing buildings.

It is anticipated that most new buildings would be designed to be consistent with the Spanish Colonial/Mission Revival architectural theme of older buildings on the campus and would enhance the appearance of the Pierce College campus. However, since individual buildings have not yet been designed, it is possible that new structures could be visually incompatible or inconsistent with the design, massing, or scale of adjacent structures, a potentially significant impact.

In order to provide space for the construction of new buildings, the 16 trailers/bungalows located south of Parking Lot 7 would be demolished and the occupants would be temporarily relocated to new trailers located on the north side of the gymnasium buildings. The proposed location of the temporary trailers/bungalows is currently used as a playing field and is visually identified as open space. Although the proposed temporary trailers would have an adverse visual effect on the visual setting of this open space area, the impact would not be significant since the trailers would be removed once new campus buildings are completed.

Three other buildings located within Landscape Unit A would also be demolished, including the existing Business Office/Student Store, cafeteria, and child development center. Demolition of the Business Office/Student Store, which is one of the oldest buildings on campus, would be considered a significant adverse visual impact. The building retains its integrity of location and is largely intact architecturally (see Section 3-6, Historic Resources); however, it did experience substantial structural damage as a result of the 1994 Northridge Earthquake. An alternative that would repair and reuse this building is discussed in Chapter 4 of this EIR.

Most of the existing buildings within Landscape Unit A would be renovated. Renovations of the administration, quad, life sciences, and campus center buildings would include architectural upgrades that enhance the "Spanish" look of the campus. Exterior materials on the roofs and façades would be replaced and/or repaired. Rooftop mechanical units would be hidden from view. Windows would be replaced and perimeter openings would be upgraded. It is, therefore,

expected that the renovations of existing buildings would enhance the visual character and quality of the campus.

Other proposed enhancements to Landscape Unit A are expected to change the visual character of the campus. A Landscape Specific Master Plan is currently being developed that would identify specific landscape improvements for the entire campus including new plazas and walkway improvements. A new botanical garden is proposed in the central quad area. New paving and seating areas are also proposed. Sidewalk areas would be enhanced with trellis and arcade shading improvements. Signage improvements would be implemented at each of the campus entrances. Construction of a new three-rail perimeter white fence to replace the existing deteriorated chain link fence that extends along the perimeter of the campus has recently been completed.

In addition, improvements to the campus grounds and playing fields are proposed, including new steel bleacher seating (200 seats), public concession booths, baseball and softball fields, baseball dugouts, and a track.

Similar improvements would be completed to campus roadways and parking lots. Brahma Drive, which currently terminates at Parking Lot 1, would be realigned for safety and aesthetic reasons to join Stadium Way. Parking Lot 1 would then be enlarged. Parking Lot 7 on the north side of campus would be reconfigured, repaved, and relandscaped, resulting in a net increase in the number of trees in the parking lot. The Parking Lot 7 project also proposes drainage improvements including a dry detention pond that would be constructed on a portion of the athletic field to the east and enclosed by a green vinyl-coated diamond mesh fence with yellow top padding. The dry detention pond would be designed so the space it occupies could continue to be used for recreational activities and thus would not substantially diminish the visual setting of this area of the campus. Other roadways and parking lots would also be resurfaced, street-facing landscaping would be enhanced, and security equipment would be installed. Improvements would also be made to the Winnetka Avenue entrance that would enhance the appearance and the visual setting of the Pierce College campus.

During construction, in order to accommodate parking needs, temporary gravel parking lots and construction staging areas would be established that would detract from the visual setting. However, because the gravel parking lots and construction staging areas would be temporary, no significant visual impacts are anticipated.

Landscape Unit B – Central Campus – Developed Upper Campus

New buildings are proposed for the developed northern portion of the Chalk Hills in the center of campus (Landscape Unit B). The exact location and number of structures for the Life-Long Learning Residences Partnership project, a residential complex for seniors, has not yet been finalized. One-, two-, and three-story structures would be constructed on approximately 5 to 6 acres east of the Performing Arts Building along the northeastern slope of the hillside. The complex would house approximately 200 to 250 residential units and various ancillary facilities. As part of the project, Parking Lot 5 would be expanded.

Similar to the proposed new buildings in Landscape Unit A, it is anticipated that these new buildings would be designed to be consistent with the Spanish Colonial/Mission Revival architectural theme of the central campus core. However, if the proposed new structures, which have not yet been designed, are visually incompatible (in design and scale) with the Performing Arts Center and other adjacent structures, the visual impact on the campus would be potentially significant.

Existing buildings located within Landscape Unit B would be renovated. Exterior materials on the roofs and façades would be replaced and/or repaired. Rooftop mechanical units would be hidden from view. Windows would be replaced and perimeter openings would be upgraded. These upgrades would improve the appearance of the campus. None of the existing buildings within Landscape Unit B would be demolished.

Similar to the central campus core, improvements would be made to the grounds and landscaping. The Landscape Specific Master Plan (currently being developed) would identify specific landscape improvements including new plazas, walkways, paving, and seating areas.

Stadium Way and the parking lots within Landscape Unit B would be resurfaced. Parking Lot 3, which is located near the base of the hill, would be realigned as part of the realignment of Brahma Drive. It is expected that street facing landscaping would be enhanced.

Visual impacts would occur during construction due to temporary gravel parking lots and construction staging areas containing construction materials and equipment. Because these impacts would be temporary, significant long-term visual impacts would not occur.

Landscape Unit C – Southeast Corner of Campus – Horticulture Area

Two new buildings would be constructed within Landscape Unit C as part of the Pierce College Master Plan. Other improvements would include the rehabilitation of the Lath House and greenhouse, demolition of a damaged storage facility, and various alterations to the grounds, including an extension of the Mall into the Horticulture area.

A new horticulture (classroom) building (including a new greenhouse) would be constructed near the existing classroom building, Lath House, and greenhouse, all of which appear eligible for inclusion on the California Register of Historical Resources (see Section 3-6, Historical Resources). It is expected that the new building would be consistent with the Spanish Colonial/Mission Revival style and would, therefore, conform with the visual quality of the surrounding structures, which have a high visual quality. If the new structure is not architecturally consistent with adjacent structures, it could result in a potentially significant adverse visual impact.

The other new structure to be built within the Horticulture area is a new Gardener's Maintenance and Operation facility, which would replace an existing damaged storage facility. Preliminary proposals suggest that the new building would be integrated into the conceptual design for the Horticulture area. Because the building would not be located immediately adjacent to any of the buildings identified as historic, the design of the new building would not significantly affect or detract from the visual setting of the Horticulture area.

The Master Plan proposes the extension of the Mall southeast into the Horticulture area to the new classroom building described above, which would create a new pedestrian axis in the area. The Mall extension would include new paving, seating areas, and landscaping. Extension of the Mall into the Horticulture area would visually link this area of campus to the central campus core, which would benefit both the Horticulture area and the entire Pierce College campus.

Other proposed enhancements to Landscape Unit C include ground improvements, and a new outdoor events area (amphitheater). These improvements are expected to have a beneficial effect on the visual quality of the campus.

Landscape Unit D – Northwest Corner of Campus – Agricultural Area

The Pierce College Master Plan proposes multiple projects within Landscape Unit D. These projects could significantly affect the visual quality/character of the area. Landscape Unit D, the northwestern corner of campus, consists primarily of open space. Implementation of the Master Plan would result in the development of much of the area on the north side of El Rancho Drive between De Soto Avenue and Mason Street for educational related facilities.

The pastures along the south side of Victory Boulevard and the east side of De Soto Avenue would be preserved for agricultural use and as open space. The northern pastures (from De Soto Avenue to Mason Street), which include approximately 20 to 25 acres of agriculture land, would be used to grow row crops. The western pastures, which extend along De Soto Avenue from Victory Boulevard to El Rancho Drive, would be converted to an agricultural educational area and would include a "pizza farm," a mini-maze, and a pumpkin patch. A new produce stand would be constructed on the northwest corner of the campus, replacing the existing stand.

Old Trapper's Lodge, the existing Folk Art Park, which is a California State Historic Landmark, would be preserved and retained in its current location. The Master Plan would not affect this historic and visual resource.

The existing equestrian center including interior pastures, animal shelters, roping arenas, ovals, round pen, and teaching rings would be replaced with a new expanded 32.8-acre Equestrian Education Center, which would include a large covered open-air arena, multiple ancillary structures, and grounds improvements. The covered arena, which would encompass approximately 95,000 square feet, would be approximately 40 feet tall and open on three sides and include several small classroom and administration rooms. Adjacent to the arena would be a number of one-story ancillary facilities such as restroom and shower facilities, concessions, a service/maintenance yard, and hay/shaving storage structures. Two large parking lots and interior roadways would also be constructed. Additionally, new stables, barns, roping and teaching arenas, and an exercise track would be provided. Numerous trees and other landscaping would be planted throughout the area.

The architectural design of the new Equestrian Education Center (the arena and other buildings) is expected to be of a unique style and theme, complimenting the Spanish Colonial Mission theme of the campus. The design of the exterior elements of the stables/barns would be architecturally similar. The location and setting of the new Equestrian Education Center has been considered in the design of the proposed facilities. For example, the multi-purpose arena,

the largest of the proposed structures, would be located just north of the hill on which the existing Red Barn is located. This location provides several advantages. First, arena seating would be configured into the hillside immediately to the south to take advantage of the natural slope. Second, the hill would obstruct or diminish views of the arena from off-campus locations to the southwest, southeast, and south. Numerous trees would also be planted along the perimeter of the new Equestrian Education Center, in the parking lot areas, and within other areas of the facility to reduce the visibility of proposed facilities from off-campus locations and also to enhance the visual appearance of the site. Other landscaping and aesthetic enhancements would also be provided to improve the appearance of the area. Nonetheless, the 10 acres of open space north of the existing equestrian area that would be developed to accommodate the proposed facility are considered an important visual resource to the community. Development of this open space would therefore be a significant visual impact.

Other proposed structures to be built within Landscape Unit D include a new Sciences Partnership Building at the corner of Mason Street and El Rancho Drive and a new Child Development Center at the corner of Mason Street and Victory Boulevard.

The Sciences Partnership Building would require the demolition of the existing Agricultural Science and Agricultural Engineering Buildings and all of the Plant Facilities and Maintenance Buildings, which would be relocated to another area of campus (Landscape Unit E). The new Sciences Partnership Building would be two to three stories with approximately 100,000 square feet of floor space and a new 400-car parking lot. The project would occupy approximately 7 acres immediately west of Mason Street.

The proposed Child Development Center (CDC) would include a 30,000-square-foot building, a 40-car parking lot, an entry drop-off area, and a partially covered children's play/activity area on approximately 2 to 3 acres of open space agricultural land west of Mason Street and south of Victory Boulevard. The loss of this open space, which is an important visual resource, would be a significant visual impact.

Landscaping is an important component of the Master Plan. Pepper trees would be planted along El Rancho Drive and possibly throughout the rest of the site as well. The proposed project would provide as much shade as possible throughout the Equestrian Education Center to protect both visitors and horses from sun exposure

Improvements would also be made to the De Soto Avenue entrance, enhancing this area of the campus.

Landscape Unit E – Southwest Corner of Campus – Undeveloped Rolling Hills

The Pierce College Master Plan proposes a limited number of improvements in the southwest corner of campus (Landscape Unit E).

The Plant Facilities and Maintenance complex may be moved from its existing site along Mason Street (in Landscape Unit D) to a site south of Stadium Way at the base of the west slope of the Chalk Hills. The new complex would include at least four new buildings, including a main office, two warehouses, and a garage structure. Placement of the complex at the base of the hill would preserve the existing ridge line, which is identified as a valuable physical resource. The

complex would incorporate landscaping and because of its location, would not be visible to most other areas on- and off-campus. The complex would, therefore, not have a significant visual impact on the campus or its setting.

The Animal Science Facilities (including animal holding pens, barns, and storage/equipment facilities) would also be moved from Landscape Unit D, north of El Rancho Drive to an area at the base of the Chalk Hills. Proposed buildings include modular barns, classrooms and laboratories, dry lot pens and an open air arena. An additional steel building would be constructed for tractor and equipment storage. These facilities would not substantially change the visual setting of the area and would, therefore, not have a significant visual impact on the campus or its setting.

The ridge of one of the Chalk Hills (directly south of Parking Lot 6) is an alternate location for the Life-Long Learning Residences Partnership. Construction of the residential complex along the ridge of the Chalk Hills would result in a significant adverse visual impact due to the loss of open space.

Other improvements include the restoration of the Canyon de Lana area, reestablishment of a 12-acre viticulture area, reuse of one of the residential units on the south side of El Rancho Drive, and the installation of a new fence along the western perimeter road.

Improvements to Canyon de Lana, which is located in the southwest corner of the campus include clearance of fallen and dead trees, removal of deteriorating bridges, demolition of the damaged storage shed and lath house, renovation of selected trails (trails may be upgraded to accommodate horse drawn carriages), and removal of exotic vegetation. A new shed would be constructed for storage of tools, construction materials, and classroom supplies. New signage and a drinking fountain would be installed at the entrance to the canyon and the amphitheater seats would be replaced. The pond would be dredged and reconstructed in some areas to improve the water quality. These improvements would not have a significant visual impact and could have a beneficial visual impact.

d. Scenic Vistas and Views

There are no designated scenic highways in the immediate vicinity of the campus. The scenic highways that are closest to the campus, the Ventura/Cahuenga Boulevard Corridor and the Mulholland Scenic Parkway, are located approximately 0.6 and 2.5 miles, respectively south of the campus. Proposed development of the Pierce College Campus would not adversely affect views to and from the Ventura/Cahuenga Boulevard Corridor and the Mulholland Scenic Parkway.

Landscape Unit A – Northeast Corner of Campus – Developed Main Campus

New views of campus would be provided from the upper floors of new buildings and along the new campus vehicular and pedestrian pathways. Views from the Mall would be enhanced. The southeastern terminus of the Mall, which is currently located at Parking Lot 1, would be extended southeast into the Horticulture area (Landscape Unit C). Buildings proposed along the Mall would be placed in alignment with existing campus elements and would enhance the

existing viewsheds and further define the visual parameters of the Mall. Existing views along the Mall would not be obstructed.

Views of Landscape Unit A from other areas of campus would be not be significantly affected by the projects proposed in the Master Plan. New buildings in the central campus core may be visible above the tops of the trees from higher elevations of the campus (Landscape Units B and E), but would not significantly affect any important views of the campus.

Landscape Unit B – Central Campus – Developed Upper Campus

New views of campus would be provided from the upper floors of the Life-Long Learning Residences complex. The location of the new buildings along the slope of the hill would provide views that would likely include panoramic vistas of the San Fernando Valley with the central campus core in the foreground.

Views of Landscape Unit B from other areas of campus would be not be significantly affected by the projects proposed in the Master Plan. Views of the Life-Long Learning Residences complex, if constructed in the preferred location, may be visible above the tops of the trees, but would not significantly affect any important views from within the campus or from off-campus.

If the Life-Long Learning Residences complex is constructed in the alternate location south of Stadium Way, it may obstruct views from residences to the south of the San Fernando Valley and distant Santa Susana Mountains, a potentially significant visual impact. The extent of obstruction, if any, would depend upon the siting and massing details of the proposed buildings, which remain to be determined.

Landscape Unit C – Southeast Corner of Campus – Undeveloped Horticulture Area

Views from within Landscape Unit C would be enhanced by the proposed grounds improvements, rehabilitation of the greenhouse and Lath House, and construction of a new horticulture building.

Views of the few structures from other areas on and off campus would continue to be limited due to large trees. The heavy foliage would continue to block views of the area from Winnetka Avenue (east) and Oxnard Street (southeast). The only readily available views of Landscape Unit C would be from Landscape Units A and B, which would be improved by the extension of the Mall into the Horticulture area. The Horticulture area would become the southern visual terminus of the Mall and more visually connected with the central campus core.

Landscape Unit D – Northwest Corner of Campus – Agricultural Area

Approximately 12 to 13 acres of the open space that currently exists in Landscape Unit D would be developed with new structures, parking lots, and landscaping as part of the new Equestrian Education Center and Child Development Center. These alterations would significantly affect views to and from this area of campus.

Landscape Unit E – Southwest Corner of Campus – Undeveloped Rolling Hills

Views of the southwest corner of campus (Landscape Unit E) would remain relatively unchanged. Views of the undeveloped rolling hills, which are considered a scenic resource to the neighboring communities, would still be available to viewers on and off campus. However, the development within Landscape Unit D would partially obstruct views of this area from the north, an insignificant impact.

Northern views from residential properties to the south of campus would not be affected.

e. Shading/Glare

The proposed Master Plan would not have a significant impact on shadow patterns within or from any of the landscape units. New buildings would be generally located within areas that are already heavily shaded by existing structures and large trees. The only exception is in the open space/agricultural areas, where there are currently few trees.

New buildings may produce some additional shadow patterns that do not currently exist. However, shadows from new buildings would not be substantial and would not significantly affect any sensitive open space areas on campus.

Similarly, the new buildings and the renovation projects would not create substantial sources of new glare. The construction of new buildings and the renovation of existing buildings would include building materials that are generally non-reflective, such as wood, stucco, or painted steel. The chance for glare, which would be greatest during the early morning hours (due to the low angle of the sun), would also be reduced given the shading provided by the relatively large number of trees on campus. Therefore, the proposed projects of the Pierce College Master Plan would not result in a significant glare impact on sensitive receptors (e.g., residences) or motorists.

f. Artificial Light

The proposed Master Plan would not introduce significant new sources of artificial light that could adversely affect sensitive uses or nighttime views. New security lighting would be installed in all parking lots, along roadways, and adjacent to new buildings and walkways.

New lighting (and a new scoreboard) would also be installed in the playing fields on the north side of campus. Since the new lighting would generally be located within vacant areas of the campus or far from sensitive residential uses that border the campus, significant spillover impacts on sensitive residential or adjacent properties are not anticipated.

3-2.3 Mitigation Measures

V-1 The Master Architect selected by the College shall develop design guidelines to ensure that new buildings are compatible with adjacent structures and maintain the Spanish architectural theme of the campus.

V-2 A study shall be conducted by a qualified structural/seismic engineer and preservation architect to determine the cost and feasibility of repairing and rehabilitating the Business Office/Student Store building. The Business Office/Student Store Building shall be rehabilitated and adaptively reused, if feasible. If rehabilitation of the Business Office/Student Store building is determined to be feasible, the plans for the adaptive reuse of the building shall meet the Secretary of the Interior's Standards for Rehabilitation.

V-3 In the event that the alternate location for the Life-Long Learning Residences complex (on the ridge of one of the Chalk Hills directly south of Parking Lot 6) is selected, proposed structures shall be designed and sited to ensure that important views from residential properties to the south would not be obstructed and as much open space as possible would be preserved.

3-2.4 Unavoidable Significant Adverse Impacts

Proposed development (i.e., new Equestrian Center and Child Development Center) within the open space/agricultural fields would be an unavoidable significant adverse visual impact.

If the Business Office/Student Store Building is demolished, an unavoidable significant adverse visual impact would occur.

3-3 AGRICULTURAL RESOURCES

3-3.1 Environmental Setting

Responsible for the production of over 250 types of crops, California plays an important role in the growing of America's fruits and vegetables. Despite the usual focus on technology and cinema, agriculture remains one of the state's most important industries. According to the United States Department of Agriculture, California produced 8.7 percent of the total agricultural crops grown in the U.S. in 1997 and led the country in total sales at $17 billion.[4] The state's temperate climate creates an environment that can support the growth of highly perishable fruit crops (e.g., oranges and strawberries) as well as hardy vegetable crops like artichokes and pumpkins. Historically, southern California is probably best known for growing citrus crops. In 1997, California produced 5,077,472,821 pounds of oranges. Agriculture in California is of national importance as well as a top economic industry for the state.

Until 1850, cattle ranches, vineyards, and grain fields dominated the Los Angeles landscape. The availability of water and natural conditions constrained the types of agricultural crops that could be grown in the area. With the completion of the Los Angeles Aqueduct (LAA) in 1913, irrigation water was abundant and shifted the economy from ranching to farming and agricultural uses. The San Fernando Valley's hotter desert climate had been best suited for dry farming and ranching prior to the LAA, but with the flow of irrigation water became a prime location for establishment of new vineyards, citrus groves, and fruit orchards. The San Fernando Valley experienced a highly productive but short-term agricultural history that lasted approximately 47 years. Post World War II, the population in Los Angeles and the San Fernando Valley grew rapidly. Much of the land in the Valley was re-zoned for urban development and by the late 1940s, farmers were selling their agricultural land to developers for construction of commercial and residential properties. By the 1960s the agricultural economy had been replaced largely by commercial, industrial, and aerospace economies.[5] The aeronautics industry, which had its beginning in the San Fernando Valley, has been an important economic factor for 55 years.

Established in 1947, Pierce College was developed as an agricultural school in the western San Fernando Valley. The school's mission was to educate urban youth in the agricultural sciences and other academic fields. At the time of purchase, between 1946 and 1947, Pierce College was the site of the Alexander Jeffries Ranch. Cattle were grazed on the ranch while hay, walnuts, oranges were also cultivated. Once established, the College offered an agricultural curriculum that included both the animal sciences and agricultural crop production. Educational trends heavily favored equestrian and animal science classes, and by 1949, the growth of truck crops and the associated course listings were discontinued at Pierce College. Since that time, animal grazing and feed crops (e.g., oat hay) have been the predominant uses on the farmland portions of the College campus, though much of the farmland is currently underutilized. The College's

[4] *1997 Census of Agriculture – Ranking of States and Counties,* United States Department of Agriculture–National Agricultural Statistic Service, 1997.
[5] City of Los Angeles, *General Plan-Conservation Element,* 2001.

open fields and diversified livestock are used as part of the community college's educational curriculum.[6]

The Farmland Mapping and Monitoring Program (FMMP) of the California Department of Conservation (DOC) produces maps and statistical data used for analyzing impacts on California's agricultural resources. Agricultural land is rated according to soil quality and irrigation status; the best quality land is called Prime Farmland. A total of 48 counties covering 44.1 million acres are mapped every 2 years. Current land use information is gathered using aerial photographs, a computer mapping system, public review, and field reconnaissance.

The 2000 FMMP Farmland Map for the Los Angeles County area designates the proposed project site as both Prime Farmland and Unique Farmland. Prime Farmland is defined as land that has "the best combination of physical and chemical features able to sustain long term production of agricultural crops. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields." Unique Farmland is defined as "lesser quality soils used for the production of the state's leading agricultural crops. This land is usually irrigated, but may include non-irrigated orchards or vineyards as found in some climatic zones in California" (DOC 2002).[7] Both land types must have been used for production of irrigated crops at some time during the 4 years prior to the mapping date. According to the FMMP Farmland Map for Los Angeles County, there are an estimated 110 acres of mapped Prime Farmland and 178 acres of mapped Unique Farmland on the Pierce College campus.

3-3.2 Environmental Impacts

a. Significance Criteria

For purposes of the analyses in this EIR, the project would have a significant impact on agricultural resources if one or more of the following would occur:

- The project would convert a substantial amount of significant Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use or;

- The project would materially conflict with existing zoning for agricultural use, or a Williamson Act contract.

b. Impacts Discussion

Construction of new Master Plan facilities would result in the conversion of underutilized agricultural land designated as Prime and Unique Farmland. The proposed facilities would include a new Equestrian Education Center, which would result in the conversion of approximately 10 acres of agricultural fields designated as Prime Farmland to equestrian related uses including new arenas, stables, and parking, and the new Child Development Center (CDC),

[6] City of Los Angeles, *General Plan-Conservation Element*, 2001.
[7] California Department of Conservation, *http://www.consrv.ca.gov/dlrp/fmmp/fmmp_categories.htm*, 2002.

which would result in the conversion of 2 to 3 acres of Prime Farmland west of Mason Street and north of Olympic Drive. Additionally, less than an acre of Prime Farmland south of Stadium Way would be required for the proposed new Maintenance and Operations Facilities.

If the Lifelong Learning Residences complex (LLRC) is developed in the alternative location on the Chalk Hills south of Stadium Way, an estimated 8 to 12 acres of land designated as Unique Farmland could be required for that development. This location, which is steeply sloped and not suitable for farming, is the site of College cross-country and hiking trails.

Although a site has not been identified and a design has not been developed for the new Water Reclamation Facility, it is possible that construction of this facility, depending on the chosen location, could also result in the conversion of Prime or Unique Farmland on the campus.

Based on the above, the proposed Master Plan improvements could result in the development of approximately 12 to 13 acres (20 to 25 acres if the LLRC is developed in the alternate location) of land designated as Prime or Unique Farmland. This amount represents less than 5 percent (12 percent with inclusion of the LLRC) of the total designated Prime and Unique Farmland acreage on the campus. Given the relatively small amount of farmland that would be developed and the fact that the proposed facilities would fulfill the Master Plan goal of enhancing land resources and would be consistent with the College's agricultural educational mission, the overall impact would not be significant. Under the Master Plan and proposed Agricultural Partnerships, approximately 20 to 23 acres of agricultural land along Victory Boulevard and De Soto Avenue would be used to grow row crops and for a produce stand and "Pizza Farm." These improvements would return the underutilized farmland to active and productive agricultural use, a beneficial effect.

There is no Land Conservation Act (i.e., Williamson Act) contract for the site. The campus is zoned as Open Space and Public Facilities. Therefore, the proposed Master Plan projects would not be in conflict with any Williamson Act contract or zoning for agricultural use.

3-3.3 Mitigation

Development of the proposed Pierce College Facilities Master Plan projects would not result in a significant impact on agricultural resources; therefore, no mitigation measures are required.

3-3.4 Unavoidable Significant Adverse Impacts

The proposed Master Plan projects would provide new and renovated facilities that would enable the College to meet its mission to educate the community in general academics and the agricultural sciences. The proposed projects that would be constructed on the campus' agricultural land are consistent with that mission and no unavoidable significant adverse impacts would occur as a result of the construction or operation of the Master Plan.

3-4 AIR QUALITY

3-4.1 Environmental Setting

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 southwest corner of the San Fernando Valley within the City and County of Los Angeles. Los Angeles County is in 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 everywhere in the Basin throughout the 1990's. 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, the nation's only "extreme" ozone non-attainment area, has until 2010 to achieve the national 1-hour ozone standard. Deadlines for CO and PM_{10} (particulate matter less than 10 microns in diameter) attainment in the Basin are 2000 and 2005, respectively. The national nitrogen dioxide (NO_2) 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 NO_2 non-attainment area when it was redesignated attainment by the EPA in 1998.

In July 1997, the EPA promulgated stricter standards for ozone and fine particulates less than 2.5 microns in diameter ($PM_{2.5}$), with up to 15 years allowed for attaining the $PM_{2.5}$ 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 $PM_{2.5}$ 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 on Table 3-1.

b. 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 are revising the 1999 AQMP, and are expected to adopt the new revision in 2002.

c. Existing Air Quality

The SCAQMD is responsible for monitoring air quality in the South Coast Air Basin (Basin), and for adopting controls, in conjunction with the California Air Resources Board, to improve air quality. Overall air quality has improved considerably throughout the Basin since 1990. In that year, the peak ozone concentration in the West San Fernando Valley was 0.19 parts per million (ppm) and the state ozone standard was exceeded 108 times. In 2000, the peak reading at that same station was 0.11 ppm and the state standard was exceeded six times. 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 8-hour concentrations of ozone and of $PM_{2.5.}$ Readings for SRA 6 for the past 5 years, together with the applicable state and national standards, are shown in Table 3-2. Where they are available, the 8-hour ozone and the $PM_{2.5}$ concentrations in SRA 6 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)	.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 very 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, December 2001.

Table 3-2: Summary of Air Quality Data at West San Fernano Valley (SRA 6) Monitoring Station

Pollutant Standards	1997	1998	1999	2000	2001[1]
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)	0.12	0.16	0.10	0.11	0.14
Maximum 8-hr concentration (in ppm)	0.10	0.12	0.09	0.08	0.12
Days state standard exceeded	12	23	5	6	27
Days national 1-hr standard exceeded	0	7	0	0	2
Days national 8-hr standard exceeded	3	13	1	0	7
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)	12	11	9	11	ND
Maximum concentration 8-hr period (in ppm)	9.8	9.3	7.6	9.8	6.13
Days state/national 1-hr standards exceeded	0	0	0	0	0
Days state 8-hr standard exceeded	2	1	0	2	0
Days national 8-hr standard exceeded	1	0	0	1	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)	0.0260	0.0266	0.0287	0.0285	ND
Percent national standard exceeded	0	0	0	0	ND
Maximum 1-hr concentration	0.20	0.14	0.12	0.11	0.09
Days state standard exceeded	0	0	0	0	0
Suspended Particulates (PM_{10})[2]					
State standard (24-hr. avg. 50 $\mu g/m^3$)					
National standard (24-hr avg. 150 $\mu g/m^3$)					
Maximum 24-hr concentration	92	75	82	74	86
Percent samples exceeding state standard	30	15	35	23	ND
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	79	67.5	56.9
Percent samples exceeding national standard			1	1.9	0

Notes:

[1] 2001 Concentrations are from California Air Resources Board

[2] Readings are from East San Fernando Valley (SRA 7). PM_{10} is not monitored in SRA 6.

ppm = parts per million

$\mu g/m^3$ = micrograms per cubic meter

ND = No Data

NM = Not Monitored

Source: SCAQMD Air Quality Data, 1997 through 2000.

Summary of Existing Air Quality

Ozone concentrations and the number of standard exceedances have fluctuated in SRA 6 since 1996, but are relatively unchanged. Despite the steep decline elsewhere in the Basin, carbon monoxide concentrations are also relatively unchanged in SRA 6 throughout the period and exceeded the state 8-hour standard in 3 of the 5 years. NO_2 concentrations were consistently low

throughout the period. Particulate levels vary from years to year, but the national PM_{10} standard was not exceeded in any year. The national $PM_{2.5}$ standard was exceeded the first 2 years it was measured.

3-4.2 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 Los Angeles Community College District.

The District 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 available on the SCAQMD's web page at www.aqmd.gov. Other chapters will be posted on the web page as they become available. 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. 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 Signficance

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
Volatile organic compounds (ROC)	75	2.5	55

Source: South Coast 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

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 or pollutants where the impacts occur very close to the source, such as carbon monoxide or particulate matter (fugitive dust).

The Master Plan would maintain the College's agricultural integrity while providing enough space and modernization to accommodate an enrollment in the Fall 2010 semester of 23,252 students or 16,423 FTE students in the 2010-2011 academic year. Proposed Master Plan projects involve construction and renovation in the education/ public facilities portion of the campus as well as the agricultural/open space areas of the campus.

Master Plan construction would be expected to commence in 2003 and continue through the year 2010. This is considered to be a flexible timetable as commencement of several projects is contingent upon finding suitable private partners.

Completion of the projects proposed under the Master Plan would result in an increase of approximately 500,000 square feet of building area,400 to 450 housing units, and 1,087 parking spaces on the campus. Currently, there are approximately 585,000 gross square feet of building area and 4,119 parking spaces on the campus.

Based on the preliminary schedule developed by the contractor, the 1st quarter of 2004 would have the most fugitive dust emissions as well as the most gaseous emissions from equipment, trucks, and employees. The peak construction quarter would include grading and excavation activities for the new buildings identified in the list below as numbers 3, 4, 5, 7, 8, 9, and 10.

1. Agriculture/Science/Nursing Building (March 31, 2004 to August 2, 2005) – 130,000 square feet (sf) (approximately 3 acres).

2. Water Reclamation Facility (August 10, 2004 to December 26, 2005)

3. Equestrian Education Center Phase II (February 2, 2004 to August 13, 2004) - total renovated area is approximately 32.8 acres.

4. East Equestrian Parking Lot (February 2, 2004 to May 14, 2004) – included in the 32.8-acre total in No. 3.

5. West Equestrian Parking Lot (February 2, 2004 to May 14, 2004) – included in the 32.8-acre total in No. 3.

6. Technology Center (May 7, 2004 to May 5, 2005) – 60,000 sf (approximately 1 acre).

7. Child Development Center (February 2, 2004 to January 28, 2005) – 30,000 sf (approximately 2.5 acres).

8. Viticulture Partnership (January 19, 2004 to October 22, 2004) – total land for the grape vines is approximately 12 acres.

9. Horticulture Classroom Building & Greenhouse & Renovations (December 15, 2003 to December 24, 2004) – 2,000 sf.

10. Horticulture Area Renovation (December 15, 2003 to December 24, 2004) – total area is approximately 31 acres (including the Horticulture Classroom Building listed in item Number 9).

11. Admissions/Counseling/Student Services (September 14, 2004 to February 27, 2006) – 60,000 sf (approximately 0.6 acres).

12. Mall Enhancement (September 14, 2004 to September 12, 2005) – area of approximately 0.5 acres.

In addition, the following buildings would be undergoing rehabilitation during the peak quarter:

Performing Arts Building Renovation – 28,550 sf
Classroom Quad Renovation – 38,012 sf
Faculty Office Cottages Interior Renovation – 14,020 sf

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

Implementation of the full Master Plan would result in the demolition of approximately 120,000 square feet of building space, as well as some existing paving in roads, parking lots, walkways, etc. Because most of this demolition would not overlap with the peak grading and excavation period, only emissions from demolition of the existing student store and demolition associated with renovation of the three existing buildings described above are shown in the peak period tables.

Prior to demolition 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 may be disturbed during grading and excavation or while storing project-related equipment. Table A9-9 of the SCAQMD *CEQA Air Quality Handbook* states that there would be 26.4 pounds of PM_{10} for each acre of graded surface.

There are approximately 55 acres associated with the projects included in the peak quarter. The analysis assumes that all 55 acres could be exposed on the peak day and an average of 20 acres exposed for either grading or excavation of building foundations throughout the peak quarter.

Peak day emissions are shown in Table 3-4; peak quarter emissions in Table 3-5.

Table 3-4: Maximum Daily Construction Emissions (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})**
Demolition					39[a]
Earthmoving/Grading (Fugitive Dust)					1,452[a]
Dirt Piling					262[a]
Diesel-Powered Equipment	192	78	528	52	45
Trucks	14	1	12	--	1
Employee Vehicles	57	7	6	--	--
MAXIMUM DAILY CONSTRUCTION EMISSIONS	263	86	546	52	1799
SCAQMD Significance Thresholds for Construction	550 lb/day	75 lb/day	100 lb/day	150 lb/day	150 lb/day
Significant?	NO	YES	YES	NO	YES

Notes:
[a] Model assesses fugitive dust only
-- not included in MVEI7G model.

Source: JHA Environmental Consultants, LLC, 2002.

Table 3-5: Peak Quarter Construction Emissions (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})**
Demolition					1.26[a]
Earthmoving/ Grading					17.16[a]
Dirt Piling					8.50[a]
Diesel-Powered Equipment	6.24	2.54	17.17	1.69	1.46
Trucks	0.47	0.05	0.40	--	0.28
Employee Vehicles	1.84	0.24	0.22	--	0.01
MAXIMUM QUARTER CONSTRUCTION EMISSIONS	8.55	2.83	17.79	1.69	10.25
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	YES	YES	NO	YES

Notes:
[a] Model assesses fugitive dust only
-- not included in MVEI7G model.

Source: JHA Environmental Consultants, LLC, 2002.

❑ Dirt Loading

The project would incorporate a construction waste management plan to recycle, reuse, or salvage construction, demolition, and land clearing waste. There would, however, be some transport of these materials offsite to the nearest landfill, which is the Calabasas Landfill, located approximately 10 miles from the project site. The analysis assumes material is loaded on trucks by loaders. Based on a formula contained in Table A9-9-F in the South Coast Air Quality Management District *CEQA Air Quality Handbook* (1993), each loader generates 21.8 pounds of PM_{10} an hour. The analysis assumes there would be 4 loaders, each loader operating 3 hours a day in the 65-day quarter loading trucks. It also assumed that no PM_{10} emissions would be lost in transport because either trucks would be covered or sufficient freeboard capacity would be maintained, in compliance with construction contract provisions and specifications.

Peak day emissions are shown in Table 3-4; peak quarter emissions in Table 3-5.

❑ Equipment

Emission estimates are derived from formulas contained in Tables A9-8-A and B in the South Coast Air Quality Management District *CEQA Air Quality Handbook* (1993). The analysis assumes there would be 4 loaders, 4 scrapers, 4 excavators, 12 dozers, and 12 pieces of miscellaneous heavy-duty equipment. All equipment except the loaders is assumed to operate 8 hours a day; loaders are assumed to operate 3 hours per day. Water is assumed to be available on the site; therefore, no water trucks are included in the total.

❑ Trucks

Although there would be recycling programs, some amount of dirt and debris would be exported to the nearest landfill, which is approximately 10 miles away. The analysis assumes there would be 20 loads a day throughout the peak quarter. In addition, there would be approximately 36 heavy-duty truck trips a day to bring supplies and equipment. These trips are assumed to average 10 miles each way.

❑ Employee Vehicles

Different workers are on site at different phases of construction. The analysis assumes there would be an average of 250 employees total working on all the projects on any day during the peak construction period. 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). Emission factors are from the CARB emission model, MVEI7G1cFB00 for summertime. Calculation sheets are contained in the Air Quality Technical Appendix (see Appendix B of this EIR). Daily emissions are shown in Table 3-4; peak quarter emissions in Table 3-5.

❑ Odors

There are no known sources of odors on the site that would cause significant odor impacts during grading and excavation. Diesel exhaust from equipment produces odors that are unpleasant to some people, but these are not considered significant.

❑ Toxics

As discussed earlier, some older buildings may contain asbestos, which is a hazardous substance. This material would be collected and encapsulated according to provisions of SCAQMD Rule 1403, then taken to an approved landfill prior to any demolition. There would be no significant public exposure to asbestos fibers.

Equipment and trucks used in construction would produce diesel exhaust emissions. On April 28, 1998 the Scientific Review Panel of the California Air Resources Board (CARB) approved reports prepared by staffs of the Office of Environmental Health Hazard Assessment (OEHHA) and CARB identifying diesel exhaust as a carcinogen. To date, no guidelines have been issued or models developed to identify what concentrations of carcinogens or other health-risk substances are contained in the exhaust streams of individual vehicles or pieces of equipment, how they differ under various operating and environmental conditions, and what would constitute a significant health risk. There are over 40 substances in diesel exhaust listed by the U.S. EPA as hazardous substances. However, there is a wide difference in the amount of these substances contained in individual diesel trucks, depending on the age of the vehicle and the amount of controls. Significant progress has been made in California as a result of state and federal controls already enacted. CARB has projected that emissions of diesel exhaust PM_{10}, which contains most of the hazardous materials in diesel exhaust, will decline 85 percent between 1990 and 2010.

College administrators do not believe that pesticides have ever been used on agricultural crops grown in any of the areas that would be developed under the Master Plan. Therefore, there should be no toxic materials exposed during grading and excavation.

❑ Sensitive Receptors

College students are considered to be adults and therefore are not included as sensitive receptors, although there may be students who suffer from asthma or other respiratory conditions. These susceptible students should be protected from fugitive dust emissions to the maximum extent feasible. Small children who attend the Child Development Center are sensitive receptors. The proposed project could have a significant adverse impact on these receptors when grading occurs in close proximity to the existing or future center.

Summary of Construction Impacts Without Mitigation

Without mitigation, VOC, NO_x, and PM_{10} emissions would be significant on the peak day and in the peak quarter. There are no known sources of odors on the site that would be released during construction. The California Air Resources Board has declared that diesel exhaust is a toxic substance. Both trucks and equipment would emit diesel exhaust. The potential exists for significant adverse impacts on sensitive receptors, without mitigation.

Operation Impacts

❑ Regional

When completed, the projects proposed under the Master Plan would result in an increase of approximately 500,000 several hundred thousand square feet of building area, 400 to 450

housing units, and 1,087 parking spaces on the campus. Currently, there are approximately 585,000 gross square feet of building area and 4,119 parking spaces on the campus. Implementation of the Master Plan would also increase employment at the College.

Traffic

Based on the Traffic Report for the project, the completed project at build out would result in an increase of 17,570 daily trips.

Vehicle emissions were calculated with the California Air Resources Board model, URBEMIS, version 2001, obtained from the SCAQMD website, adjusted with total new trips for each land use supplied by the Traffic Consultant. Emissions were calculated for summertime conditions.

Utilities

Utility emissions were calculated using Tables A9-11 and A9-12 in the SCAQMD *CEQA Air Quality Handbook*. Operational emissions are shown in Table 3-6.

Significance of Regional Impacts Before Mitigation

Based on SCAQMD significance thresholds, the project would have a significant impact on regional air quality without mitigation. As shown in Table 3-6, emissions of three (CO, VOC, and NO_x) of the four criteria pollutants, would exceed SCAQMD thresholds. However, the project accommodates regional growth already accounted for in the AQMP through the SCAG regional forecasts that were incorporated into the AQMP baseline. Therefore, the operational emissions have been offset through control measures in the AQMP. Nonetheless, the impact of pollutant emissions generated by the proposed project is considered to be significant.

❑ Local

The Traffic Consultant's estimates of future traffic volumes at the key intersections most affected by the completed project were used to determine potential carbon monoxide concentrations in 2010 both with and without the project.

The two intersections most adversely affected by the project at build out were Mason Street/Victory Boulevard and Winnetka Avenue/Calvert Street. These intersections were modeled for existing, future without project, and future with project conditions using the Caltrans computer model, Caline 4.

Table 3-6: Net Increase in Operational Emissions (in pounds per day)

Source Category	Pollutant			
	Carbon Monoxide (CO)	**Volatile Organic Compounds (VOC)**	**Oxides of Nitrogen (NOx)**	**Particulate Matter (PM_{10})**
Traffic Emissions	1,506	170	108	90
Natural Gas Emissions	2	1	10	0
Electricity Emissions	4	0	22	1
TOTAL PROJECT EMISSIONS	1,512	171	140	91
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 URBEMIS (2001) from SCAQMD website.
Utility emissions: *SCAQMD CEQA Handbook 1993*, Tables A9-11 A and B; Tables A9-11 A and B.

Source: JHA Environmental Consultants, LLC, 2002.

Consistent with SCAQMD requirements, background concentrations must be added to modeled concentrations to provide a margin of safety. Since the SCAQMD Handbook does not project future concentrations beyond the year 2000, monitored concentrations at the West San Fernando Valley air monitoring station in 2000 were added to modeled concentrations in both 2002 and 2010. This methodology greatly overstates potential impacts since CARB emission models predict that CO concentrations will continue to decline as new vehicles with newer controls replace older vehicles. Consistent with Caltrans and CARB specifications, 8-hour concentrations were estimated at 70 percent of predicted 1-hour concentrations.

Existing and future CO concentrations are shown in Table 3-7 and Table 3-8.

Significance of Local Impacts Before Mitigation

Carbon monoxide concentrations at the most affected intersections would be less than significant.

Table 3-7: Peak 1-Hour Concentration (in ppm)

Intersection	Monitored[a]	Existing (2002)		Future (2010)		
		Modeled	Adjusted	Modeled (No Project)	Modeled (With Project)	Adjusted
AM Peak						
Mason St. Victory Bl.	9	5.9	14.9	3.6	3.7	12.7
Winnetka Av. Calvert St.	9	2.2	11.2	1.4	1.4	10.4
PM Peak						
Mason St. Victory Bl.	9	6.3	15.3	3.8	4.3	13.3
Winnetka Av. Calvert St.	9	2.3	11.3	1.4	1.6	10.6

Note: [a]SCAQMD *Year 2000 Air Quality Data*, Peak 1-Hour CO concentration at West San Fernando Valley Monitoring Station.

Source: JHA Environmental Consultants, LLC, 2002.

Table 3-8: Peak 8-Hour Concentration (in ppm)

Intersection	Monitored[a]	Existing (2002)		Future (2010)		
		Modeled	Adjusted	Modeled (No Project)	Modeled (With Project)	Adjusted
AM Peak						
Mason St. Victory Bl.	7.4	4.13	11.53	2.52	2.59	9.92[b]
Winnetka Av Calvert St.	7.4	1.54	8.94	0.98	0.98	8.38
PM Peak						
Mason St. Victory Bl.	7.4	4.41	11.81	2.66	3.01	10.41[b]
Winnetka Av Calvert St.	7.4	1.61	9.01	0.98	1.12	8.52

Notes:

[a]SCAQMD *Year 2000 Air Quality Data*, Peak 8-Hour CO concentration at West San Fernando Valley Monitoring Station

[b] Exceeds 8-hour CO standard when year 2000 background concentrations are added in. However, the increase over future conditions without the project is less than 0.45 ppm. Therefore, the increase is less than significant. Future CO concentrations at Mason Street and Victory Boulevard are lower than existing conditions, even with increased traffic.

Source: JHA Environmental Consultants, LLC, 2002.

Consistency with the AQMP

The proposed project would provide services for the population growth projected in the 1999 AQMP for the South Coast Air Basin and is therefore consistent with the AQMP. The increase

in emissions that arise from population growth and the services this added population requires are accounted for in the AQMP. Measures and programs (such as use of alternative fuels and non-polluting energy sources, transportation and transit improvements, ridesharing and telecommuting incentives, etc.) are contained in the AQMP to offset the adverse effects on air quality resulting from this growth. The project would utilize mitigation measures contained in the SCAQMD's *CEQA Air Quality Handbook* (1993) to offset fugitive dust emissions to the extent feasible. These reductions are assumed in the air basin's PM_{10} control strategy contained in the AQMP.

3-4.3 Mitigation Measures

a. Construction Mitigation Measures

Fugitive Dust Emissions

The following measures shall be implemented to control fugitive dust. These measures would reduce PM_{10} emissions 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.

AQ-8 Schedule grading and excavation activities in the vicinity of the Child Development Center during periods when children are not in attendance.

Gaseous Emissions

The following measure shall be implemented to reduce emissions from equipment. This measure would reduce emissions by approximately 10 percent.

AQ-9 Turn off equipment when not in use for longer than 5 minutes.

The following measures shall be employed 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-10 Use biodiesel fuel in all onsite diesel-powered equipment, if available.

AQ-11 Use alternatively fueled (compressed natural gas (CNG), liquefied natural gas (LNG), dual-fuel or electric) construction equipment, if available.

The peak day and peak quarter construction emissions after mitigation measures are shown in Table 3-9 and Table 3-10, respectively.

b. Operational Mitigation Measures

Regional

AQ-12 Please see the Transportation Demand Management Measures in Section 3-16 (Transportation, Traffic, and Parking).

Local

Impacts are not significant and do not require mitigation.

Table 3-9: 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	263	86	546	52	1799
Demolition (60% reduction)					23[a]
Earthmoving/ Grading (Fugitive Dust) (60% reduction)					871[a]
Dirt Piling (60% reduction)					157[a]
Diesel-Powered Equipment (10% reduction)	19	8	53	5	5
MAXIMUM DAILY CONSTRUCTION EMISSIONS AFTER MITIGATION	244	78	493	47	743
SCAQMD Significance Thresholds for Construction	550 lb/day	75 lb/day	100 lb/day	150 lb/day	150 lb/day
Significant?	NO	YES	YES	NO	YES
Note: [a] Model assesses fugitive dust only.					

Source: JHA Environmental Consultants, LLC, 2002.

Table 3-10: Peak Quarter Construction Emissions After Mitigation (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	8.55	2.83	17.79	1.69	28.67
Demolition (60% reduction)					0.76[a]
Earthmoving/ Grading (60% reduction)					10.30[a]
Dirt Piling (60% reduction					5.1[a]
Diesel-Powered Equipment (10% reduction)	0.62	0.25	1.72	0.17	0.15
Maximum Quarter Construction Emissions After Mitigation	8.49	2.58	16.07	1.52	12.36
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	YES	YES	NO	YES

Notes: [a] Model assesses fugitive dust only.
-- not included in MVEI7G model.

Source: JHA Environmental Consultants, LLC, 2002.

3-4.4 Unavoidable Significant Adverse Impacts

a. Construction

After mitigation, there would still be significant adverse impacts on NOx, VOC and PM_{10} concentrations on the peak day and in the peak quarter. Adherence to mitigation measures to schedule grading and excavation operations near the Child Development Center at times when children are not present should protect these sensitive receptors from adverse impacts. Use of alternative diesel fuels would prevent exposure to toxic diesel emissions.

b. Operation

Regional emissions of CO, VOC and NOx would still be significant, based on SCAQMD thresholds. There would be no local hotspots of carbon monoxide as a result of the completed project.

3-5 BIOLOGICAL RESOURCES

3-5.1 Introduction

Los Angeles Pierce College supports educational and administration facilities, agricultural land and facilities, surface parking lots, athletic fields and sports facilities, and some open space areas. The campus supports no native vegetation, aside from the Ecological Studies Preserve in Canyon de Lana in the southwest corner of the campus, which supports restored native vegetation planted during the 1960's, and the Arboretum in the southeastern portion of the campus, which supports some planted tree species native to southern California. Otherwise, biological resources on campus are limited to agricultural fields and large areas of open space dominated by non-native weedy vegetation, various (primarily non-native) horticultural tree species, and ornamental shrubs. Biological resources in the vicinity of Los Angeles Pierce College are also limited as the campus is surrounded by residential, educational, commercial, and light industrial land uses. No threatened or endangered species are known to exist on campus or in the immediate vicinity.

3-5.2 Environmental Laws Governing Biological Resources

a. 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.

b. 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.

c. 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 prohibit take of birds and active nests.

d. Section 404 of the U.S. Clean Water Act

The objective of the Clean Water Act of 1977 is to restore and maintain the chemical, physical, and biological integrity of the nation's waters. Section 404 of the Act regulates activities that result in discharge of dredged, fill or excavated material into "waters of the United States;" this generally includes any waterway, intermittent stream, man-made wetland or reservoir. Projects that include any such physical modification of a "water of the United States" must generally comply with Section 404 under the jurisdiction of the U.S. Army Corps of Engineers.

e. Sections 301 and 402 of the U.S. Clean Water Act

These sections of the Clean Water Act address problems of water pollution through the National Pollution Discharge Elimination System (NPDES). Section 301 prohibits the discharge of any pollutant without a permit, and Section 402 establishes the permit program administered by the Environmental Protection Agency (EPA).

f. California Fish and Game Code Sections 1600 - 1607

CDFG oversees streambeds and associated habitats pursuant to Sections 1600 to 1607 of the California Fish and Game Code, which manages activities that would "substantially change" the "bed, channel, or bank of any river, stream or lake designated by the department in which there is at any time an existing fish or wildlife resource, or from which these resources derive benefit."

3-5.3 Methods for Biological Resources Inventory

Prior to conducting surveys of the campus, Keane Biological Consulting (KBC) reviewed the Los Angeles Pierce College Facilities Master Plan project description and project maps to ascertain potential habitat suitability of the campus and adjacent areas for native plant and wildlife species, including sensitive species.

Surveys were conducted from 11:00 a.m. to 3:00 p.m. on May 6, 2002, from 4:00 to 6:00 p.m. on May 12, 2002, and from 10:15 to 12:30 p.m. on May 22, 2002 to ascertain the existing biological resources of the campus and its surroundings. Because the campus supports primarily agricultural, landscaped, and developed lands, the potential for sensitive plant and wildlife species is very low; thus, surveys earlier in the year to document sensitive plant species found only in the spring, or conducted earlier in the morning to observe sensitive bird species, were not deemed necessary. Nevertheless, surveys focused on identifying the presence and locations of

plant communities, wildlife habitat, and potential habitat for sensitive species. The survey also evaluated riparian (streambed) habitats that may be subject to potential jurisdiction under Section 404 of the U.S. Clean Water Act and/or Section 1600 of the California Fish and Game Code. Plant and wildlife species observed during surveys were recorded. Plants were identified with the use of Hickman (1993) and Brenzel (2001). Wildlife species were identified by visual or auditory observation or by sign (tracks, burrows, or scat[8]), and nomenclature for birds followed American Ornithologists' Union (1983).

A list of bird species observed on the campus from 1973 through 2002 was provided to KBC by Pat Farris, professor of biology at Pierce College; this list is included as Appendix C to this EIR. Pat Farris also provided information on the occurrence of amphibians, reptiles, and mammals as well as of sensitive and unusual species on the campus, including the Canada geese that use the agricultural fields on campus during the winter. Identification of some exotic (horticultural) trees on the campus was provided by Bob Perry, licensed landscape architect, and Mick Sears, professor of natural resource management.

KBC also reviewed documents pertaining to sensitive species that may be present on the campus. A plant or wildlife species is defined as sensitive when it has been afforded special recognition by federal, state, or local resources conservation agencies (e.g., U.S. Fish and Wildlife Service [USFWS], California Department of Fish and Game [CDFG]) and/or resource conservation organizations (e.g., California Native Plant Society). Because the campus supports limited habitat for sensitive species, a California Natural Diversity Data Base search was not conducted. However, the following documents pertaining to sensitive species were reviewed, including:

- State and Federally Listed Endangered and Threatened Animals of California, CDFG, Natural Heritage Division, April 2002.
- State and Federally Listed Endangered, Threatened and Rare Plants of California, CDFG, Natural Heritage Division, April 2002.
- Special Animals (including California Species of Special Concern), CDFG, Natural Heritage Division, April 2002.

3-5.4 Environmental Setting

a. Description of Existing Resources

Vegetation

As stated above, no native plant communities as defined by Holland (1986) exist on campus, although Canyon de Lana, also called the campus Ecological Studies Preserve, supports a riparian (streamside) community as a result of a restoration project in the 1960s. Dominant plant species in the restored riparian community include willow (*Salix* sp.)[9], western sycamore (*Platanus racemosa*), Fremont cottonwood (*Populus fremontii*), Mexican elderberry (*Sambucus*

[8] Animal droppings.
[9] Scientific names are provided only after the first mention of the species' common name in this document.

mexicana), maple (*Acer* sp.), alder (*Alnus* sp.), and blackberry (*Rubus ursinus* or *discolor*). Also present is a small freshwater marsh in the pond at the base of the canyon with dense growth of cattail (*Typha* sp.) on the northwestern edge of the pond and rabbitfoot grass (*Polypogon monospilensis*) at its edges.

Restored (planted) vegetation common in chaparral and coastal sage scrub plant communities typical of the Santa Monica Mountains is present on the slopes of Canyon de Lana, along with several non-native pine trees (*Pinus* sp.). Some native pine species and other conifers are also present, including foothill pine (*Pinus sabiniana*), pinyon pine (*Pinus monophylla*), incense cedar (*Calocedrus decurrens*), and coast redwood (*Sequoia sempervirens*), which are species found in California mountains. Restored plant species along the canyon slopes include white oak (*Querecus lobata*), coast live oak (*Quercus agrifolia*), purple sage (*Salvia leucophylla*), toyon (*Heteromeles arbutifolia*), Brewer's saltbush (*Atriplex lentiformis*), scrub oak (*Quercus berberidifolia*), holly-leaved redberry (*Rhamnus ilicifolia*), spiny redberry (*Rhamnus crocea*), thick-leaved yerba santa (*Eriodictyon crassifolium*), sugarbush (*Rhus ovata*), bladderpod (*Isomeris arborea*), redbud (*Cercis occidentalis*), mountain mahogany (*Cercocarpus betuloides*), and one individual of the state-endangered Nevin's barberry (*Mahonia nevinii*). Weedy vegetation, primarily non-native grasses (*Bromus* sp. and *Avena* sp.) and other exotic species such as horehound (*Marrubium vulgare*), dominate openings among the trees and shrubs.

The plowed agricultural fields in the western portion of campus north of Canyon de Lana, the hill east of Canyon de Lana, and the agricultural area east of that hill support ruderal (weedy, primarily non-native) vegetation including non-native grasses (*Bromus diandrus*, *Bromus madritensis* ssp. *rubens*, *Avena* sp. and *Hordeum* sp.), shortpod mustard (*Hirschfeldia incana*), jimsonweed (*Datura wrightii*), Russian-thistle (*Salsola tragus*), villous sand-spurry (*Spergularia villosa*), sweetclover (*Melilotus*), Australian saltbush (*Atriplex semibaccata*), tree tobacco (*Nicotiana glauca*), California fan palm (*Washingtonia filifera*), wild radish (*Raphanus sativus*), common fiddleneck (*Amsinckia intermedia*), cheeseweed (*Malva parviflora*), lamb's quarters (*Chenopodium album*), filaree (*Erodium* sp.) and horehound. Trees along the edges and near buildings in the agricultural fields include Brazilian pepper (*Schinus terebinthifolius*), Peruvian pepper (*Schinus molle*), European olive (*Olea europaea*), eucalyptus (*Eucalyptus* sp.), and palm (*Washingtonia* sp.). A concrete-lined channel runs south to north through the agricultural area over the hill east of Canyon de Lana. Trees planted along the concrete channel include tree-of-heaven (*Ailanthus altissima*) and silk oak (*Grevillea robusta*) (Sapphos Environmental 1993).

Trees near the horticultural buildings south of the campus entrance on Winnetka Avenue include western sycamore, maple, ash (*Fraxinus* sp.), palm, juniper (*Juniperus* sp.) and European olive. The Arboretum/Braille Trail nearby in the southeastern corner of the campus supports a variety of trees from around the world, including some very large specimen trees. A few of the numerous trees represented in the Arboretum are Canary Island pine (*Pinus canariensis*), Chinese holly grape (*Mahonia lomarifolia*), Shamel ash (*Fraxinus uhdei*), sweet bay (*Laurus nobilus*), deodar cedar (*Cedrus deodara*), yaw pine (*podocarpus macrophylla*), cork oak (*Quercus suber*), eucalyptus, and Brazilian pepper. Several small brick-lined planters throughout the arboretum support native species such as sages (*Salvia* sp.), as well as herbs and succulents. The Arboretum also includes trees and shrubs native to California including coast live oak, giant sequoia (*Sequioadendron giganteum*), lemonadeberry (*Rhus integrifolia*), and coffeeberry

(*Rhamnus californica*). Understory plants include periwinkle (*Vinca major*) and non-native weedy species including non-native grasses, horehound, shortpod mustard, and cheeseweed.

An abandoned vineyard dominated by weedy species similar to those discussed for the agricultural and open space areas above is present west of the Arboretum. Farther west is a fallow orchard with fig (*Ficus* sp.), orange, and ash, and several invasive and weedy species including California fan palm, blackberry, field bindweed (*Convolvulus arvensis*) and non-native grasses. South of the orchard is a grove of tall palm trees, and to the west, just south of the existing stadium, is a hill with several species of tall pine trees.

Within the areas of the campus supporting administrative and classroom buildings and parking lots are several horticultural trees and shrubs including shiny xylosma (Xylosma congestum), redwood (*Sequoia sempirvirens*), monkey-puzzle tree (*Araucaria imbricata*), bottle tree (*Brachychiton populneus*), elm (*Ulmus* sp.), several species of pine (*Pinus* sp.), palm trees, holly oak (*Quercus ilex*), carob tree (*Ceratonia siliqua*), western sycamore, and oleander (*Nerium oleander*).

Wildlife

The predominance of agricultural and horticultural vegetation on the campus limits its potential to support a diverse array of wildlife other than species well adapted to human-modified habitats and migratory birds. The only fish expected to occur on campus (outside of laboratories) would be in the Canyon de Lana pond, which is stocked with mosquitofish (*Gambusia affinis*). Amphibians associated with the pond and riparian habitats of the canyon would be limited to the non-native bullfrog (*Rana catesbeiana*) and possibly Pacific treefrog (*Hyla regilla*). Because of the large feral cat population on campus, native reptiles are rare and limited to a few southern alligator lizards (*Elgaria* multicarinata); no western fence lizards (*Sceloporus occidentalis*), common in other open space areas of southern California, have been observed recently.[10] Native reptiles may also have been depleted due to collecting by students and by residents in neighborhoods adjacent to the campus.

Resident birds (those that can be seen throughout the year) observed during the campus surveys included domestic fowl in the agricultural areas, mallard (*Anas platyrhynchos*) near the pond in Canyon de Lana, red-tailed hawk (*Buteo jamaicensis*), American kestrel (*Falco sparverius*), killdeer (*Charadrius vociferus*), mourning dove (*Zenaida macroura*), spotted dove (*Streptopelia chinensis*), Anna's hummingbird (*Calypte anna*), western scrub-jay (*Aphelocoma californica*), American crow (*Corvus brachyrhynchos*), northern mockingbird (*Mimus polyglottos*), spotted towhee (*Pipilo maculatus*), California towhee (*Pipilo crissalis*), song sparrow (*Melospiza melodia*), red-winged blackbird (*Agelaius phoeniceus*—likely nesting in the cattails of the pond in Canyon de Lana), house finch (*Carpodacus mexicanus*), lesser goldfinch (*Pipilo maculatus*), American goldfinch (*Carduelis tristis*), and house sparrow (*Passer domesticus*).

Migratory birds (seasonal residents or visitors) observed during the three surveys included white-throated swift (*Aeronautes saxatalis*), Pacific slope flycatcher (*Empidonax difficilis*), willow

[10] Pat Farris, personal communication.

flycatcher (*Empidonax traillii*)[11], ash-throated flycatcher (*Myiarchus cinerascens*), western kingbird (*Tyrannus verticalis*), Cassin's vireo (*Vireo cassinii*), barn swallow (*Hirundo rustica*), bushtit (*Psaltriparus minimus*), ruby-crowned kinglet (*Regulus calendula*), cedar waxwing (*Bombycilla cedrorum*), phainopepla (*Phainopepla nitens*), orange-crowned warbler (*Vermivora celata*), Wilson's warbler (*Wilsonia pusilla*), black-headed grosbeak (*Pheucticus melanocephalus*), and hooded oriole (*Icterus cucullatus*). The agricultural fields support high numbers of rock doves (*Columba livia*), European starlings (*Sturnus vulgaris*), Brewer's blackbirds (*Euphagus cyanocephalus*) and brown-headed cowbirds (*Molothrus ater*). Several other resident and migratory species may be observed on the campus; those that have been observed by students and professors from 1973 through 2002 are listed in Appendix C. As documented by the above list and Appendix C, Los Angeles Pierce College serves as important habitat for several resident birds and also as important stopover habitat for migratory birds.

No Canada geese (*Branta canadensis*) were observed during the surveys; however, during the winter months (generally from November to March), the agricultural fields on campus support hundreds of Canada geese during the day whenever grass or other crops are present. They apparently roost at night at the Sepulveda Basin. Los Angeles Pierce College is the only known area in the San Fernando Valley, aside from the Sepulveda Basin and the Encino Reservoir, where these geese can find sufficient feeding and roosting (resting) habitat prior to returning to breeding areas in Canada and Alaska.

Native mammal species seen in residential areas at the edge of the Santa Monica Mountains south of the campus include striped skunk (*Mephitis mephitis*) and raccoon (*Procyon lotor*), but these have not been recorded recently on campus. However, a coyote (*Canis latrans*) was observed in the agricultural fields during spring 2002, but it was apparently considered a threat to the campus farm animals and was killed.[12] The native Botta's pocket gopher (*Thomomys bottae*) also occurs on campus but its population is likely controlled in the agricultural areas. No other native mammals such as species found in the Santa Monica Mountains are expected to occur on campus, since it is isolated from those mountains by development. The agricultural areas of the campus support domestic cattle (*Bos bovis*) and domestic sheep (*Ovis aries*). Also, as stated above, the campus supports a large population of feral cats (*Felis domesticus*) and because food is provided for the cats, non-native Virginia opossum (*Didelphis virginiana*) and Norway rat (*Rattus norvegicus*), which also eat cat food, are also numerous on campus. The non-native Eastern red or fox squirrel (*Sciurus niger*), which is known to eat food provided by humans as well as bird's eggs, is also common.

Wildlife Dispersion Corridors

A wildlife corridor is an area of open space including one or more types of habitat connecting two or more larger areas of open space. It is essentially free of physical barriers such as fences and developed areas and allows for ease of wildlife dispersion between habitat patches. Canyon bottoms and some ridges with a well-developed tree canopy often serve as wildlife corridors and

[11] Although willow flycatcher is listed as an endangered species by the State of California, and one subspecies of willow flycatcher is federally-listed as endangered, the observation was in an oak tree of the Arboretum, not in riparian habitat used for breeding, and it was observed May 22, 2002, when it was likely migrating.
[12] Pat Farris, personal communication.

offer food, shelter, and water, as well as ease of movement, depending upon the density of the understory. Generally, because most birds (except non-migratory species and those with limited habitat preferences) can fly between habitat patches fragmented by development, wildlife corridors are discussed in terms their ability to allow dispersion of mammals and some reptiles.

Canyon de Lana is bordered by residential development on the south and a major roadway (DeSoto Avenue) on the west. Thus, it would only allow dispersion of the limited wildlife it supports within the canyon and between the canyon to and from other undeveloped areas of the southern portion of the campus. Canyon de Lana and other open space areas of the campus may also allow wildlife dispersion to agricultural areas in the northwestern part of the campus, as likely occurred for the coyote discussed above. However, because the remainder of the campus is largely developed or in agricultural use, and because the campus is entirely surrounded by development, the ability of the campus to serve as a wildlife corridor is very limited.

Sensitive Species

Species are typically recognized as sensitive because of declining or limited population sizes resulting, in most cases, from loss of habitat. Those listed as threatened or endangered by the federal or California Endangered Species Act (ESA) are protected by those acts. Other sensitive species categories include the USFWS Category 1 candidate, CDFG Species of Special Concern, and the California Native Plant Society [CNPS] rare plants. These species are not legally protected; however, resource conservation agencies (e.g., USFWS, CDFG) encourage the development of measures to minimize impacts on these and other sensitive species.

As described above, Los Angeles Pierce College supports no native plant communities or potential habitat for federally or state-listed endangered or threatened species that occur in the Santa Monica Mountains or other nearby open space areas. However, focused surveys for sensitive plants were conducted in 1993 by Sapphos Environmental (1993), and none were observed. Other sensitive species that may be present on the campus are discussed below.

Canada Goose (*Branta canadensis*) is not included on any list of sensitive species. However, high numbers of Canada geese use the campus agricultural fields during the winter, and because feeding and resting habitat for Canada geese is rare in coastal southern California, this species is considered locally sensitive, and the campus agricultural fields are important habitat for geese. According to College officials, the number of Canadian geese on the campus has varied widely over the last several decades.

Merlin (*Falco columbarius*) is a California Species of Special Concern (CSSC). It is an uncommon winter visitor in southern California, preferring open woodlands and grassland edges for foraging. Merlins have been recorded rarely on campus (Appendix C).

Peregrine falcon (*Falco peregrinus*) is listed as endangered by CDFG; it was delisted in 1999 by the USFWS. Peregrine falcons are known to nest on some buildings in downtown Los Angeles. They have been recorded very rarely over the campus (Appendix C) and would not be expected to nest on campus. They are much more common closer to the coast (Small 1994).

Cooper's hawk (*Accipiter cooperii*) and **sharp-shinned hawk** (*Accipiterstriatus*) are both on the CSSC list. Cooper's hawks are uncommon as breeders in southern California, nesting in dense oak or riparian woodlands, but are fairly common in winter (Small 1994). Sharp-shinned hawks are fairly common winter visitors but do not nest in coastal southern California (Small 1994). Both species are common in the spring and fall on campus (Appendix C), likely foraging among the trees of Canyon de Lana and/or the Arboretum.

Other raptor species observed during the surveys were limited to American kestrel and red-tailed hawk, neither of which is considered sensitive. Focused surveys for raptor nests were not conducted during the surveys, but both the red-tailed hawk and American kestrel may nest on campus. In addition, the campus provides foraging habitat for raptors, which is limited in the project vicinity. Thus, raptors using the campus would thus be considered locally sensitive.

Loggerhead shrike (*Lanius ludovicianus*) is an uncommon but widespread resident of southern California. It prefers open habitats with scattered trees, which are becoming scarce in southern California; thus, the loggerhead shrike is a CSSC. This species was not observed during surveys but is common on campus during all seasons and also nests on campus (Appendix C).

3-5.5 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[13] 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;

[13] Because CEQA does not define the term "substantial," a substantial biological effect is defined in this section of the document as one that would adversely affect a biological resource that is considered rare or of limited distribution in southwestern San Fernando Valley.

- 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. 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 footnote 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 native vegetation communities exist on the Los Angeles Pierce College campus. Construction of the proposed project would remove agricultural, ruderal, and horticultural vegetation and structures; this would not be considered a significant impact. Components of the proposed Master Plan that may remove vegetation from existing open space areas are discussed below. Otherwise, vegetation that may be removed during construction of new and renovated project facilities would primarily include horticultural trees and shrubs. The locations of the proposed Master Plan projects discussed below are shown on Figure 2-4.

New Equestrian Education Center and Child Development Center: These projects would be located on existing agricultural lands and thus would remove roosting (resting) and foraging habitat for Canada geese. Because this species is considered locally sensitive, the impact would be significant.

Renovation of the Horticulture Area: Construction of this proposed project may remove large trees in the vicinity of the Arboretum that provide important habitat for resident and migratory birds. This would not likely represent a significant biological impact since an abundance of other trees are present in the Arboretum and Canyon de Lana.

New Life-Long Learning Residences Community: One of the two proposed alternative sites for this facility is located west of the stadium on a hill supporting ruderal habitat not considered suitable for roosting (resting) and feeding by Canada geese or for the variety of birds found in Canyon de Lana or the Arboretum. Thus, construction of this project component would not result in a significant biological impact.

Canyon de Lana Restoration: The proposed nature/wildlife preserve restoration would enhance existing California vegetation and eliminate non-California plantings. Selected trails would be re-compacted and improved and the circulating ponds would be renovated; this would include installing new pumps, replanting floating and shoreline plants, and dredging of the upper pond to increase its size and depth and to regulate depth and water flow downstream. Depending upon whether the pond renovation work will require discharge of fill material into the streambed of Canyon de Lana, it may be a significant impact on what could be defined as a "waters of the United States." Pierce College will obtain an individual permit under Section 404 of the Clean Water Act if needed. A Streambed Alteration Agreement will be obtained by Pierce College if activities associated with pond renovation result in a violation of Section 1600 of the Fish and Game Code or significant impacts on protected wetlands.

In addition, as described above, Canyon de Lana provides important habitat for a variety of bird species. Assuming no existing trees are removed, no significant impacts on biological resources would be anticipated as part of this proposed project, provided a biologist with demonstrated successful experience in restoration of riparian and woodland habitats and a biology department faculty member familiar with the resources of the canyon oversee the design and implementation of all components of any enhancement or restoration that occurs in Canyon de Lana.

❑ 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 (opossum, red squirrel) may occur during project construction, although none of these would be species that are rare on the campus or in the project vicinity. 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.

❑ Wildlife Dispersion Corridors

Because no direct impacts on Canyon de Lana are anticipated, and because the potential for the canyon or other portions of the campus to serve as a wildlife corridor is very limited, no direct impacts on wildlife dispersion corridors are anticipated due to project construction.

❑ Sensitive Species

As discussed above, significant biological impacts to Canada geese would occur due to construction of proposed facilities in the agricultural fields of the campus. Proposed Master Plan

improvements, however, are not expected to result in significant biological impacts on merlin, peregrine falcon, Cooper's hawk, sharp-shinned hawk, other raptors, loggerhead shrike or other sensitive species, since the campus currently and would continue to provide an abundance of woodland and open space habitat for these species.

Indirect Impacts Due to Project Construction

❑ Vegetation

Native trees and other vegetation in Canyon de Lana and the Arboretum, and horticultural 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 to riparian vegetation in Canyon de Lana and trees in the Arboretum 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.

❑ Wildlife

Construction dust, noise, and vibration, and increased human presence (construction workers) during construction may result in indirect effects on wildlife on the campus, including birds and other species using Canyon de Lana and the Arboretum, 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 and most proposed project facilities would not be located adjacent to Canyon de Lana and the Arboretum, no significant indirect impacts on wildlife are anticipated.

❑ Wildlife Dispersion Corridors

Construction dust, noise, and vibration may temporarily disturb wildlife using portions of the campus to move from one area to another. However, because the impact would be temporary, and because wildlife species expected to use the campus are generally those expected to be well adapted to human habitats, this impact would not be considered significant.

❑ Sensitive Species

Canada geese and other sensitive species may avoid portions of the campus during construction. If construction activities in the agricultural fields during the winter months result in avoidance of the entire campus by Canada geese, this would represent a significant biological impact; however, other agricultural and open space areas not under construction would be available for geese. Because construction would be limited to small areas of the campus during any one period of time, and because raptors and other sensitive species are primarily limited to areas of the campus not affected by construction, indirect impacts on sensitive species would not be significant.

Direct and Indirect Impacts due to Project Operation

❑ Vegetation

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, aside from a possible increase in wildlife mortalities due to an increase in traffic on the campus. However, because native wildlife species in the area are not rare and those that exist are generally common in surrounding residential areas, this would not be considered a significant impact.

Increases in campus lighting in the Arboretum may also occur due to new facilities to the north; however, wildlife using the Arboretum are expected to be generally well-adapted to lights associated with residential and other developed areas. The remainder of the southern portion of the campus including Canyon de Lana would not be affected by increased lighting due to the distance of these areas from new facilities. Although student enrollment and the number of employees on the campus are expected to increase as Master Plan improvements are implemented over the next 8 years, 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.

❑ Wildlife Dispersion Corridors

During project operation, higher levels of human use may result in decreased dispersion among areas of the campus by wildlife. However, because the campus functions minimally as a wildlife corridor, this impact would not be considered significant.

❑ Sensitive Species

Increased human use of the campus is not expected to substantially alter its use by sensitive species. Canada geese, raptors, and loggerhead shrike use agricultural and ruderal habitats on the campus, and human use in these areas following construction of the proposed Master Plan is not expected to increase to a level that would result in a reduction of habitat used by these species. Other sensitive species would primarily use Canyon de Lana and the Arboretum, which would support somewhat higher levels of human use, but not to the extent that disturbances would be so continuous or prolonged as to result in avoidance of these areas by sensitive wildlife species. Assuming some agricultural areas are made available for Canada geese, and assuming project operation does not result in alteration in the quality of wildlife habitat of Canyon de Lana or the Arboretum, impacts on sensitive species due to project operation are not expected to be significant.

3-5.6 Mitigation Measures

BR-1 In order to avoid significant impacts on the Canada goose, a locally sensitive species, Los Angeles Pierce College shall attempt to avoid construction activities in the agricultural portions of the campus during the winter months when geese are present. If construction activities in agricultural areas during winter cannot be avoided, then several months prior to the scheduled initiation of construction activities, Los Angeles Pierce College shall plant low-growing herbaceous crops (alfalfa, grains) or wild grass favored by Canada geese in portions of the agricultural fields that would not be affected by construction activities to provide alternative feeding habitat for the geese. Human disturbance in the enhanced area shall be prohibited until the geese migrate from the area or until construction activities in the agricultural fields are complete. In addition, because the project includes permanent removal of some feeding and roosting habitat for geese, a mitigation plan shall be developed to minimize permanent impacts on the campus Canada geese population. The plan shall be developed by campus biology instructors familiar with the areas used on campus by Canada geese, in conjunction with experts familiar with successful management of wintering geese populations at Sepulveda Basin, the Salton Sea, and/or Central Valley. The plan shall include the following measures:

- An evaluation of the extent of use by geese of agricultural areas to be removed from agricultural use as part of the Master Plan. The number of acres to be enhanced for geese shall be directly proportional on a 1:1 basis to the number of acres in the area to be removed from agricultural production that have been used by geese during one or more of the past 5 years.

- An evaluation of the remaining agricultural areas on campus that would be appropriate to enhance for geese roosting (resting) and foraging. The enhancement areas shall be appropriate for maintaining limited human disturbance, for planting crops known to be used in other areas of California for geese foraging (rye grass, corn, sorghum, millet), and for providing sufficient take-off area for geese so they don't feel boxed in.

- A planting plan that specifies the timing of planting, pre-planting, and post-planting methods (e.g., harvesting crops to prepare them for geese forage) to maximize use by geese; methods for limiting human disturbance; and methods for limiting encroachment by geese into areas outside the enhancement site where they may suffer mortality due to campus traffic or other campus uses.

- Monitoring and reporting methods so that the success of the enhancement can be measured for a minimum of 5 years following the first planting. Monitoring shall be conducted a minimum of once monthly during each winter, and a monitoring report shall be prepared once annually. Population monitoring shall take into account the wide fluctuations in the geese population on campus that has occurred over the last several decades.

BR-2 In order to avoid violations of the MBTA or Fish and Game Code 3503, Los Angeles Pierce 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, Los Angeles Pierce College 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 3 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, Los Angeles Pierce College 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.

BR-3 In order to minimize impacts on resident and migratory birds, removal of large trees or trees in Canyon de Lana or the Arboretum shall be avoided. Horticultural trees in other portions of the campus that are removed as part of project construction shall be replaced at a minimum ratio of 1:1, and replacement trees shall possess a canopy upon planting and be a minimum size of 5 gallons.

BR-4 In order to avoid violations of wetland laws, if any project construction or operation activities in Canyon de Lana or other drainages on campus would result in even minor alterations of drainages, ponds or streambeds, Los Angeles Pierce College shall retain the services of a qualified wetland specialist to conduct wetland delineations as necessary; to contact appropriate resources agencies (U.S. Army Corps of Engineers and California Department of Fish and Game) regarding permits and agreements that would be required prior to initiation of activities in drainages, ponds, or streambeds; and to prepare documentation as appropriate so that permits and agreements pursuant to Section 404 of the U.S. Clean Water Act and Section 1600 of the California Fish and Game Code can be obtained.

3-5.7 Unavoidable Significant Adverse Impacts

With implementation of the mitigation measures above, no unavoidable significant adverse impacts on biological resources are anticipated due to construction or operation of the Los Angeles Pierce College Master Plan.

3-6 HISTORICAL RESOURCES

3-6.1 Environmental Setting

On August 5, 1769, somewhere adjacent to the present-day intersection of Sepulveda Boulevard and Mulholland Drive, the members of the Gaspar de Portola expedition became the first Europeans to view the San Fernando Valley (Valley) as they paused on their journey north in search of Monterey Bay. They gave the valley its first name: "Valle Santa Catalina de Bononia de los Encinos" (Valley of Saint Catherine Bononia of the Live Oak Trees), due to the abundant Live Oak trees in the vicinity of present-day Encino and Sherman Oaks. Permanent settlement of the Valley began with the establishment of the Mission San Fernando Rey de España in 1797. The Mission gave the Valley its current name.

The establishment in 1845 of the Rancho El Escorpion, and the subsequent acquisition of the property by Miguel Leonis (1829-1889), are key milestones in the post-mission history of Woodland Hills. Originally a part of the larger Mission San Fernando lands that had totaled 116,858 acres, Rancho El Escorpion was ceded to Native Americans Urbano, Odon, and Manuel. In 1869, Leonis' sheep herding activities brought him to the San Fernando Valley, whereupon he married the daughter of Urbano and came into possession of the ranch. The ranch encompassed a portion of Woodland Hills and the present-day city of Calabasas. Leonis next proceeded to take control of all the government land bordering El Escorpion without bothering to obtain a permit for its use. This led to confrontations with a series of squatters and challengers vying for the disputed land. Starting in the 1870s, Leonis began enlarging an already extant adobe that was part of his property, transforming it into a showcase two-story Monterey Style residence. The house survives today on the border of Woodland Hills and what is now the city of Calabasas at 23537 Calabasas Road, approximately 3 miles southwest of Pierce College.

In 1907, with the approval by Los Angeles voters of a $23 million bond issue for the construction of the Owens Valley Aqueduct, large-scale urbanization of the Valley became possible for the first time. Between 1907 and 1913, when the aqueduct was completed, real estate promotion began in earnest with fairs, excursions, barbecues, automobile races, and all manner of boosterism. In 1910, in the midst of this fevered real estate speculation, the Suburban Home Association created the largest subdivision in the San Fernando Valley: Tract 1000. Because of its size, historian W.W. Robinson considers the platting of this particular subdivision an official ending point of the Valley's earlier rancho period.

The real estate boom occasioned by the Owens Valley Aqueduct prompted several new real estate endeavors in Woodland Hills. In 1912, George E. Platt, owner of the Los Angeles Creamery, purchased a portion of Rancho El Escorpion, as well as most of the abutting property to the east, for dry farming and use as a dairy farm. Loosely bordered by Sherman Way on the north and Calvert Street on the south, the Platt Ranch survived until 1945. Prior to Platt's new ranch, El Escorpion had been the largest undivided tract of land in the San Fernando Valley. During this same time period, one of the promoters of the Suburban Home Association, Otto F. Brant, established an 852-acre rancho in present-day Woodland Hills near the current intersection of Topanga Canyon and Ventura Boulevards.

Rudolph F. Langraf became the first to exploit the land commercially for geologic resources when he purchased 12 acres in the Chalk Hills (located between the Pierce College campus and Ventura Boulevard) and began quarrying architectural-quality chalk fieldstone. He also established a gas station and rest stop—probably the first such facility in Woodland Hills.

Although there were scattered ranches, some like the Henry Show estate featuring architecturally impressive residences, no large-scale residential development of Woodland Hills occurred until 1923, when developer Victor Girard subdivided approximately 2,800 acres of the rancho to establish the new residential community of Girard.

On February 4, 1923, the town-site of Girard was officially opened to the public. However, possibly because of its remoteness, the development of Girard was not entirely successful. Although 6,000 lots were sold and thousands of California sycamore, pepper, and pine trees were planted along Canoga Avenue and other streets south of Ventura Boulevard, in 1931, 2 years into the Great Depression, there were only 75 inhabitants. The community retained the name of "Girard" until it was renamed "Woodland Hills" in 1941.

One of the founders of the Warner Brothers motion picture studio, Harry Warner, began acquiring land just west of the Pierce College campus during the 1930s. His estate, "Warner Ranch," occupied the present-day Warner Center property. His ranch house was built atop "Warner Ridge," a bluff bordering the southwestern corner of Pierce College at Oxnard Street and De Soto Avenue. The ranch house and all associated structures were demolished in 1982.

The majority of residential and commercial development in Woodland Hills dates from just after World War II, as does Pierce College. The Pierce College property and adjoining land to the west was the site of the Alexander Jeffries Ranch, which was utilized for walnut, orange, and hay cultivation as well as a cattle ranch prior to establishment of the College between 1946 and 1947.

Pierce College was named for Dr. Clarence W. Pierce, an advocate for post-high school vocational agriculture instruction in Los Angeles and member of the Los Angeles Board of Education. At Dr. Pierce's urging, the Board of Education voted in 1943 to purchase 392 acres in Woodland Hills as the site for the eventual development of an agricultural school. In 1945, the name Clarence W. Pierce School of Agriculture was selected as the name of the proposed school. Instruction officially began on September 15, 1947, with 67 students and 18 faculty. During the first year, the campus buildings consisted of war surplus buildings, including several large metal quonset huts, along with move-on wood-framed bungalows from other Los Angeles City School District campuses. One of the quonset huts was called Exposition Hall; it was the site of the opening day ceremonies on September 15, 1947, and served for the next 2 years or more as classroom space and the main assembly room on campus (Figure 3-16). This structure survives along Mason Street as part of the Plant Facilities compound.

During the 1948-1949 and 1949-1950 academic years, a number of permanent Mission Revival/Spanish Revival buildings were erected, including the Business Office/Student Store Building; Modern Language Art/Administration Building (previously demolished); Horticulture

Figure 3-16: Student Assembly in the Quonset Hut Referred to as Exposition Hall, circa 1947

Source: Larry Kraus, Pierce College.

Building; and approximately 10 dormitories (currently used as faculty offices) (Figure 3-17 and Figure 3-18). The North Hollywood architect Albert B. Gardner designed all of these buildings. Gardner gained his professional experience working for several prominent Los Angeles architectural firms, including John & Donald Parkinson, Austin & Ashley, and as part of the design staff of the Los Angeles Board of Education. After launching his own practice beginning in the late 1930s, he designed a number of school buildings for the Los Angeles Unified School District. In 1949, he was architect of the Broadway Department Store (located at Crenshaw and Martin L. King Boulevards)—the architect's key work—and the only building for which he is cited in a standard architectural reference book (Gebhard and Winter, 1994). The absence of biographical information about Gardner, and his omission from nearly all standard reference books on Los Angeles architecture, suggest that Gardner was not professionally noteworthy. Thus, the buildings on the Pierce College campus designed by Gardner derive their significance based upon their association with the College's early history rather than their association with the architect.

A documentation search was completed in April 2002 to identify significant historic and/or architectural resources on or within a 2-mile radius of the Pierce College campus. Sources included the statewide database of historic/architectural resources, including those listed on the California Register of Historical Resources, *Architecture in Los Angeles: An Architectural Guide*

(Gebhard and Winter), and the City of Los Angeles Cultural Heritage Commission list of Historic-Cultural Monuments.

Figure 3-17: View of Pierce College Business Office/Student Store Building, the Modern Language Art/Administration Building (demolished), and Faculty Office Cottages, circa 1950

Source: Larry Kraus, Pierce College.

Figure 3-18: View of Pierce College showing the Business Office/Student Store Building, Modern Language Art building (demolished) and one of the Faculty Offices, circa 1950

Source: Larry Kraus, Pierce College.

The results of this listing are presented in Table 3-11 and Figure 3-19. One significant resource has been previously documented on the Pierce College campus: Old Trapper's Lodge. There are also several additional listed historic/architectural resources within a 2-mile radius of the campus.

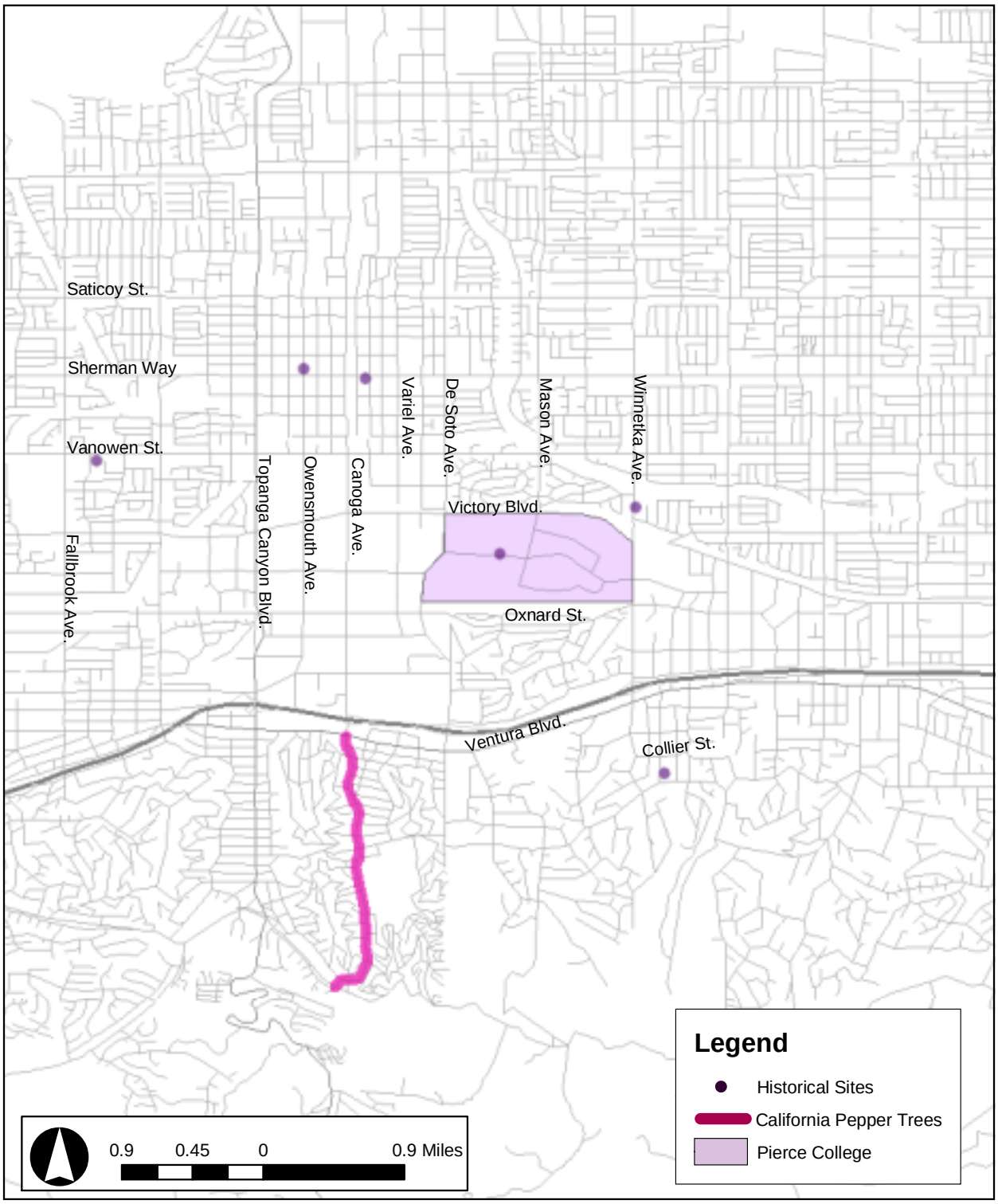
Table 3-11: Significant Architectural/Historic Resources Within a 2-Mile Radius of the Project Site

Resource Location	Historic Name	Year Built	Description	Significance
6201 Winnetka Av.	Old Trapper's Lodge	1951-81	A remarkable 20th century folk environment by artist John Ehn	CA State Historic Landmark #939
5230 Penfield Av.	Van Dekker Residence	1940	Significant International Style residence. Rudolph Schindler, architect	Gebhard & Winter 1994
21355 Sherman Way	Canoga RR Station	1912	Site of Spanish Revival railroad station	L. A. Cultural Heritage Monument #488
21801 Sherman Way (at Jordan)	Canoga Park Post Office	1938	Notable design fusing Spanish Colonial Revival and 1930s Modern styles	Gebhard & Winter 1994
7260 Owensmouth Av.	Canoga Park Branch Library	1959	Notable Modern Style public library	L. A. Cultural Heritage Monument #700
22633 Vanowen St.	Workman House	1869-72; 1935	Adobe & redwood residence. Lawrence Test, architect (1935)	L. A. Cultural Heritage Monument #9
6530 Winnetka Av.	Crippled Children Society Bldg.	1979	Notable office building design by architect John Lautner	Gebhard & Winter 1994
4500-5300 N. Canoga Av.	California Pepper Trees (Schinus molle)	c. 1923	Original parkway trees planted by Victor Girard, developer of Woodland Hills	L. A. Cultural Heritage Monument #93

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

Though none would be affected by the proposed project, identification of these resources assisted in understanding the historic context in which Woodland Hills and Pierce College developed.

Figure 3-19: Significant Architectural/Historic Resources within a 2-Mile Radius of the Project Site



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

Pierce College contains a registered historic landmark as well as a grouping of potentially historic buildings. It is the location of Old Trapper's Lodge—a remarkable 20th century folk art environment and a listed California State Historical Landmark. The installation, which was relocated to Pierce College from Sun Valley, is the work of John Ehn (1897-1981), a self-taught artist who conceived and assembled the work over the 30-year period between 1951 and his death in 1981. The installation blends both autobiographical elements as well as Wild West myth and legend. Ehn also incorporated personal memorabilia and used family members as models for the figures that are part of the installation, which is located in a small garden space screened by tall trees on three sides to the west of the current Agriculture Sciences building.

The Pierce College campus contains several buildings that date from the first several years of its existence. These include the war surplus bungalows and quonset huts used during the 1947-48 academic year, as well as the Spanish Colonial/Mission Revival buildings constructed between 1948 and 1954 that reflect the original master plan concept for the campus and its Spanish architectural theme. The war surplus structures are modest, fairly ordinary buildings. Evaluated during site visits to the campus during March and April 2002, these buildings are not deemed architecturally significant. They include at least four metal quonset huts and a number of wood-frame/wood-sided bungalows. However, one of the quonset huts was known as Exposition Hall and was used as the location of the College's opening day orientation activities on September 15, 1947 (Figure 3-16 and Figure 3-20). During the first 2 or more years of the College's existence, it served as an assembly hall as well as classroom space. Thus, although not architecturally noteworthy, this particular quonset hut may be historically significant due to its close association with the key school-wide academic activities during the first year of the College's existence. It may therefore be eligible for inclusion on the California Register of Historical Resources per California Public Resource Code SS5024.1, Title 14 CCR, Section 4852, criterion A: buildings and structures associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.

The Business Office/Student Store Building served as the original campus cafeteria. Built between 1949 and 1950, the building was the most architecturally sophisticated of the early buildings and was intended to serve as the campus' principal social space during that period. Together with the Modern Language Art/Administration Building, and Faculty Office cottages (dormitories originally), the referenced building was at the core of the College campus, and strongly conveyed the campus' original genial Spanish Colonial/Mission Revival architectural design and master plan themes (Figure 3-18 and Figure 3-21). Although the interior has been substantially altered, the exterior of the building retains sufficient design integrity to convey the period of its construction the design ambiance intended for the early campus. This building appears eligible for inclusion on the California Register of Historical Resources per California Public Resource Code SS5024.1, Title 14 CCR, Section 4852, criterion A. However, the building was evaluated by both FEMA and OES following the Northridge Earthquake, deemed ineligible for the National Register of Historic Places, and slated for demolition rather than rehabilitation utilizing FEMA funding. This evaluation was done prior to the establishment of the California Register of Historical Resources, and utilized the criteria for the National Register of Historic Places, which typically only considers resources 50 years old or older for inclusion.

Figure 3-20: One of Three Maintenance Facility Quonset Huts

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

Figure 3-21: Business Office/Student Store Building

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

The current Horticultural unit includes one of the campus' original Spanish Colonial/Mission Revival classroom buildings (Building 4900), the original steel-and-glass and lath greenhouses from the 1948-1949 period, several modest outbuildings, and two move-on prefabricated classroom buildings (Buildings 4923 and 4930) that appear to date from the recent past (circa

1965) and are not architecturally significant. The greenhouses and Building 4900 were an integral part of the educational mission of Pierce College as originally conceived. Building 4900 strongly conveys the Spanish Colonial/Mission Revival design theme of the early 1948-1954 campus and the original master plan concept, and all three structures reflect the history of the development of the campus (see Figure 3-22 and Figure 3-23). This building and the related structures appear eligible for inclusion on the California Register of Historical Resources per California Public Resource Code SS5024.1, Title 14 CCR, Section 4852, criterion A.

Figure 3-22: Horticulture Unit Classroom, Building 4900

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

Figure 3-23: Horticulture Unit Lath House

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

Pierce College contains an unusual grouping of 10 cottages in the area bounded by the Business Office/Student Store Building on the north and Stadium Way on the south. These cottages are currently used as faculty offices but originally served as dormitories for male resident students during the first several years of the College's existence (Figure 3-24). The faculty office grouping strongly conveys the then-intended Spanish architectural theme and the original master plan concept for the campus, which placed it adjacent to what were originally the cafeteria, administration offices and classroom space (the Business Office/Student Store, and now-demolished Modern Language Art Buildings, respectively). The buildings are architecturally intact on the exterior and attractively sited in a loose crescent arrangement that integrates them visually with their mature landscaped setting. This formally conceived landscape includes hedge parterres and California Sycamore, olive, and carob shade trees as well as recent, less noteworthy landscape features. This grouping of small residential-scaled buildings is unusual for a public college campus and appears eligible for inclusion on the California Register of Historical Resources per California Public Resource Code SS5024.1, Title 14 CCR, Section 4852, criteria A and C.

Figure 3-24: Representative Faculty Office Building

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

3-6.2 Environmental Impacts

a. Significance Criteria

According to Section 21084.1 of CEQA a project that causes a substantial or potentially substantial adverse change (emphasis added) in the significance of an historical 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 historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate

surroundings such that the significance of an historical resource would be materially impaired (§15064.5[b]1).

The significance of an historical 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.

b. Impacts Discussion

Certain components of the Los Angeles Pierce College Facilities Master Plan would cause a substantial adverse change to historical resources previously discussed in Section 3-6.1. The adversely affected resources are those that are potentially proposed for demolition, including the Business Office/Student Store Building and the quonset hut[14] that originally served as Exposition Hall during the College's first couple years. In the proposed project, the three surviving quonset huts in the Maintenance and Operations Facility are proposed for demolition or removal to accommodate the proposed new Sciences Partnership Building.

Removal and demolition of Exposition Hall (1947) would be a significant effect under CEQA, because of the its strong historical associations. Although moved from its original location and altered in a manner that is reversible, the structure retains compelling associations with the early history of the College.

Demolition of the Business Office/Student Bookstore would be a significant effect per CEQA. This building is strongly associated with the early history of the College during its first 3 years, and thus, with events and patterns that are significant in the history of Los Angeles. Retaining its integrity of location, and largely intact architecturally, the Business Office/Student Store Building strongly conveys the original master plan concept and Spanish Colonial/Mission Revival architectural theme for the campus (1947-1954).

Although construction of a new Technology Center and demolition of the current Business Office/Student Store Building are proposed in fairly close proximity to the faculty office cottages, the proposed project would not adversely affect these resources. Retention of all 10

[14] The quonset huts have been relocated several times over the years. Consequently, additional research is required to determine, if possible, which of the remaining quonset huts served as Exposition Hall.

cottages in their present setting is proposed, and therefore, the project would not have a significant effect on these historic resources.

Similarly, current plans for the potential Horticulture Partnership development propose siting it adjoining the existing Horticulture Unit. The proposed development would not adversely affect the several buildings and/or structures that were deemed historic, including the key classroom building (Building 4900), greenhouse and lath house.

Old Trapper's Lodge is the only resource on the Pierce College that is that is an officially listed historic resource. Although located along the western border of the proposed new Sciences Partnership Building development and the associated parking facilities, the proposed development would not adversely affect this resource. Old Trapper's Lodge would be retained in its current location as part of the existing Folk Art Park.

A less specific adverse change to the historic buildings at Pierce College might result from the possible introduction to the campus of new development featuring a different building scale and new architectural themes. This could work to indirectly foster the removal of the older buildings rather than the integration of old and new design.

3-6.3 Mitigation Measures

HR-1 Additional research shall be conducted to identify the quonset hut that served as Exposition Hall. If it is determined that this quonset hut retains sufficient integrity to qualify as a historic resource, it shall be retained onsite or relocated from the proposed new Sciences Partnership Building site to another appropriate site on campus; if feasible, and the building's role in the early history of Pierce College shall be interpreted through the use of historic photographs, artifacts, audio-visual, and other types of displays to make the history of the College and its campus understandable to the general public.

HR-2 A study shall be conducted by a qualified structural/seismic engineer to determine the cost and feasibility of repairing the Business Office/Student Store Building. The Business Office/Student Store Building shall be rehabilitated and adaptively reused, if feasible. If rehabilitation of the Business Office/Student Store Building is determined to be feasible, the plans for the adaptive reuse of the building shall meet the Secretary of the Interior's Standards for Rehabilitation.

HR-3 If demolition of the Business Office/Student Store or quonset hut that served as Exposition Hall is proposed because retention of the buildings is determined to be infeasible, Historic American Building Survey (HABS) or equivalent documentation of the building shall be undertaken, and this documentation deposited with the Pierce College library as well as made available to local museums.

HR-4 For both historic preservation reasons and to achieve greater aesthetic coherence, the Master Plan shall seek creative ways through architectural design, graphics, landscape design to weave together older development and historic resources with new future development. The Master Plan shall identify opportunities for adaptive reuse of the

historic buildings and address long-term historic resource conservation and interpretative issues.

No mitigation is required for the Trapper's Lodge installation, the faculty cottages, or the existing Horticulture Unit because the project would not result in a significant effect on these historical resources.

3-6.4 Unavoidable Significant Adverse Impacts

Implementation of the above mitigation measures would reduce impacts to historic resources to a less than significant level. However, if retention of the Business Office/Student Store and Exposition Hall quonset hut buildings is not feasible and the buildings are demolished, the impact would be unmitigable and significant. Additionally if it can not be determined as a result of additional research which of the remaining quonset huts served as the original Exposition Hall, then demolition of one or more of any of the remaining quonset huts would be an unavoidable significant adverse impact.

3-7 ARCHAEOLOGICAL RESOURCES

3-7.1 Environmental Setting

a. Current Environmental Setting

Pierce College is depicted on the Canoga Park, 1:24,000-scale, USGS topographic map within the Ex-Mission San Fernando Grant Boundary (T1N/R16W). Situated at an elevation ranging from approximately 770 feet to 975 feet above mean sea level, the topography of the campus includes flat, level agricultural land areas, as well as the rolling foothills of the Chalk Hills to the south. Currently, areas surrounding the Pierce College campus have been fully developed into housing tracts and commercial business districts.

Vegetation on the Pierce College campus includes agricultural fields, a nature preserve, large areas of open space covered by introduced grassland species, various tree species, and ornamental landscaping. Prior to historical development, however, the project area and the larger San Fernando Valley were an open, relatively dry, grassland savannah. In general, water sources are rare in the project area and are confined to springs along the base of the hills that border the San Fernando Valley. Spring-fed Arroyo Calabasas and Bell Creek originate from the hills southwest and west of the College campus, respectively. As a result of flood control, these drainages no longer resemble creeks, but are wide, relatively straight concrete-lined channels.

The San Fernando Valley has a Mediterranean climate characterized by warm, dry summers and mild winters with most of the annual rainfall occurring between the months of November and April.

b. Cultural Setting

Cultural chronologies for the Los Angeles Basin and San Fernando 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 Fernando Valley, the San Gabriel Valley, the San Bernardino Valley, and the Los Angeles-Santa Ana River Plain. Inhabiting the watersheds of the Los

Angeles, San Gabriel, and Santa Ana Rivers; several smaller intermittent streams in the Santa Monica and Santa Ana Mountains; all of the Los Angeles Basin; and the coastal strip from Aliso Creek in the south to Topanga Creek in the north; the Gabrielino also occupied the islands of Santa Catalina, San Clemente, and San Nicholas (Bean and Smith 1978:538). 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 craftmanship in quarrying and manufacturing steatite (soapstone) objects and constructing the plank canoe. For further information regarding the Gabrielino, the reader is referred to Bean and Smith (1978), Kroeber (1925), McCawley (1996).

c. Study Methods

Prior to the archaeological field investigation of the Pierce College campus, 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 1-mile radius of the project study area. Results of this search indicate that 17 cultural resources studies have been conducted within a 1-mile radius of the project area. Of these, none was located within the boundaries of Pierce College. An additional 15 studies are potentially within a 1-mile radius of the project area; however, the exact location of these investigations is unknown because of insufficient mapping 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 Pierce College or within a 1-mile radius of the project area. Information provided in the 1993 Final EIR for the Pierce College Fill Project, however, states that an archaeological survey was conducted (presumably on the Pierce College campus) by Archaeology Associates in March 1978. This same document reports that the project area was also studied as part of the Warner Ridge Draft EIR. Results of these two studies indicated that prehistoric artifacts were found in the Chalk Hills area but that the project area did not yield any significant cultural resources (1993 Final EIR). Neither is there a record of these surveys nor are reports on file at the South Coastal Central Archaeological Information Center.

Inspection of the historic, Calabasas USGS 15'-series topographic maps indicates that the San Fernando Valley was almost entirely undeveloped in 1903. The Southern Pacific's Chatsworth Park Branch Railroad ran south from the community of Chatsworth to just north of the Chalk Hills, where it turned to the east toward the communities of Reseda and Encino. A few unimproved roads also crossed the valley with a few structures located at some of the more prominent crossroads.

Other sources consulted include the California Points of Historical Interest (1992) and the City of Los Angeles Historic Cultural Monuments; no properties or landmarks within a 1-mile radius of the Pierce College campus have been listed in these documents. In addition, the National Register of Historic Places (updated annually) lists no properties within a 1-mile radius of the project area. The California State Historic Resources Inventory database of the State Office of Historic Preservation (1976) lists several properties that have been evaluated for historical significance within a 1-mile radius of the project area; however, none is located within the boundaries of Pierce College. The "Old Trapper's Lodge" is designated as California Historical Landmark No. 939. Specifically, the designation states:

> "The Trapper's Lodge is one of California's remarkable Twentieth Century Folk Art Environments. It represents the life and work of John Ehn (1897-1981), a self-taught artist who wished to pass on a sense of the Old West, derived from personal experience, myths, and tall tales. From 1951 to 1981, using his family as models, and incorporating memorabilia, the "Old Trapper" followed his dreams and visions to create the Lodge and its "Boot Hill." Original location: 10340 Kewsick Avenue at San Fernando Road, Sun Valley. Located at Los Angeles Pierce College, Cleveland Park, 6201 Winnetka Avenue, Woodland Hills 19-173146."

In addition to the archaeological literature and records search, the Native American Heritage Commission (NAHC) was contacted on March 28, 2002, to solicit pertinent cultural resources information available in the Sacred Lands Files for the project study area. In a reply on April 15, 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 23 individuals and/or organizations that may have knowledge of cultural resources in the project area be contacted by letter. On April 16, 2002, letters of inquiry were sent to these 23 individuals/organizations as recommended by the NAHC (Wood 2002). On April 22, 2002, the archaeological consultant, Applied Earthworks, Inc. (Applied EarthWorks), received a telephone call from Mr. Jim Velasques, a Gabrielino/Kumeyaay Native American, who expressed concerns about the proposed project and the possible inadvertent discovery of Native American human remains. In addition, on April 30, 2002, Applied EarthWorks received a telephone call from Ms. Beverly Salazar Folkes, a Chumash/Fernandeno/Tataviam Native American, who expressed the same concerns. Both individuals recommended that any project-related ground disturbing activities be monitored by a qualified archaeologist and a Native American. On May 3, 2002, Applied EarthWorks received a written response from Mr. Samuel Dunlap, a Gabrielino/Cahuilla/Luiseno Native American, who also expressed similar concerns (see Appendix B of the Archaeological Survey Report, which is contained in Appendix D of this EIR).

Following the archaeological literature and records search, a complete and intensive archaeological survey of approximately 115 acres on the Pierce College campus was conducted by Applied EarthWorks between April 10 and April 12, 2002. These surveys were confined to eight areas of the campus. Whenever possible, survey transect spacing was 15 m (50 ft). In some areas where the layout of the parcel was not conducive to walking systematic transects, these areas were examined by walking all accessible areas where ground surface visibility permitted inspection.

Many areas on the Pierce College campus were not surveyed due to the existence of one or more of the following conditions: a) asphalt pavement/parking lots; b) cement walkways, buildings, and/or grass obscuring the ground surface; c) extremely dense vegetation and ground cover (the Nature Trail area along the creek in the southeastern corner of the project area); and d) one construction area/hard hat zone where no entry was permitted. Additionally, most of the entire southwestern quadrant of the Pierce College campus was not surveyed because generally no Master Plan improvements are proposed in that area.

d. Study Findings

The archaeological survey of portions of the Pierce College campus failed to identify the presence of prehistoric or historical archaeological resources. This may be due, in part, to the restricted ground surface visibility in many areas, as well as previous developmental and agricultural activities on the campus grounds. Lack of surface evidence of archaeological resources, however, does not preclude their subsurface existence. At least two water sources are located on the College campus, one in the southwestern corner of the campus, and one in the Nature Trail area in the southeastern corner of the campus (this area was not surveyed due to very poor ground surface visibility). The presence of these water sources and the reputed discovery of prehistoric artifacts in the Chalk Hills area (see Section3-7.1c) suggest that Native American cultural resources may be present in some campus locations.

3-7.2 Environmental Impacts

a. Significance Criteria

As proposed, the Los Angeles Pierce College Master Plan is subject to compliance with the California Environmental Quality Act (CEQA), as amended through 1999. Therefore, cultural resources management work conducted as part of the proposed Master Plan shall comply with the CEQA Statutes and Guidelines (California 1999), which directs lead agencies, in this case LACCD, to first determine whether an archaeological site is a "historically significant" cultural resource. A project with an effect that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment (California 1999:14). Generally, a cultural resource shall be considered by the lead state agency to be "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. As well, any proposed undertaking that may affect "historically significant" cultural resources must be submitted to the State Historic Preservation Officer (SHPO) for review and comment prior to project approval (and again prior to construction) by the responsible state agency.

Therefore, if potentially significant archaeological resources are discovered during implementation of the proposed Master Plan, those resources must be inventoried and evaluated to ascertain whether they meet the criteria for listing on the California Register of Historical Resources.

b. Impacts Discussion

As stated in Section 3-7.1d, the archaeological survey of portions of the Pierce College campus failed to identify the presence of prehistoric or historical archeological resources. Consequently, no significant adverse impacts to archaeological resources are known or anticipated at this time if the proposed Master Plan is implemented. Lack of surface evidence of archaeological resources, however, does not preclude the subsurface existence of archaeological resources. The presence of at least two water sources on the Pierce College campus and the reputed discovery of prehistoric artifacts in the Chalk Hills area suggest that Native American cultural resources may be present in some campus locations. If significant resources are encountered during construction, construction activities could disturb or destroy these resources, a potentially significant impact.

3-7.3 Mitigation Measures

The following mitigation measures shall be implemented to reduce project-related adverse impacts to archaeological resources that may be encountered during construction of proposed Master Plan improvements:

AR-1 If buried cultural resources are uncovered during construction, all work must 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. In areas of archaeological sensitivity, such as in the vicinity of the water sources described above and the Chalk Hills, a certified archaeologist and a culturally affiliated Native American with knowledge in cultural resources shall monitor project-related ground disturbing activities.

AR-2 Provisions for the disposition of recovered prehistoric artifacts shall be made in consultation with culturally affiliated Native Americans.

AR-3 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 Public Resources Code 5097.98 shall be implemented.

3-7.4 Unavoidable Significant Adverse Impacts

No Native American human remains are known to exist on the campus and the likelihood of encountering remains is not high given that most construction 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 identified above would reduce impacts to other archaeological resources to a level of insignificance.

3-8 PALEONTOLOGICAL RESOURCES

3-8.1 Environmental Setting

Pierce College is located in the southern half of the western San Fernando Valley in the community of Woodland Hills. The southwestern portion of the campus is located in the Chalk Hills, in a northeastern portion of the Santa Monica Mountains.

The topography of the campus includes nearly flat terrain as well as hilly terrain. The hilly terrain varies in elevation from approximately 760 to 990 feet above sea level with north- and northeast sloping knolls and approximately 50 percent slopes. The site is underlain by bedrock belonging to the Late Miocene Age Modelo Formation and which is composed of marine sedimentary rock that is likely to contain significant remains of fossil vertebrates. The rock unit consists largely of thick bedded to massive fine-grained sandstone, siltstone, and small amounts of diatomaceous shale.

Alluvial and colluvial deposits consisting of Quaternary fan alluvial sediments of clays, sands, and gravel of the San Fernando Valley flood plain are present over the majority of the flat-lying portions of the campus. These deposits contain Balcom silty clay loam and Macho-urban land complex soil types in a ratio of approximately 68 percent to 32 percent, respectively. Macho soils are very deep and well drained, and were formed in young alluvium derived primarily from shale and sandstone. These soils are found on fans and on the valley floor at slopes ranging from 0 to 9 percent. Balcom series loam consists of moderately deep, well-drained soils formed in material that was weathered in place from soft shale and sandstone. These soils are found on hills at slopes ranging from 9 to 75 percent and are underlain by shale or sandstone at depths ranging from 23 to 40 inches. The top few feet of these deposits are not likely to contain significant vertebrate fossils, but just below these top layers are deposits of Late Pleistocene alluvium that are known to contain vertebrate fossils.

Review of the information provided in a records search conducted by the Section of Vertebrate Paleontology of the Los Angeles County Natural History Museum indicated that although there were no paleontologic localities recorded within the boundaries of the Pierce College campus, there are four recorded localities in Late Pleistocene Quaternary Alluvium located within approximately 3 miles. These localities are described in Table 3-12. However, during a very recent archaeological survey of the campus, paleontologic specimens were encountered in many locations on the campus where the soil was visible, including marine fauna such as clam (*Chione sp*.), scallop (*Pecten sp*.), and olive shell (*Olivella sp*.). Areas of artificial fill have been encountered in the central and east central portion of the campus. These fill areas, which consist of yellow to brown sand, silt, and clay, are not shown on geologic maps due to scale. Previous tests indicate the maximum depth of the fill is approximately 8 to 9 feet and possibly deeper in some instances.

Table 3-12: Fossil Localities in the Region Surrounding the Project Area

Locality Number[1]	Approximate Location[2]	Fossils Found[3]
LACM 5878	West/southwest in Hidden Hills-vicinity Long Valley Road	Fossil Mastodon skeleton (*Mammut*) from the Late Pleistocene Quaternary Alluvium
LACM 1213	South/southwest-vicinity Mulholland Highway	Fauna of fossil horse (*Equus*) and ground sloth (*Paramylodon*) from the Late Pleistocene Quaternary Alluvium
LACM 3173	Directly southwest-vicinity Mulholland Highway	Fossil shearwater (*Puffinus*) from the Modelo Formation
LACM 4506	North/northwest on eastern side of Chatsworth Reservoir	Bony fish specimen from the Modelo Formation

Notes:
1. LACM; Los Angeles County Museum of Natural History.
2. The exact location of fossil localities is not generally stated to the public in order to avoid loss of paleontological resources.
3. Pleistocene: approximately 10,000 to 1,6000,000 years ago

Source: Los Angeles County Natural History Museum Vertebrate Paleontology Section.

3-8.2 Environmental Impacts

a. Significance Criteria

For the purposes of this EIR, the proposed project would have a potentially significant effect on the environment if it directly or indirectly destroys a unique paleontological resource or site without proper testing, evaluation, and retrieval and curation, if warranted.

b. Impacts Discussion

Because operation of the project would have no effect on the geologic environment, the following discussion of impacts is limited to the construction phase of the project.

Based upon the results of previous geotechnical studies of the campus and recent archaeological surveys, Pierce College contains surface and bedrock deposits in the hilly portion of the campus that consist of marine shales of the Late Miocene Age Modelo Formation. These are likely to contain significant fossil vertebrate remains. Because there is a high probability that paleontological resources exist fairly close to the ground surface in such locations, paleontological resources could be encountered during excavation for the proposed buildings. Surface deposits in the flat lying portions of the campus—primarily along its northern and eastern segments—consist of soil and Quaternary fan alluvial sediments of clays, sands, and gravels in the San Fernando Valley flood plain. While there is a low probability of encountering vertebrate fossils in the surface deposit layers, the underlying Late Pleistocene alluvium is known to contain vertebrate fossils.

Therefore, excavation into the Modelo Formation marine shales or Late Pleistocene alluvium could result in the destruction of unique fossil resources—a potentially significant impact. Should unique paleontologic resources be encountered, the mitigation measures below will reduce impacts to a level of insignificance.

3-8.3 Mitigation Measures

The following measures shall be implemented to ensure that potential impacts to any unique paleontologic resources that may be present would be reduced to a level of insignificance.

PR-1 Monitoring excavation in areas identified as likely to contain paleontologic resources shall be conducted by a qualified paleontologic monitor. The monitor shall be equipped to salvage fossils and samples of sediments as they are unearthed to avoid construction delays. Monitors shall be empowered to temporarily halt or divert 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 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 Specimens shall be curated into a professional, accredited museum repository 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 Pierce College, would signify completion of the program to mitigate impacts to paleontologic resources.

3-8.4 Unavoidable Significant Adverse Impacts

There would be no unavoidable adverse impacts on paleontologic resources after implementation of the mitigation measures specified above.

3-9 GEOLOGY/SOILS/SEISMICITY

3-9.1 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.

The San Fernando Valley is an east-west structural trough within the Transverse Ranges geologic province of southern California. The mountains that bound the trough are actively deforming anticlinal ranges bounded on their south sides by thrust faults. As these ranges have risen and deformed, the San Fernando Valley has subsided and been filled with sediment. The western portion of the valley has received sediment in the form of channel deposits from small streams of the Santa Monica Mountains, Simi Hills, Chalk Hills, and Santa Susana Mountains.

b. Project Site

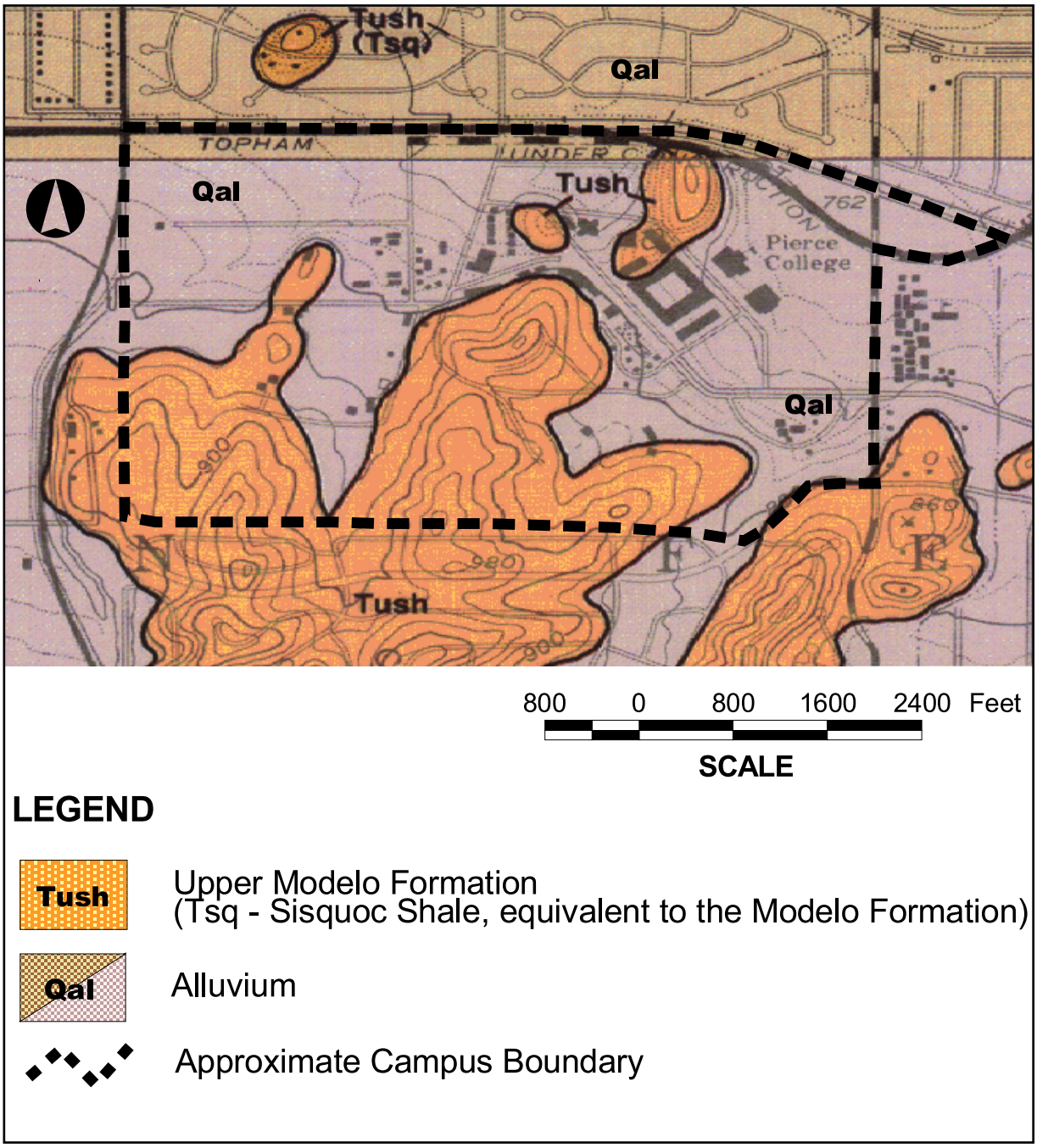
Physiography

Pierce College is located in a fully developed area at the southwestern edge of the San Fernando Valley. Current land uses include residential, light industrial, commercial, and service-oriented businesses. The campus is located at the northern end of the Chalk Hills. The area is typically characterized by low relief, with elevations within the Pierce College campus ranging from approximately 975 feet (mean sea level datum) along the southern boundary of the campus to 765 feet near the northern boundary of the campus. Areas of higher relief to the south of the project vicinity include the Santa Monica Mountains, Chalk Hills, and Woodland Hills. The Los Angeles River is located less than ¼ mile from the northeastern boundary of the campus. Pierce College is located on the USGS 7.5-Minute Canoga Park topographic quadrangle.

Geology

The project area is underlain predominantly by late Miocene (approximately 10 to 15 million years in age) upper Modelo Formation and Holocene (less than 11,000 years old) alluvial deposits as shown on Figure 3-25 (Dibblee 1992a, 1992b). Localized areas of artificial fill are expected to underlie the developed portion of the campus (buildings, roads, etc.).

Figure 3-25: Geologic Map



Source: Thomas W. Dibblee, Jr., 1992

The upper Modelo Formation is the most widely exposed bedrock unit in the area and is composed of interbedded[15] deep marine clay shale, siltstone, and sandstone, diatomaceous shale and siltstone, and massive, fine- to coarse-grained sandstone. Bedding in the Modelo Formation

[15] Alternating layers of differing character.

typically dips in the same direction as the slopes in the area (northward) which sometimes creates slope stability problems.

Holocene alluvial deposits in the project area consist of alluvial fan deposits and alluvial basin deposits. The source areas for the local alluvial deposits consist primarily of the fine-grained Modelo Formation, which results in clayey alluvial materials. Alluvial fan deposits in the project area consist largely of clay and silt with lesser amounts of sand and gravel and interfinger [grading from one material to another through a series of interpenetrating wedge-shaped layers] with alluvial basin deposits consisting predominantly of clay with some silt and sand layers (California Division of Mines and Geology 2001).

Previous Geotechnical Studies

Three geotechnical studies have been conducted for specific projects on the Pierce College Campus within the last 10 years. In 1993 a Geotechnical Exploration Report was prepared by Associated Soils Engineering, Inc. for the *Pierce College Fill Project DEIR*, which addressed the feasibility of using some of the undeveloped/pasture land in the western portion of campus (west of Stadium Way and south of El Rancho Drive) as a fill area for the adjacent Warner Ridge Development (now known as the Bella Vista residential development project). Two soil borings were completed as part of this study to a maximum depth of 40 feet. Materials encountered in these borings included brown to olive-brown silty alluvium with varying amounts of clay and fine sand and bedrock (Modelo Formation) consisting predominantly of olive to yellow-brown silty clay, clayey silt, and silty fine sand. Perched groundwater was encountered in the northernmost boring at a depth of approximately 24 feet.

A geotechnical investigation was conducted in 1997 by Pioneer Soils Engineering for foundation repairs to classrooms and the Business Office/Student Store and Modern Language Buildings in the central campus area that were damaged in the 1994 Northridge Earthquake. Eleven soil borings were drilled in the project area to depths ranging from 13 to 16 feet. Soil materials logged in these borings consist of artificial fill, alluvium/colluvium, and sandstone bedrock (Modelo Formation). Artificial fill was encountered in all the borings with thickness ranging from 2.5 to 8 feet and consists primarily of black to brown, stiff, silty clay and clayey silt with minor sand and scattered pebbles, bedrock fragments, trash, and roots. The alluvial/colluvial materials encountered consist of brown to light yellow-brown, firm, clayey sandy silt and silty fine sand and were found to be 4 to 8.5 feet thick at this site. Bedrock (Modelo Formation) was encountered at depths ranging from approximately 7 to 14 feet at this site and consists of yellow-brown, dense to slightly hard, highly to slightly weathered, moderately well to well indurated, massive fine-grained sandstone. No groundwater was encountered in the borings to the maximum depth of 16 feet. Laboratory testing and analysis of select soil samples revealed moderately expansive soils at this site.

In 2002, Geotechnical Consultants, Inc. conducted a geotechnical investigation for the replacement of Parking Lot 7. Thirteen shallow borings, 3.5 to 5.5 feet in depth, and one deeper boring to 25 feet in depth were completed for this investigation. Materials encountered in these borings were artificial fill, alluvium/colluvium, and bedrock (Modelo Formation). Artificial fill 1 foot or less in thickness was encountered locally and consists predominantly of light brown to brown, clayey silt and silty clay with minor amounts of sand. Alluvium/colluvium was

encountered principally in the borings located in the northern half of the parking lot and consisted predominantly of damp, dark brown, medium-stiff to stiff clayey silt and silty clay. Laboratory testing indicated the presence of corrosive and expansive soils in the alluvium/colluvium. Bedrock (Modelo Formation) was encountered primarily in the borings located in the southern half of the parking lot and the borings located in the soccer field east of the lot. The Modelo Formation at this site consists of damp, light brown to tan siltstone, sandstone, and claystone. No groundwater was encountered in any of the borings.

Soils

The U.S. Department of Agriculture's Soil Survey for the Los Angeles, West San Fernando Valley Area (1980) indicates that three basic soil types underlie the project area: the Balcom series, the Cropley series, and the Mocho series. Within the Pierce College Campus area the Balcom soils are principally located on the hills and ridges in the southern portion of the campus and where bedrock is at the ground surface. The Balcom series consists of moderately deep, well-drained soils formed in material weathered from soft, calcareous shale and sandstone. Balcom soils are formed on hills with slopes of 5 to 75 percent. The soil ranges from loam to silty clay loam with more than 15 percent sand.

Both the Mocho and Cropley soils are formed in alluvium. The Cropley soils are found within the northern and northwestern portions of the campus. Cropley series soils are deep, moderately well-drained soils formed on fans and floodplains with slopes of 0 to 15 percent. Cropley soils typically range from clay loam to clay. The Mocho soils are found primarily within the agricultural land in the western area of campus. Mocho series consist of very deep, well-drained soils formed on alluvial fans with slopes of 0 to 9 percent. Mocho soils range from loam to clay loam with 18 to 35 percent clay and more than 15 percent fine sand or coarser.

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[16] accommodating translational[17] 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.

[16] A fault in which the movement of the fault is parallel to the orientation of the fault, i.e. sideways.

[17] Fault block movement in which the blocks have no rotational component, parallel features remain so after movement.

Active reverse or thrust faults[18] in the Transverse Ranges include blind thrust faults[19]responsible for the 1987 Whittier Narrows Earthquake and 1994 Northridge Earthquake, and the range-front faults[20] 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 1999):

- Faults that have generated earthquakes accompanied by surface rupture during historic time (approximately the last 200 years) and faults that exhibit aseismic fault creep[21] 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[22] and thus the activity classification of these faults is predominantly based on historic earthquakes and microseismic activity along the fault.

The Pierce 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 Northridge Thrust, Santa Susana, and San Fernando faults. These faults along with other faults considered to be potentially significant seismic sources are listed in Table 3-13. Data presented in this table include the type of fault, Alquist Priolo status, estimated earthquake magnitude, and distance between the fault and the project area. The locations of these faults are shown on Figure 3-26. Alquist-Priolo Earthquake Fault Zones are areas designated by the State of California as having high potential for fault movement resulting in ground surface rupture.

[18] A fault with predominantly vertical movement in which the upper block moves upward in relation to the lower block, a thrust fault is a low angle reverse fault.
[19] Blind thrust faults are low-angled subterranean faults that have no surface expression.
[20] Faults along the front of mountain ranges responsible for the uplift of the mountains.
[21] Movement along a fault that does not entail earthquake activity.
[22] A geologic structure that has or is capable of generating an earthquake.

Table 3-13: Significant Active Faults

Fault Name	Fault Type	Alquist Priolo Status	Minimum Distance from Site (mi)[1]	Maximum Earthquake Magnitude[2]	Estimated Site Intensity (MM)[3]
Northridge	Blind Thrust		9	6.9	IX
Santa Susana	Dip Slip	EQ Fault Zone	10	6.6	IX
Malibu Coast	Dip Slip	EQ Fault Zone	10	6.7	IX
Santa Monica	Dip Slip	EQ Fault Zone	11	6.6	IX
San Fernando (Sierra Madre)	Dip Slip	EQ Fault Zone	11	6.7	IX
Hollywood	Dip Slip	EQ Fault Zone	11	6.4	VIII
Verdugo	Dip Slip		12	6.7	IX
Palos Verdes	Strike-Slip		15	7.1	VIII
Simi-Santa Rosa	Dip Slip	EQ Fault Zone	15	6.7	VIII
Newport-Inglewood	Strike-Slip	EQ Fault Zone	16	6.9	VIII
San Gabriel	Strike-Slip	EQ Fault Zone	16	7.0	VIII
Oak Ridge	Dip Slip		16	6.9	VIII
Sierra Madre	Dip Slip	EQ Fault Zone	17	7.0	VIII

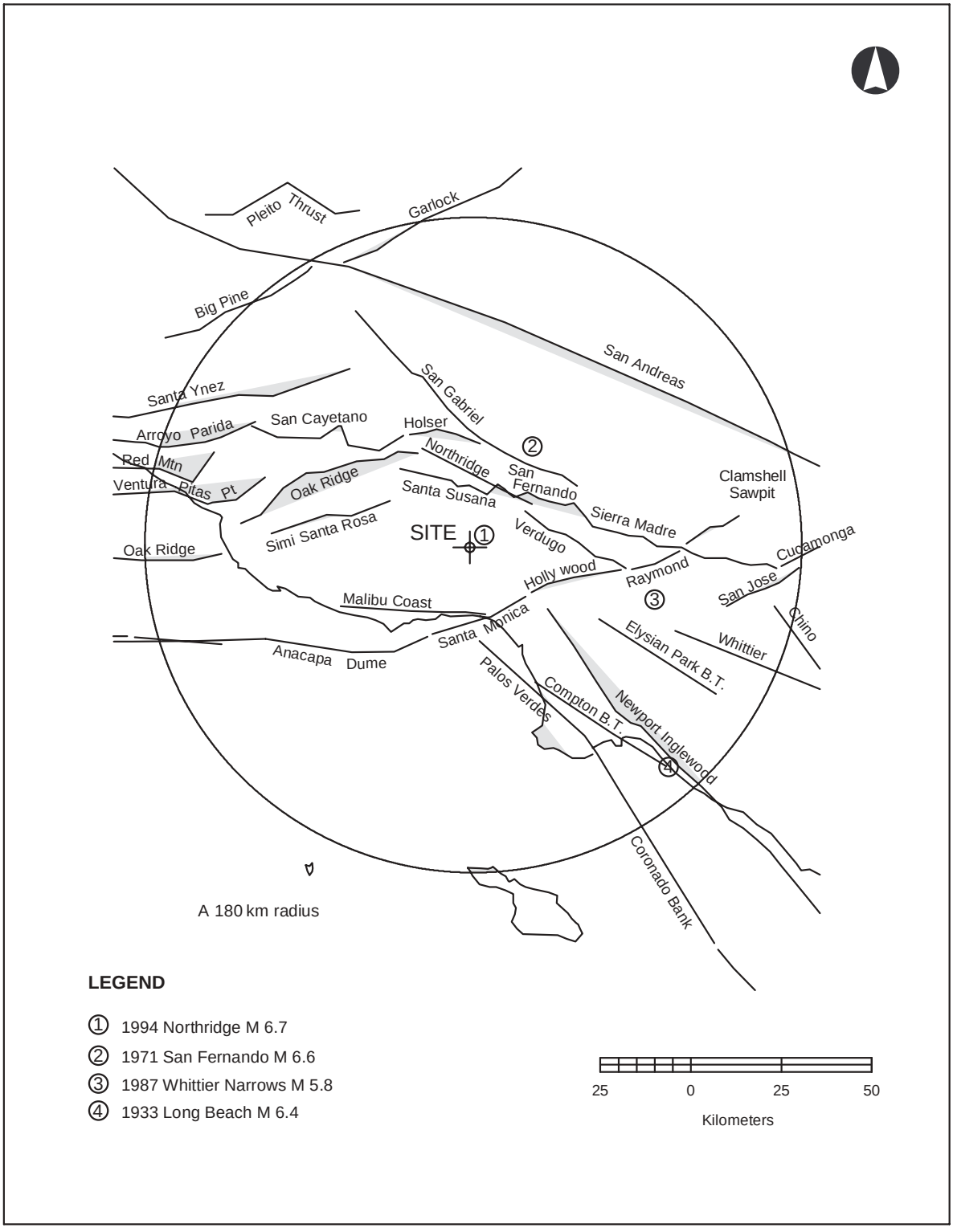
Notes:
1. Fault distances obtained using the EQFault computer program (Blake 2000), based on digitized data adapted and modified from the CDMG fault database.
2. Maximum Earthquake Magnitude – the maximum earthquake that appears capable of occurring under the presently known tectonic framework, using the Richter scale.
3. Estimated Site Intensity – a measure of surface intensity and damage from an earthquake, measured using the Modified Mercalli Scale (MM) (see Table 3-2).

Source: Geotechnical Consultants, Inc, 2002.

Nine miles to the northeast, the northwest-southeast trending Northridge Thrust fault is the closest active fault to the project area. The Northridge Thrust fault is a recently discovered southwest dipping blind thrust fault with an estimated slip rate of 1.5 millimeters[23] (0.06 inches) per year and an estimated recurrence interval of 818 years (California Division of Mines and Geology 1996). Although the trace of this fault is projected to the surface on the fault location map, the closest distance to any site on the surface is measured from the closest point on the buried dipping fault plane, and therefore is a measure of fault distance and depth. The Northridge Thrust fault was responsible for the 1994 Northridge Earthquake.

[23] References to fault slip rates are traditionally presented in millimeters per year. This convention is maintained and the conversion to inches is also provided.

Figure 3-26: Fault Location Map



Source: EQFault Program, Blake; 2002.

The Santa Susana fault extends for approximately 17 miles west-northwest along the southern edge of the Santa Susana Mountains from the San Fernando Valley in Los Angeles County into Ventura County. The Santa Susana is a northward dipping reverse fault with a low angle of dip near the surface, which becomes steeper (50 to 60°) at depth (United States Geological Survey 1987). Estimated slip rate and recurrence intervals are 5 millimeters (0.2 inches) per year and 138 years, respectively (California Division of Mines and Geology 1996). Surface rupture occurred along the Santa Susana fault during the 1971 San Fernando Earthquake.

The San Fernando fault is a north dipping reverse fault comprised on five northeast striking en echelon strands.[24] Estimated slip rate and recurrence intervals are 2 millimeters (0.08 inches) per year and 1,000 years, respectively. This fault was responsible for the 1971 San Fernando Earthquake.

Strong Ground Shaking. An earthquake is classified by the amount of energy released, which traditionally has been quantified using the Richter scale. Recently, seismologists have begun using a Moment Magnitude (M) scale, because it provides a more accurate measurement of the size of major and great earthquakes. For earthquakes of less than M 7.0, the Moment and Richter Magnitude scales are nearly identical. For earthquake magnitudes greater than 7.0, readings on the moment magnitude scale are slightly greater than a corresponding Richter Magnitude.

Seismic analyses generally include discussions of design level and upper bound earthquakes. An upper bound earthquake is defined as an event that has a 10 percent probability of occurrence in 100 years. The design level earthquake is defined as an event that has a 10 percent probability of occurrence in 50 years.

The intensity of the seismic shaking, or strong ground motion, during an earthquake is dependent on the distance between the project area and the epicenter of the earthquake, the magnitude of the earthquake, and the geologic conditions underlying and surrounding the project area. Earthquakes occurring on faults closest to the project area would most likely generate the largest ground motions. The Modified Mercalli Scale is commonly used to indicate the site intensity of an earthquake as a subjective measure of the strength of an earthquake at a particular place as determined by its effects on persons, structures, and earth materials. The Modified Mercalli Scale for Earthquake Intensity is presented in Table 3-14.

A review of historic earthquake activity from 1800 to 1999 indicates that six earthquakes of magnitude M 6.0 or greater have occurred within 50 miles (80 kilometers) of the proposed project area. Distance from the project area, magnitude, and site intensity for each of these six earthquake events is presented in Table 3-15. The M 5.9 Whittier Narrows earthquake of 1987 is also included in the table because it was a significantly damaging earthquake within 30 miles (50 kilometers) of the project area. There have been 10 additional earthquakes with magnitudes between M 5.5 and M 6.0 within 50 miles of the project area between 1800 and 1999.

[24] Overlapping or staggered faults strands that form a linear zone.

Table 3-14: Modified Mercalli Scale for Earthquake Intensity

Intensity Scale (MM)	Effects
XII	Damage total or nearly total, practically all works of construction are greatly damaged or destroyed. Roads, rails, and underground utilities severely damaged.
XI	
X	Major damage, including partial to complete collapse of weak masonry and frame buildings and moderate damage of stronger structures.
IX	
VIII	Moderate damage including toppled chimneys, cracked stucco, frames shifted on foundations. Damage more severe to weak walls and masonry.
VII	
VI	Minor damage including cracks in chimneys and walls. Furniture moved and items knocked off shelves.
V	Felt by most people, some awakened from sleep. Some objects are moved. No structural damage.
IV	
III	Felt indoors by some people.
II	Not generally felt by people.
I	

Source: Modified from Lacopi, 1981.

Table 3-15: Historic Eearthquakes

Date	Approx. Distance to Site (miles)	Earthquake Magnitude (M)	Approx. Site Intensity (MM)
September 24, 1827	27	7.0	VII
November 27, 1852	45	7.0	V
July 11, 1855	28	6.3	VI
April 4, 1893	8	6.0	IX
February 9, 1971	19	6.4	VII
October 1, 1987	30	5.9	V
January 17, 1994	3	6.7	X

Source: EQSearch, v. 3.0 – Thomas F. Blake, 2000.

Three significant damaging historic earthquakes have occurred in the last 25 years within 30 miles of Pierce College. The closest and most damaging earthquake near the project area was the January 17, 1994, M 6.7 Northridge Earthquake. This earthquake was located approximately 3 miles north of the project area and resulted in 60 deaths and approximately $15 billion in property damage (National Earthquake Information Center 2000; Southern California Earthquake Center 2000). Damage was significant and widespread, including collapsed freeway overpasses and more than 40,000 damaged buildings in Los Angeles, Ventura, Orange, and San Bernardino Counties. This earthquake occurred on a blind thrust fault and produced the strongest ground motions ever instrumentally recorded in an urban setting in North America. The maximum recorded acceleration exceeded 1.0g (g is the acceleration due to gravity) at

several sites, with the largest recorded (1.8g) at Tarzana, about 4 miles south of the epicenter (National Earthquake Information Center 2000).

The second closest significant earthquake was the February 9, 1971, M 6.5 San Fernando Earthquake (also known as the Sylmar Earthquake). This earthquake caused over $500 million in property damage and 65 deaths. Most of the deaths occurred when the Veteran's Administration Hospital collapsed. Newly constructed freeway overpasses also collapsed. In response to this earthquake, building codes were strengthened and the Alquist Priolo Earthquake Fault Zone Act was passed in 1972 (Southern California Earthquake Center 2000).

Although lesser in magnitude than the two above-mentioned earthquakes, the October 1, 1987 M 5.9 Whittier Narrows earthquake caused significant damage in the Los Angeles region. This earthquake was located approximately 30 miles southeast of the project area and resulted in eight deaths and $358 million in property damage. The Whittier Narrows earthquake occurred on a previously unknown blind thrust fault, the Puente Hills fault, located just northwest of the northern terminus of the Whittier fault (Southern California Earthquake Center 2000).

3-9.2 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, alluvium and Modelo Formation throughout. Thus, construction of proposed Master Plan improvements is not expected to affect any unique geologic features. 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 industry 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 and, as a result, substantial alteration of the topography is not anticipated. Minimal slope regrading would be required for planned structures located south of Brahma Drive and below and east of the stadium.

Unstable Slopes. Most of the areas where construction of new facilities is planned are relatively flat or have already been graded for existing buildings. Most existing sloped areas located near anticipated construction sites have already been stabilized by means of retaining walls and landscaping. 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 2001) 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.

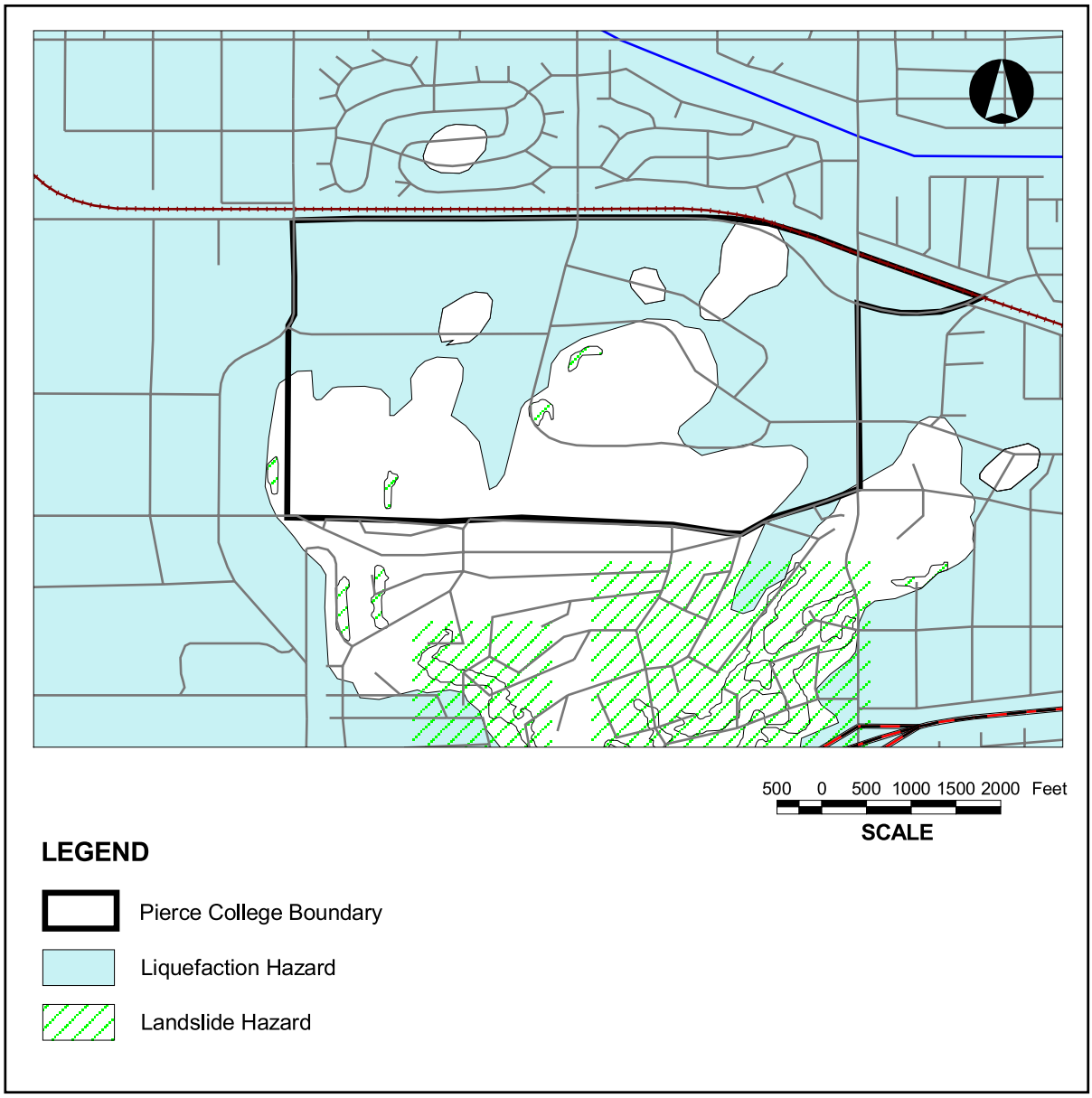
Strong Ground Shaking. The estimated site intensity of between IX and VIII for the estimated maximum earthquake on any of the faults within 19 miles of the project area (see Table 3-13) is very high. Seismic shaking intensity of IX to VIII could cause significant damage to all aboveground structures 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 Table 3-13, resulting in significant damage to structures in the proposed project area.

The ground motion hazard described above is not unusual for the San Fernando Valley area. This hazard would represent a less than significant impact provided that design and construction of the proposed project conforms to all applicable provisions 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 shall conform to the 1997 UBC's earthquake design criteria for Seismic Zone 4.

Liquefaction Potential. Liquefaction is the phenomenon in which saturated granular sediments temporarily lose their shear strength during periods of earthquake-induced, strong ground shaking. The susceptibility of a site to liquefaction is a function of the depth, density, and water content of granular sediments, and the magnitude and frequency of earthquakes in the surrounding region. Saturated, unconsolidated silt, sand, and silty sand within 50 feet of the ground surface are most susceptible to liquefaction. Liquefaction-related phenomena may include lateral spreading, ground oscillation, loss of bearing strength, subsidence, and buoyancy effects (Tinsley et al. 1986). Lateral spreading comprises the movement of surficial blocks of sediment due to liquefaction, and commonly occurs on gentle slopes of 0.3 to 3 degrees.

The low-lying portions of the project area are within a California Department of Mines and Geology (CDMG) Seismic Hazard Mapping Program liquefaction hazard zone (CDMG 1998), as shown on Figure 3-27. Although no historical liquefaction has been reported in the Canoga Quadrangle, there was evidence of lateral spreading in the Northridge and Reseda areas after the Northridge Earthquake. Additionally, localized areas of shallow groundwater and unconsolidated sediments may exist within the project site, and could potentially lead to liquefaction phenomena. However, much of the campus is underlain by bedrock and the remainder of the campus appears to be underlain by fine-grained alluvial/colluvial material that would not be susceptible to liquefaction phenomena. Consequently, although the project site has a high potential for moderate to strong intensity ground shaking, liquefaction-related phenomena should not pose a significant problem.

Figure 3-27: Seismic Hazard Map



Source: CDMG Seismic Hazard Evaulation Map, Canoga Park 7.5 Minute Quadrangle

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 very high 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 on an individual project basis relying 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 methods, reducing any impact from slope failure to less than significant.

Several small seismically induced landslide hazard zones are located within the project area (see Figure 3-27). Based on the location and small size of these zones, they do not pose a significant impact to the proposed project.

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.

3-9.3 Mitigation Measures

a. Construction Mitigation

To minimize hazards to construction workers from unstable temporary slopes, the following measures shall be implemented by the construction contractor(s):

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 Pierce College campus.

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

b. Operational Mitigation

Because of the potential for strong seismic ground shaking, unsuitable soils, and soil liquefaction, the following mitigation measures shall be implemented

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 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 should be identified by the geotechnical investigation.

GS-4 Unsuitable Soil Conditions. The geotechnical investigation of proposed facilities should fully characterize the presence and extent of corrosive, expansive, or loose compactable soil. Based on the collected data, appropriate mitigation can 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.

3-9.4 Unavoidable Significant Adverse Impacts

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

3-10 HAZARDOUS MATERIALS

This section discusses the potential for ground contamination resulting from the discharge of hazardous materials to adversely affect the proposed Pierce College Project. A review of public records was conducted, an environmental database was prepared by Environmental Data Resources, Inc (2002), and a site reconnaissance and interviews were performed by Geotechnical Consultants, Inc. to verify current conditions and potential impacts at the project site and from nearby properties.

3-10.1 Environmental Setting

Existing and past land use activities are used as potential indicators of hazardous material storage and use at individual sites. For example, many industrial sites, historic and current, are known or suspected to have soil or groundwater contamination by hazardous substances. Other hazardous materials sources include leaking underground tanks; surface runoff and migration of contaminated groundwater plumes from contaminated sites; and application of pesticides and herbicides on agricultural land.

The primary issue in identifying potential environmental contamination is worker health and safety, and public exposure to hazardous materials during construction and waste handling. Potential impacts on air quality and traffic during waste transport must also be considered. Where encountered, contaminated soil may qualify as hazardous waste and thus require handling and disposal according to local, state, and federal regulations.

a. Land Use/Site Conditions

Historic Land Use

Research of historic area land use was conducted using historic aerial photographs (1952 through 1994) and historic topographic maps (1903 through 1967). The review of the aerial photographs and topographic maps indicates that prior to the 1920s the project area was primarily undeveloped. From the 1920s through the 1940s the area was a mix of agricultural and urban, with the agriculture predominant near the project area and several small urban areas, the growing communities of Canoga Park, Tarzana, and Woodland Hills, located at distances of approximately a mile or less to the north, east, and south. Urban density and sprawl has increased since the 1950s, and all of the previously existing agricultural land, with the exception of the College, has been replaced by residential, commercial, and light industrial buildings. By the mid-1970s, the area west of the project site was developed with light industrial and business parks.

Current Site Conditions/Land Use

Field reconnaissance of the project site and surrounding project area was conducted to verify current conditions. The field reconnaissance component of the study relied on a visual survey of surface conditions by an environmental geologist to identify sites where storage containers (chemicals, paint, oil) were present or evidence of stained soil or corroded pavement was visible,

suggesting chemical spillage to the ground. This survey concentrated on the project site and sites identified in the EDR database. A site reconnaissance of the Pierce College campus was conducted in the presence of Pierce College personnel familiar with campus hazardous material use, storage, and disposal. Reconnaissance of the area surrounding the campus was limited to viewing properties from adjacent public streets and alleys; no attempt was made to gain access to any properties except the open parking lot areas.

Pierce College Campus. Land use on the Pierce College campus includes educational, recreational/athletic, agricultural, horticultural, community, plant facilities, and parking. Approximately half of the campus is devoted to agricultural laboratory uses, which has not been intensively used in the last few years (*Pierce College Facilities Master Plan* 1998). The campus core area contains the most actively used educational facilities and consists primarily of one-story classroom and administrative buildings constructed from the late 1940s to early 1980s, with most of the buildings constructed prior to 1970. Classroom buildings used for science education contain laboratories that use and store a variety of chemicals and other hazardous materials. Included among the classroom buildings are a number of "temporary" buildings located in the northern part of the campus core. Other buildings in and/or near the campus core include various plant facilities buildings and industrial technology buildings, which also use and store hazardous materials. Horticultural facilities, including classroom buildings, a greenhouse, an arboretum, and miscellaneous plantings are located in the southeast corner of the campus. Livestock buildings and related facilities are located within the agricultural areas west of Stadium Way.

Surrounding Area. Properties south of the Pierce campus are primarily single-family residential. North of the campus across Victory Boulevard and the railroad right-of-way, land use is also primarily residential, consisting of a mix of single-family houses and multi-story apartment buildings. The area west of the campus contains light industrial buildings and small office complexes. East of the campus are educational and residential land uses, including LAUSD West Valley Occupational Center north of Brahma Drive and single-family homes south of Brahma Drive.

b. Environmental Database Review

An electronic database search of listings maintained by federal, state, and local agencies of sites with known or suspected hazardous material contamination, use of hazardous or toxic materials and regulated wastes, discharge or spillage incidents, discharge permits, landfills, and storage tanks was performed by Environmental Data Resources Inc. in 2002 (see Appendix E). The database was reviewed for sites listed as potential or known dischargers of hazardous materials that could potentially affect the project site. The database search included sites within a 1-mile radius of an approximate center point for the Pierce College campus. A total of approximately 170 sites were identified within the search radius, although only a total of 37 sites occur within 1/4 mile of the project site boundaries. The principal regulatory directories reviewed by Environmental Data Resources, Inc., including the date last updated, are listed below in Table 3-16.

Table 3-16: Principal Regulatory Agency Databases Searched

Regulatory Agency Database	Date Last Updated
Federal	
National Priority List (NPL)	January 2002
Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS)	November 2001
Comprehensive Environmental Response, Compensation, and Liability Information System – No Further Remedial Action Planned (CERCLIS-NFRAP)	November 2001
Resource Conservation and Recovery Act Information System (RCRIS), (includes RCRA Generators)	June 2000
RCRA Corrective Action Sites (CORRACTS)	November 2001
California State	
Annual Work Plan (AWP, formerly Bond Expenditure Plan, by Cal EPA)	November 2000
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)	January 2002
Underground Storage Tank Registration Database (UST, by RWQCB; and FID, by Cal EPA)	January 2002 and October 1994
Solid Waste Information System (SWIS)	December 2001
Hazardous Waste Information System (HAZNET, by Cal EPA)	December 2000
Local	
Site Mitigation List (by Community Health Services)	January 2001
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	September 2001

Source: Environmental Data Resources, Inc., 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, or 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 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 Resource Conservation and Recovery Act 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 Resource Conservation and Recovery Act, 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.

❑ Storage and Use of Hazardous Materials at Pierce College

Various types of hazardous materials and hazardous waste are stored on campus. A number of different types of chemicals used for instructional purposes are stored in the Life Science Building and in the Chemistry Building. Chemicals and chemical waste are stored in a small locked storage bunker adjacent to the Chemistry Building. Motor oil and waste motor oil are used/stored within the Industrial Technology Building (auto shop). The waste oil is stored in 55-gallon drums and is disposed of twice a year. A third small locked storage bunker is located behind the Agricultural Sciences Buildings off of El Rancho Drive. This bunker contains poisons, paints, and limited amounts of pesticides and herbicides.

The Plant Facilities on campus uses and stores many different types of chemicals. Within the Plant Facilities is a vehicle maintenance area that has two underground fuel storage tanks (USTs), one for diesel fuel and one for unleaded fuel. Prior to 1996, four USTs (three fuel tanks and one waste oil tank) were located in this area. During removal of these tanks in 1996, contamination was noted and remediated. Also found in the vehicle maintenance area is waste oil stored in 55-gallon drums, which is disposed of at least twice a year. Paints and solvents are stored in a locked cage near the workshops on the northern edge of the Plant Facilities area. Limited amounts of paints and solvents in immediate use are stored in the various workshops. Small quantities of biological waste generated by the campus clinic are stored in a locked room in the Plant Facilities offices prior to disposal.

❑ Pesticide and/or Herbicide Use at Pierce College

It has been the practice and policy of Pierce College not to use pesticides on the agricultural laboratory land. Pesticides and herbicides are stored and used by the Horticultural Department. Pesticides and herbicides not in immediate use at the various horticultural facilities are stored in a bunker, a locked storage building located approximately 550 feet south of the Horticultural Department classroom buildings. Limited amounts of herbicides and pesticides are stored for

immediate use in the classrooms and other horticultural facilities. Limited amounts of Roundup, a herbicide, are used around the campus to control weeds (personal communication with Randy Brooks 2002). Roundup has a very short half-life, between 2 and 174 days depending on application and environmental conditions, and is applied in small controlled amounts.

❑ Asbestos and Lead Containing Material

Based on the age of many of the buildings on campus, there is a potential that asbestos-containing material and lead-based paint may be present in the structures. Personal communications with campus staff (Randy Brooks, Charlie Ng 2002) indicate that remediation for asbestos-containing material and lead-based paint had occurred in some of the buildings on campus.

3-10.2 Environmental Impacts

The principal environmental impacts involving hazardous waste are the mobilization of contaminants resulting in exposure of workers and the general public, i.e., excavation and handling of contaminated soil and removal and handling of asbestos-containing material. Hazardous materials in the construction area may require special handling as hazardous waste can create an exposure risk to workers and the general public during excavation and transport. Contaminated soil exceeding regulatory limits for construction backfill will require onsite treatment or transport to offsite processing facilities. Contaminated soil removed from the construction area must be transported according to state and federal regulations and be replaced by import soil approved for backfill. Similar issues pertain to contaminated groundwater.

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

Site conditions with potential environmental impacts are presented in Table 3-17.

Table 3-17: Potential Environmental Impacts

Condition	Notes
Use and storage of hazardous materials and waste at Pierce College.	Two USTs are located at the plant facilities buildings. Various chemicals and chemical wastes are stored and used on campus. Biologic waste from the campus clinic is stored at the Plant Facilities.
Previous and current application of pesticides and/or herbicides on the project site.	Personal communication with campus staff (Randy Brooks 2002) indicates that it is the policy of the school not to use herbicides or pesticides on the agricultural laboratory land. Limited amounts of Roundup, a herbicide, are used around campus. Pesticides and herbicides are used and stored in and near the Horticultural Department facilities.
Asbestos and lead-based paints in older buildings on campus to be demolished or remodeled.	Due to the age of many of the buildings on campus, there is a potential that they contain asbestos and lead-based paint.
Contamination spread to campus from offsite sources.	One site with a high potential to adversely affect the campus was identified in the Environmental Data Resources, Inc. database.

Source: Geotechnical Consultants, Inc., 2002.

Construction Impacts

The impact from use and storage of hazardous materials at Pierce College would be less than significant if anticipated areas of construction and ground disturbance do not overlap with hazardous material storage and use areas. If construction overlaps with hazardous material areas, the impact could be potentially significant. However, if a site inspection is performed prior to construction to determine if leaks or spills may have caused potential environmental contamination and if present, remediated as indicated in Mitigation Measure HM-1, the impacts would be reduced to less than significant.

Demolition or remodeling of older structures on the campus could potentially result in exposure and mobilization of asbestos-containing material and/or lead-based paint contaminants, a potentially significant impact. Confirmation of previous remediation or remediation of asbestos-containing material and lead-based paint would be completed before any construction on or demolition of existing buildings, as specified in mitigation measure HM-4, reducing the potential impact to less than significant.

Listed Hazardous Material Sites

Properties listed in the Environmental Data Resources, Inc. environmental database were reviewed for potential to affect the project. Potentially contaminated properties identified within a ¼-mile "buffer zone" of the campus boundary were screened for potential large-scale contamination that may have spread beyond individual property boundaries.

Table 3-18 presents the criteria used to evaluate the potential environmental impact from listed sites within and immediately adjacent to the project area. Sites that are physically separated from the proposed sites would have little or no potential to affect the project. The remaining adjacent sites are ranked as high, medium, or low potential to affect construction according to site conditions, regulatory status, and review of agency records.

Table 3-18: Contaminated Properties Impact Criteria

Impact Potential	Criteria
High	• Sites within or immediately adjacent to the project site with leaking underground storage tanks that are reported as no action taken. • Sites within or immediately adjacent to the project site where site assessment efforts are reported to be in progress. • Sites within or immediately adjacent to the project site where remediation/cleanup efforts are reported to be in progress. • Areas within the project site with known soil or groundwater contamination.
Moderate	• Sites within or immediately adjacent to the project site where the number and/or status of underground storage tanks on site is not reported. • Sites within or immediately adjacent to the project site with active underground storage tanks. • Sites within or immediately adjacent to the project site with inactive underground storage tanks.
Low	• Sites within or immediately adjacent to the project site where underground storage tanks have been removed. • Sites within ¼-mile of the project site with active underground storage tanks. • Sites within or immediately adjacent to the project site which generate large quantities of hazardous materials. • Sites within or immediately adjacent to the project site where historic or current use may be associated with large quantities of hazardous materials.
None	• Generator or UST sites located greater than ¼-mile from the project site. • Sites within or immediately adjacent to the project site which generate small amounts of hazardous materials. • Sites within or immediately adjacent to the project site where no further action is required. • Sites within or immediately adjacent to the project site where case has been closed following site remediation/cleanup.

Source: Geotechnical Consultants, Inc., 2002.

Properties listed in the Environmental Data Resources, Inc. database were screened and assigned potentials to adversely affect the project of none, low, moderate, or high. Properties within ¼-mile of the project site with moderate or high potential to affect the project are listed in Table 3-19.

Table 3-19: Properties within ¼-Mile of the Campus Boundary with Moderate or High Potential Impact

I.D. Number	Site Name	Address	List	Potential to Affect Project	Notes
A1-A7	Los Angeles Pierce College	6201 Winnetka Ave.	LUST UST GEN	Moderate	Leaking USTs removed, remediated and replaced; College currently has two active UST's; uses and store misc. chemicals, pesticides, and herbicides; generates misc. chemical and biologic wastes
B10-B15	P.L. Porter Company	6355 De Soto Ave.	LUST UST GEN	High	Remedial action in progress for hydrocarbon leak; 10 USTs reported, 3 large tanks & 7 small tanks; large generator of misc. solvents and waste oil
F34-F36	Les Young & Assoc./ Irving Levine	6033 De Soto Ave.	LUST UST GEN	Moderate	LUST is case closed (1997), status of UST unknown

Notes:
Environmental Data Resources, Inc. - Environmental Information Data Site I.D. Number.
Regulatory Agency Listing:
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: Geotechnical Consultants, Inc.; Environmental Data Resources, Inc., 2002.

Operational Impacts

Routine use of pesticides and/or herbicides in proposed landscape areas adjacent to structures and at the Horticultural Department facilities should not pose a significant hazard to workers or the public. Hazardous materials are and will be stored in designated storage areas in compliance with local, state, and federal safety regulations. No significant hazardous materials impacts are predicted as a result of operation of the proposed Master Plan projects.

3-10.3 Mitigation Measures

Two sites with moderate potential and one site with high potential to affect the proposed project were identified. Two mitigation measures were developed for the moderate and high potential sites as identified in Table 3-19. Mitigation Measure HM-3 is proposed to address potential soil contamination from pesticides or herbicides. The potential presence and contamination from asbestos-containing materials and lead-based paint is addressed in Mitigation Measure HM-4.

The presence of hazardous waste sites within and adjacent to the proposed project site represents a potential significant impact due to the potential health hazards to construction workers and the public. 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. 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 discuss proper handling, treatment, and storage of hazardous waste from the proposed projects (prior to construction).

HM-1 Moderate Potential Sites. A thorough review of available environmental records, a thorough historical land use assessment, and a site-specific inspection shall be completed. Record review shall identify data confirming remediation of onsite and offsite contamination of former LUST sites, or agency certified closure of the site. The status and/or number of tanks that are not reported shall undergo further record review to determine the status, condition, contents, and number of tanks. At sites with inactive or improperly abandoned USTs, the tanks may be old and in poor condition and, therefore, shall be thoroughly evaluated for condition and possible leaks. 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 or visual inspection that indicate contamination may be present in a proposed project area shall cause medium potential sites to be treated as high potential.

Relocation of the Plant Facilities buildings and appurtenances will require removal and relocation of their two USTs. Removal of the active USTs in the Plant Facilities vehicle maintenance area shall be monitored by a qualified professional for evidence of leaks. If any evidence of leakage is noted, a site assessment shall be performed and appropriate remediation completed.

HM-2 High Potential Site. Current agency records of the "high" potential site (P.L. Porter Company) shall be reviewed to assess and verify the extent of potential contamination of surface and underlying soil, and shallow groundwater. If the review 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. Results shall be reviewed and approved by the Los Angeles County Fire Department, Health Hazardous Materials Division or Department of Toxic Substances Control prior to construction. 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 appropriate worker protection and hazardous material handling and disposal procedures appropriate for the subject site.

Construction activities that require dewatering may require treatment of contaminated groundwater prior to discharge. Appropriate regulatory agencies, such as California EPA, the Regional Water Quality Control Board (RWQCB), and the Los Angeles County Fire Department, Health Hazardous Materials Division shall be notified in advance of construction and discharge permits identifying discharge points, quantities, and groundwater treatment (if necessary) shall be identified and obtained.

Areas with contaminated soil determined to be hazardous waste shall be excavated by personnel who have been trained through the OSHA-recommended 40-hour safety program (29CFR1910.120) with an approved plan for excavation, control of contaminant releases to the air, and offsite transport or onsite treatment. Health and safety plans prepared by a qualified and approved industrial hygienist shall be developed to protect the public and all workers in the construction area. Health and safety plans shall be reviewed and approved by the appropriate agencies, such as the Los Angeles County Fire Department, Health Hazardous Materials Division or California Department of Toxic Substances Control.

HM-3 Residual Pesticides/Herbicides. Soil samples shall be collected in construction areas where the land has historically or is currently being farmed to verify and delineate the possibility of and extent of pesticide and/or herbicide contamination. Excavated materials containing elevated levels of pesticide or herbicide require and shall undergo special handling and disposal procedures. Standard dust suppression procedures shall be used in construction areas to reduce airborne emissions of these contaminants and reduce the risk of exposure to workers and the public. Regulatory agencies for the State of California and County of Los Angeles shall be contacted to plan handling, treatment, and/or disposal options.

HM-4 Asbestos-Containing Material and Lead-Based Paint. Records of previously completed asbestos-containing material and lead-based paint remediation at the College shall be reviewed. A survey of buildings, structures, and pavement areas to be removed or demolished to assess the presence and extent of asbestos-containing materials and lead-based paint shall be conducted. A qualified and approved environmental specialist shall conduct this study prior to final project design. The investigation shall include collecting samples for laboratory analysis and quantification of contaminant levels within the buildings and structures proposed for demolition, and in pavement disturbance areas. Based on these findings appropriate measures for handling, removal, and disposal of these materials can be developed. Regulatory agencies for the State of California and Los Angeles County shall be contacted to plan handling, treatment, and/or disposal options.

3-10.4 Unavoidable Significant Adverse Impacts

There are no unavoidable significant adverse hazardous material impacts. Proper handling, disposal, and remediation of hazardous materials can mitigate the impacts of on-campus use of miscellaneous chemicals and of pesticides and herbicides, asbestos-containing material and lead-based paint, and contamination from off-site sources.

3-11 HYDROLOGY AND WATER QUALITY

3-11.1 Environmental Setting

Precipitation in the San Fernando Valley occurs intermittently during the winter months with occasional storm events through the spring and summer months. On average, 85 percent of the annual precipitation occurs from November to March. Although precipitation normally occurs as rainfall, the San Gabriel Mountains are commonly capped with winter snow as a result of their high elevations. Los Angeles, a typical semi-arid region, experiences a wide variation in monthly and seasonal precipitation averages.

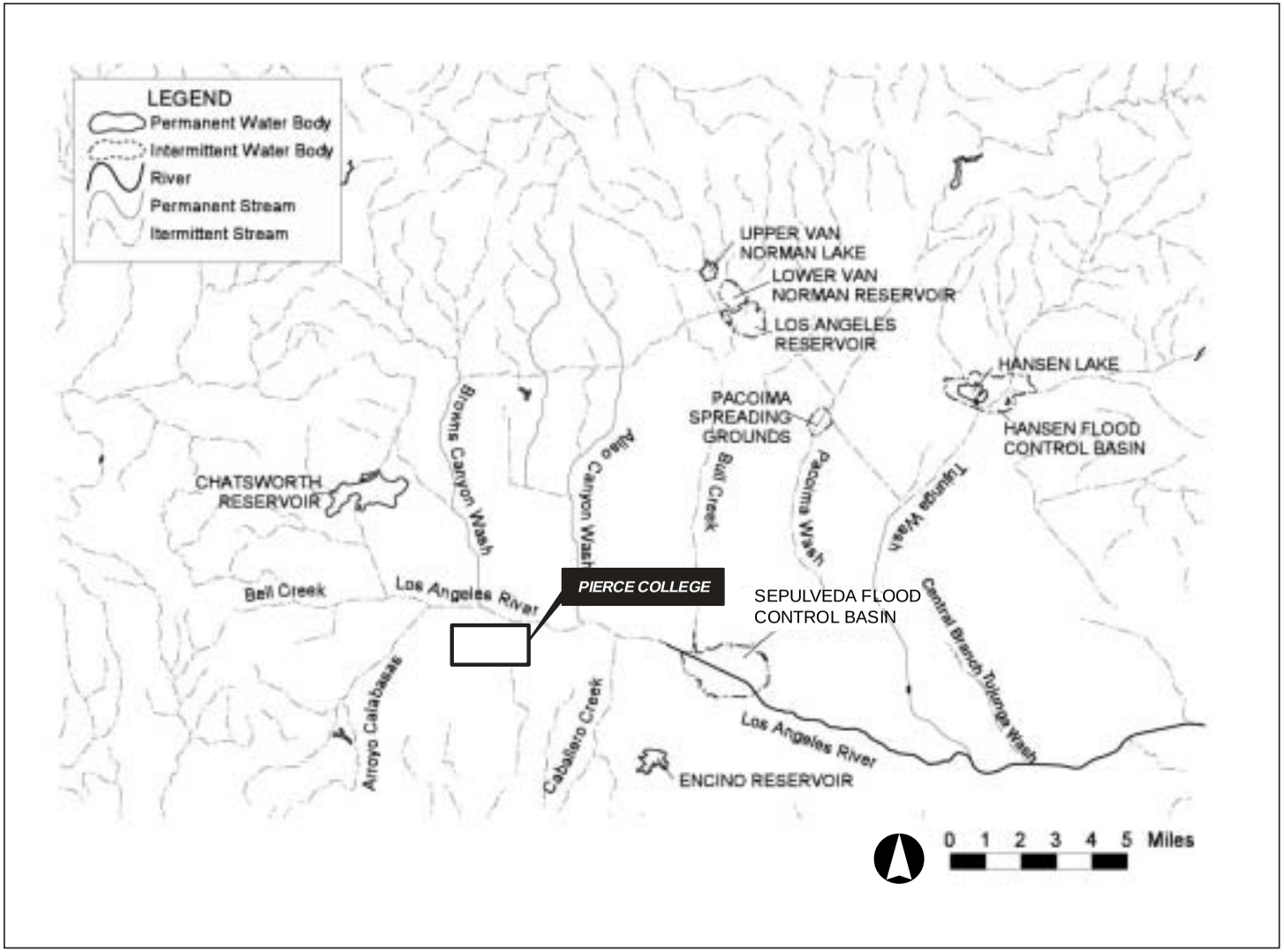
Precipitation may flow into surface reservoirs and groundwater basins or into an extensive network of surface streams and channels that transport runoff to the ocean. Both capture and storage of precipitation are critical for the Los Angeles area as they are contributing sources of domestic water supplies. Surface reservoirs capture runoff for short-term storage while groundwater basins are recharged by precipitation and runoff and provide long-term water storage. The amount of infiltration to groundwater basins is dependent upon slope, soil type, and intensity and duration of rainfall. Due to the extent of paved and therefore impervious surfaces in the Los Angeles area, a substantial amount of runoff occurs. Flood control measures (e.g., storm drains) have been constructed throughout the urban landscape to regulate and control stormwater runoff. Runoff is channeled safely to recharge basins for groundwater storage and overflow is directed to the ocean.

a. Surface Water Resources

Surface water in the San Fernando Valley (Valley) flows out of the Valley through the Los Angeles River, which begins approximately one-half mile northwest of the project area. Figure 3-28 shows the major surface water resources in the region in relation to the project area. Historically, the Los Angeles River was prone to flooding, hence, the U. S. Army Corps of Engineers and Los Angeles County Flood Control District initiated construction to channelize the river in 1938. Within the Sepulveda Dam and Flood Control Channel (c. 1941), located approximately 3 miles east of Pierce College, the floor of the channel is unlined, allowing water to percolate into the ground. The Sepulveda Dam is an earthfilled structure consisting of an earth embankment with a concrete spillway. The dam is 15,440 feet long and has a maximum height of 57 feet above the streambed. Designed to retain maximum flood levels (greater than 100-year flood event), the spillway reaches 712 feet above sea level and can retain 17,425 acre-feet of floodwater.[25] Although no portion of the proposed project lies within the basin, all dry and wet season runoff flow from the campus contributes to cumulative waters that must pass through the Sepulveda Basin.

[25] US Army Corps of Engineer Los Angeles District Reservoir Regulation Section, *http://www.spl.usace.army.mil/resreg/htdocs/spda.html*, 2002.

Figure 3-28: Local Surface Water Resources



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

Many tributaries with intermittent flow drain into the Los Angeles River. Tributaries located in proximity to Pierce College include Bell Creek, Chatsworth Creek, Arroyo Calabasas, Browns Canyon Wash, and Aliso Canyon Wash. These washes and creeks are primarily concrete-lined within the urban areas.

Flows in the tributaries and the Los Angeles River are highly variable. Dry-season flows are generally turf irrigation runoff from urban areas, controlled releases from reservoirs, and treated wastewater from the Tillman and Los Angeles-Glendale treatment plants. Wet season storm events, varying in duration and intensity, can create excessive runoff flows that transform the usually low-flow Los Angeles channel into a tumultuous river. First-event storms, generally preceded by many months of zero precipitation, contain high levels of pollutants (e.g., hydrocarbons and asbestos), while pollutant levels in stormwater runoff decrease as storm events increase.

Drinking water supplies for Los Angeles are not solely dependent on flows from these local channels. Predominantly, municipal water is transported to Los Angeles via the Los Angeles Aqueducts and the Metropolitan Water District of Southern California (MWD). Winter snowpack runoff from the eastern Sierra Nevadas, Owens River, and Owens Lake groundwater is routed over 300 miles through concrete-lined channels (Los Angeles Aqueduct), and in the 2000 to 2001 fiscal year, provided the City of Los Angeles with 38 percent (238,997 acre feet) of its water use. Additionally, Colorado River water is transported by aqueducts managed by the MWD, which contributed 51 percent (343,403 acre-feet) of water supplies during the same fiscal year.[26]

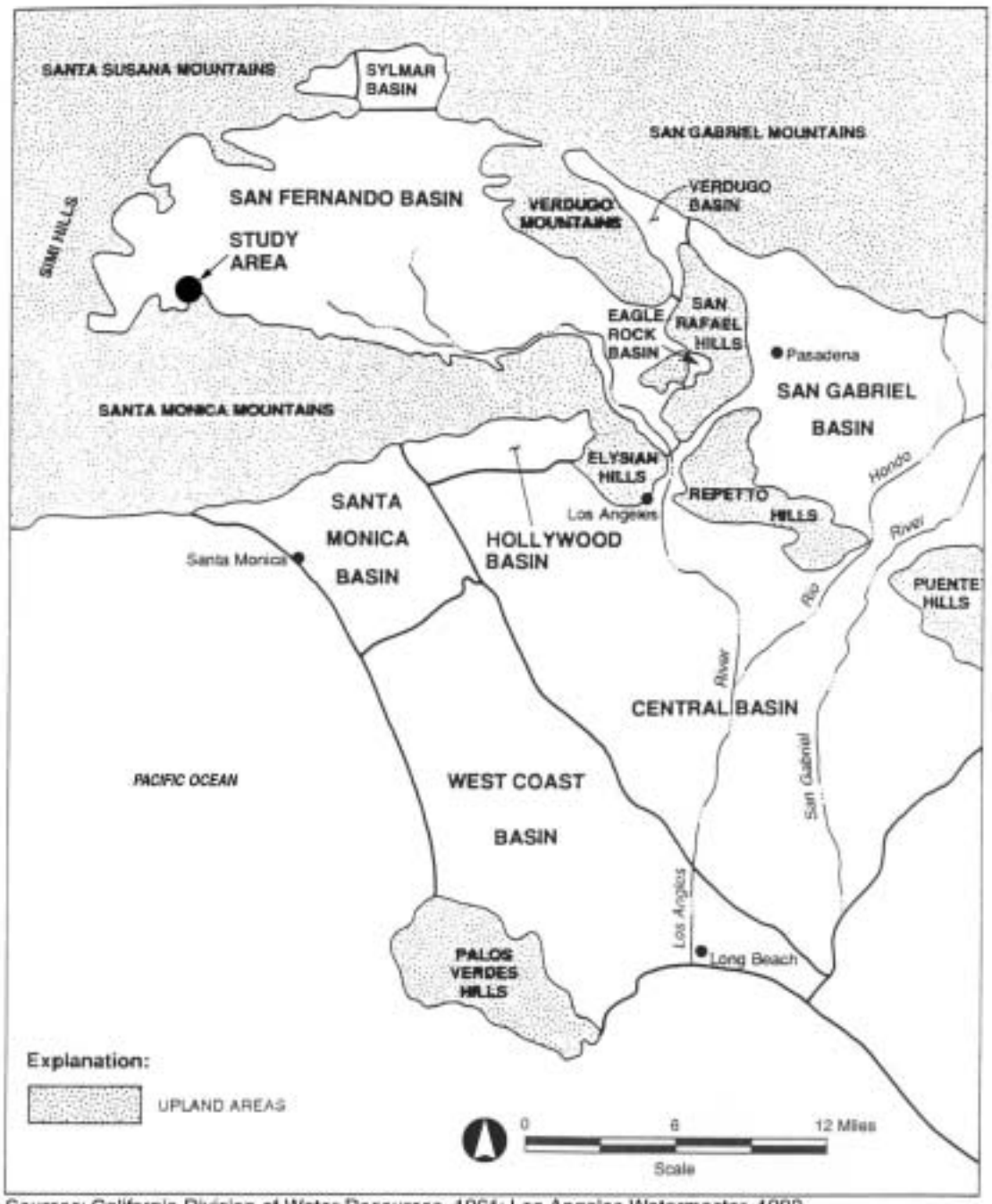
b. Groundwater

Groundwater resources are the result of water percolation through the soil layer. Water will continue to permeate through the soil until it meets an impervious surface such as clay or bedrock. The rate of percolation depends on the soil structure. Clayey soils and those with high organic compositions tend to pond or saturate with minimal levels of precipitation. Sandy coarse-grained soils percolate water quickly and consequently, provide little filtration. Groundwater resources, or aquifers, can be independent structures divided from other aquifers by faults or fissures generally created by seismic activity. Aquifers are formed by percolation of natural rainfall and seepage from rivers and washes, but modern levels of water extraction can lead to groundwater overdraft. Urban areas artificially recharge aquifers to maintain water quality, reduce risk of subsidence, and preserve emergency water sources.

The Los Angeles Department of Water and Power defines the San Fernando Valley as the Upper Los Angeles River Area Groundwater Unit. It is comprised of four groundwater basins: the San Fernando, Sylmar, Verdugo, and Eagle Rock Basins. The proposed project site is located over the western portion of the San Fernando groundwater basin (see Figure 3-29).

[26] City of Los Angeles Department of Water and Power, *Urban Water Management Plan,* 2001.

Figure 3-29: Groundwater Basins in the Los Angeles Area



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

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Covering a subterranean area of 112,000 acres, the San Fernando Basin is the largest of the four and is the main source of groundwater supplies to the City of Los Angeles.[27] Overall, groundwater resources are relied on for a small percentage of the yearly Los Angeles area water

[27] http://www.ladwp.com/water/supply/grdwtr/html

needs; during fiscal year 2000 to 2001, groundwater contributed 13 percent (85,037 acre feet) of consumed water sources. This percentage has been relatively constant for the last 20 years.

c. Floodplains

A review of Floodplain Insurance Rate Map (FIRM) panel number 0601370036C, prepared by the Federal Emergency Management Agency (FEMA), reveals that the project site lies within an area delineated as Zone X. Zone X is defined by FEMA as an area outside of the 500-year floodplain, which means there is less than a 0.2 percent chance every year over a 500-year period that this area may be inundated by a flood. However, one small portion of the property, the parcel on the northeast corner of Winnetka Avenue and Victory Boulevard, lies within a 500-year floodplain. Pierce College leases this parcel and it is currently used as little league fields. The aforementioned tributaries located near the project area that drain into the Los Angeles River (Arroyo Calabasas, Bell Creek, Chatsworth Creek, and Browns Canyon Wash) are mapped as 100-year floodplains, or Zone A. Each of the tributaries completely contains the floodplain within its flood control channel. Although the project area does not lie within a floodplain, the campus is known to experience flooding during heavy storm events. See Section 3-11.5b for a more detailed discussion.

3-11.2 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. 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 Water Quality Control Board (LAWCB).

Previously prepared environmental documents and reports produced by the Los Angeles Department of Water and Power (LADWP) and LAWCB provided information to determine the local groundwater setting. FEMA maps revealed floodplain information necessary to assess potential adverse effects.

a. Significance Criteria

Under CEQA, and for the purposes of this EIR, the proposed project would have a significant environmental effect if it:

- Produces substantial amounts of polluted runoff;
- Substantially degrades the water quality of surface or groundwater resources;
- Violates any water quality standards or waste discharge requirements;

- 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

Improvements to existing facilities and construction of new facilities would add impervious surfaces to the Pierce College campus. Proposed projects also include the transformation of existing fallow fields into planted and irrigated agricultural fields. Intended use of the renovated or new facilities would be partially pedestrian-oriented, while the remaining new development would consist of parking lots. Most of the new facility construction and facility redevelopment would be located in the eastern portion of the campus. New construction would create additional runoff that was not planned for when the existing storm water drainage network was designed and constructed. Therefore, Master Plan improvements include the construction of new storm drains that would direct flows to detention basins and water quality ponds.

Runoff from rooftops and pedestrian areas (e.g., sidewalks) would potentially accumulate debris (e.g., dust and organic litter) that would run off during storm events as non-toxic pollutants. However, six parking lots of various capacities (see Section 3-16 Traffic & Parking) are located on the eastern portion of the campus and three new parking lots would be constructed on the western portion of campus. Parking lots are known to generate runoff polluted by hydrocarbons and other toxic substances. To comply with Section 404 of the federal Clean Water Act, the College must implement a Standard Urban Stormwater Mitigation Plan (SUSMP). Administered by Los Angeles County, SUSMP permits are required for parking lots having 25 or more parking spaces or 5,000 or more square feet. The Regional Water Quality Control Board has approved a list of Best Management Practices (BMPs) and those chosen by Pierce College must be incorporated into the Master Plan to obtain the Los Angeles County Permit. Biofilters are generally recommended for parking lots. Additionally, as mentioned above, Pierce College Master Plan improvements include detention basins and water quality ponds to reduce polluted runoff and meet water quality standards established for the region. Therefore, new development on this portion of the campus would not have a significant adverse effect on the water quality of local surface water resources.

New agricultural fields would be established in the northwest corner of the campus to provide outdoor education classrooms for College students and school children and local produce (for purchase) to the community. In total, between 21 and 23 acres of underutilized fields would become productive agricultural fields. Historically, the College has employed sustainable growing practices and dry farming. Sustainable growth is achieved through use of natural fertilizers (i.e., animal manure and hay) and no application of pesticides; dry farming relies solely on natural precipitation. The new fields would incorporate intense irrigation practices, but would maintain a no pesticide (i.e., organic) growing philosophy. Currently, the western half of

the campus has one 6-inch irrigation line that runs east-west between Victory Boulevard and El Rancho Drive. Additional irrigation infrastructure is proposed for this portion of the campus. Due to California's temperate climate, irrigation crops can be grown year 'round, hence, these agricultural fields could be productive during the winter months, which are known to be the wet season for the Los Angeles area. Irrigation runoff from the agricultural fields could contain non-toxic pollutants and sediments that could adversely effect the quality of local water resources, a potentially significant impact. Implementation of Mitigation Measures SW-1 and SW-2 described below would ensure that these impacts would be reduced to a less than significant level.

Groundwater

Proposed building renovation, new building construction, and development of the agricultural fields would have no adverse effects on groundwater resources. The campus relies on water delivered by LADWP through existing pipelines, which the Master Plan would improve to meet the needs of the new facilities. The College does not have any active wells on campus, and therefore, does not pump groundwater for its water needs. It is not anticipated that groundwater resources would be significantly affected by the development of the proposed Master Plan.

Floodplains and Drainage

Proposed development on Pierce College would not place structures within or in proximity of a 100-year floodplain. All construction and operation of projects proposed under the Master Plan and described in this EIR would be within Zone X-delineated land. Again, Zone X is defined as areas with a 0.2 percent chance of flooding in any year over a 500-year period. Therefore, the project would not create a significant level of risk to properties or people by placing them in a floodplain.

Although no floodplains, as defined by FEMA, exist within the project area, localized drainage and flooding problems are known to occur on portions of the campus.

The eastern portion of the campus has an existing storm drain network that has a well-planned hierarchy of storm drain diameters that accommodate increases in flow as the network collects additional runoff flowing towards the Los Angeles River.[28] Campus facilities personnel state that the existing system performs adequately in this portion of campus. New and renovated facilities proposed for this portion of campus would increase the amount of runoff flowing into the existing system. The Master Plan would improve the storm drain system through the addition of new storm drain pipes that would increase runoff collection capacity and maintain an adequate level of service for this portion of campus.

Conversely, the western portion of Pierce College is known to experience substantial runoff and flooding during large storm events. A contributing factor to the flooding is the type of soil found on the flat, fallow fields in the northwest quadrant of campus. Designated as Cropley-Urban land complex with 0 to 2 percent slopes by the Soil Conservation Survey, 1975, these fields have

[28] *Draft Preliminary Utility Evaluation for Pierce College Los Angeles Community College District*, February 11, 2002, Psomas.

soils that are high in clay content and require substantial additions of sand and/or other organic materials to improve porosity. In their natural state, these soils tend to pond during low-intensity storms and would flood during high-intensity events.

Compounding the site's propensity to flood, the existing storm water infrastructure is inadequate and was not designed to accommodate storm runoff produced during high-intensity and/or long-duration storm events. Overland flows from the southwest quadrant of campus (Canyon de Lana) drain to the north-northeast where the waters spill over onto Victory Boulevard and inundation of the existing catch basin at Mason Avenue is known to occur.[29] Existing drainage consists of one open concrete channel that begins on the north side of Oxnard Street and directs flow north through the Facilities and Farrowing drainage area to El Rancho Drive and into two 36-inch corrugated metal pipes. These pipes continue underground to an open channel bend south of Victory Boulevard. Surface runoff from the equestrian drainage area is also directed into the same two corrugated metal pipes. Original campus drawings show that this drainage system was not intended to collect runoff from Canyon de Lana.[30] Addition of the new Agriculture Partnerships, Sciences Partnership, and Child Development Center buildings, the new expanded Equestrian Education Center, and construction of two new parking lots would contribute 11.5 acres of new impervious surfaces. Construction of these new facilities would add runoff to the inadequate storm drain system and localized flooding would increase during storm events without infrastructure improvements. The Master Plan projects, by themselves, would not result in significant downstream impacts on the flood control capacity of the Los Angeles River system.

To mitigate the localized drainage and flooding problems, the Preliminary Utility Evaluation recommends a proposal that would construct seven detention basins and add capacity to the existing two 36-inch corrugated metal pipes. Storm water runoff flowing north from Canyon de Lana would be reduced by two detention basins: one at the mouth of the canyon and one on the south side of El Rancho Drive. A larger detention basin would be added to collect runoff draining along the open concrete channel from Oxnard Street and another where the channel meets El Rancho Drive. North of the new Equestrian Education Center parking lot, three detention basins would collect runoff from the new agricultural facilities and any overflow from the open channel bend on the south side of Victory Boulevard. Consequently, with the implementation of these improvements, no significant drainage or flooding impacts would occur under the Master Plan. The College may follow this proposal or implement similar measures to mitigate the localized drainage and flooding problems as described in Mitigation Measure FD-1 below.

3-11.3 Mitigation Measures

a. Surface Water Resources

To mitigate adverse effects from construction and/or operation of the proposed projects under the Pierce College Facilities Master Plan, the following measures shall be implemented:

[29] *Final Environmental Impact Report – Pierce College Fill Project,* August 1993, Makagini Corporation.
[30] *Preliminary Utility Evaluation for Pierce College Los Angeles Community College District,* February 11, 2002, Psomas.

SW-1 A Standard Urban Stormwater Mitigation Plan (SUSMP) shall be developed in accordance with Los Angeles County Stormwater permit requirements.

SW-2 Water quality ponds shall be implemented, where feasible, as a Best Management Practice (BMP) to capture and treat polluted runoff from parking lots.

These mitigation measures would be sufficient to reduce adverse effects to surface waters to below significant levels.

b. Groundwater

The proposed projects of the Master Plan would have no significant adverse effects on groundwater levels; hence, no mitigation measures are required.

c. Floodplains and Drainage

The proposed project would not place any newly constructed facilities within a 100-year floodplain; however, deficient drainage conditions contribute to flooding on the western portion of campus. To mitigate existing and potentially increased flooding and drainage problems, the following improvements shall be implemented:

FD-1 Detention basins or other appropriate drainage facilities shall be installed and the storm drain system shall be improved to (a) meet anticipated increases in runoff from new facilities and impervious surfaces and (b) bring the western portion of campus up to an adequate level of service and reduce flooding.

FD-2 Earth berms, channels, or vegetated swales shall be provided to capture runoff from agricultural fields to reduce topsoil runoff.

3-11.4 Unavoidable Significant Adverse Impacts

There would be no unavoidable significant adverse water quality impacts due to the proposed Master Plan improvements. Implementation of the above mitigation measures will ensure that hydrology and water quality impacts would be less than significant.

3-12 LAND USE AND PLANNING

3-12.1 Environmental Setting

Pierce College is located in the southwest corner of the San Fernando Valley in the City and County of Los Angeles. The College campus encompasses a total land area of approximately 387 acres. The campus is generally bounded to the north by Victory Boulevard (note: Pierce College property also includes a Child Development Center and land leased to the Sunrise Little League located immediately north of Victory Boulevard and west and east of Winnetka Avenue, respectively), to the south by residential development and Oxnard Street, to the east by Winnetka Avenue, and to the west by De Soto Avenue and residential development on the east side of De Soto Avenue.

a. Existing Land Use

Existing land uses on the Pierce College campus include agricultural fields and open space, an equestrian area, various animal pens, a nature preserve, academic buildings and classrooms, a library, a theater, plant facilities, a sports stadium, Men's and Women's gymnasiums, athletic fields, a Child Development Center, and parking.

Land uses to the east of the campus include both single-family residential and an adult education center that is part of the Los Angeles Unified School District. Single-family residential uses exist immediately south of the campus and north of the campus across Victory Boulevard and the MTA railroad right-of-way. Warner Ridge (Bella Vista), a residential development currently under construction, adjoins the campus to the west. Both light industrial manufacturing and general commercial land uses, including the Warner Center Business Park, are located west of the campus across De Soto Avenue.

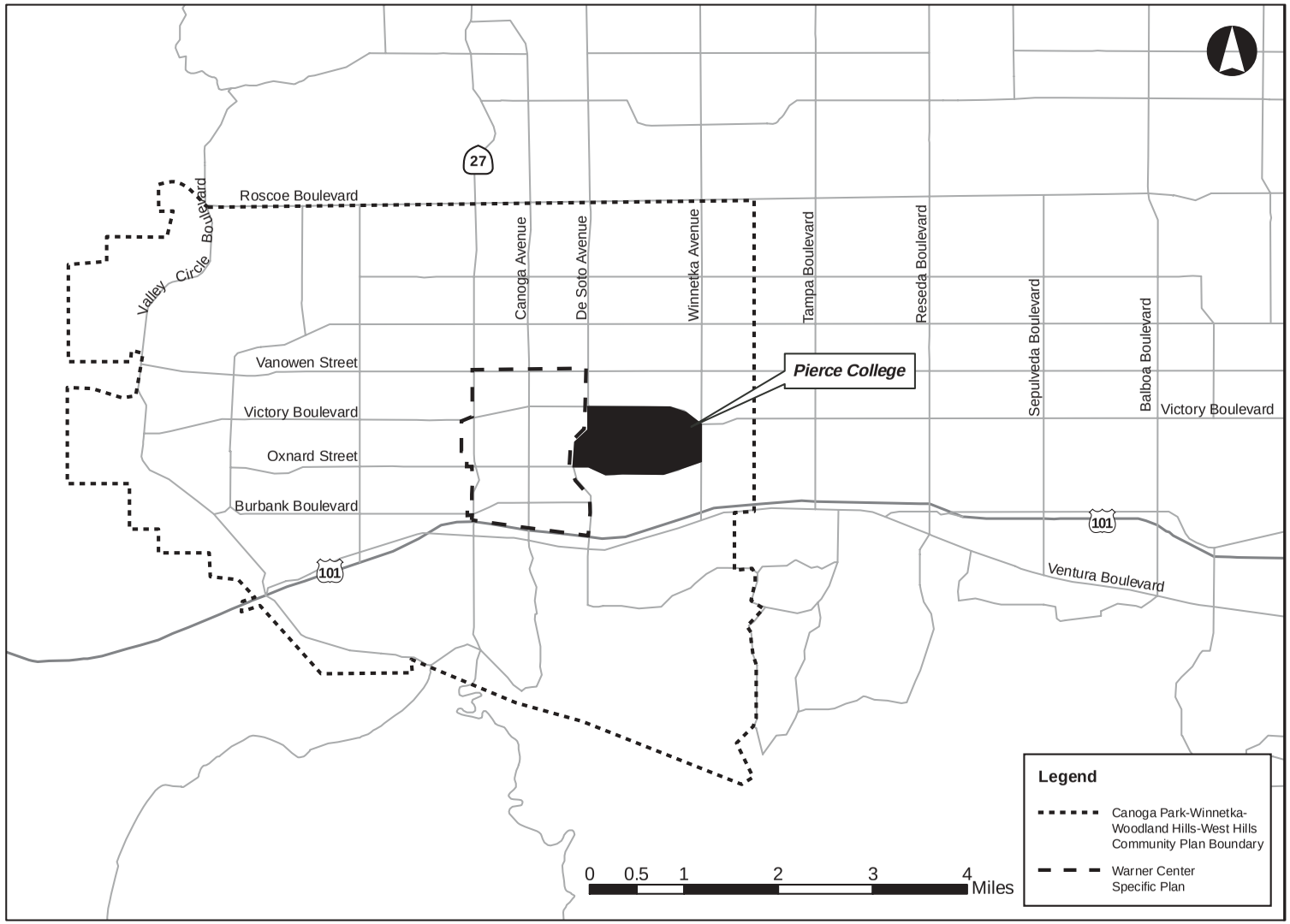
b. Land Use Plans and Policies

Several land use plans are applicable within the land use study area for the proposed project. A brief description of the purposes, goals, and policies for each of these planning documents follows. A map of the boundaries for the various planning areas is provided on Figure 3-30.

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).

Figure 3-30: Community Plan Map



Sources: Environmental Systems Research Institute, Inc., 2001; Myra L. Frank & Associates, Inc., 2002.

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.*

The Transportation Chapter core actions relevant to the proposed project are:

- *Policy 4.01: Transportation investments shall be based on SCAG's adopted Regional Performance Indicators (mobility, accessibility, environment, reliability, safety, livable communities, equity, and cost effectiveness.*

- *Policy 4.02: Transportation investments shall mitigate environmental impacts to an acceptable level.*

- *Policy 4.04: Transportation Control Measures shall be a priority.*

- *Policy 4.06: Implementing transit restructuring, including Smart Shuttles, freight improvements, advanced transportation technologies, airport ground access, and traveler information services are RTP priorities.*

- *Policy 4.16: Maintaining and operating the existing transportation system will be a priority over expanding capacity.*

The Air Quality Chapter of the RCPG "sets the policy context in which SCAG participates in and responds to" the adoption and implementation of air plans within the region. The Air Quality Chapter core actions relevant to the proposed project are:

- *Policy 5.07: Determine specific programs and associated actions needed (e.g., indirect source rules, enhanced use of telecommunications, provision of community based shuttle services, provision of demand management based programs, or vehicle miles traveled – emission fees) so that options to command and control regulations can be assessed.*

- *Policy 5.11: Through the environmental document review process, ensure that plans at all levels of government (regional, air basin, county, subregional and local) consider air quality, land use, transportation and economic relationships to ensure consistency and minimize conflicts.*

The Water Quality Chapter core actions relevant to the proposed project are:

- *Policy 11.07: Encourage water reclamation throughout the region where it is cost-effective, feasible, and appropriate to reduce reliance on imported water discharges. Current administrative impediments to the increased used of wastewater should be addressed.*

City of Los Angeles General Plan

The City of Los Angeles 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 and maintained by the Department of City Planning, is a comprehensive, long-range declaration of purposes, policies, and programs for the development of the City of Los Angeles. The General Plan is a dynamic document consisting of 12 elements; 11 citywide elements, and the land use element or plan for each of the City's 35 Community Planning Areas. The following elements comprise the General Plan: the Framework Element (2001), Transportation Element (1999), Infrastructure Systems Element (pending initiation), Land Use Element (see Community Plans), Housing Element (2001), Noise Element (1999), Air Quality Element (1992), Conservation Element (2001), Open Space Element (pending initiation), Historic Preservation and Cultural Resources (pending initiation), Safety Element (1996), and the Public Facilities and Services Element (pending initiation).

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 even though some date back to 25 or more years ago (e.g., infrastructure-related elements adopted between 1968 and 1972).

❑ Framework Element

The General Plan Framework Element (Framework), which was adopted in 1996 and re-adopted in 2001, establishes the broad overall policy and direction for the entire General Plan and defines citywide policies that will be implemented through subsequent adoption of and revisions to the citywide elements, the 35 Community Plans, the zoning ordinances, and other pertinent planning programs.

Canoga Park – Winnetka – Woodland Hills – West Hills Community Plan

As noted above, the General Plan divides the City of Los Angeles into 35 Community Plan areas. Within each Community Plan area, the City has established specific goals and policies regarding the long-term intensity and mix of desired land uses. Pierce College is located in the Canoga Park–Winnetka–Woodland Hills–West Hills Community Plan area in the southwest San Fernando Valley. The Community Plan Area (CPA) covers 17,887 acres, or approximately 6 percent of the land in the City of Los Angeles. Planning communities that border this CPA are Chatsworth-Porter Ranch, Reseda–West Van Nuys, Encino–Tarzana, the Cities of Hidden Hills and Calabasas, and portions of Los Angeles and Ventura Counties.[31]

A diverse natural and socioeconomic landscape characterizes this CPA. Dominant on the natural landscape are the Simi Hills of West Hills, the hillsides of the Santa Monica Mountains and the Chalk Hills of Woodland Hills, and the valley plain in Canoga Park and Winnetka. Initially an agricultural cattle-oriented community, the area has undergone substantial residential and commercial development over the last 50 years. The Canoga Park–Winnetka–Woodland Hills–West Hills Community Plan Area is considered the economic hub of the San Fernando Valley.

[31] *Canoga Park-Winnetka-Woodland Hills-West Hills Community Plan*, August 1999.

The CPA consists of four community subareas: Canoga Park, Winnetka, Woodland Hills, and West Hills. Pierce College is located in the Woodland Hills subarea. This subarea lies in the southern portion of the CPA. The boundaries run generally along Victory Boulevard from Corbin Street to Topanga Canyon Boulevard, Topanga Canyon Boulevard to U.S. 101, U.S. 101 west to the City limits, and the Santa Monica Mountains on the south. In addition to Pierce College, this subarea contains a variety of predominantly single-family homes and is the home of Warner Center.

The Community Plan designates Pierce College land use as both Open Space and Public Facilities.

Warner Center Specific Plan

Warner Center, located in the southwest corner of the San Fernando Valley, is one of four existing urban centers in the valley with intense, regional-oriented office and commercial development (the others being Encino/Sherman Oaks; Universal City/Burbank Media District, and Panorama City). Considered to be the "crown jewel" of the San Fernando Valley, Warner Center is the only business district in the Valley that was developed from the start in accordance with a private/public master plan with high standards of landscaping, architecture, sign controls, and existing layouts.

The Warner Center Specific Plan, established for portions of the Canoga Park-Winnetka-Woodland Hills-West Hills Community plan and adopted by an ordinance in June 2001, encompasses the area bounded generally by Vanowen Street to the north, the Ventura Freeway (U.S. 101) to the south, De Soto Avenue to the east and the lots fronting the west side of Topanga Canyon Boulevard to the west.

One of the major goals of the Specific Plan is to coordinate future land use development in Warner Center with public transit and transportation system improvements necessary to ensure that mobility within the area is maintained and traffic congestion is minimized.[32] The Specific Plan protects residential neighborhoods from the intrusion of through traffic, establishes a hierarchy of land use intensity, which decreases with distance away from the Warner Center Core, and encourages mixed-use development with Warner Center.

The Specific Plan sets forth four phases of development and urban design, transportation, parking, noise and air quality, and signage requirements for this development within Warner Center.

The Warner Center zone is divided into the following land use categories: open space, multiple residential, limited commercial, commercial, commercial/industrial, and public facilities. The Specific Plan also uses height/floor area ration designations.

Los Angeles Planning and Zoning Code

The *Los Angeles 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

[32] *Warner Center Specific Plan*, June 2001.

City, and is required by California law to be consistent with the land use element of the City's general and community plans.

Pierce College is zoned OS-1XL and PF-1XL for open space and public facilities use in Height District 1, Extra Limited Height. No building or structure in Height District 1XL shall exceed 2 stories nor shall the highest point of the roof of any building or structure located in such district exceed 30 feet in height. Generally, the academic and educational core of the campus is located in the area zoned for public facilities while the agricultural fields are located in the open space zone. Figure 3-31 shows the open space and public facilities zones of the campus.

Under state law, buildings and facilities at Pierce College are generally subject to zoning limitations imposed by the City of Los Angeles. By two-thirds vote of the District's Board of Trustees, however, the District may elect to exempt classroom facilities from local zoning control. Any new facilities that would not fully comply with current zoning and that are not exempted by the District Board will require a variance, conditional use permit, or zone modification from the City of Los Angeles.

3-12.2 Environmental Impacts

a. Significance Criteria

For the purposes of the analyses in this EIR, the proposed Los Angeles Pierce College Facilities Master Plan would have a significant environmental impact on land use and planning if it would:

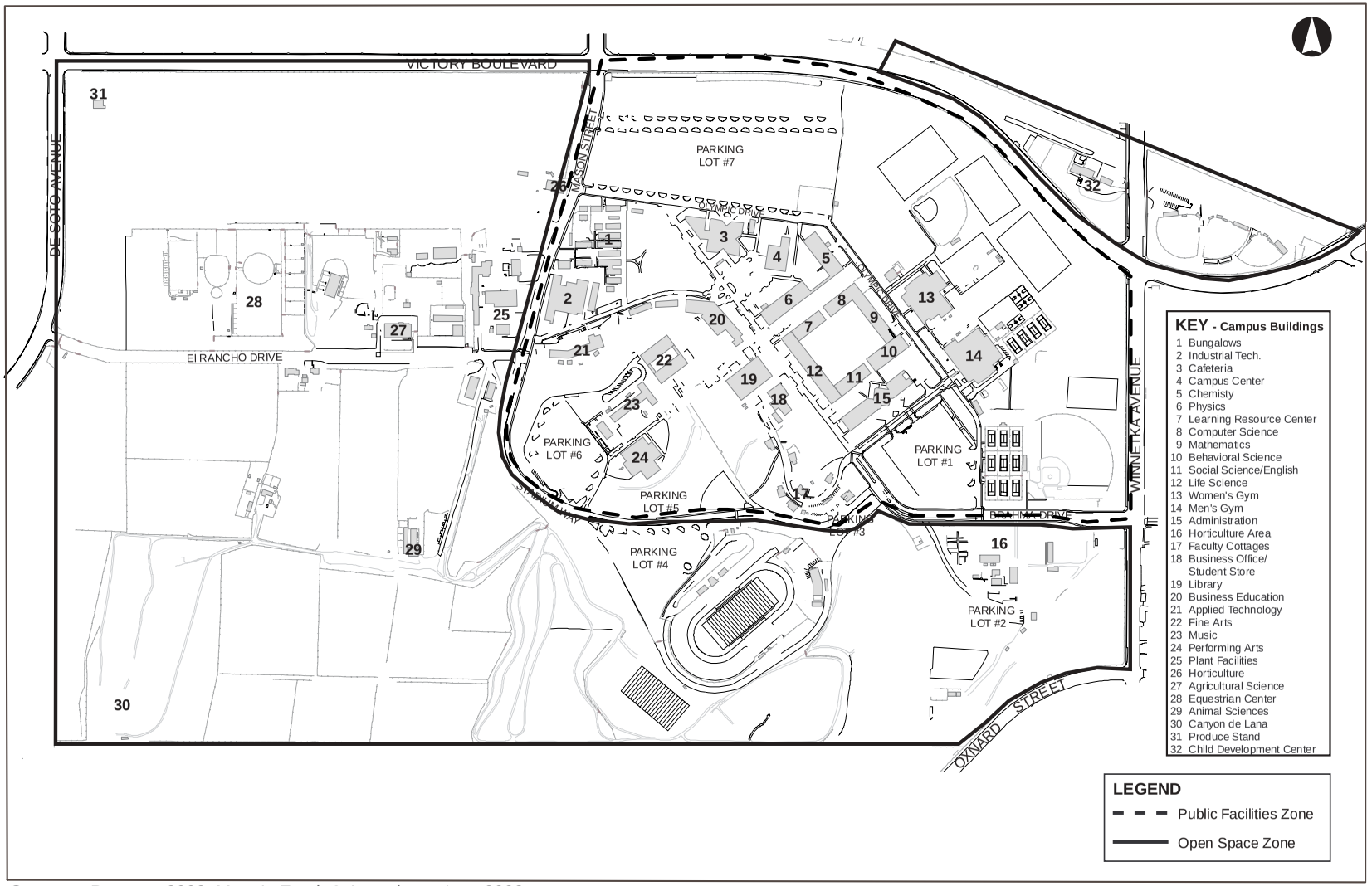
- result in new land uses that are incompatible with land uses and development in the vicinity; or
- materially conflict with any applicable adopted land use plan, policy, or regulation of an agency with jurisdiction over the project.

b. Impacts Discussion

Indirect Effects of Construction Activity

As detailed in the project description, Chapter 2 of this EIR, construction associated with implementation of the Master Plan 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.

Figure 3-31 Zone Map



Sources: Psomas, 2002; Myra L. Frank & Associates, Inc., 2002.

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, with the exception of construction noise impacts on Pierce College students, 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, the Child Development Center, residences located near the campus and the West Valley Adult Occupational Center. 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 Visual Resources; 3-4 Air Quality; 3-13 Noise; 3-14 Population, Housing; 3-15 Public Services; 3-16 Traffic and Parking; and 3-17 Utilities.

Compatibility with Existing Land Uses

Implementation of the Master Plan includes development and construction in both the public facilities and open space zones on the campus. Generally, the public facilities zoned area of the campus encompasses the academic core of the campus and athletic fields as well as the majority of the parking. The open space zoned area of the campus, more commonly known as the "Farm" to both Pierce College students and staff and the community residents, was historically used for agriculture production. Currently, this area generally consists of underutilized farmland and open space for cattle grazing. This area also contains an existing equestrian area, the agricultural engineering and science buildings, animal science facilities, soils lab/horticulture building, and plant facilities. As such, the open space zone contains educational uses as well.

❑ Public Facilities Land Use

Development in the public facilities zoned area includes renovation and modernization of existing facilities including parking, construction of new academic facilities, new and expanded landscaping, and implementation of several public/private partnerships. The renovation, modernization, new construction, and landscape projects would be compatible with existing academic land uses in this area of the campus.

The public/private partnerships that would occur within this area of the campus include the Horticulture Partnership, the Viticulture Partnership, the Botanical Garden Partnership, the Student Dormitory Partnership, and the Life-Long Learning Residences Partnership. The Horticulture Partnership would renovate the southeast portion of the campus, which is the existing location of the Horticulture area. This partnership would include renovation of existing

facilities, construction of a new classroom building, and new gardens. These uses would be consistent and compatible with the horticultural nature of this portion of the campus. The Botanical Garden Partnership is currently underway and would enhance the grass quad, providing new gardens and other landscaped improvements. The Student Dormitory Partnership would construct two new dormitory buildings on the campus. Currently there are no dormitory buildings on the campus and all of the students commute to the College. This partnership would reestablish residential uses on the campus, as the current faculty cottages were originally used as dormitories. Dormitories are considered to be an extension of the academic facilities and education mission of the College since they would provide housing and study areas for students. Consequently the dormitories would be consistent and compatible with the existing academic nature of this area of the campus.

The Life-Long Learning Residences Partnership would construct residences for persons 55 years of age or older. The residents who would occupy this complex may take one or more courses offered at the College or become part-time faculty members. Residents of the Life-Long Learning Residences must participate in the College as students, teachers, or be otherwise actively involved in the educational, agricultural, or athletic activities of the College. The Life-Long Learning Residences further the educational mission of the College to serve a variety of populations and provide them with academic opportunities. As such, these residences would remain consistent with the goals of the College and compatible with the existing academic facilities on the campus. Given that residential developments surround the campus, this use would be consistent and compatible with existing land uses in the surrounding area as well.

- Open Space Land Use

Development in the open space zoned area includes renovation, modernization, and new construction projects. Public/private partnerships would also be developed in this area. Specifically renovation and modernization projects include the animal sciences facility, portions of the equestrian area including the horse and walking trails, and the Canyon de Lana Nature Preserve. New construction would include a new Equestrian Education Center, a new Child Development Center, and new structures to restore the Animals Sciences Facilities. Public/private partnerships include the Agriculture Partnerships (consisting of the Agriculture Educational Experiences and Programs, Produce Stand, and Agricultural Fields), and the Sciences Partnership Building.

The proposed renovation and modernization projects would maintain and be compatible with land uses in this area of the campus.

The proposed new Equestrian Education Center project includes equestrian teaching stables and support facilities, an events center, several new barns and accompanying structures, surface parking lots, and renovation activities noted above. This proposed project would expand the area occupied by the existing equestrian center by using the fields located to the north and west of the existing equestrian area and the animal science/engineering area to the east. This expansion would encompass approximately 10 additional acres of land. Construction of the new Events Center, barns, accompanying structures and parking lots and resulting expansion of the equestrian center would be compatible with existing land uses and consistent with the College's academic and educational mission and objectives.

Construction of the new Child Development Center would occupy approximately 2 to 3 acres of land located west of Mason Street and north of the existing Soils lab. Currently this land exists as open fields. The new CDC would be compatible with existing land uses in the area. The academic facilities of the College are located primarily southeast of the proposed CDC site on campus. A LAUSD facility also operates in the vicinity, immediately east of the College, across Winnetka Avenue. As such, the new CDC would be consistent with local land uses. Agricultural fields exist immediately west of the proposed site. These fields would be used to grow crops under the proposed partnership project identified above. As such, concerns have been expressed during public scoping about the release of natural groundbourne toxins and generation of air pollutants (fugitive dust) by farming activities and the impacts on children that would occupy the CDC. It is expected that the impacts of farming activities on children at the CDC would not be significant or could be mitigated to a level of insignificance. For a more detailed discussion of air quality impacts, please see Section 3-4 of this Draft EIR.

The Agriculture Partnership program would be developed on the existing agricultural fields extending from the Produce Stand to Mason Street, just south of Victory Boulevard. This land would be developed as a "greenbelt" to serve the agricultural and educational goals of the College. The proposed uses would be compatible with adjacent land uses and consistent with the educational goals of the College and historical agricultural use of the property.

The Sciences Partnership Building would be located on the site currently occupied by Plant Facilities and the Soils Lab. These facilities would provide space for academic uses, private research and development, and support services. As such it would be compatible with adjacent land uses and the educational goals and mission of the College.

Consistency with Local Plans

Piece College is an important part of the Community Plan Area's history. Its agricultural program is one of the few remaining connections to the community's agrarian past. A legacy of this program is the preservation of a sizable and environmentally important piece of publicly held open space. The Master Plan fulfills these goals by revitalizing the agrarian nature of the College's underutilized agricultural open space. The Community Plan recognizes the need for continued development of equestrian, hiking, and bicycle trails in the area. The proposed expansion of the equestrian center at the College would help fulfill this need. The consistency of the Master Plan with the Community Plan and the SCAG Regional Comprehensive Plan and Guide policies are summarized in Table 3-20.

Table 3-20: Comparison of the Proposed Project with Local Plans

Policy Type and Goals	Finding	Discussion
Canoga Park-Winnetka-Woodland Hills-West Hills Community Plan		
Open Space portion of Pierce College is an environmentally sensitive resource.	Generally consistent with this policy	Although some new structures are proposed in open space areas, the Master plan recognizes the environmental sensitivity of this open space and proposes to revitalize the area by returning the existing underutilized fields to agrarian and educational use. Restoration of the Canyon de Lana Nature Preserve would also preserve and enhance this natural and sensitive open space area. The Master Plan also proposes landscaping improvements throughout the campus.
Current use of the land is an important educational resource for the Community Plan Area.	Consistent with this policy	Implementation of the Master plan would construct new educational facilities and renovate and modernize existing facilities. As such the Master Plan would create an expanded educational resource that would have more to offer and better serve the Community Plan Area.
The Community Area is well served by existing commercial land. No new commercial land is needed for the life of this Community Plan. Adequate commercial land exists in Warner Center and in nearby Community Commercial Centers.	Consistent with this policy	The Master Plan preserves the agricultural and educational nature of the College. The Master Plan proposes several public/private partnerships (i.e., the Horticulture Partnership and the Sciences Building Partnership) that would contain research, laboratory, and education facilities for use by private partners and the College.
Continued development of equestrian, hiking, and biking trails.	Consistent with this policy	Expansion of the existing Equestrian Center on the campus provides for restoration and development of new equestrian and hiking trails.
SCAG Regional Comprehensive Plan and Guide		
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.	Consistent with this policy	The proposed project is the development and expansion of educational facilities and onsite utility systems.
Policy 3.05: Encourage patterns of urban development and land use, which reduce costs on infrastructure construction and make better use of existing facilities.	Consistent with this policy	The proposed project is located within an urbanized area, with an extensive network of infrastructure in place. Any new development would remain on the campus, and a major component of the proposed project is renovation of existing facilities.

Table 3-20: Comparison of the Proposed Project with Local Plans

Policy Type and Goals	Finding	Discussion
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.	Consistent with this policy	The Master Plan proposes public/private partnerships as a development option to minimize development costs and provide an additional source of funds to the College. Also see the discussion of Policy 3.05 above.
Policy 3.10: Support local jurisdictions' actions to minimize red tape and expedite the permitting process to maintain economic vitality and competitiveness.	Consistent with this policy	The Master Plan planning and approval process would streamline the development process for future projects under the Master Plan.
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.	Not Applicable	The Master Plan consists of renovation and expansion of educational facilities located near a proposed busway.
Policy 3.13: Encourage local jurisdictions' plans that maximize the use of existing urbanized areas accessible to transit through infill and redevelopment.	Consistent with this policy	The proposed project consists of several new construction projects as well as renovation of existing facilities to maximize use of the campus.
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.	Consistent with this policy	The Master Plan proposes new, expanded, and renovated facilities near a proposed busway and transit station.
Policy 3.16: Encourage developments in and around activity centers, transportation corridors, underutilized infrastructure systems, and areas needing recycling and redevelopment.	Consistent with this policy	The proposed project is located near an urban center, Warner Center, and a proposed busway transit system.
Policy 3.18: Encourage planned development in locations least likely to cause environmental impact.	Not Applicable	The area surrounding the campus is a developed urban area.
Policy 3.21: Encourage the implementation of measures aimed at the preservation and protection of recorded and unrecorded cultural resources and archaeological sites.	Generally consistent with this policy	See Section 3-6 of this Draft EIR.

Table 3-20: Comparison of the Proposed Project with Local Plans

Policy Type and Goals	Finding	Discussion
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.	Consistent with this policy	See Summary of Impacts and Mitigation Measures in the Summary Chapter of this EIR.
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.	Consistent with this policy	The Master Plan consists of renovation and expansion of existing educational facilities to meet future needs of the community. These projects meet and fulfill the College's educational mission to serve a variety of populations.
Policy 4.01: Transportation investments shall be based on SCAG's adopted Regional Performance Indicators (mobility, accessibility, environment, reliability, safety, livable communities, equity, and cost effectiveness).	Not Applicable	The proposed project does not contain any regional transportation investment elements.
Policy 4.02: Transportation investments shall mitigate environmental impacts to an acceptable level.	Not Applicable	The proposed project does not contain any regional transportation investment elements.
Policy 4.04: Transportation Control Measures shall be a priority.	Consistent with this policy	See Section 3-16 of this Draft EIR.
Policy 4.06 Implementing transit restructuring, including Smart Shuttles, freight improvements, advanced transportation technologies, airport ground access, and traveler information services are RTP priorities.	Not Applicable	The proposed project does not require the implementation of transit restructuring.
Policy 4.16: Maintaining and operating the existing transportation system will be a priority over expanding capacity.	Consistent with this policy	The proposed project includes measures to mitigate impacts to the transportation system. See Section 3-16 of this Draft EIR.

Table 3-20: Comparison of the Proposed Project with Local Plans

Policy Type and Goals	Finding	Discussion
Policy 5.07: Determine specific programs and associated actions needed (e.g., indirect source rules, enhanced use of telecommunications, provision of community based shuttle services, provision of demand management based programs, or vehicle miles traveled –emission fees) so that options to command and control regulations can be assessed.	Consistent with this policy	See Section 3-4 of this Draft EIR.
Policy 5.11: Through the environmental document review process, ensure that plans at all levels of government (regional, air basin, county, subregional and local) consider air quality, land use, transportation and economic relationships to ensure consistency and minimize conflicts.	Consistent with this policy	See relevant sections of this Draft EIR.
Policy 11.07: Encourage water reclamation throughout the region where it is cost-effective, feasible, and appropriate to reduce reliance on imported water discharges. Current administrative impediments to the increased used of wastewater should be addressed.	Consistent with this policy	The Master Plan includes a proposed Water Reclamation Facility that would convert wastewater into gray water for irrigation purposes.

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

Consistency with Planning and Zoning

The proposed renovation and modernization projects would not change the existing use of the facilities. As such, these projects would be consistent with existing permitted land uses.

As noted above, the College is zoned as both public facilities and open space. The public facilities zone permits use for government buildings, structures, offices, and service facilities, including maintenance yards; agricultural use including field crops, gardens and nurseries; and police stations.[33] Development in the public facilities zone of the campus includes the Financial Aid Building, Agriculture/Science/Nursing Building, Technology Center, Student Food Services/Conference Facility, and Campus Police Station. These projects are for academic and educational purposes and fulfill the College's educational mission and goals. For purposes of the zoning code, these facilities are government buildings and structures. As such, there are no conflicts with existing zoning. It should be noted that these campus facilities are part of the College's academic development, and for this reason as well, no conflicts would occur.

[33] *City of Los Angeles Planning and Zoning Code*, July 2000, Rev. 6/13/2001.

Proposed public/private partnerships that are planned for the public facilities zone of the campus are the Student Dormitory Partnership, the Life-Long Learning Residences Partnership, and the Botanical Garden Partnership. The Botanical Garden Partnership is the development of a garden under the zoning code, thus a permitted use. The Student Dormitory Partnership would develop two dormitory buildings on campus to provide housing for Pierce College students. While residential in nature, these facilities provide study areas and facilities that serve an academic use. As such these buildings are part of Pierce College's academic development, thus no conflicts would occur with land use policies. The Life-Long Learning Residences Partnership would also construct residences on campus for persons 55 years of age or older. Residents of the Life-Long Learning Residences must participate in the College as students, teachers, or be otherwise actively involved in the educational, agricultural, cultural, or athletic activities of the College. As such this project would be considered part of the College's academic development as it fulfills the College's mission and goals of providing a wide variety of populations access to and use of the College's facilities.

Some permitted uses in the open space zone include: parks and recreation facilities, including equestrian trails, walking trails, nature trails, and children's play areas; natural resource preserves; and agricultural lands used for food and plant production.[34] Development in the open space zone includes the Child Development Center, Maintenance and Operations Facilities, Water Reclamation Facility, and expansion of the existing Equestrian Center, including an Exhibition/Events Center. The Child Development Center, Maintenance and Operations Facilities, and expansion of the Equestrian Center are all academic-related facilities that would help fulfill the College's educational mission and goals. The Child Development Center provides academic facilities for children and would contain College classrooms and observation windows into children's classrooms for use by Pierce students and would enhance the current academic curriculum associated with the facility. The Child Development Center would also contain a children's play area, a permitted use as noted above. The existing Maintenance and Operations facilities are located in the open space zone. Construction of a new facility in this zone to replace the existing facilities would be consistent with the zoning. The Equestrian Center expansion would provide equestrian and hiking trails, a permitted use, and expand existing facilities. This development would allow for an expanded curriculum at the College. Classroom facilities are also a component of the new Exhibition/Events Center. The new Equestrian Education Center would be serve the academic curriculum by providing horticultural programs, cultural events, NCAA intercollegiate events, graduation ceremonies, and expand and enhance academic classes associated the with equestrian and livestock curriculum. Since the current equestrian center is an existing permitted use in the open space zone and the expansion would serve academic purposes, no conflict would occur. While these proposed facilities may require some form of zone modification, they are highly compatible with and are not in material conflict existing planning or zone designations.

Although the specific location of the proposed Water Reclamation Facility has not been identified, it is likely that the proposed facility would be located in the open space zone of the campus since there is limited space in the public facilities zone. Since this facility would treat wastewater generated by campus uses, it would be an academic related facility.

[34] Ibid.

Proposed public/private partnerships in the open space zone include the Agriculture Partnerships, Horticulture Partnership, and Sciences Building Partnership. The Agriculture Partnerships would use existing fields for agricultural and educational uses, minor retail sales and development of a "greenbelt" area. Since these partnerships would use the fields for agricultural production, no conflicts would occur. The Horticulture Partnership would enhance the existing Horticulture area of the campus by constructing several garden areas and educational facilities. These facilities would be for academic use and continue an existing permitted use of the land. The Sciences Building Partnership would be located in the open space zone and replace existing College facilities. This facility would provide educational research and development opportunities for the College. Since this facility would maintain the academic use of the site, no conflicts would arise.

Several proposed buildings (e.g., Agriculture/Science/Nursing Building, Technology Center, Exhibition Center, Sciences Partnership Building, Life-Long Learning Residences Complex) could be three stories tall and consequently would exceed the height limit in the zoning code of two stories or 30 feet. However, most of these structures would be centrally located in the campus core, buffered from offsite uses, and would not create substantial new environmental impacts due to their height. Consequently, these buildings would not materially conflict with the zoning code.

Although several of the proposed facilities discussed above may require variances, conditional use permits, or other zone modifications, they are highly compatible with and not in material conflict with existing planning and zone designations.

3-12.3 Mitigation Measures

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

3-12.4 Unavoidable Significant Adverse Impacts

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

3-13 NOISE

3-13.1 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 3-21 shows typical 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 3-21: 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; Myra L. Frank & Associates, Inc., 2002.

To account for fluctuations over time, noise levels are commonly evaluated using two time-average noise descriptors: L_{eq} and CNEL. L_{eq}, 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 L_{eq} 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.) L_{eq} levels are adjusted by 5 dBA. Nighttime (10 p.m. to 7 a.m.) L_{eq} 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

Pierce College is generally surrounded by residential, educational, and commercial/industrial uses in a developed urban area in the City of Los Angeles. Existing ambient and background noise levels within Pierce College campus are relatively low (around 62 dBA). Noise levels on the edges of campus and at adjacent properties are dominated by traffic on City streets and are therefore much higher. Victory Boulevard, which defines the northern boundary of the campus, provides three lanes per direction with traffic traveling at an average speed of approximately 40 to 45 mph. Winnetka Boulevard, to the east, provides two lanes in each direction, with traffic traveling at approximately 35 to 40 mph. Traffic on De Soto Avenue, to the west, which provides two lanes in each direction, travels at approximately 35 to 40 mph.

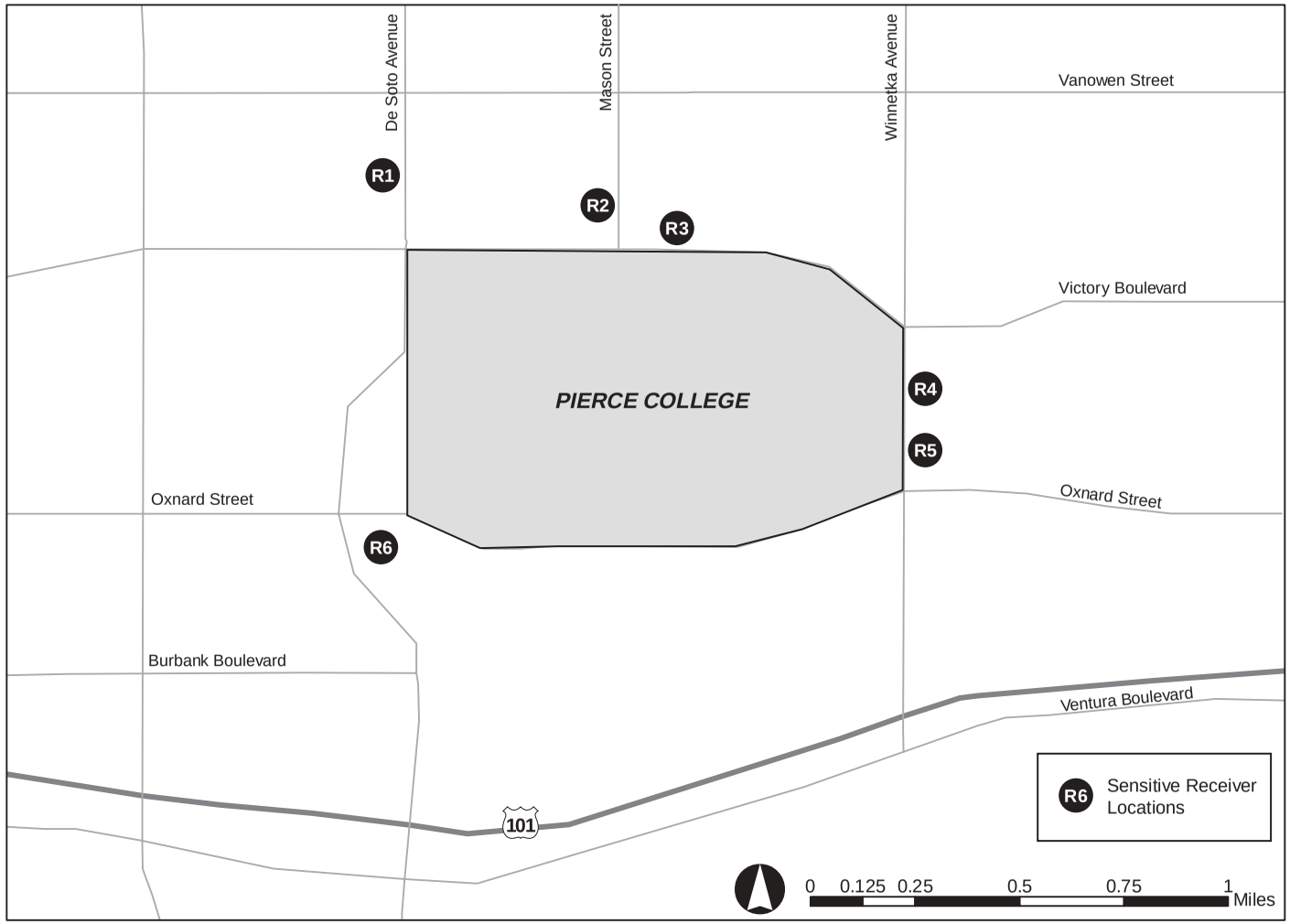
There are three entrances to Pierce College located along each of the main thoroughfares. The entrances link campus streets and parking lots on the campus. There are 7 campus parking lots joined by Stadium Way, which bisects the campus.

In order to evaluate existing noise levels, field measurements were taken at six sensitive receptor locations in the immediate vicinity of the campus. Noise-sensitive uses[35] in the project area include single-family residences south of the campus, north of the campus across Victory Boulevard, and to the southeast across Winnetka Avenue. The West Valley Occupational Center school for adults is located immediately east of the campus across Winnetka Avenue. Additionally, a luxury apartment community is under construction immediately to the west of the campus and south of El Rancho Drive. The measurements were taken using the Rion NL-15 Precision Integrating Sound Level Meter (Serial No. 00591106). The measurement sites were selected as representative of the existing exterior noise conditions at sensitive locations (residences and schools) near campus. All measurements were taken 5 feet above the ground surface. Traffic counts along the respective roadways were taken simultaneously with the noise measurements (See Figure 3-32 for a map of the measurement sites).

- The first noise measurement was taken along the west side of De Soto Avenue north of Victory Boulevard directly in front of one of five large apartment buildings.
- The second measurement was taken approximately mid block on the west side of Mason Street between Victory Boulevard and Kittridge Avenue and is representative of noise levels at the property lines of the single-family residences along Mason Street.
- The third noise measurement was taken at the rear property line of one of the residences along the north side of Victory Boulevard approximately 250 feet east of Mason Street across from campus.
- The fourth noise measurement was taken along the east side of Winnetka Avenue directly in front of West Valley Adult Occupational Training Center across from the campus.

[35] Noise-sensitive uses are typically defined as land uses where sleep or speech interference is a concern and include residences, motels, hotels, hospitals, schools, libraries, concert halls, etc.

Figure 3-32: Noise Measurement and Sensitive Receptor Locations



Sources: Environmental Systems Research Institute, Inc., 2001; Myra L. Frank & Associates, Inc., 2002.

- The fifth noise measurement was taken along the east side of Winnetka Avenue north of Oxnard Street at the front property line of one of the many single-family residences that line the east side of Winnetka Street south of the of West Valley Adult Occupational Training Center.

- The sixth noise measurement was taken along the south side of Oxnard Street east of De Soto Avenue in front of the townhouse complex that is located on the southeast corner of Oxnard Street and De Soto Avenue. The measurement was taken across the street from the apartment complex currently under construction.

According to the measurements, existing ambient noise levels at residences in the vicinity of the campus range from 75 dBA to 79 dBA, higher than the presumed ambient noise level for a residential area yet slightly lower than 80 dBA, the typical noise level of an urban area.[36] The high noise levels were due to the heavy volume of traffic on local streets in the immediate vicinity of the measurement sites. Table 3-22 below shows the noise readings taken at each of the measurement sites.

Table 3-22: Noise Measurements At Noise Sensitive Uses

Measurement Site Number	Location	Time and Duration of the Measurement	L_{eq} Noise Levels (dBA) [2]
1	De Soto Avenue, north of Victory Boulevard	3:55, 15 minutes	79.2
2	Mason Street, north of Victory Boulevard	4:20, 15 minutes	76.4
3	Victory Boulevard, east of Mason Street	4:50, 15 minutes	75.7
4	Winnetka Avenue, at the Adult Technical School	5:25, 15 minutes	78.0
5	Winnetka Avenue, north of Oxnard Street	5:45, 15 minutes	79.5
6	Oxnard Street, east of De Soto Avenue	6:15, 15 minutes	74.9

Notes:
1. Measurements taken on June 11, 2002.
2. Leq Noise Levels represent average noise levels for the duration of the measurement.

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

[36] City of Los Angeles Municipal Code Section 111.03.

3-13.2 Environmental Impacts

a. Significance Criteria

For the purposes of the analyses in this EIR, the proposed Pierce College Master Plan would have a significant impact if:

Construction

- it results in construction noise that violates Section 112.03[37] of the City of Los Angeles noise ordinance;
- it results in construction noise that substantially disrupts or interferes with academic activities; or

Operation

- it causes the ambient noise levels measured at the property line of affected uses to increase by 3 dBA in CNEL to or within the "normally unacceptable" or "clearly unacceptable" category (see Table 3-23 below), or any 5 dBA or greater noise increase.

Table 3-23: Community Noise Levels (Exterior) And Land Use Compatibility

LAND USE	Community Noise Exposure Level CNEL, dBA			
	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
Single Family Residence	50-60	55-70	70-75	Above 70
Multi-Family Residence	50-65	60-70	70-75	Above 70
Hotel/Motel	50-65	60-70	70-80	Above 80
Auditorium	-	50-70	-	Above 65
Sports Arena	-	50-75	-	Above 70
Parks	50-70	-	67-75	Above 72
Office Building/Commercial	50-70	67-77	Above 75	-
Industrial/Manufacturing	50-75	70-80	Above 75	-

Notes:
Normally Acceptable: Development is acceptable.
Conditionally Acceptable: Noise abatement should be considered as part of the development.
Normally Unacceptable: Development should generally be discouraged.
Clearly Unacceptable: Development should generally not be built.

Source: City of Los Angeles, *Draft LA CEQA Thresholds Guide*, 1998.

[37] After 7:00 a.m. and prior to 9:00 p.m. of any day, in any residence zone of the City or within 500 feet thereof, no person shall perform any construction or repair work on any building or structure, or perform any excavation work, which work entails the use of any power driven hoist, scraper, or shovel, pneumatic hammer, pile driver or other construction type device in such manner that the noise created thereby is loud, unnecessary and unusual and substantially exceeds the noise customarily and necessarily attendant to the reasonable and efficient performance of such work (Section 112.03 of the City of Los Angeles Noise Ordinance).

b. Impacts Discussion

Construction Impacts

In general, demolition and construction activities associated with the Master Plan would result in increases in ambient noise levels in the vicinity of the construction site. Noise levels would fluctuate depending on the construction location, phase, equipment type and duration of use, distance between noise source and listener, and presence or absence of barriers between the noise source and listener. Construction noise at a distance of 50 feet from the construction activity could reach intermittent highs of 90 dBA depending upon the activity. Average noise levels are generally less than the equipment levels indicate because the equipment is operated intermittently. Construction of certain projects could require the use of diesel-powered heavy equipment, such as haul trucks, cement trucks, and bulldozers, all of which would generate high noise levels. Most earth moving equipment (i.e., compactors, front loaders, backhoes, tractors, graders, and pavers) produce noise levels of 75 to 89 dBA (decibels) at distances of 50 feet. Material handling equipment (i.e., concrete mixers, concrete pumps, and cranes) produces noise levels of 83 to 89 dBA at a distance of 50 feet. Stationary equipment (i.e., pumps, generators, and compressors) produces noise levels of 70 to 85 dBA at a distance of 50 feet. Table 3-24 illustrates typical construction noise levels at 50 feet.

Table 3-24: Typical Construction Noise Levels

Equipment	*Noise Level Range (dBA)*
Front Loader	73-76
Trucks	82-95
Cranes (moveable)	75-88
Cranes (derrick)	86-89
Vibrator	68-82
Saws	72-82
Pneumatic Impact Equipment	83-88
Jackhammers	81-98
Pumps	68-72
Generators	71-83
Compressors	75-87
Concrete Mixers	75-88
Concrete Pumps	81-85
Back Hoe	73-95
Pile Driving (peaks)	95-107
Tractor	77-98
Scraper / Grader	80-93
Paver	85-88
Note: Noise level ranges are estimated noise levels at a distance of 50 feet from the noise source.	

Sources: City of Los Angeles, 1998; Myra L. Frank & Associates, Inc., 2002.

Noise-sensitive uses that are located within several hundred feet of a construction site could be adversely affected by construction noise. However, because most construction would take place

within the interior of campus and since noise level increases would be limited to daytime hours and would be temporary and intermittent, significant construction noise impacts on off-campus noise-sensitive uses would not occur. On-campus academic facilities, i.e., classrooms, in the immediate vicinity of construction sites, however, could experience significant short-term increases in noise levels due to construction activities.

Operational Impacts

Implementation of the Master Plan and anticipated increases in student enrollment and employment would result in increased traffic on local streets. This increased traffic would increase community noise levels in the vicinity. Generally, noise levels increase approximately 3 dBA for each doubling of roadway traffic volume as long as vehicle speeds remain constant.[38] Under the Master Plan, PM peak hour traffic volumes on nearby streets would not increase by more than 25 percent as compared to future cumulative base volumes (i.e., future conditions without the project). Consequently, the resulting noise level increases would not be substantial and would not exceed the 3-dBA significance criterion. Thus, implementation of the Master Plan would result in a less than significant increase in traffic noise levels at noise-sensitive uses in the vicinity of the campus.

Noise would also be generated by onsite campus activities. In general, in the future (i.e., through the year 2010), it is not anticipated that campus activities would differ substantially from activities that occur today with possibly two exceptions. The fallow agricultural fields located south of Victory Boulevard that extend from De Soto Avenue on the west to Mason Street on the east would be used to grow row crops as part of the proposed Agricultural Education Center Partnership project. Use of farm equipment, such as diesel-powered tractors, in the fields along Victory Boulevard would increase local ambient noise levels. However, the noise increases would be intermittent, limited to daytime hours, and consequently would not significantly affect off-campus noise-sensitive uses, including the residential uses north of Victory Boulevard. Another project proposed under the Master Plan is the development of a new Equestrian Education Center on the site of the existing equestrian area north of El Rancho Drive. As part of this project, a 2,500-seat multi-purpose covered arena would be constructed to accommodate events such as rodeos, horse shows, other live stock shows, concerts, exhibits, and conventions. Noise from these outdoor events, which would usually occur on Friday evening or on weekends and would terminate before 10:00 p.m., would typically be impulsive in nature and temporary. Additionally, the nearest existing off-campus residential uses would be located approximately 800 feet to the north across Victory Boulevard (note; the luxury apartments under construction to the southwest would be located approximately 1,300 feet from the proposed arena). Residences that border the campus to the south would be located approximately 2,400 feet from the proposed arena. The multi-purpose arena would also be sited to take advantage of the existing hillside immediately to the south, which would shield the facility from view and act as a natural noise barrier. Therefore, noise from the arena would result in a less than significant increase in ambient and background noise levels at off-campus noise-sensitive receptors.

[38] *LA City CEQA Thresholds Guide*, City of Los Angeles, 1998.

3-13.3 Mitigation Measures

To mitigate the significant, short-term construction noise impacts on campus academic facilities the following measures are proposed.

N-1 Noise control devices, such as equipment mufflers, enclosures, and barriers shall be used where feasible.

N-2 All sound-reducing devices and restrictions shall be maintained throughout the construction period.

N-3 Construction schedules shall be coordinated with Academic Affairs to minimize noise impacts on students and faculty.

3-13.4 Unavoidable Significant Adverse Impacts

With implementation of the mitigation measures identified above, the proposed project would not result in any unavoidable significant adverse noise impacts.

3-14 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 3-33 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 City of Los Angeles 2000 Census data. In addition, projected population and housing forecasts in the City of Los Angeles generated by the Southern California Association of Governments (SCAG) have also been reviewed.

3-14.1 Environmental Setting

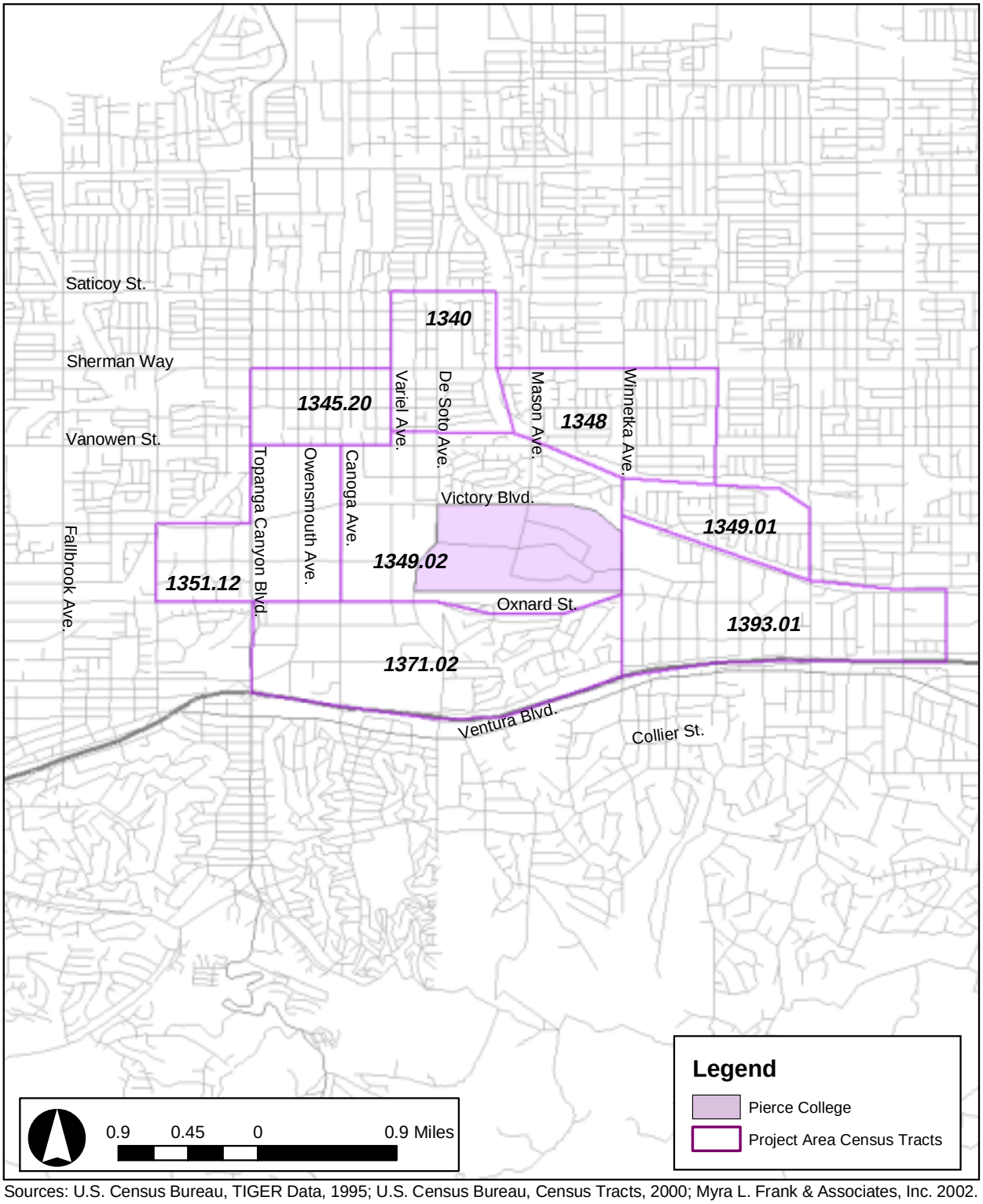
a. Population

The proposed project is located entirely within the existing boundaries of the Pierce College campus, in the southwest corner of the San Fernando Valley in the City and County of Los Angeles. The population of the City totaled 3,694,820 persons in the 2000 Census. The non-white population was 2,595,632 persons. Persons of Hispanic or Latino origin represented the largest segment of the City's population at 1,719,073 persons or about 46.5 percent of the total. This is somewhat higher than the proportion of the second largest group in the City, white non-Hispanic persons, who totaled 1,099,188 persons, or 29.7 percent.

Table 3-25 summarizes the characteristics of the existing regional population in 2000.

In accordance with Policy 3.01 of the Regional Comprehensive Plan and Guide (RCPG) (SCAG 1996), SCAG has adopted forecasts of estimated and projected future population for the City of Los Angeles. The SCAG 2001 Regional Census Tract Population, Household and Employment Projections indicated that the population of the City would grow by about 8 percent between 2000 and 2005, and by about 12.7 percent between 2000 and 2010. Table 3-26 summarizes the projected regional population in 2010.

Figure 3-33: Location of Census Tracts in the Study Area



Sources: U.S. Census Bureau, TIGER Data, 1995; U.S. Census Bureau, Census Tracts, 2000; Myra L. Frank & Associates, Inc. 2002.

Table 3-25: Existing Regional and Local Population Characteristics - Race/Ethnicity (2000)

Area	Total Population	White	%	Black	%	Native American	%	Asian	%	Hispanic	%	Other	%
City of Los Angeles	3,694,820	1,099,188	29.7	401,986	10.9	8,897	0.2	364,850	9.9	1,719,073	46.5	95,826	2.6
Study Area													
Tract 1340	6,930	1,253	18.1	262	3.8	33	0.2	948	14	4,304	62	130	1.9
Tract 1345.20	5,401	767	14.2	204	3.8	11	0.2	424	7.9	3,886	71.9	109	2
Tract 1348	5,531	2,418	43.7	207	3.7	20	0.4	547	9.9	2,135	38.6	204	3.7
Tract 1349.01	2,962	1,915	64.7	92	3.1	5	0.2	154	5.2	641	21.6	155	5.2
Tract 1349.02	7,385	2,828	38.3	355	4.8	11	0.2	674	9.1	3,279	44.4	238	3.2
Tract 1351.12	6,011	4,399	73.2	290	4.8	16	0.3	591	9.8	465	7.7	250	4.2
Tract 1371.02	7,366	5,562	75.5	341	4.6	16	0.2	558	7.6	503	6.8	386	5.2
Tract 1393.01	4,152	3,254	78.4	128	3.1	6	0.1	212	5.1	346	8.3	206	5
Study Area Total	45,738	22,396	49	1,879	4.1	118	0.2	4,108	9	15,559	34	1,678	3.7

Sources: U.S. Census Bureau, 2000 Census of Population and Housing, SF 1, 2000; Myra L. Frank & Associates, Inc., 2002.

Table 3-26: Projected Regional and Local Population (2000-2001)

Area	2000	2010	Absolute Change	Percent Change
City of Los Angeles	3,694,820	4,164,597	469,777	12.70
Study Area				
Tract 1340	6,930	7,137	207	3.00
Tract 1345.20	5,401	6,000	599	11.10
Tract 1348	5,531	6,560	1,029	18.60
Tract 1349.01	2,962	1,191	-1,771	-59.80
Tract 1349.02	7,385	7,671	286	3.90
Tract 1351.12	6,011	5,374	-637	-10.60
Tract 1371.02	7,366	6,733	-633	-8.60
Tract 1393.01	4,152	3,386	-766	-18.40
Study Area Total	45,738	44,052	-1,686	-3.7

Sources: U.S. Census Bureau, 2000 Census of Population and Housing, SF 1, 2000; Southern California Association of Governments, 1998 RTP Population, Household, & Employment Forecasts; Myra L. Frank & Associates, Inc., 2002.

b. Housing

According to the 2000 Census, there were 1,337,706 housing units in the City of Los Angeles in the year 2000. About 95.3 percent of the units were occupied. An average of 2.83 persons resided in each occupied unit. Of the total occupied units in the City, 61.4 percent were renter-occupied and the remaining 38.6 percent were owner-occupied. Table 3-27 summarizes the characteristics of the existing regional housing in 2000.

The SCAG 2001 forecasts project that the total number of households in the City of Los Angeles will grow by about 2.9 percent between 2000 and 2005, and by about 10.2 percent between 2000 and 2010. Table 3-28 summarizes the projected number of regional households in 2010.

c. Study Area Context

The Canoga Park-Winnetka-Woodland Hills-West Hills Community Plan Area is in the southwest San Fernando Valley and covers approximately 6 percent of the land within the City of Los Angeles. The *Canoga Park-Winnetka-Woodland Hills-West Hills Community Plan*[39] 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. One of the fundamental premises of the Community Plan is to monitor population growth and infrastructure improvements. If the population is seen to be growing faster than projected, the plan states that necessary steps will be taken to protect infrastructure resources.

[39] The *Canoga Park-Winnetka-Woodland Hills-West Hills Community Plan* is part of the General Plan of the City of Los Angeles.

Table 3-27: Existing Regional and Local Housing Characteristics – Occupancy/Tenure (2000)

Area	Total Units	Occupied Units	%	Vacant Units	%	Persons per Household	Occupied Units	Owner-Occupied	%	Renter-Occupied	%
City of Los Angeles	1,337,706	1,275,412	95.3	62,294	4.7	2.83	1,275,412	491,882	38.6	783,530	61.4
Study Area											
Tract 1340	1,910	1,865	97.6	45	2.4	3.71	1,865	814	43.6	1,051	56.4
Tract 1345.20	1,715	1,665	97.1	50	2.9	3.24	1,665	283	17	1,382	83
Tract 1348	1,728	1,688	97.7	40	2.3	3.28	1,688	1,332	79	356	21.1
Tract 1349.01	1,176	1,149	97.7	27	2.3	2.55	1,149	743	64.7	406	35.3
Tract 1349.02	2,759	2,703	98	56	2	2.73	2,703	785	29	1,918	71
Tract 1351.12	4,167	3,595	86.3	572	13.7	1.67	3,595	662	18.4	2,933	81.6
Tract 1371.02	3,597	3,452	96	145	4	2.13	3,452	1,543	44.7	1,909	55.3
Tract 1393.01	1,558	1,502	96.4	56	3.6	2.74	1,502	1,262	84	240	16
Study Area Total	18,610	17,619	94.7	991	5.3	2.76	17,619	7,424	42.1	10,195	57.1

Sources: U.S. Census Bureau, 2000 Census of Population and Housing, SF 1, 2000; Myra L. Frank & Associates, Inc., 2002.

Table 3-28: Estimated and Projected Regional and Local Households (2000-2001)

Area	2000	2010	Absolute Change 2000-2010	Percent Change 2000-2010
City of Los Angeles	1,275,412	1,405,464	130,052	10.2
Study Area				
Tract 1340	1,865	2,041	176	9.4
Tract 1345.20	1,665	1,761	96	5.8
Tract 1348	1,688	1,926	238	14.1
Tract 1349.01	1,149	403	-746	-64.9
Tract 1349.02	2,703	2,977	274	10.1
Tract 1351.12	3,595	3,719	124	3.4
Tract 1371.02	3,452	3,717	265	7.7
Tract 1393.01	1,502	1,208	-294	-19.6
Study Area Total	17,619	17,752	133	.75

Sources: U.S. Census Bureau, 2000 Census of Population and Housing, SF 1, 2000; Myra L. Frank & Associates, Inc., 2002.

d. Population

The population of the project study area in the 2000 Census totaled approximately 45,738 persons. The population in the area was split evenly between whites and non-whites, at 49 percent and 51 percent, respectively, of the total population. Persons of Hispanic or Latino origin represented the largest minority group in the study area, at 34 percent. The next largest group was persons of Asian descent, at 9 percent of the total population in the study area. This percentage is about equal to the City as a whole. The African American population was found to be at a lower proportion it the study area than in the City as a whole; 4.1 percent within the study area, as compared to 10 percent in the City overall.

Table 3-25, above, summarizes the characteristics of the existing study area population in 2000 as compared to the City as a whole.

The SCAG forecasts indicate that the population in the study area would decrease by approximately 3.7 percent between 2000 and 2010. During this same period, the City as a whole is expected to grow by over 10 percent. Table 3-26 above summarizes the projected study area population in 2010.

e. Housing

The 2000 Census documented a total of 18,610 housing units in the project study area. Approximately 95 percent of all the housing units in this area were occupied, leaving approximately 5 percent of the units vacant. The average number of persons per household within the study area was close to the City as a whole, at 2.76 persons. Almost 58 percent of the occupied units were renter-occupied, a much larger proportion than in the City in its entirety. Table 3-27, above, summarizes the characteristics of the existing study area housing in 2000.

The SCAG forecasts for households in the study area project a growth rate of less than 1 percent between 2000 and 2010. This represents a much slower rate of growth than is found in the City as a whole. Table 3-28, above, summarizes the projected number of study area households in 2010.

3-14.2 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 would:

- 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
- 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 are expected to take place over the next 8 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 $166 million overall construction cost, it is estimated that total construction employment would be approximately 3,738 full-time one-year jobs, over the course of 8 years.[40]

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 to any significant degree as a consequence of construction work opportunities. 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.

[40] The number of construction jobs anticipated was calculated using RIMS II Multipliers from the U.S. Department of Commerce, Department of Economic Analysis. Multipliers are based on the 1992 Benchmark Input-Output Table for the U.S. and 1997 state data released July 1999.

Operational Impacts

❑ Population and Housing Growth

The proposed project would increase the number of College employees by 168 persons, for a total of 734 full-time equivalent employees in 2010. In addition, it is expected that the public/private partnership projects would increase on-campus employment. The horticultural building partnership is expected to employ approximately 3 to 4 full-time persons, along with up to 60 student employees; and the agricultural partnerships are expected to employ approximately 2 to 3 full time persons, in addition to student help. The Sciences Partnership Building, which would contain approximately 100,000 gross square feet of floor space for research and development type uses, would provide employment for an estimated 200 persons based on an employee factor of 1 person per 500 square feet. Some of these employees would be College staff and faculty.

The approximately 375 additional on-campus employees (full time equivalent College employees and private partner employees) expected as a result of the proposed project are not anticipated to substantially increase the demand for additional housing in the study area or in the City of Los Angeles. The SCAG household forecasts show a nearly 1 percent increase in the area between 2000 and 2010. 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 Pierce College to support anticipated increased enrollment through the year 2010. The projected enrollment for the 2010-2011 academic year is approximately 16,423 full time equivalent (FTE) students. In the Fall 2010 semester, a total enrollment of 23,252 students is projected. This is an increase of 2,832 FTE students or 5,298 total students over the 2001-2002 and Fall 2001 enrollments, respectively.

Currently, because no on-campus housing is currently provided, all students commute to the College primarily from the western San Fernando Valley, as well as other areas of the City of Los Angeles. It is anticipated that the majority of the students in 2010 would continue to commute to the College from the western San Fernando Valley. In addition, some of the student demand for local housing would be absorbed by the new student dormitories, which would house up to 600 students. Therefore, the proposed project is not anticipated to 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 over the next 8 years. 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 *Canoga Park-Winnetka-Woodland Hills-West Hills Community Plan*.

3-14.3 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.

3-14.4 Unavoidable Significant Adverse Impacts

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

3-15 PUBLIC SERVICES

3-15.1 Environmental Setting

a. Police Protection

Security and law enforcement services for all nine campuses of the Los Angeles Community College District is provided by the Los Angeles County Sheriff's Department (LASD). Approximately 227 Sheriff's personnel comprise the Community College Bureau, which polices the 9 college campuses. Each campus throughout the District utilizes a combination of Deputy Sheriffs and armed Sheriff's Security Officers to provide security and law enforcement services. Security officers provide the core of security services, while Deputy Sheriffs provide police services and oversight. Deputies and Security Officers utilize bicycle, vehicle, and foot patrols on a daily basis.[41]

The 227 officers comprising the Community College Bureau include 1 Captain, 1 Lieutenant, 11 Sergeants, 9 College Sheriffs, 18 Deputies, 97 Security Officers, and 90 Cadets. Pierce College currently has a temporary Sheriff's facility on campus that is staffed by 2 Deputies, 14 Security Officers, and 7 Cadets. The College also has 1 Sergeant assigned to oversee operations at the campus as well as two other colleges in the District.[42]

During 2001, campus offenses consisted primarily of petty theft, vandalism, and burglary. There were 22 traffic collisions reported in 2001. The total number of arrests made for the year was 16.[43]

Police protection for areas outside of the campus is provided by the Los Angeles Police Department's (LAPD) West Valley Community Police Station. The West Valley Area encompasses approximately 52 square miles and is bounded by the Santa Monica Mountains on the south, Chatsworth and Roscoe Boulevard on the north, Van Nuys on the east, and the Calabasas city limit on the west. The West Valley Community Police Station is under the jurisdiction of the Operations–Valley Bureau (OVB) and employs 350 sworn officers who serve approximately 300,000 residents and a working community of approximately 160,000.[44]

The OVB office is located at 6240 Sylmar Avenue, Room 316 in Van Nuys; the West Valley Community Police Station is located at 19020 Vanowen Street in Reseda. The Pierce College campus is located within Basic Car Area 10A75 and Reporting District 1058.

Fire Protection

Fire protection services for Pierce College are provided by the Los Angeles Fire Department (LAFD) in accordance with the Los Angeles Fire Code, the Los Angeles Municipal Code, and the General Plan of Los Angeles. The City of Los Angeles Fire Code, Municipal Code, and General Plan serve to guide the City departments, other government agencies, private

[41] www.lasd.org, April 2002
[42] Phone Conversation with Patrick Northam, Crime Analyst, Community College Bureau, May 2002.
[43] L.A.S.D. – Pierce College Crime and Arrest Statistics, 2001.
[44] www.lapdonline.com, April 2002.

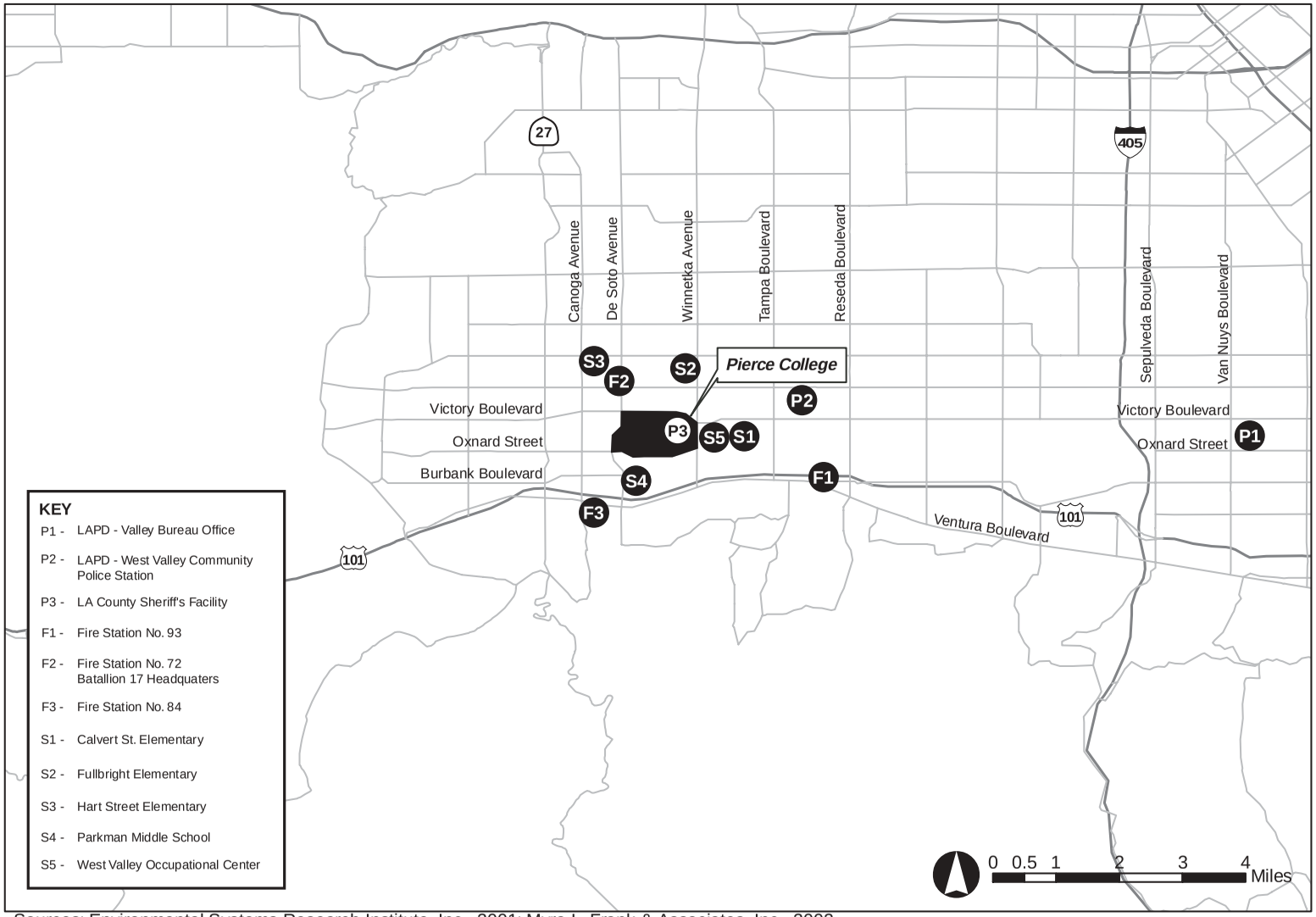
developers, and the public in reference to the construction, maintenance, and operation of fire protection facilities in the City. In addition, standards for the distribution, design, construction, and location of fire protection facilities are established. These standards specify fire-flow criteria, minimum distances to fire stations, hydrant specifications, and access provisions for fire fighting vehicles and personnel.

Pierce College is located within the service area of Fire Battalion 17, which includes 7 fire stations. The three LAFD stations that operate in the vicinity of the campus are listed below and shown on Figure 3-34.

- Fire Station No. 93
  19059 Ventura Boulevard
  Tarzana, CA 91356
  Task Force Truck and Engine Company
  Paramedic Rescue Ambulance
  Staff – 12
  Miles from Winnetka Avenue entrance to campus – 1.9
  Miles from the closest campus entrance – 1.9
- Fire Station No. 72
  6811 De Soto Avenue
  Canoga Park, CA 91303
  Single Engine Company
  Paramedic Rescue Ambulance
  Battalion 17 Headquarters
  Staff – 7
  Miles from Winnetka Avenue entrance to campus – 2.4
  Miles from the closest campus entrance – 0.7
- Fire Station No. 84
  5340 Canoga Avenue
  Woodland Hills, CA 91364
  Paramedic Engine Company
  Staff – 4
  Miles from Winnetka Avenue entrance to campus – 2.4
  Miles from the closest campus entrance – 1.4

According to the LAFD, the adequacy of fire protection for a given area is based on required fire-flow levels, initial response distances from existing fire stations, and the LAFD's judgment for needs in the area. In general, the required fire-flow is closely related to land use. The quantity of water necessary for fire protection varies with the type of development, life hazard, occupancy, and the degree of fire hazard. Fire-flow requirements vary from 2,000 gallons per minute (gpm) in low-density residential areas to 12,000 gpm in high-density commercial or industrial areas. A minimum residual water pressure of 20 pounds per square inch is to remain in the water system, with the required gallons per minute flowing. The required fire-flow for Pierce College has been set at 4,000 gpm from 4 hydrants flowing simultaneously.

Figure 3-34: Public Services and Facilities



Sources: Environmental Systems Research Institute, Inc., 2001; Myra L. Frank & Associates, Inc., 2002.

The Fire Prevention and Protection Plan of Los Angeles sets the response distance criterion at 0.75 miles for an engine company and 1.0 miles for a truck company. In the LAFD's response to the Notice of Preparation (NOP) regarding response times, the LAFD calculated the distance from the stations listed above to the Winnetka Avenue entrance to the campus only. Based on those calculations, the closest fire station would be 1.9 miles from the campus, and consequently the LAFD determined fire protection services to be inadequate. However, Fire Station No. 72 is located approximately 0.7 miles from the El Rancho Drive entrance to the College and within the 0.75-mile criterion for an engine company. As such fire protection services would be considered adequate.

Schools

❑ The Los Angeles Unified School District

The Los Angeles Unified School District (LAUSD, or District) is one of the largest public school districts in the nation. Located in Los Angeles County, California, it serves the City of Los Angeles, all or portions of 16 other cities in the County, and numerous unincorporated areas of the County that surround the City of Los Angeles. The District comprises an area of over 700 square miles, with an estimated population of over 4.6 million. Approximately two-thirds of the District's land area, and 82 percent of the population residing in it, falls within the City of Los Angeles.

The LAUSD provides kindergarten through high school (K-12) education as well as adult and special education programs to approximately 907,000 students in 947 schools and centers. It employs about 78,085 personnel, about half (36,721) of whom are teachers. The LAUSD's fiscal year 2001-2002 operating budget was $9.787 billion.

As of October 2001, LAUSD's total K-12 enrollment was an estimated 736,675 students. Approximately 50 percent of these students attended the elementary school (K-6) level, 42 percent attended the middle/junior and high school levels, and 8 percent attended magnet schools and centers or other facilities throughout the District.

As shown in Table 3-29, enrollment, both in total and by school type, has remained stable over the 2000-2001 to 2001-2002 period, growing by a total of 1.9 percent.

Table 3-29 LAUSD K-12 Enrollment, FY 2000-2001and FY 2001–2002

Grade Level	2000-2001	2000-2002
Senior High School	152,060	157,499
Junior High School	144,519	151,055
Elementary School	367,265	366,755
Magnet Schools, Centers and Other Facilities	58,883	61,416
Total (K-12) Enrollment	722,727	736,675

Source: LAUSD Fingertip Facts, 2001-2002.

❑ Schools in the Project Vicinity

Pierce College is located in LAUSD District C, which covers an area of approximately 70 square miles. This district is located in the southern portion of the west and central portions of the San Fernando Valley. District C includes the following communities: Encino, Reseda, Sherman Oaks, Tarzana, Van Nuys, Warner Center, and Winnetka, and portions of Studio City, Valley Village, and Woodland Hills. Table 3-30 lists the public schools operated by the Los Angeles Unified School District that are within approximately 0.5 miles of Pierce College.

Table 3-30 LAUSD Public Schools within Approximately 0.5 Miles of Pierce College

School	Location	Distance (Miles)	2000-2001 Enrollment	Capacity	Percent Capacity
Calvert St. Elementary	19850 Delano Street, Woodland Hills	0.4 miles	425	537	79
Fullbright Elementary	6940 Fullbright Avenue, Canoga Park	0.5 miles	627	656	96
Hart Street Elementary	21040 Hart Street, Canoga Park	0.6	1,036	1,308	79
Parkman Middle School	20800 Burbank Boulevard, Woodland Hills	0.6	1,266	1,617	78
West Valley Occupational Center	6200 Winnetka, Avenue, Woodland Hills	0.1	Not Available	Not Available	Not Available

Source: www.lausd.com, April 2002.

The West Valley Occupational Center is operated by the LAUSD, Division of Adult and Career Education. The Center offers short-term vocational and technical training, providing its students with entry-level skills or upgrading skills for the job market. Enrollment is available to students 16 years of age or older. The school provides job training for business occupations, Cosmetology, Child Care, and Health occupations, Industrial occupations, and English courses.

❑ The Los Angeles County Office of Education

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.

Recreation Facilities and Parks

Based upon the Public Recreation Plan (PRP), an element of the City of Los Angeles General Plan, an overall provision of 10 acres of land per 1,000 persons is recommended. The PRP also calls for park space to consist of neighborhood, community, regional, state, and national parks providing both active and passive recreational activities for groups of all ages within service radii of 2 miles.

The City of Los Angeles Department of Recreation and Parks maintains two parks within approximately 1 mile of the Pierce College campus. These parks are:

- John Quimby Park
  7008 De Soto Avenue
  Canoga Park, CA 91303
  Miles from campus – 0.6

- Warner Ranch Park
  5800 Topanga Canyon Boulevard
  Woodland Hills, CA 91367
  Miles from campus – 0.75

3-15.2 Environmental Impacts

a. Significance Criteria

Police Protection

For the purposes of the analyses in this EIR, the proposed Los Angeles Pierce College Facilities Master Plan would have a significant environmental impact 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.

Fire Protection

For the purposes of the analyses in this EIR, the proposed Los Angeles Pierce College Facilities Master Plan would have a significant environmental impact if it:

- creates a substantial need for additional fire protection services requiring new or altered fire department 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 fire protection services or results in inadequate emergency access, thereby posing a significant hazard to persons or property.

Schools

For the purposes of the analyses in this EIR, the proposed Los Angeles Pierce College Facilities Master Plan would have a significant environmental impact 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 Los Angeles Pierce College Facilities Master Plan would have a significant environmental impact 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

Los Angeles Pierce College is one of nine colleges that comprise the Los Angeles Community College District (LACCD). As of January 2001, police protection services for the LACCD are being provided by the Los Angeles County Sheriff's Department. As such LASD has jurisdiction within the boundaries of Pierce College.

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 the fact that the LASD has a facility located on campus, impacts would not be significant.

Given the fact that all construction, renovation, and demolition activities will occur within campus boundaries, impacts to adjacent streets and neighboring communities serviced by the

LAPD would be limited to increased traffic from construction vehicles. This potential traffic increase due to construction vehicles would be temporary and intermittent. Consequently, impacts would not be significant.

In the 2001-2002 academic year there were 13,591 full time equivalent (FTE) enrolled students at Pierce College and 566 full-time-equivalent employed staff members. In the 2010-2011 academic year, the Master Plan would accommodate an FTE of 16,423 students and 734 FTE employed staff members, 400 to 500 residents of the Life-Long Learning Residences, and approximately 200 or more employees or visitors generated from the public/private partnerships. Future security needs will be evaluated by the LASD in coordination with the LAPD. Determination of future needs will be based on future student enrollment and employment numbers. For existing needs, 17 officers and 7 cadets have been determined to be appropriate to provide sufficient police protection services.

In 2001, 16 arrests were made on campus. Based on the 2001-2002 FTE of 13,591 students, there were 0.0012 arrests per student. Applying this generation factor of 0.0012 arrests per student to the 2010-2011 FTE of 16,423 students, there would be approximately 20 arrests on campus in 2010. This increase of 4 arrests over 9 years would not create a significant demand on police protection services and therefore it is not expected that major new or expanded facilities would be required beyond what is contemplated in the Master Plan.

Implementation of the Master Plan includes construction of a new 2,500-seat Events Center. During events, special security measures may need to be implemented to ensure the safety of event attendees. It is anticipated that events that could fill the capacity of the new Events Center would occur only a few times per year. The LASD will determine the level of security appropriate for various events using an established risk assessment model.[45] Any special events that will require deputy/security staffing, in addition to the acquisition of vending permits, shall be conducted through the Operations Sergeant. As such it is anticipated that the Los Angeles County Sheriff's Department would have adequate personnel to provide security during these events.

Implementation of the Master Plan includes projects that would provide additional security/emergency phones throughout the campus that may partially offset any increased demand for additional police protection services on the campus. New and renovated buildings would also provide better lighting and improved access. The Master Plan also proposes a new Campus Police Station, however this project is currently on hold. Consequently, the proposed improvements could deter and reduce the potential for crime activity to some degree on the campus.

Given this modest increase in demand for police protection services generated from increased student enrollment and full-time-equivalent employees through 2010 and the proposed improvements and Campus Police Station that are included in the Master Plan, it is unlikely additional new or altered police protection facilities would be required to accommodate implementation of the Master Plan.

Increased enrollment and employment at Pierce College could generate additional traffic and increase congestion and initial response times in the area. Intersections that operate at a level of

[45] LASD Special Events on Campus/Security Arrangements Bureau Order, January 31, 2001.

service (LOS) E or F (90 percent of capacity or greater) decrease the level of police protection that can be provided by the LAPD to surrounding areas of the campus. The traffic analyses indicate that implementation of the Master Plan would increase the number of study intersections that would operate as LOS E or F, which could have a potentially significant impact on emergency vehicle response times.

Fire Protection

Adequacy of fire protection for a given area is based on required fire-flow levels, initial response distances from existing fire stations, and the LAFD's judgment for needs in the area. The Fire Prevention and Protection Plan of Los Angeles sets forth the response distance criteria at 0.75 miles for an engine company and 1.0 miles for a truck company. Fire Station No. 72 is located approximately 0.65 miles from the El Rancho Drive entrance to Pierce College. As such the initial response distance criteria is currently satisfied. However, adverse impacts to fire protection services could occur if response times are significantly increased. The response times are dependent on both the distance of the nearest fire station to a given location and the level of traffic congestion on local roads.

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.

Implementation of the Master Plan would accommodate an enrollment in 2010 of 23,252 students and 734 full time equivalent employed staff members, 400 to 500 residents of the Life-Long Learning Residences, and approximately 200 or more employees or visitors generated from the public/private partnerships. Increased enrollment and employment at Pierce College could generate additional traffic and increase congestion and initial response times in the area. Intersections that operate at a level of service (LOS) E or F (90 percent of capacity or greater) decrease the level of fire protection services and response times that can be provided by the LAFD to the campus and surrounding areas. The traffic analyses indicate that implementation of the Master Plan would increase the number of study intersections that would operate as LOS E or F, which could have a potentially significant impact on emergency vehicle response times.

The total number of emergency responses to calls for service of the above listed fire stations for the year 2001 was 18,359. Fire Station No. 93 had 6,679 emergency responses in 2001; Fire Station No. 72 had 7,519 emergency responses in 2001; and Fire Station No. 84 had 4,161 emergency responses. Demand for services has increased at a rate of 4 percent over the previous 2 years. Based on this steady increase, the LAFD expects the demand for service to continue to increase at a rate of 4 percent per year. Since both Pierce College future enrollment and employment numbers are projected at a rate of 4 percent per year starting in the 2003-2004 academic year, this increase remains consistent with the expected increase for demand in fire services in the area. Consequently, no significant impacts would occur.[46]

[46] Phone conversation with Captain Wells, LAFD, May 2002.

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 approximately 500,000 total gross square feet of new building space and 400 to 450 housing units. However the increase in fire emergencies and demand for fire protection services is not expected to be substantial for several reasons. Implementation of the Master Plan would demolish existing facilities that are in disrepair and violation of current fire codes. Additional fire hazards would be reduced as existing facilities are renovated and brought into compliance with current fire codes. Also, all new construction would comply with current fire codes and specific fire safety measures recommended by the LAFD. Access to and from the campus would remain unobstructed and access to specific areas within the campus would be improved as a result of roadway and parking lot repairs (such as the Parking Lot #7 Replacement Project) that would include necessary fire lanes and fire hydrants.

Consequently, it is not anticipated that the addition of approximately 500,000 total gross square feet of building floor space and 400 to 450 housing units 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

The public school enrollment due to a proposed development is a function of the number of households resulting from a project's proposed residential development or the number of households associated with a project's direct, net new employees. Implementation of the Master Plan includes public/private partnerships that would develop 400 to 450 housing units on the campus. Of these 400 to 450 housing units, 200 units would be student dormitories. The remaining 200 to 250 would be part of the Life Long Learning Residences partnership and would serve as a residential community for active adults above 55 years of age. Given the demographics of the persons that would occupy these 400 to 450 housing units, it is not expected that development of these units would result in an increase the student enrollment in the LAUSD.

Full buildout of the Master Plan through 2010 would increase employment at Pierce College by approximately 168 full-time-equivalent employed staff members and approximately 207 private partner employees. LAUSD estimates that each new job would generate a demand for 0.489 residential units within the District.[47] Accordingly, 375 new jobs could result in 183 new residential units. Based on LAUSD student generation factors, implementation of the Master Plan could indirectly generate 40 to 47 elementary students, 18 middle school students, and 18 to 25 high school students[48] by 2010. Since new employees could live anywhere within a large area that is within commuting distance to the site and the above stated increase would be spread out over the next 8 years or through 2010, no one school is likely to experience a substantial increase in enrollment due to implementation of the Master Plan.

[47] *Los Angeles Unified School District, School Facilities Fee Plan, Documentation for Imposition of School Impact Fees*, February 1994.

[48] Los Angeles Unified School District Generation Factors, November 1994. The following student generation factors were used in calculating the number of additional students generated by new households: 0.22, 0.25 elementary; 0.10 middle school; and 0.10, 0.14 high school.

The West Valley Adult Occupational Training Center is located immediately east of the campus. Construction activities could create minor nuisance impacts such as traffic, noise, and air pollution.

Recreation Facilities and Parks

Implementation of the Master Plan would increase enrollment by approximately 5,298 total students and an additional 168 full time equivalent employed staff members and approximately 207 private employees would be added through 2010. Despite this increase in students and employees, it is not expected that recreation facilities and parks located in the vicinity of Pierce College would be overburdened or experience an increase in use that would cause an acceleration in the deterioration of these parks. Implementation of the Master Plan includes projects that would renovate and modernize existing recreational and athletic facilities on the campus. Also, public/private partnerships would enhance existing areas of the campus including the Horticulture area and Quad area (a new botanical garden) that could provide students and employees with necessary green spaces. Consequently, impacts would not be significant.

3-15.3 Mitigation Measures

a. Police Protection

The following measures shall be implemented to ensure that potential impacts would be reduced to a level of insignificance:

PPS-1 Pierce College shall implement security features (i.e. improved lighting, improved landscaping, and additional security phones) as part of the proposed projects described in the Master Plan.

PPS-2 Pierce College shall design and implement a Special Event Security Plan, in coordination with the Los Angeles County Sheriff's Department and the Los Angeles Police Department, for the new Events Center. Issues addressed may include, but are not limited to: security needs, emergency evacuation procedures, and money handling issues.

In addition, implementation of the traffic mitigation measures identified in Section 3-16 of this EIR would minimize impacts on emergency vehicle response time.

b. Fire Protection

The following measures shall be implemented to ensure that potential impacts would be reduced to a level of insignificance:

FPS-1 The College shall consult with the City Engineer and the Fire Department regarding appropriate standards (e.g., lane widths, grades, cut corners, etc.) for private streets and entry gates to ensure adequate access for Fire Department vehicles and equipment.

FPS-2 All landscaping shall use fire-resistant plants and materials.

FPS-3 Sprinkler systems shall be required throughout any structure to be built, in accordance with state codes and standards established by the State Architect and State Fire Marshal.

FPS-4 The proposed project shall comply with all applicable codes and regulations administered by the State Architect and State Fire Marshall.

In addition, implementation of the traffic mitigation measures identified in Section 3-16 of this EIR would minimize impacts on emergency vehicle response time.

c. Schools

Although no significant impacts are anticipated, the following measures shall be implemented:

S-1 LAUSD Transportation Branch shall be contacted regarding the potential impact, if any, upon existing school bus routes.

S-2 Contractors shall ensure that safe and convenient pedestrian routes to schools are maintained during construction.

S-3 Contractors shall maintain ongoing communication with the Principal of the West Valley Occupational School.

S-4 Establishment of the construction haul route at Mason Street and Victory Boulevard shall be considered.

d. Recreation Facilities and Parks

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

3-15.4 Unavoidable Significant Adverse Impacts

a. Police Protection

Implementation of the Master Plan would result in no significant adverse impacts to police protection services. Implementation of the mitigation measures above would ensure that impacts remain below a level of significance.

b. Fire Protection

Implementation of the Master Plan would result in no significant adverse impacts to fire protection services. Implementation of the mitigation measures above would ensure that impacts remain below a level of significance.

c. Schools

Implementation of the Master Plan would result in no significant adverse impacts to schools. Implementation of the mitigation measures above would ensure that impacts remain below a level of significance.

d. Recreation Facilities and Parks

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

3-16 TRANSPORTATION/TRAFFIC AND PARKING

3-16.1 Environmental Setting

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

a. Existing Street System

The Pierce College campus is bounded by Victory Boulevard on the north, Winnetka Avenue on the east, and De Soto Avenue on the west. To the north, east, and west of the campus, the street system is a north-south/east-west grid system. To the south of the campus, the street grid is disrupted by the Chalk Hills and, farther to the south beyond Ventura Boulevard, the Santa Monica Mountains.

The street system within the study area is illustrated on Figure 3-35. Primary regional access to the area is provided by the Ventura Freeway (U.S. 101), which runs east-west approximately 1 mile south of the campus. Winnetka Avenue and De Soto Avenue on either side of the campus are north-south arterial facilities providing access to the Ventura Freeway. Victory Boulevard is an east-west arterial facility. Mason Avenue is a secondary highway providing access to the campus from the north.

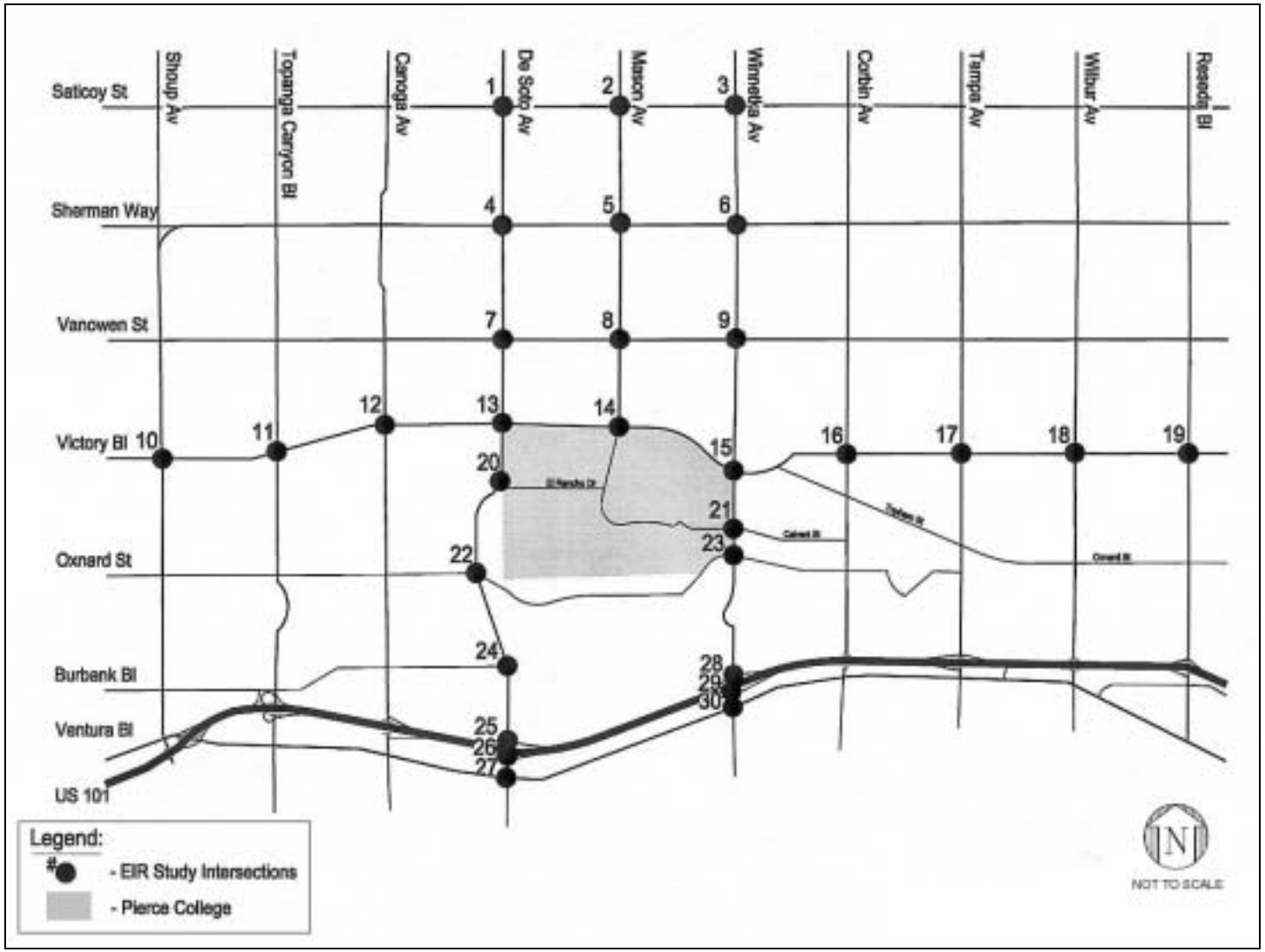
Additional arterial facilities serving the surrounding study area include Topanga Canyon Boulevard, Canoga Avenue, Tampa Avenue, and Reseda Avenue running north-south, and Saticoy Street, Sherman Way, and Ventura Boulevard running east-west.

Descriptions of key roadways serving the study area are provided below:

- Ventura Freeway (U.S. 101) - The Ventura Freeway is a major regional facility that travels in an east-west orientation through the southern portion of the study area. The freeway provides access from the study area to the eastern San Fernando Valley and metropolitan Los Angeles to the east and to the Agoura/Westlake areas and Ventura County to the west. Key interchanges providing access to the Pierce College campus are full diamond interchanges at Winnetka Avenue and De Soto Avenue. Within the study area, the freeway provides 10 lanes (5 in each direction) east of Topanga Canyon Boulevard and eight lanes (4 in each direction) west of Topanga Canyon Boulevard.

- Shoup Avenue - Shoup Avenue is a north-south street located about 1.5 miles west of Pierce College. It is classified as a secondary highway north of, and a collector street south of, Ventura Boulevard. North of Ventura Boulevard to Roscoe Boulevard, Shoup Avenue provides four through lanes, with on-street parking.

Figure 3-35: Study Area and Analyzed Intersections



Source: Kaku Associates, Inc., 2002.

- Topanga Canyon Boulevard (S.R. 27) - Topanga Canyon Boulevard is a north-south major highway located about 1 mile west of the Pierce College campus. Topanga Canyon provides access across the Santa Monica Mountains to Pacific Coast Highway (S.R. 1) to the south, and to the Simi Valley Freeway (S.R. 118) and the northwestern portion of the San Fernando Valley to the north. Four through lanes are provided north of Vanowen Street, five through lanes (three northbound and two southbound) are provided between Vanowen Street and Burbank Boulevard, and six through lanes are provided south of Burbank Boulevard. A raised median island is present south of Burbank Boulevard. On-street parking is prohibited along the east side of the roadway throughout the Warner Center area, although it is allowed along most of the west side within Warner Center and on both sides north of Vanowen Street. The City of Los Angeles *Bicycle Plan* (Los Angeles Department of City Planning, April 1996) proposes Class II bike lanes along Topanga Canyon Boulevard throughout the study area.

- Canoga Avenue - Canoga Avenue is a north-south street located about one-half mile west of the Pierce College campus. It is classified as a major highway between Ventura Boulevard and Victory Boulevard and as a secondary highway both to the north of Victory Boulevard and to the south of Ventura Boulevard. Six through lanes are provided between Victory Boulevard and the Ventura Freeway. Four through lanes are provided to the north of Victory Boulevard and between the Ventura Freeway and Ventura Boulevard, narrowing to two lanes south of Ventura Boulevard. A raised median island is present between Victory Boulevard and Burbank Boulevard. On-street parking is prohibited along much of Canoga Avenue within the study area, although unrestricted parking is allowed south of Ventura Boulevard and along the west side, north of Hart Street.

- De Soto Avenue - De Soto Avenue is a north-south street that forms the western boundary of the Pierce College campus. It is classified as a major highway north of Ventura Boulevard and as a collector street south of Ventura Boulevard (where the street name changes to Serrania Avenue). Four through lanes are provided north of Victory Boulevard, six lanes are provided between Victory Boulevard and the Ventura Freeway, five lanes (three northbound and two southbound) are provided between the freeway and Ventura Boulevard, and two lanes are provided south of Ventura Boulevard. On-street parking is prohibited along De Soto Avenue between Victory Boulevard and Ventura Boulevard. Parking is allowed north of Victory Boulevard, although peak period parking restrictions are used in this section to provide a third southbound travel lane during the morning peak period and a third northbound travel lane during the evening peak period. Unrestricted parking is allowed south of Ventura Boulevard on Serrania Avenue. Bicycle lanes are present on both sides between the Pierce College driveway (El Rancho Drive) and Burbank Boulevard. The City of Los Angeles *Bicycle Plan* proposes Class II bike lanes along De Soto Avenue between Burbank Boulevard and Ventura Boulevard, and commuter peak period bike lanes north of Victory Boulevard.

- Mason Avenue - Mason Avenue is a north-south secondary highway providing access between Pierce College and areas to the north. Mason Avenue terminates as a public street at its intersection with Victory Boulevard on the north side of the campus, and

continues within the campus as an internal campus roadway. Mason Avenue provides four through lanes with on-street parking.

- Winnetka Avenue - Winnetka Avenue is a north-south street forming the eastern boundary of the Pierce College campus. It is classified as a major highway north of, and a collector street south of, Ventura Boulevard. Four through lanes and a two-way continuous left-turn lane are provided north of Ventura Boulevard, and two lanes are provided south of Ventura Boulevard. On-street parking is allowed both north of the Calvert Street/Pierce College driveway (Brahma Drive) and south of Ventura Boulevard, and is prohibited between Calvert Street and Ventura Boulevard. The City's *Bicycle Plan* proposes Class II bike lanes along Winnetka Avenue north of Ventura Boulevard.

- Corbin Avenue - Corbin Avenue is a north-south secondary highway located one-half mile east of Pierce College. Within the study area, four through lanes are present north of Topham Street and two through lanes are present south of Topham Street. On-street parking is provided.

- Tampa Avenue - Tampa Avenue is a north-south major highway located 1 mile east of Pierce College. Tampa Avenue provides four through lanes with on-street parking during off-peak hours. During peak periods, street parking is prohibited to provide additional travel lanes.

- Wilbur Avenue - Wilbur Avenue is a north-south secondary highway located 1.5 miles east of Pierce College. Wilbur Avenue provides four through lanes with on-street parking.

- Reseda Avenue - Reseda Avenue is a north-south major highway located 2 miles east of Pierce College. Within the study area, Reseda Avenue provides four through lanes with on-street parking.

- Saticoy Street - Saticoy Street is a four-lane east-west secondary highway located about 1.5 miles north of Pierce College. A two-way continuous left-turn lane is provided throughout most of the study area, as is on-street parking.

- Sherman Way - Sherman Way is an east-west major highway located about 1 mile north of Pierce College. It is classified as a divided major highway east of Variel Avenue, where six through lanes and a raised median island are provided. West of Variel Avenue, it is classified as a major highway and provides four through lanes and a two-way continuous left-turn lane. On-street parking is allowed throughout the study area.

- Vanowen Street - Vanowen Street is a four-lane east-west secondary highway located about one-half mile north of the Pierce College campus. On-street parking is permitted on the north side throughout the study area, and on the south side in certain sections.

- Victory Boulevard - Victory Boulevard is an east-west major highway with a two-way continuous left-turn lane throughout the study area. Four through lanes are provided from east of Fallbrook Avenue to Topanga Canyon Boulevard. Six through lanes are

provided between Topanga Canyon Boulevard and De Soto Avenue within Warner Center, with some sections of eight lanes. Five through lanes (three eastbound and two westbound) are provided east of De Soto Avenue to Winnetka Avenue adjacent to the Pierce College campus. Four through lanes are provided east of Winnetka Avenue. On-street parking is allowed east of De Soto Avenue. Parking restrictions are used along the north side east of De Soto Avenue to provide a third westbound travel lane during both the morning and evening peak periods. The City's *Bicycle Plan* proposes Class II bike lanes along Victory Boulevard east of De Soto Avenue, and commuter peak period bike lanes west of De Soto Avenue.

- Oxnard Street - Oxnard Street is an east-west secondary highway located to the south of the Pierce College campus. Four lanes are provided throughout most of the study area, narrowing to two lanes both west of Shoup Avenue and east of Winnetka Avenue. A raised median island is present between Topanga Canyon Boulevard and Canoga Avenue. On-street parking is prohibited between Topanga Canyon Boulevard and De Soto Avenue in Warner Center, but is allowed to the east of De Soto Avenue.

- Burbank Boulevard - West of De Soto Avenue, Burbank Boulevard is an east-west secondary highway providing four through lanes between De Soto Avenue and Farralone Avenue. On-street parking is allowed between Canoga Avenue and Topanga Canyon Boulevard. At De Soto Avenue, Burbank Boulevard jogs to the south and continues to the east as a two-lane collector street with on-street parking.

- Ventura Boulevard - Ventura Boulevard is an east-west major highway located about one mile south of the Pierce College campus. Three through lanes are provided in the westbound direction throughout most of the study area, although two lanes are provided east of Winnetka Avenue. In the eastbound direction, two through lanes are provided west of West Hills Drive, three lanes are provided between West Hills Drive and the Chalk Hill summit, two lanes are provided east of the summit, three lanes are provided approaching Winnetka Avenue, and two lanes are provided east of Winnetka Avenue. On-street parking is allowed throughout most of the study area, although parking restrictions are used to provide a third eastbound through lane during both the morning and evening peak periods in the sections between Topanga Canyon Boulevard and West Hills Drive and east of Winnetka Avenue. Parking is also restricted along the south side of Ventura Boulevard immediately adjacent to Taft High School (west of Winnetka Avenue) on school days. A raised median island is present for short sections just east of West Hills Drive (over the Chalk Hill summit).

Diagrams of the existing lane configurations at the 30 study intersections are provided in Appendix F to this EIR (also see Appendix A of the Traffic Study).

b. Existing Traffic Volumes and Operating Conditions

The following sections present the existing peak hour traffic volumes at the study intersections, a description of the methodology used to analyze intersection operating conditions, and the resulting level of service at each location under existing conditions.

Existing Peak Hour Traffic Volumes

Weekday AM and PM peak period intersection turning movement counts were conducted at the 30 study intersections in February 2002. The existing weekday peak hour turning movements at the analyzed intersections are summarized in the tables in Appendix F of this EIR.

Intersection Level of Service Standards and Methodology

Level of service (LOS) is a qualitative measure used to describe the condition of traffic flow, ranging from excellent conditions at LOS A to overloaded conditions at LOS F. Level of service definitions for signalized intersections are provided in Table 3-31.

Table 3-31: Level of Service Definitions for Signalized Intersections

Level of Service	Volume/Capacity Ratio	Definition
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 signal 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.

The City of Los Angeles typically uses LOS D as a standard, meaning that LOS D or better is considered to represent satisfactory conditions, while LOS E or F is generally considered to be substandard. The Warner Center Specific Plan establishes LOS E as the minimum acceptable level of service within the Warner Center Specific Plan area (to the west of the Pierce College campus).

All of the study intersections are currently controlled by traffic signals. The City of Los Angeles Department of Transportation (LADOT) requires that the "Critical Movement Analysis" (CMA) method (Transportation Research Board, 1980) of intersection capacity analysis be used to determine the intersection volume to capacity (V/C) ratio and corresponding level of service for

the given turning movements and intersection characteristics at signalized intersections. The CALCADB software package developed by LADOT was used to implement the CMA methodology in this study.

Most of the study intersections (all of those within Warner Center, between Victory Boulevard and Ventura Boulevard, or along Sherman Way east of Topanga Canyon Boulevard) are currently controlled by the City of Los Angeles' Automated Traffic Surveillance and Control (ATSAC) system. In accordance with LADOT procedures, a capacity increase of 7 percent (0.07 V/C adjustment) was applied to reflect the benefits of ATSAC control at these intersections.

Existing Peak Hour Intersection Levels of Service

The existing weekday AM and PM peak hour turning movements summarized in Appendix B of the Traffic and Parking Study (see Appendix F of this EIR) were used in conjunction with the level of service methodology described above to determine existing operating conditions at each of the study intersections. Level of service calculation worksheets are included in Appendix C of the Traffic and Parking Study.

Table 3-32 summarizes the existing AM and PM peak hour V/C ratios and corresponding levels of service at each of the study intersections. As can be seen, 13 of the 30 intersections currently operate at LOS E or F during one or both of the AM and PM peak hours. These intersections are as follows:

- De Soto Avenue/Saticoy Street
- Mason Avenue/Saticoy Street
- Winnetka Avenue/Saticoy Street
- De Soto Avenue/Vanowen Street
- Mason Avenue/Vanowen Street
- Winnetka Avenue/Vanowen Street
- Canoga Avenue/Victory Boulevard
- De Soto Avenue/Victory Boulevard
- Winnetka Avenue/Victory Boulevard
- Corbin Avenue/Victory Boulevard
- Tampa Avenue/Victory Boulevard
- Wilbur Avenue/Victory Boulevard
- Reseda Avenue/Victory Boulevard

The remaining study intersections operate at fair to good levels of service (LOS D or better) during both the AM and PM peak hours.

Table 3-32: Existing (Year 2002) Intersection Levels of Service Analysis

Intersection	AM Peak Hour		PM Peak Hour	
	V/C	LOS	V/C	LOS
1. De Soto Av & Saticoy St	0.955	E	0.991	E
2. Mason Av & Saticoy St	0.939	E	0.892	D
3. Winnetka Av & Saticoy St	1.099	F	1.113	F
*4. De Soto Av & Sherman Way	0.795	C	0.884	D
*5. Mason Av & Sherman Way	0.714	C	0.691	B
*6. Winnetka Av & Sherman Way	0.858	D	0.869	D
*7. De Soto Av & Vanowen St	0.857	D	0.921	E
8. Mason Av & Vanowen St	0.945	E	0.814	D
9. Winnetka Av & Vanowen St	1.085	F	1.107	F
*10. Shoup Av & Victory Blvd	0.854	D	0.705	C
*11. Topanga Canyon Blvd & Victory Blvd	0.836	D	0.863	D
*12. Canoga Av & Victory Blvd	0.779	C	0.911	E
*13. De Soto Av & Victory Blvd	1.034	F	1.056	F
*14. Mason Av & Victory Blvd	0.807	D	0.686	B
*15. Winnetka Av & Victory Blvd	1.101	F	1.005	F
*16. Corbin Av & Victory Blvd	0.988	E	0.949	E
*17. Tampa Av & Victory Blvd	1.114	F	1.085	F
*18. Wilbur Av & Victory Blvd	1.021	F	1.007	F
*19. Reseda Blvd & Victory Blvd	0.960	E	0.970	E
*20. De Soto Av & El Rancho Dr	0.420	A	0.485	A
*21. Winnetka Av & Calvert St	0.769	C	0.545	A
*22. De Soto Av & Oxnard St	0.701	C	0.671	B
*23. Winnetka Av & Oxnard St	0.874	D	0.707	C
*24. De Soto Av & Burbank Blvd West	0.608	B	0.605	B
*25. De Soto Av & I-101 WB Ramps	0.823	D	0.750	C
*26. De Soto Av & I-101 EB Ramps	0.541	A	0.742	C
*27. De Soto Av & Ventura Blvd	0.689	B	0.741	C
*28. Winnetka Av & I-101 WB Ramps	0.606	B	0.621	B
*29. Winnetka Av & I-101 EB Ramps	0.766	C	0.825	D
*30. Winnetka Av & Ventura Blvd	0.781	C	0.824	D
Note: * Intersection is currently operating under ATSAC system.				

Source: Kaku Associates, 2002.

c. Existing Public Transit Service

The Pierce College campus is currently served by bus service provided by the Los Angeles County Metropolitan Transit Authority (LACMTA) and the Santa Clarita Transit Authority (SCTA). Existing bus routes providing direct service along Victory Boulevard, Winnetka Avenue, and/or De Soto Avenue adjacent to the campus include:

- LACMTA Line 164 - Line 164 provides local service along Victory Boulevard between Valley Circle Boulevard, Woodland Hills, Warner Center, Reseda, Van Nuys, North Hollywood, and Burbank. Service is provided 7 days per week. In the vicinity of the Pierce College campus, Line 153 stops on Victory Boulevard east of Mason Avenue adjacent to Lot 7.
- LACMTA Line 243 - Line 243 provides local service between Chatsworth, Canoga Park, Warner Center, Woodland Hills, Winnetka, and Northridge, along a "U" shaped route that includes both De Soto Avenue and Winnetka Avenue on either side of Pierce College. Service is provided 5 days per week (Monday through Friday). In the vicinity of Pierce College, Line 243 stops on Winnetka Avenue south of Victory Boulevard southbound, north of Brahma Drive/Calvert Street northbound, and south of Brahma Drive/Calvert Street southbound. It also stops on De Soto Avenue northbound and southbound just north of El Rancho Drive.
- SCTA Commuter Route 796 - This line provides limited stop service between Santa Clarita and Warner Center. Service is provided Monday through Friday only, with five runs traveling inbound from Santa Clarita to Warner Center in the morning peak period and five runs traveling outbound from Warner Center to Santa Clarita in the evening peak period. Route 791/796 travels along De Soto Avenue in the vicinity of Pierce College.

d. Pierce College Campus Access and Internal Circulation

Vehicular access to the Pierce College campus is provided at four locations:

- Brahma Drive - Brahma Drive is an internal street providing access from Winnetka Avenue on the east side of the campus. Brahma Drive intersects Winnetka Avenue opposite Calvert Street, and its intersection with Winnetka Avenue/Calvert Street is controlled by a traffic signal. Within the campus, Brahma Drive provides access to Lot 1 and connects to Stadium Way, which in turn ultimately connects to Mason Street.
- Mason Street - Mason Street is an internal street providing access from Victory Boulevard on the north side of the campus. Mason Street intersects Victory Boulevard opposite Mason Avenue, and its intersection with Victory Boulevard is signalized. Within the campus, Mason Street provides access to Lot 7. It then intersects with Olympic Drive and El Rancho Drive and continues as Stadium Way, ultimately connecting with Brahma Drive.
- El Rancho Drive - El Rancho Drive is an internal street providing access from a signalized intersection with De Soto Avenue on the west side of the campus. Within the campus, El Rancho Drive connects to Mason Street/Stadium Way.

- Lot 7 Driveway - In addition to the three signalized access points described above, there is an unsignalized driveway from parking Lot 7 directly onto Victory Boulevard, east of Mason Avenue.

Additional internal streets providing circulation within the campus include:

- Olympic Drive - Olympic Drive runs along the south side of Lot 7 and has a security gate at the east end of the lot. Beyond the security gate, it continues into the campus core, becoming part of the internal system with a second gate near the Sheriff's substation.
- Stadium Way - Stadium Way is the primary through route around the south side of the campus core. It connects Brahma Drive with Mason Street and El Rancho Drive, and provides access to Shepard Stadium and several student parking lots.

e. Existing Pierce College Parking Conditions

Parking is a critical component of Piece College's transportation system since the majority of students, faculty, staff, and visitors access the campus by vehicle. This section discusses the existing campus parking supply and compares it to the existing demand for parking in order to assess the ability of the current parking supply to serve the campus community.

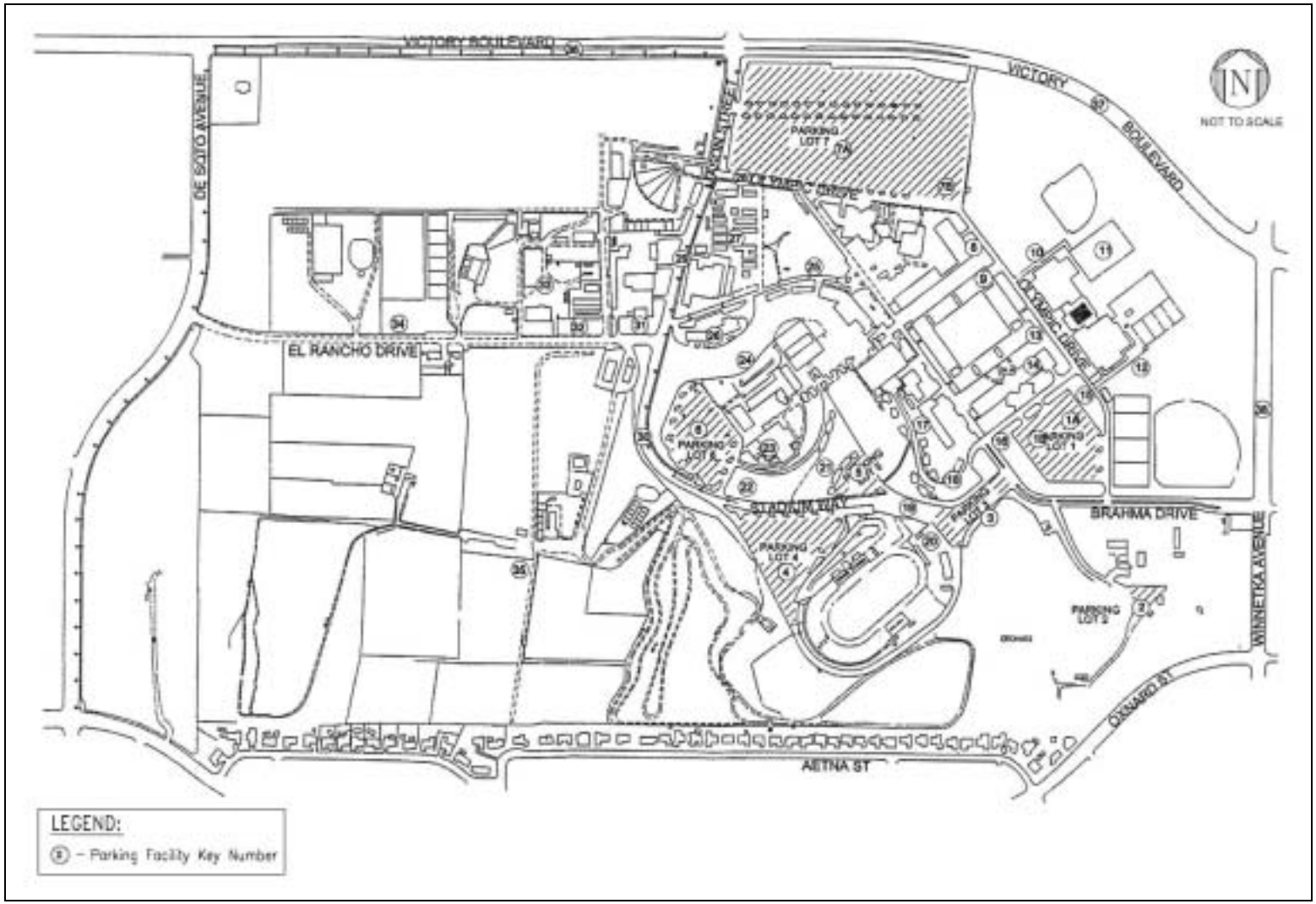
Existing Campus Parking Supply

This section describes the current inventory of parking on the Pierce College campus, including location, amount, and type of existing parking. This information was either provided by the College, gathered through field investigation, or both. Specifically, the field investigation involved counting the number and type of spaces at each campus lot and adjacent on-street parking locations in the spring of 2002.

Parking for the Pierce College community is provided through numerous surface parking lots and street parking on adjacent frontages of Victory Boulevard and Winnetka Avenue. The locations of these lots are illustrated on Figure 3-36. As summarized in Table 3-33, a total of approximately 4,119 parking spaces are available on the campus in 7 major student lots and numerous smaller lots. This includes about 3,441 spaces in student or undesignated lots (including approximately 170 unmarked parking spaces in dirt parking areas) and 678 spaces in designated staff lots. The 7 major student lots range in size from about 58 spaces in Lot 5 to 1,769 spaces in Lot 7 (the large lot adjacent to Victory Boulevard).

Access to the student lots is physically unrestricted, although students are required to purchase a pass to use these spaces. Access to the staff lots is typically controlled by security gates and is restricted to faculty, staff, and visitors with passes.

Figure 3-36: Locations of Pierce College Parking Lots



Source: Kaku Associates, Inc., 2002.

Table 3-33: Existing Pierce College Parking Inventory by Lot

Map No.	Location/ Description	Use	Type	# of Parking Spaces	Inventory Notes
ON-CAMPUS PARKING					
1A	Parking Lot 1	Visitor & Student Parking	Lot	263	
1B	Parking Lot 1	Visitor & Staff Parking	Lot	116	
2	Parking Lot 2 & Dirt Parking	Staff & Student Parking	Lot	67	47 marked spaces in Lot 2 plus 20 estimated dirt spaces.
3	Parking Lot 3	Student Parking	Lot	82	
4	Parking Lot 4	Student Parking	Lot	388	
5	Parking Lot 5	Student Parking	Lot	58	
6	Parking Lot 6	Student Parking	Curb/Lot	347	16 spaces temporarily unusable at time of inventory. 4 spaces unmarked, number estimated.
7A	Parking Lot 7	Student Parking	Lot	1,769	
7B	Parking Lot 7 N of Chemistry Bldg.	Staff Parking	Lot	59	
8	Staff Parking NE of Chemistry Bldg.	Staff Parking	Curb	10	
9	Staff Parking NE of Computer Science Bldg.	Staff Parking	Lot	6	
10	Staff Parking NW of Women's Gym	Staff Parking	Lot	11	
11	Staff Parking NE of Women's Gym	Staff Parking	Lot	157	Spaces are unmarked, number was estimated.
12	Staff Parking SE of Men's Gym	Staff Parking	Lot	27	
13	WS of Olympic Drive	Staff Parking	Curb	25	
14	Staff Parking NE of Administration Bldg.	Staff Parking	Lot	21	
15	WS of Olympic Drive NE of Parking Lot 1	Staff Parking	Curb	6	Spaces are unmarked, number was estimated.
16	Staff Parking NW of Parking Lot 1	Staff Parking	Curb	17	
17	Staff Curbside Parking N of Community Services Bldg.	Staff Parking	Curb/Lot	35	3 spaces temporarily unusable at time of inventory.
18	Staff Parking E of Community Services Bldg.	Staff Parking	Lot	29	18 spaces temporarily unusable at time of inventory.

Table 3-33: Existing Pierce College Parking Inventory by Lot

Map No.	Location/ Description	Use	Type	# of Parking Spaces	Inventory Notes
19	Stadium Way Curbside Parking NW of Parking Lot 3	Student Parking	Curb	20	9 spaces are unmarked, number was estimated.
20	Staff Parking NW of Field House	Staff & Student Parking	Lot	37	
21	Dirt Parking NW of Parking Lot 5	Student Parking	Dirt Lot	90	Spaces are unmarked, number was estimated.
22	Dirt Parking SE of Parking Lot 6	Student Parking	Dirt Lot	30	Spaces are unmarked, number was estimated.
23	Staff Parking SW of Performing Arts Bldg. (Loading Area)	Staff Parking	Lot	2	
24	Staff Parking NW of Music Bldg.	Staff Parking	Lot	27	14 spaces temporarily unusable at time of inventory.
25	Staff Parking N of Bungalows 01 - 04	Staff Parking	Curb	14	
26	Staff Parking N of Trades Bldg.	Staff Parking	Lot	33	19 spaces temporarily unusable at time of inventory.
27	Staff Parking Bungalows 06 - 36	Staff Parking	Lot	36	
28	Olympic Drive Curbside Parking	Student Parking	Curb	15	Spaces are unmarked, number was estimated.
29	Curbside Parking Mason Street	Student Parking	Curb/Lot	27	Portion of spaces are unmarked, number was estimated.
30	Curbside Parking Stadium Way	Student Parking	Curb/Lot	79	Portion of spaces are unmarked, number was estimated.
31	Curbside Parking S of Plant Facilities Bldg.	Student Parking	Curb	4	Spaces are unmarked, number was estimated.
32	Student Parking S of Agricultural Science Bldg.	Student Parking	90 Degree Street	117	90-degree spaces on either side of El Rancho Drive.
33	Staff Parking N of Agricultural Science Bldg.	Staff Parking	Lot	10	
34	El Rancho Drive	Student Parking	Curb	55	Spaces are unmarked, number was estimated.
35	Swine Unit	Student Parking	Dirt Lot	30	Spaces are unmarked, number was estimated.

Table 3-33: Existing Pierce College Parking Inventory by Lot

Map No.	Location/ Description	Use	Type	# of Parking Spaces	Inventory Notes
	ON-CAMPUS SUBTOTAL			**4,119**	
	Estimated Spaces in Unmarked Dirt Lots			170	
	On-Campus Subtotal Not Including Dirt Spaces			3,949	
OFF-CAMPUS (ADJACENT STREET) PARKING					
36	Parking on South Side of Victory Blvd., De Soto to Mason	General Parking	Curb	112	Spaces unmarked, number estimated.
37	Parking on South Side of Victory Blvd., Mason to Winnetka	General Parking	Curb	114	Spaces unmarked, number estimated.
38	Parking on West Side of Winnetka Ave., Victory to Calvert	General Parking	Curb	21	Spaces unmarked, number estimated.
	OFF-CAMPUS SUBTOTAL			247	
GRAND TOTAL ON- AND OFF-CAMPUS PARKING					
	TOTAL SPACES			4,366	
Note: Parking inventory conducted February 2002.					

Source: Kaku Associates, 2002.

In addition to the on-campus parking supply, it is estimated that there are approximately 247 off-campus curbside unmarked parking spaces along Victory Boulevard and Winnetka Avenue immediately adjacent to the campus. This includes about 21 spaces on the west side of Winnetka Avenue between Victory Boulevard and Brahma Drive/Calvert Street, about 114 spaces on the south side of Victory Boulevard between Mason Avenue and Winnetka Avenue, and about 112 spaces on the south side of Victory Boulevard between De Soto Avenue and Mason Avenue.

❑ Existing Campus Parking Demand

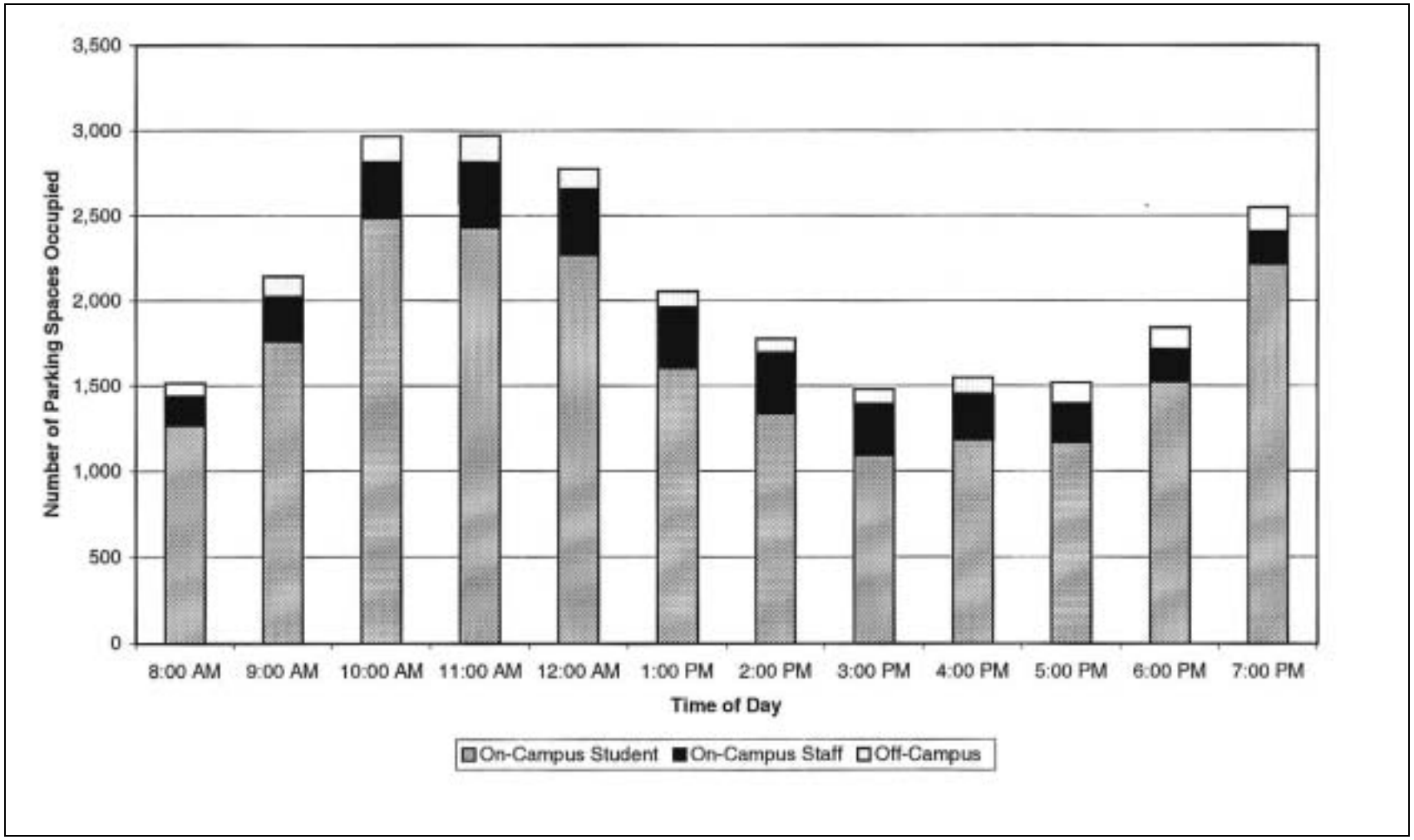
A parking utilization survey was conducted as part of this study on Tuesday, February 26, 2002, to assess the utilization of the various parking facilities throughout a typical weekday with school in session. The survey was conducted during the fourth week of classes for the Spring 2002 semester, after campus activity levels had stabilized. The survey was conducted hourly throughout the day from 8 AM to 7 PM in each of the on-campus parking facilities as well as for the adjacent street parking.

Table 3-34 summarizes the results of the utilization survey. As can be seen, a maximum of 2,972 parking spaces were observed to be utilized at 11 AM, including 2,815 on-campus spaces and 157 off-campus/on-street spaces. Figure 3-37 illustrates the hourly variation of existing parking demand for the entire campus parking system.

The peak demand-to-supply ratio for the entire system is around 68 percent at 11 AM. The morning hours between 10 AM and 12 noon experience the highest demand levels, ranging from 64 percent to 68 percent of the spaces utilized. The 7 PM hour, with 58 percent of the spaces utilized, is the fourth highest demand hour of the day, due to relatively high attendance at evening classes.

Typically, demand/supply ratios of 85 percent to 90 percent are considered to indicate a fully utilized parking supply. A parking area would be considered effectively full despite the 10 percent to 15 percent remaining capacity since the time to find an empty space would be excessive. Since utilization of the existing Pierce College parking system currently peaks at about 68 percent, there is presently a substantial amount of excess capacity in the system as a whole. Certain individual lots, however, have demand/supply ratios of greater than 90 percent at certain times of the day, including student Lots 1, 3, and 5 (see Appendix D in the Parking and Traffic Study for details of the utilization survey results by parking lot).

Figure 3-37: Existing Pierce College Parking Utilization



Source: Kaku Associates, Inc., 2002.

Table 3-34: Summary of Existing Pierce College Parking Inventory and Utilization
Tuesday, February 26, 2002

	Inventory (No. of Spaces)	Number and Percent of Parking Spaces Occupied by Time of Day											
		8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM
Number of Spaces Occupied													
On-Campus:													
Student Lots	3,441 [a]	1,269	1,759	2,485	2,432	2,268	1,604	1,337	1,095	1,184	1,169	1,526	2,215
Staff Lots	678	170	267	330	383	390	356	358	300	269	230	190	195
Subtotal	4,119 [a]	1,439	2,026	2,815	2,815	2,658	1,960	1,695	1,395	1,453	1,399	1,716	2,410
Off-Campus	247 [b]	78	118	151	157	117	95	81	86	96	120	126	141
Total	4,366	1,517	2,144	2,966	2,972*	2,775	2,055	1,776	1,481	1,549	1,519	1,842	2,551
Percent of Spaces Occupied													
On-Campus:													
Student Lots		37%	51%	72%	71%	66%	47%	39%	32%	34%	34%	44%	64%
Staff Lots		25%	39%	49%	56%	58%	53%	53%	44%	40%	34%	28%	29%
Subtotal		35%	49%	68%	68%	65%	48%	41%	34%	35%	34%	42%	59%
Off-Campus		32%	48%	61%	64%	47%	38%	33%	35%	39%	49%	51%	57%
Total		35%	49%	68%	68%*	64%	47%	41%	34%	35%	35%	42%	58%

Notes:

* Denotes peak demand.

a. On-campus inventory includes approximately 170 unmarked parking spaces in dirt parking lots.

b. Approximate number of on-street spaces immediately fronting campus along south side of Victory Boulevard and west side of Winnetka Avenue.

Source: Kaku Associates, 2002.

f. Cumulative Base Traffic Projections

In order to properly evaluate potential impacts of the proposed project on the street system, it was necessary to develop estimates of future traffic conditions in the study area both with and without the project. Future 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 and represent cumulative base (no project) conditions.

Areawide Traffic Growth

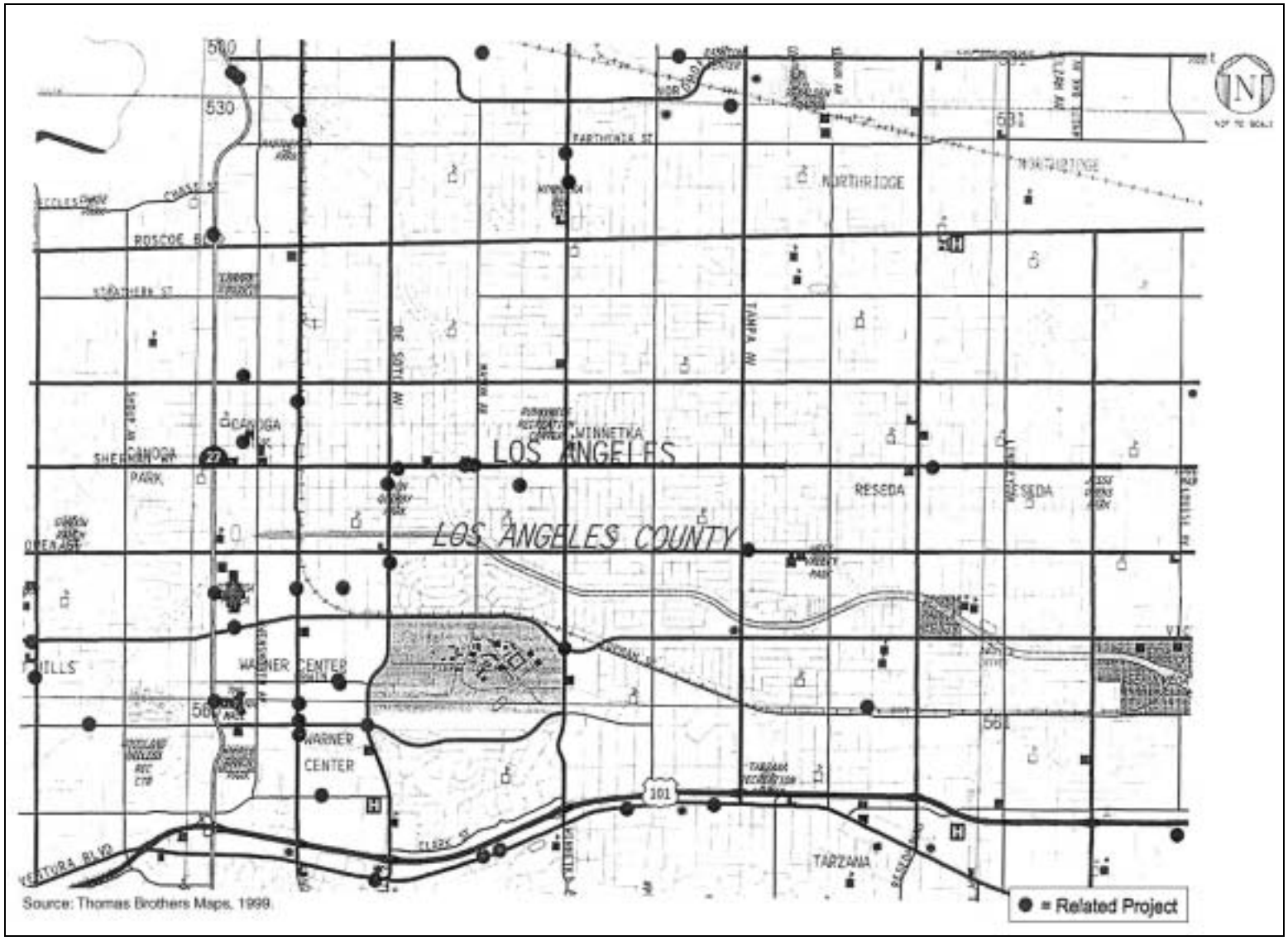
The background regional growth in traffic was estimated by adjusting the existing traffic volumes upwards using a growth factor. A factor of 1 percent per year was used in this analysis, based on general traffic volume growth factors suggested in the *1997 Congestion Management Program for Los Angeles County* (Los Angeles County Metropolitan Transportation Authority, November 1997) for the San Fernando Valley. Using this growth rate, the existing (year 2002) traffic volumes were adjusted upwards by 8 percent to reflect 8 years of regional growth from 2002 to 2010.

Traffic Generation of Cumulative Development Projects

Traffic expected to be generated by specific development projects within, or with the potential to affect, the study area was also considered. Information regarding future projects that are either under construction, planned, or proposed for development was obtained from several sources including the City of Los Angeles Department of City Planning and the City of Los Angeles Department of Transportation (LADOT). A total of 45 related projects were identified for inclusion in the analysis. The locations of these projects are illustrated on Figure 3-38.

Eleven of the known related projects are located within the boundaries of the Warner Center Specific Plan area (the area generally bounded by De Soto Avenue on the east, properties along the west side of Topanga Canyon Boulevard on the west, Vanowen Street on the north, and the Ventura Freeway on the south). In addition to the specific proposed development projects, overall anticipated growth in the adjacent Warner Center area through the year 2010 permitted by Phase I of the *Warner Center Specific Plan* (City of Los Angeles, as amended June 2001) was also incorporated into the cumulative base projections. The Warner Center Specific Plan permits growth to approximately 21.5 million square feet (MSF) of non-residential development within Warner Center in Phase I of the plan. This represents an increase of about 5.6 MSF from the estimated 2002 existing development level of about 15.9 MSF (including known projects). Residential growth of about 300 multi-family dwelling units is also anticipated. Information and methodologies from the *Transportation Technical Report for the Warner Center Specific Plan Transportation Improvement and Management Program Restudy and Supplemental Environmental Impact Report* (Kaku Associates, October 2000) were used to estimate future increases in traffic within Warner Center related to this growth on a traffic analysis zone basis, using zones developed as part of the Warner Center Specific Plan transportation technical report.

Figure 3-38: Related Project Locations



A net increase of about 94,100 daily, 4,535 AM peak hour, and 9,940 PM peak hour trips are projected throughout Warner Center by 2010 (including known development projects and projected growth). Supporting data for this analysis are included in Appendix E of the Traffic and Parking Study.

The 34 related projects outside of Warner Center and the estimated trip generation for each are listed in Table 3-35. Trip generation estimates for the related projects were either prepared using standard trip generation rates/equations contained in *Trip Generation, Sixth Edition* (Institute of Transportation Engineers [ITE], 1997) or were obtained from LADOT from various relevant traffic studies for specific projects. As shown in Table 3-35, the 34 related projects outside of Warner Center are projected to generate a combined total of approximately 41,900 daily trips, including about 3,475 and 3,905 trips during the weekday AM and PM peak hours, respectively.

Traffic Distribution

The geographic distribution of traffic generated by developments such as those included in the analysis is dependent on several factors. These factors include the type and density of the proposed land uses, the geographic distribution of the population from which employees and/or patrons of the proposed development are drawn, and the location of the project in relation to the surrounding street system. Trip distribution patterns for each related project were developed based on the above factors.

In addition, distribution data from the Warner Center travel demand model developed in support of the Warner Center Specific Plan restudy were used to indicate potential trip distribution patterns for projected growth in the Warner Center area. The trip distribution patterns in the Warner Center travel demand model were based on distribution patterns inherent in the Southern California Association of Governments' (SCAG's) year 2010 regional trip table data for trips generated in the Warner Center area (which, in turn, was a product of the regional gravity model run by SCAG).

Cumulative Base Traffic Volumes

Using the estimated trip generation and trip distribution patterns, traffic generated by the related projects was assigned to the street network and added to the ambient background increase of 8 percent. The resulting traffic volumes, representing cumulative base conditions without the project, are presented in Tables B-3 and B-4 in Appendix B of the Traffic and Parking Study (see Appendix F of this EIR).

Table 3-35: Trip Generation Estimates for Related Projects

Project Name	Project Description	Project Location	Daily Trips	AM Peak Hour Trips			PM Peak Hour Trips			Source
				Inbound	Outbound	Total	Inbound	Outbound	Total	
Office Development	1,322,425 sq ft office development	21261 Burbank Bl	[6]							
Mod. to CPC 99-0055	14,185 sq ft	21261 Burbank Bl	[6]							
Shopping Center	59,194 sq ft	19401 Business Center Dr	2,884	31	20	51	123	133	256	[1]
Restaurant (demo/addition)	Remodel convenience store. Add 2,928 sq ft of fast-food restaurants.	5960 Canoga Av	[6]							
Residential Apartment Complex	Demolish existing office building. Construct 223,857 sq ft, 5-story, 136 unit residential apartment complex with 234 parking spaces.	6150 Canoga Av	[6]							
Mixed-use Center	119 units apartment complex; 3,500 sq ft learning center; 15,000 sq ft gym; future charter school (K-5th grade) on 238,095 sq ft lot	7505 Canoga Av	2,546	226	202	428	108	67	175	[2]
144K Canoga Av Industrial Facility	General Light Industrial	8907 Canoga Av	1,008	110	23	133	30	112	142	[2]
New Office Space (retail, storage, office)	Demolish 36,000 sq ft movie theatre, convert existing bank (5,200 sq ft) into office, add 107,300 sq ft of offices. Total of 112,500 sq ft. Net non-residential development of 71,300 sq ft.	6020 Canoga Av (also 6030 & 6040 Canoga and 2130 Oxnard St)	[6]							
Lucy's Laundromat w/ McDonald's	7,912 sq ft mini mall with 3,413 sq ft fast food	6750 De Soto Av	1,875	107	68	175	65	65	130	[2]
Fast Food and Convenience Market	5,625 sq ft fast food and 5,625 sq ft convenience market	7117 De Soto Av	3,471	165	159	324	125	120	245	[1]
Bella Vista	315 unit apartment community on 21.48 acre site. Includes a 4-story bldg (125 units) and a 3-story bldg (190 units and recreation center).	6000-6200 De Soto Av	2,088	26	135	161	131	64	195	[3]
Addition of Storage Area	Total development of 22,000 sq ft. Net non-residential development of 1,364 sq ft.	21122 Erwin St	[6]							
Office Development	Total development of 74,800 sq ft. Net non-residential development of 9,800 sq ft.	21135 Erwin St	[6]							
Addition of 3,028 sq ft	3,028 sq ft	21135 Erwin St	[6]							

Table 3-35: Trip Generation Estimates for Related Projects

Project Name	Project Description	Project Location	Daily Trips	AM Peak Hour Trips			PM Peak Hour Trips			Source
				Inbound	Outbound	Total	Inbound	Outbound	Total	
Preschool/Daycare/Private School	Expand existing preschool/daycare from 70 to 270 students (preschool/daycare/K-4) w/42 parking spaces	6221 Fallbrook Av	783	91	61	152	44	72	116	[2]
Apartment Complex	Residence to Apartments	7311 Jordan Av	373	2	8	10	11	6	17	[2]
Single Family Development	40 single family homes	7633 Jordan Av	306	6	18	24	20	12	32	[2]
Westmark School	Expand school from 250 to 400 students, and from 75 to 134 faculty	5461 Louise Av	525	83	55	138	24	39	63	[2]
Industrial Site Subdivision	Subdivide lot into 4 parcels. Construct 3 buildings.	9120 Mason Av	0	0	0	0	0	0	0	[2]
West Hills Oncology Center	43,600 sq ft additions to hospital	7300 Medical Center Dr	1,418	76	19	95	39	105	144	[1]
Spectrum Health Club	Reconsideration for Reduced Parking	19601 Nordhoff St	350	6	8	14	123	79	202	[2]
Proposed Preschool and Day Care Facility	Church/Residence to Preschool/Day Care	7101 Oso Av	465	43	38	81	40	45	85	[2]
Private School Expansion	Expand existing private school from 200 to 385 students. Construct 8,400 sq ft of new classroom/bldg space. 80 parking spaces	22555 Oxnard St	662	102	68	170	30	48	78	[2]
Walgreen Pharmacy	Demolish existing building and skating rink. Construct 15,035 sq ft pharmacy with drive through window.	18430 Sherman Way	617	23	17	40	42	43	85	[2]
Pharmacy	15,120 sq ft pharmacy with drive through	20505 Sherman Way	800	14	10	24	46	48	94	[1]
Proposed Market and Drugstore	Convert church to retail/commercial shopping center.	20553 Sherman Way	5,136	62	42	104	240	240	480	[2]
EZ Lube	1,834 sq ft auto lubrication center	20860 Sherman Way (west)	2,400	12	6	18	17	14	31	[2]
Restaurant with Arcade	58,000 sq ft theme restaurant	6100 Topanga Canyon Bl	[6]							
Lucky's/Sav-On Combination Store	New Lucky's and Sav-On Store	8335 Topanga Canyon Bl	1,636	22	14	36	77	77	154	[2]
Apartment Complex	266 unit market rate apartment complex	9012 Topanga Canyon Bl	1,571	19	102	121	101	50	151	[2]
Fast Food Restaurant	2,816 sq ft	9045 Topanga Canyon Bl	944	43	28	71	22	21	43	[1]
Replacement of 01-8991 with New Addition of 738,000 sq ft	738,000 sq ft	6600 Topanga Canyon Bl	[6]							
Proposed Elementary School / Daycare	Convert daycare to elementary school / daycare	18719 Topham St	303	30	23	53	26	30	56	[2]

Table 3-35: Trip Generation Estimates for Related Projects

Project Name	Project Description	Project Location	Daily Trips	AM Peak Hour Trips			PM Peak Hour Trips			Source
				Inbound	Outbound	Total	Inbound	Outbound	Total	
Proposed Coffee House with Drive Through		19255 Vanowen St	512	27	25	52	18	17	35	[2]
Carl's Jr. Restaurant	Fast-food restaurant with drive through	19414 Ventura Bl	2,166	87	83	170	58	54	112	[2]
Chuck E. Cheese Restaurant	Convert former shopping center into 13,000 sq ft fast food restaurant	19838 Ventura Bl	1,193	58	53	111	56	37	93	[2]
Sunrise Assisted Living	85 units for senior citizens	20461 Ventura Bl	296	4	2	6	5	3	8	[4]
Auto Dealership with Repair Service	Construct 45,000 sq ft auto dealership with repair service. Construct 96,000 sq ft vehicle inventory lot and parking.	20539 Ventura Bl	0	0	0	0	0	0	0	[2]
McDonald's Restaurant	3,500 sq ft fast food restaurant with drive through	20952 Ventura Bl	868	45	43	88	30	28	58	[1]
Pride Center	181,082 sq ft shopping center	22816 Victory Bl	1,066	14	9	23	48	53	101	[2]
Retail, Auto Service	0 sq ft	21851 Victory Bl	[6]							
San Fernando Valley East-West Transit Corridor Project - Reseda Station	400 space park-n-ride lot plus transit station	Victory Bl at Reseda	1,328	160	40	200	160	40	200	[5]
San Fernando Valley East-West Transit Corridor Project - Pierce College Station	350 space park-n-ride lot plus transit station	Victory Bl at Winnetka Av on Pierce College Campus	848	116	11	127	116	11	127	[5]
Our Redeemer Lutheran Church	Church expansion	8520 Winnetka Av	742	76	65	141	29	24	53	[2]
Child Care Homes	CUP to operate child care center in single homes	8663 Winnetka Av	749	72	64	136	68	76	144	[2]
RELATED PROJECTS TOTAL (not including projects in Warner Center)			**41,929**	**1,958**	**1,519**	**3,477**	**2,072**	**1,833**	**3,905**	

Notes:
[1] Trip generation data obtained from LADOT related project database. LADOT data did not include passby reduction for retail trips and a reduction was added.
[2] Trip generation obtained from LADOT related project database. Passby credit either included in LADOT data, not applicable to given land use, or insufficient data was available to determine if passby credit had been included and passby credit was not added.
[3] Trip generation based on 6th Edition ITE Trip Generation Code 220 (Apartment).
[4] Trip generation based on 6th Edition ITE Trip Generation Code 253 (Elderly Housing- Attached).
[5] Trip generation based on San Fernando Valley East-West Corridor Draft Environmental Impact Report, May 2001.
[6] Project located within the Warner Center Specific Plan area. Future traffic growth for all development anticipated in the Warner Center Specific Plan through year 2010 estimated separately (see text and Appendix F).

Source: Kaku Associates, Inc., 2002.

g. Baseline Transportation System Improvements

Information was collected regarding committed transportation system improvements programmed for implementation within the study area and timeframe. These include:

- Canoga Avenue/Victory Boulevard - Widen Victory Boulevard to provide a second left-turn lane on the westbound Victory approach. Modify signal as appropriate. (Condition of approval of the Lennar Partners development project in Warner Center.)

- De Soto Avenue/Victory Boulevard - Improve Victory Boulevard to provide a second left-turn lane on the westbound Victory approach. Modify signal as appropriate. (Condition of approval of the Lennar Partners development project in Warner Center.)

- De Soto Avenue Bridge Over Los Angeles River - Widen bridge to provide six through traffic lanes. (Funded in City of Los Angeles Capital Improvement Program.)

- ATCS System - Implement the Adaptive Traffic Control System (ATCS) at 42 intersections throughout the Warner Center area. (Condition of approval of Warner Ridge and Lennar Partners development projects.) LADOT estimates that the ATCS system provides an additional capacity increase of about 3 percent (0.03 V/C adjustment) beyond the 7 percent increase related to the precursor ATSAC system. It includes the following 10 study intersections:

    - De Soto Avenue & Vanowen Street
    - Topanga Canyon Boulevard & Victory Boulevard
    - Canoga Avenue & Victory Boulevard
    - De Soto Avenue & Victory Boulevard
    - De Soto Avenue & El Rancho Drive
    - De Soto Avenue & Oxnard Street
    - De Soto Avenue & Burbank Boulevard west
    - De Soto Avenue & US 101 westbound ramps
    - De Soto Avenue & US 101 eastbound ramps
    - De Soto Avenue & Ventura Boulevard

- San Fernando Valley East-West Transit Corridor Bus Rapid Transit - Implement the Bus Rapid Transit (BRT) project between the North Hollywood Metro Red Line station and the Warner Center Transit Hub along the former Southern Pacific Burbank-Chandler branch right-of-way and Victory Boulevard. In the vicinity of Pierce College, the BRT alignment would run within the former railroad right-of-way along the north side of Victory Boulevard across from the campus. Within the study area, stations are proposed at the Warner Center Transit Hub, De Soto Avenue, Winnetka Avenue, Tampa Avenue, and Reseda Boulevard. Park-and-ride lots are proposed at the Winnetka Avenue and Reseda Boulevard stations. (To be funded and implemented by the MTA.)

- Warner Center Transit Hub - Construct a transit hub along Owensmouth Avenue between Erwin Street and Oxnard Street.

These improvements were assumed to be in place as part of the cumulative base traffic forecasts in this study.

The Transportation Improvement and Management Program (TIMP) set forth in the Warner Center Specific Plan also includes additional future improvements at certain of the study intersections. The Specific Plan also requires that developers within Warner Center pay a Traffic Impact Assessment (TIA) fee to help pay for these improvements. However, since the TIA fee by design does not fully fund these improvements (since it funds only the portion of the improvements that would be needed as a result of Warner Center future development), these improvements have not been assumed as a baseline condition in this study. Instead, they are considered as applicable later in the mitigation section.

h. Project Traffic Projections

Project Trip Generation

Future traffic volumes were projected for the Pierce College campus for buildout (year 2010) of the campus Master Plan. The methodology for development of the volume projections included the following:

- Academic Growth (Students, Faculty/Staff and Visitors) - The Master Plan envisions academic growth to 16,423 full-time equivalent (FTE) students by the 2010-2011 academic year. Growth in trips generated by students, faculty/staff, and campus visitors related to this projected academic growth were estimated by applying empirical trip generation rates derived from existing Pierce College conditions.

  Empirical trip generation rates per FTE were derived through comparison of the total number of existing vehicles entering and exiting the campus to the existing (year 2001-2002) estimated student FTE. The rates were adjusted upward to incorporate those students who currently park on-street on either Victory Boulevard or Winnetka Avenue who were not captured in the in/out traffic counts. Based on this analysis, it is estimated that, on average, the number of vehicle trips currently generated per FTE on the Pierce College campus is as follows:

Vehicle Trips Per Student FTE		
Daily	AM Peak Hour	PM Peak Hour
2.00	0.18 (73% in/27% out)	0.14 (60% in/40% out)

These trip generation rates were applied to the projected future FTE to project the increase in future trips generated by academic purposes through the year 2010. The future growth in FTE to which the rates were applied was adjusted to take out students expected to live on-campus in the proposed student housing partnership so that the trips represent "commuter" student FTE only, since trips generated by the student housing partnership were estimated separately.

Table 3-36 presents the results of this analysis, including both the derivation of the empirical trip rates and the projection of future trip increases. As can be seen, a net increase of approximately 4,460 daily trips is projected, including about 400 trips during the AM peak hour and 310 trips during the PM peak hour.

- Other Bond Projects - As shown on Table 3-37, potential future trip generation was explicitly estimated for two bond projects not directly related to enrollment growth:
    - Child Development Center - The child development center is proposed to accommodate 200 children, replacing an existing facility accommodating 60 children. Trips were generated for the net increase in size using trip generation rates from the ITE *Trip Generation, Sixth Edition*. Net new trips external to the campus were then estimated by reducing the projected trips by 100%, assuming that all of the children would be children of Pierce students, faculty, or staff already on campus. Thus, as shown on Table 3-37, it is estimated that the child development center would not generate a net increase in trips external to the campus.
    - Equestrian Exhibition/Events Center (Public Events) - The equestrian exhibition/events center is proposed to include a 2,500 seat arena as well as supporting barns, stables, rings, and other facilities. During the day on weekdays, activities at the equestrian center would be related to the academic mission of the school, and are therefore not expected to generate additional trips beyond those already incorporated into the academic growth estimates.
    - However, on weeknights and weekends, the equestrian center may host events that are open to the public. For weekday trip generation purposes, it was assumed that public events would not generate any trips during the AM peak hour. Trip generation of public events during the weekday PM peak hour was estimated assuming that a weekday evening event would attract a maximum of 300 spectators, with 25% of the spectators arriving in vehicles during the PM peak commute hour at an average vehicle occupancy of 3 persons per vehicle. In addition, as many as 100 participant vehicles may be present, and it was also assumed that 25% of these vehicles would arrive during the PM peak commute hour. As indicated on Table 3-37, with these assumptions, it is estimated that a weekday evening public event at the equestrian center could generate approximately 400 daily trips and about 50 trips during the PM peak hour.
- Public/Private Partnership Projects - Potential future trip generation was also estimated for the public/private partnership projects described in the campus Master Plan. The following assumptions were made regarding these projects:
    - Agriculture Partnerships - The Agriculture Education Experiences & Programs (AEEP) component was assumed to generate two school buses plus four accompanying private vehicles at any one time, with one morning session arriving during the AM peak commute hour and one afternoon session departing during the PM peak commute hour. Trips were estimated for the proposed 5,000-square-foot produce stand using rates from the ITE *Trip Generation, Sixth Edition* with a 50 percent reduction for pass-by trips.

Table 3-36: Pierce College Facilities Master Plan Trip Generation Estimates: Academic Growth

	Student FTE	Daily	AM Peak Hour [b]			PM Peak Hour [b]		
			In	Out	Total	In	Out	Total
Existing Pierce College In/Out Trips (February 2002)								
Mason Street Driveway			747	282	1,029	412	270	682
Lot 7 Driveway on Victory Boulevard			277	137	414	148	108	256
Calvert Street Driveway			561	200	761	324	274	598
El Rancho Drive Driveway			129	24	153	172	40	212
Total Driveway Trips		25,850	1,714	643	2,357	1,056	692	1,748
Estimate for On-Street Parkers [c]		1,290	86	32	118	53	35	88
Estimated Total Existing Trips		27,140	1,800	675	2,475	1,109	727	1,836
Empirical Trip Rates (2001-2002)								
FTE (2001-2002) [d]	13,591							
Trip Rate per FTE		2.00	73%	27%	0.18	60%	40%	0.14
Estimated Future FTE (Buildout)								
FTE (Buildout) [d]	16,423							
Non-Commuter FTE [e]	(600)							
Commuter FTE	15,823							
Net Trip Increase Over 2001-2002								
Net Increase in Commuter FTE	2,232							
Net Trip Increase		4,460	293	109	402	187	125	312

Notes:

a. Estimated trips are academic-related only, and do not include non-academic bond projects or public/private partnership projects. Trip estimates are based on February 2002 manual in/out cordon counts and projected FTE growth.

b. AM peak hour of existing in/out trips = 8:45-9:45 AM; PM peak hour of existing in/out trips = 5:00-6:00 PM.

c. Estimated existing trips generated by Pierce College students parked on surrounding street frontages (Victory Boulevard and Winnetka Avenue). Assumed to be 5% addition to driveway trips, based on percent of existing peak parking demands that are on-street versus on-campus.

d. Source: Pierce College, June 2002.

e. Trips for 600 on-campus residents in 200 proposed student housing units (assumes 100 2-bed units and 100 4-bed units) calculated separately as Student Housing Partnership.

Source: Kaku Associates, 2002.

Table 3-37: Pierce College Facilities Master Plan Trip Generation Estimates: Other Bond Projects and Public/Private Partnership Projects

No.	Description	Size	Trip Generation Rates									Estimated Trips						
			Daily	AM Peak Hour			PM Peak Hour			Trips Per Unit	Source [j]	Daily	AM Peak Hour			PM Peak Hour		
				Rate	% In	% Out	Rate	% In	% Out				In	Out	Total	In	Out	Total
Other Bond Projects																		
1.	Child Development Center																	
	Future	200 children	4.52	0.81	53%	47%	0.86	47%	53%	trips/child	ITE 565	900	86	76	162	81	91	172
	Existing	-60 children	4.52	0.81	53%	47%	0.86	47%	53%	trips/child	ITE 565	(270)	(26)	(23)	(49)	(24)	(28)	(52)
	Net increase	140 children										630	60	53	113	57	63	120
	% Pierce students/faculty/staff [a]		100%	100%			100%				assumed	(630)	(60)	(53)	(113)	(57)	(63)	(120)
	Subtotal: net new external trips											0	0	0	0	0	0	0
2.	Equestrian Education Center) [b]																	
	Spectators (public event)	300 spectators	0.67	0.00	0%	0%	0.08	100%	0%	trips/seat	assumed	200	0	0	0	25	0	25
	Participants/staff (public event)	100 stables	200	0	0%	0%	25	0%	0%	trips	assumed	200	0	0	0	25	0	25
	Subtotal											400	0	0	0	50	0	50
	Subtotal: Other Bond Projects											400	0	0	0	50	0	50
Public/Private Partnership Projects																		
1.	Agricultural Education Center Partnership	25 acres																
	AEEP [c]		24	6	100%	0%	6	0%	100%	trips	assumed	20	6	0	6	0	6	6
	Produce Stand [d]	5,000 sf	111.5	3.25	61%	39%	11.51	51%	49%	trips/ksf	ITE 850	560	10	6	16	30	28	58
	produce stand trip reduction: pass-by		50%	50%			50%					(280)	(5)	(3)	(8)	(15)	(14)	(29)
	Subtotal: net new external trips											300	11	3	14	15	20	35
2.	Science Partnership Building [e]	100,000 sf	8.11	1.24	83%	17%	1.08	15%	85%	trips/ksf	ITE 760	810	103	21	124	16	92	108
3.	Horticulture Partnership [f]	2 classrooms	160	40	100%	0%	40	0%	100%	trips	assumed	160	40	0	40	0	40	40
4.	Viticulture Partnership [g]	n/a										*	*	*	*	*	*	*
5.	Student Housing Partnership [h]	200 du	6.63	0.51	16%	84%	0.62	67%	33%	trips/du	ITE 220	1,330	16	86	102	83	41	124
	% of trips internal to campus		67%	67%			67%				assumed	(890)	(11)	(57)	(68)	(55)	(27)	(82)
	Subtotal: net new external trips											440	5	29	34	28	14	42

Table 3-37: Pierce College Facilities Master Plan Trip Generation Estimates: Other Bond Projects and Public/Private Partnership Projects

No.	Description	Size	Trip Generation Rates									Estimated Trips						
			Daily	AM Peak Hour			PM Peak Hour			Trips Per Unit	Source [j]	Daily	AM Peak Hour			PM Peak Hour		
				Rate	% In	% Out	Rate	% In	% Out				In	Out	Total	In	Out	Total
6.	Lifelong Learning Residences Partnership [i]	250 du	4	0.20	40%	60%	0.28	60%	40%	trips/du	SANDAG	1,000	20	30	50	42	28	70
7.	Botanical Gardens Partnership [g]	n/a										*	*	*	*	*	*	*
	Subtotal: Public/Private Partnership Projects											2,710	179	83	262	101	194	295

Notes:

* Negligible new trips

a. Source: Pierce College, June 2002.

b. Assumes maximum weeknight public event of 300 spectators, 3.0 spectators per vehicle, 25% arrive during PM commute peak hour. 100 participant/staff vehicles, 25% arrive during PM commute peak hour.

c. Agriculture Education Experiences & Programs. Assumes 2 school buses at one time plus 4 accompanying private cars, 1 morning session arriving during AM commute peak hour, 1 afternoon session departing during PM commute peak hour. Employees would be Pierce students.

d. Trips for produce stand estimated using ITE supermarket rates, with assumed pass-by reduction. No trip reduction taken for prior use (~1,500 sf) since not in use at time counts were conducted.

e. Research and development facility. To be conservative, no trip reduction credit taken for potential internal overlap with Pierce students, faculty, or staff.

f. Horticulture Partnership project description: 2 classrooms with capacity for 25 to 30 students each, 40 to 50 persons present at a given time, classes 8 AM to 5 PM weekdays, some portion may share rental cars. Assumes 1.25 AVR, twice daily turnover.

g. Viticulture partnership and botanical gardens partnership not expected to generate significant activity on their own. Would be for education purposes and possible use by Horticulture Partnership.

h. ITE apartment trip generation rate, reduced since most student housing trips are assumed to remain on campus (as either vehicle or walking trips).

i. Residents proposed to be active adults >55 years of age; assumed to generate trips as an active retirement community. Assumes residents do not include Pierce students, faculty, or staff.

j. ITE = Institute of Transportation Engineers, Trip Generation, 6th Edition, 1997. SANDAG = San Diego Association of Governments, Traffic Generators, July 1998.

- Science Partnership Building - The Science Partnership was assumed to consist of 100,000 square feet of research and development space. Trip generation rates from the ITE *Trip Generation, Sixth Edition* were used to estimate trips for this proposed development. To be conservative, no trip reduction credit was taken for potential internal campus overlaps between Science Partnership trips and Pierce students, faculty, or staff.
- Horticulture Partnership - The Horticulture Partnership was assumed to consist of two classrooms with a capacity of 25 to 30 students each, with classes between 8 AM and 5 PM on weekdays, 40 to 50 persons present at any given time, and some portion sharing rental cars. Trip generation was estimated assuming an average vehicle ridership (AVR) of 1.25 persons per vehicle with twice daily turnover.
- Viticulture Partnership - The Viticulture Partnership is not expected to generate significant activity on its own, but rather would support general educational purposes and would also possibly be used by the Horticulture Partnership.
- Student Housing Partnership - The Student Housing Partnership was assumed to consist of 200 housing units accommodating 600 students. Trips were estimated using the apartment rate from the ITE *Trip Generation, Sixth Edition*, and were reduced 67 percent since most student housing trips are expected to remain on campus (as either internal walking or vehicle trips).
- Lifelong Learning Residences Partnership - The Lifelong Learning Residences partnership is assumed to consist of 250 dwelling units for active adults over 55 years of age. Trips were estimated using the active retirement community rate from the San Diego Association of Governments' (SANDAG's) *Traffic Generators*. To be conservative, it was assumed that none of the residents would be Pierce students, faculty, or staff already on campus.

Botanical Gardens Partnership - The Botanical Gardens partnership is not expected to generate significant activity on its own, but rather would support general educational purposes and would also possibly be used by the Horticulture Partnership.

Table 3-37 presents the trip generation rates and estimated trips for the public/private partnership projects. As indicated on the table, the 7 public/private partnership projects are estimated to generate a combined total of approximately 2,710 daily trips external to the campus, including about 260 trips during the AM peak hour and about 295 trips during the PM peak hour.

Table 3-38 summarizes the estimated incremental increase in external trips generated on the Pierce College campus through the year 2010 related to the future campus academic population growth, the proposed public/private partnership projects, and the other bond projects combined. As can be seen, a total net increase of about 7,570 daily, 665 AM peak hour, and 655 PM peak hour external trips are projected.

Table 3-38: Pierce College Facilities Master Plan Trip Generation Estimates: Academic Growth & Other Bond Projects

Master Plan Element	Daily	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Existing Trips [a]	27,140	1,800	675	2,475	1,109	727	1,836
Academic Growth [a]	4,460	293	109	402	187	125	312
Other Bond Projects [b]	400	0	0	0	50	0	50
Public/Private Partnership Projects [b]	2,710	179	83	262	101	194	295
Total Net Increase in Trips	7,570	472	192	664	338	319	657
Total Future Trips	34,710	2,272	867	3,139	1,447	1,046	2,493

Notes:
a. From Table 3-36.
b. From Table 3-37.

Source: Kaku Associates, Inc., 2002.

Project Traffic Distribution and Assignment

A trip distribution pattern was developed for the Pierce College campus based on inspection of two data sources: zip code data of existing Pierce College student residences (supplied by Pierce College for fall 2001); and existing volumes and turning movements at the campus access points (Brahma Drive, Mason Street, Lot 7 driveway, and El Rancho Drive) as an indication of both the existing split of traffic accessing the campus between the various access points and the existing direction of travel of these trips at the access points.

Table 3-39 below summarizes the residence locations of Pierce College students, based on aggregation of the zip code data:

Table 3-39: Distribution of Zip Codes of Residence Pierce College Students – Fall 2001

Area	Frequency	Percent
West San Fernando Valley	14,033	78.2%
East San Fernando Valley	2,102	11.7%
Simi/Moorpark/Thousand Oaks	504	2.8%
Ventura/Oxnard	53	0.3%
Santa Clarita	134	0.7%
Los Angeles	458	2.5%
Los Angeles Westside	105	0.6%
Burbank/Sunland	224	1.2%
Pasadena	23	0.1%
Palmdale/Lancaster	99	0.6%
Other	226	1.3%
Total	17,951	100.0%

Source: Pierce College, April 2002.

Taking these data into consideration along with the direction of travel at the campus access points, a trip distribution pattern was developed for project trips as illustrated on Figure 6 of Appendix F of this Draft EIR.

The estimated project-generated future trips were assigned to the Brahma Drive and Mason Street access points in general proportion to the existing allocation of trips to these two primary campus points of entry. However, since Parking Lot 7 would be reduced in size in the future (see the future campus parking discussion in this section), no additional future trips were assigned to the Lot 7 driveway onto Victory Boulevard. Rather, since the Master Plan calls for the construction of large new parking lots in the vicinity of the proposed Equestrian Education Center along El Rancho Drive, a higher percentage of trips was assigned to the El Rancho Drive access onto De Soto Avenue under future conditions than under existing conditions to reflect this internal reallocation of parking supply within the campus.

Tables B-5 and B-6 in Appendix B of the Traffic and Parking Study (see Appendix F of this EIR) present the net incremental traffic generated by the buildout of the proposed Master Plan (including academic growth and public/private partnership projects) at the study intersections.

i. Cumulative Plus Project Traffic Projections

The project-generated traffic volumes were then added to the cumulative base traffic projections to yield the cumulative plus project traffic forecasts. The resulting projected cumulative plus project peak hour traffic volumes are presented in Tables B-7 and B-8 in Appendix B of the Traffic and Parking Study (see Appendix F of this EIR).

3-16.2 Environmental Impacts

This section presents an analysis of the potential impacts of the traffic generated by buildout of the Pierce College Facilities Master Plan project on the local street system. The analysis compares the projected levels of service at each study location under cumulative conditions both with and without the project to determine potential impacts, using significance criteria established by the City of Los Angeles.

a. Significance Criteria

The City of Los Angeles Department of Transportation has established threshold criteria that determine if a project has a significant traffic impact at a specific intersection. According to the LADOT criteria, a project impact would be considered significant if the following conditions were met:

Intersection Condition With Project Traffic		Project-Related Increase in V/C Ratio
LOS	V/C Ratio	
C	> 0.70 - 0.80	Equal to or greater than 0.04
D	> 0.80 - 0.90	Equal to or greater than 0.02
E, F	> 0.90	Equal to or greater than 0.01

b. Impacts Discussion

Cumulative Base Intersection Operating Conditions

This section presents an analysis of potential future traffic conditions under year 2010 cumulative base conditions if no growth were to occur on the Pierce College campus. The cumulative base traffic volumes (see above) were analyzed using the level of service methodologies previously described to forecast cumulative base peak hour levels of service at the study locations.

The first columns in Table 3-40 summarize the results of this analysis. As can be seen, the following 23 study intersections are projected to operate at LOS E or F during one or both peak hours under year 2010 cumulative base conditions:

- De Soto Avenue & Saticoy Street
- Mason Avenue & Saticoy Street
- Winnetka Avenue & Saticoy Street
- De Soto Avenue & Sherman Way
- Winnetka Avenue & Sherman Way
- De Soto Avenue & Vanowen Street
- Mason Avenue & Vanowen Street
- Winnetka Avenue & Vanowen Street
- Shoup Avenue & Victory Boulevard
- Topanga Canyon Boulevard & Victory Boulevard
- Canoga Avenue & Victory Boulevard
- De Soto Avenue & Victory Boulevard
- Mason Avenue & Victory Boulevard
- Winnetka Avenue & Victory Boulevard
- Corbin Avenue & Victory Boulevard
- Tampa Avenue & Victory Boulevard
- Wilbur Avenue & Victory Boulevard
- Reseda Avenue & Victory Boulevard
- De Soto Avenue & Oxnard Street
- Winnetka Avenue & Oxnard Street
- De Soto Avenue & US 101 westbound ramps
- Winnetka Avenue & US 101 eastbound ramps
- Winnetka Avenue & Ventura Boulevard

Table 3-40: Year 2010 Intersection Level of Service Analysis

	Intersection	Peak Hour	Cumulative Base		Cumulative Project		Project Increase in V/C	Significant Project Impact	With Project Mitigation		Project Increase in V/C	Residual Impacts	With Alternative Mitigation		Project Increase in V/C	Residual Impacts
			V/C	LOS	V/C	LOS			V/C	LOS			V/C	LOS		
1	De Soto Av & Saticoy St	AM	1.101	F	1.106	F	0.005	NO	[a]	[a]						
		PM	1.171	F	1.176	F	0.005	NO	[a]	[a]						
2	Mason Av & Saticoy St	AM	1.042	F	1.055	F	0.013	**YES**	1.051	F	0.009	NO	0.951	E	-0.091	NO
		PM	0.994	E	1.008	F	0.014	**YES**	0.967	E	-0.027	NO	0.904	E	-0.090	NO
3	Winnetka Av & Saticoy St	AM	1.251	F	1.258	F	0.007	NO	[a]	[a]						
		PM	1.287	F	1.296	F	0.009	NO	[a]	[a]						
*4	De Soto Av & Sherman Way	AM	1.066	F	1.072	F	0.006	NO	[a]	[a]						
		PM	1.263	F	1.268	F	0.005	NO	[a]	[a]						
*5	Mason Av & Sherman Way	AM	0.867	D	0.886	D	0.019	NO	0.880	D	0.013	NO				
		PM	0.875	D	0.899	D	0.024	**YES**	0.894	D	0.019	NO				
*6	Winnetka Av & Sherman Way	AM	1.056	F	1.067	F	0.011	**YES**	1.064	F	0.008	NO				
		PM	1.088	F	1.096	F	0.008	NO	1.095	F	0.007	NO				
**7	De Soto Av & Vanowen St	AM	1.107	F	1.111	F	0.004	NO	[a]	[a]						
		PM	1.233	F	1.237	F	0.004	NO	[a]	[a]						
8	Mason Av & Vanowen St	AM	1.090	F	1.116	F	0.026	**YES**	1.007	F	-0.083	NO				
		PM	1.004	F	1.023	F	0.019	**YES**	1.019	E	0.085	**NO**				
9	Winnetka Av & Vanowen St	AM	1.295	F	1.308	F	0.013	**YES**	1.304	F	0.009	NO	1.204	F	-0.091	NO
		PM	1.376	F	1.389	F	0.013	**YES**	1.347	F	-0.029	NO	1.287	F	-0.089	NO
*10	Shoup Av & Victory Blvd	AM	1.080	F	1.089	F	0.009	NO	[a]	[a]						
		PM	0.975	E	0.984	E	0.009	NO	[a]	[a]						
**11	Topanga Cyn Blvd & Victory Blvd	AM	1.041	F	1.051	F	0.010	**YES**	1.048	F	0.007	NO				
		PM	1.224	F	1.240	F	0.016	**YES**	1.212	F	-0.012	NO				
**12	Canoga Av & Victory Blvd	AM	0.921	E	0.935	E	0.014	**YES**	0.866	D	-0.055	NO				
		PM	1.285	F	1.303	F	0.018	**YES**	1.237	F	-0.048	NO				
**13	De Soto Av & Victory Blvd	AM	1.118	F	1.144	F	0.026	**YES**	1.089	F	-0.029	NO				
		PM	1.247	F	1.261	F	0.014	**YES**	1.093	F	-0.154	NO				
*14	Mason Av & Victory Blvd	AM	0.937	E	0.990	E	0.053	**YES**	0.901	E	-0.036	NO				
		PM	0.847	D	0.913	E	0.066	**YES**	0.854	D	0.007	NO				
*15	Winnetka Av & Victory Blvd	AM	1.270	F	1.338	F	0.068	**YES**	1.248	F	-0.022	NO				
		PM	1.253	F	1.289	F	0.036	**YES**	1.223	F	-0.030	NO				
*16	Corbin Av & Victory Blvd	AM	1.151	F	1.170	F	0.019	**YES**	1.107	F	-0.044	NO	1.133	F	-0.018	NO
		PM	1.144	F	1.153	F	0.009	NO	1.151	F	0.007	NO	1.121	F	-0.023	NO
*17	Tampa Av & Victory Blvd	AM	1.286	F	1.302	F	0.016	**YES**	1.205	F	-0.081	NO	1.267	F	-0.019	NO
		PM	1.288	F	1.295	F	0.007	NO	1.293	F	0.005	NO	1.263	F	-0.025	NO

Table 3-40: Year 2010 Intersection Level of Service Analysis

	Intersection	Peak Hour	Cumulative Base		Cumulative Project		Project Increase in V/C	Significant Project Impact	With Project Mitigation		Project Increase in V/C	Residual Impacts	With Alternative Mitigation		Project Increase in V/C	Residual Impacts
			V/C	LOS	V/C	LOS			V/C	LOS			V/C	LOS		
*18	Wilbur Av & Victory Blvd	AM	1.143	F	1.151	F	0.008	NO	[a]	[a]						
		PM	1.211	F	1.217	F	0.006	NO	[a]	[a]						
*19	Reseda Blvd & Victory Blvd	AM	1.105	F	1.114	F	0.009	NO	[a]	[a]						
		PM	1.149	F	1.155	F	0.006	NO	[a]	[a]						
**20	De Soto Av & El Rancho Dr	AM	0.515	A	0.549	A	0.034	NO	0.523	A	0.008	NO				
		PM	0.624	B	0.711	C	0.087	**YES**	0.667	B	0.043	NO				
*21	Winnetka Av & Calvert St	AM	0.891	D	0.969	E	0.078	**YES**	0.865	D	-0.026	NO				
		PM	0.667	B	0.697	B	0.030	NO	0.690	B	0.023	NO				
**22	De Soto Av & Oxnard St	AM	0.901	E	0.909	E	0.008	NO	[a]	[a]						
		PM	0.879	D	0.891	D	0.012	NO	[a]	[a]						
*23	Winnetka Av & Oxnard St	AM	1.097	F	1.117	F	0.020	**YES**	1.081	F	-0.016	**NO**				
		PM	0.884	D	0.913	E	0.029	**YES**	0.875	E	-0.009	**NO**				
**24	De Soto Av & Burbank Blvd West	AM	0.716	C	0.723	C	0.007	NO	[a]	[a]						
		PM	0.737	C	0.749	C	0.012	NO	[a]	[a]						
**25	De Soto Av & US101 WB Ramps	AM	0.948	E	0.969	E	0.021	**YES**	0.840	D	-0.108	NO				
		PM	0.865	D	0.884	D	0.019	NO	0.783	C	-0.082	NO				
**26	De Soto Av & US101 EB Ramps	AM	0.631	B	0.647	B	0.016	NO	0.642	B	0.011	NO				
		PM	0.885	D	0.901	E	0.016	**YES**	0.897	D	0.012	NO				
**27	De Soto Av & Ventura Blvd	AM	0.763	C	0.769	C	0.006	NO	[a]	[a]						
		PM	0.885	D	0.890	D	0.005	NO	[a]	[a]						
*28	Winnetka Av & US101 WB Ramps	AM	0.696	B	0.732	C	0.036	NO	0.722	C	0.026	NO				
		PM	0.712	C	0.755	C	0.043	**YES**	0.744	C	0.032	NO				
*29	Winnetka Av & US101 EB Ramps	AM	0.877	D	0.912	E	0.035	**YES**	0.770	C	-0.107	NO				
		PM	0.946	E	0.994	E	0.048	**YES**	0.774	C	-0.172	NO				
*30	Winnetka Av & Ventura Blvd	AM	0.939	E	0.943	E	0.004	NO	[a]	[a]						
		PM	0.973	E	0.980	E	0.007	NO	[a]	[a]						

Notes:
* Intersection is currently operating under ATSAC system.
** Intersection is currently operating under ATSAC system, but will be upgraded to ATCS as a cumulative baseline improvement.
[a] No mitigation required.

Source: Kaku Associates, Inc., 2002.

This represents a substantial deterioration in operating conditions from existing conditions since, as previously discussed (Table 3-32), only 13 of the intersections currently operate at LOS E or F during one or both peak hours. Thus, background traffic growth and traffic generated by related projects is expected to affect operating conditions in the study area even without consideration of potential growth on the Pierce College campus.

It should be noted that the cumulative base conditions projected in Table 3-40 and discussed above assume implementation of the committed baseline transportation system improvements described previously.

Project Traffic Impact Analysis

The cumulative plus project traffic volumes as projected in the previous section were analyzed to determine potential future operating conditions and traffic impacts with the addition of incremental project-generated traffic associated with buildout of the Pierce College Master Plan through the year 2010. The middle columns in Table 3-40 show the results of this analysis.

As indicated in the table, 25 of the study intersections are projected to operate at LOS E or F during one or both peak hours under cumulative plus project conditions. Application of the significance criteria described previously indicates that the project would create significant traffic impacts at the following 19 study intersections:

- Mason Avenue & Saticoy Street
- Mason Avenue & Sherman Way
- Winnetka Avenue & Sherman Way
- Mason Avenue & Vanowen Street
- Winnetka Avenue & Vanowen Street
- Topanga Canyon Boulevard & Victory Boulevard
- Canoga Avenue & Victory Boulevard
- De Soto Avenue & Victory Boulevard
- Mason Avenue & Victory Boulevard
- Winnetka Avenue & Victory Boulevard
- Corbin Avenue & Victory Boulevard
- Tampa Avenue & Victory Boulevard
- De Soto Avenue & El Rancho Drive
- Winnetka Avenue & Calvert Street
- Winnetka Avenue & Oxnard Street
- De Soto Avenue & US 101 westbound ramps
- De Soto Avenue & US 101 eastbound ramps

- Winnetka Avenue & US 101 westbound ramps
- Winnetka Avenue & US 101 eastbound ramps

These impacts would be generated by both the forecast general growth in academic-related traffic to/from the campus as well as traffic generated by the proposed public/private partnership projects.

Parking Impact Analysis

This chapter presents an analysis of the projected future parking supply and peak parking demands associated with buildout of the proposed Pierce College Master Plan, to ensure that the plan provides sufficient parking supply to accommodate the projected needs.

❑ Future Parking Supply

The Master Plan proposes a variety of changes to the future parking supply serving the Pierce College campus. Major proposed changes include:

- Of the existing seven main student lots, two (Lots 1 and 2) would be increased in size, two (Lots 3 and 7) would be reduced in size, and three (Lots 4, 5 and 6) would be retained in roughly their existing size.
- Certain smaller existing parking lots would be eliminated, generally in or adjacent to the core area of the campus at locations where future buildings would be constructed.
- Curb parking on most internal campus streets would be eliminated (including El Rancho Drive, Mason Street, Olympic Drive, Pierce Lane, and the auto shop roadway). Curb parking would remain on Stadium Way, including the portion to be realigned with Brahma Drive.
- Additional parking would be provided in the vicinity of the existing Swine Unit, as part of future expansion of academic facilities in this area.
- 40 new spaces would be provided at the new maintenance and operations facility.
- 40 new spaces would be provided at the new Child Development Center.
- 894 new automobile spaces would be provided at the Equestrian Education Center, plus parking for 28 buses, 50 recreational vehicles, 30 horse trailers. The automobile spaces would be available for academic use during weekdays. Excess spaces beyond those required for a public event would also be available for academic use on weeknights.
- 60 new spaces would be provided as part of the Agriculture Partnerships.
- 400 new spaces would be provided as part of the Sciences Partnership. Excess spaces beyond those required for the science partnership would be available for academic use during weekdays and weeknights.

- 40 new spaces would be provided as part of the Horticulture Partnership. In addition, Lot 2 would be expanded to support horticultural academic growth.

- No new spaces would be provided as part of the student housing partnership. Rather, parking for students residing on-campus in the student housing partnership would be provided as part of the parking supply for academic purposes.

- New spaces would be provided as part of the Life-Long Learning Residences Partnership to satisfy applicable City of Los Angeles code requirements for residential parking.

Details regarding the estimated changes by lot to the existing and future parking supply on the Pierce College campus with implementation of the proposed Master Plan are included in Appendix F of the Traffic and Parking Study (see Appendix F of this EIR). The existing and projected future parking supply is summarized in Table 3-41.

Table 3-41: Summary of Existing and Projected Future Parking Supply

Type of Parking Supply	Existing Number of Spaces [a]	Estimated Future Number of Spaces		
		Total Future Spaces [b]	Spaces Available for Academic Use	
			Weekday Daytime	Weekday Evening [c]
Existing On-Campus Parking Facilities	4,119	3,338	3,338	3,338
New On-Campus Parking Facilities	n/a	1,868	1,134	1,120
Future On-Campus Subtotal	4,119	5,206	4,472	3,875
Off-Campus Street Parking	247	243	243	243
Grand Total	4,366	5,449	4,715	4,701

Notes:
a. Existing parking inventory conducted by Kaku Associates, February 2002.
b. Includes spaces for academic use and for public/private partnerships.
c. Assumes weeknight public event at Equestrian Education Center at 70% of capacity.

Source: Kaku Associates, Inc., 2002.

As indicated in the above table, the projected number of spaces available to support academic purposes on the campus varies since a portion of the supply would be provided via unused spaces at the Equestrian Education Center (excess spaces beyond those required for a public event) and at the Sciences Partnership.

❑ Projected Peak Parking Needs

Future peak parking needs were projected for buildout (year 2010) of the Master Plan. The methodology used to develop the parking demand projections consisted of the following:

- Academic Growth (Students, Faculty/Staff and Visitors) - The Master Plan envisions academic growth to 16,423 full-time-equivalent (FTE) students by the 2010-2011 academic year. Growth in parking need generated by students, faculty/staff, and campus visitors related to this projected academic growth were estimated by applying empirical parking requirement ratios derived from existing Pierce College conditions.

  Empirical parking requirement ratios per FTE were derived through comparison of the total number of existing vehicles parked on the campus at the 11 AM weekday daytime peak and at the 7 PM weekday evening peak to the existing (year 2001-2002) estimated student FTE. For planning purposes, the observed peak parking demands were adjusted upward by a 10 percent circulation factor, since parking facilities are typically considered to be fully utilized when used at 85 to 90 percent of capacity. Based on this analysis, it is estimated that, on average, the peak parking requirement ratio currently generated per FTE on the Pierce College campus is as follows:

Peak Parking Requirement – Spaces Per Student FTE	
Weekday Daytime Peak	Weekday Evening Peak
0.241 spaces per FTE	0.206 spaces per FTE

  These parking requirement ratios were applied to the projected future FTE to project the future peak parking requirement generated by academic purposes at year 2010 buildout. The future growth in FTE to which these ratios were applied was adjusted to take out students expected to live on-campus in the proposed Student Housing Partnership so that the trips represent "commuter" student FTE only, since parking needs for the Student Housing Partnership were estimated separately.

  Table 3-42 presents the results of this analysis, including both the derivation of the empirical parking ratios and the projection of future peak parking requirements. As can be seen, a peak requirement for about 4,293 parking spaces is projected during weekdays and 3,740 spaces on weeknights in support of future academic activities at buildout. This includes an estimated 480 spaces required for future students residing at the proposed student housing partnership, since the Student Housing Partnership would not be providing additional new parking for students residing on campus.

- Other Bond Projects - As shown on Table 3-43, potential future parking requirements were explicitly estimated for two bond projects not directly related to enrollment growth:

  - Child Development Center - Parking requirements for the Child Development Center were estimated through application of Los Angeles County code requirements for child care uses (in lieu of an applicable code requirement), resulting in an estimated need for 40 parking spaces.

  - Equestrian Education Center (Public Events) - During the day on weekdays, activities at the Equestrian Education Center would be related to the academic mission of the school, and are therefore not expected to generate additional parking demand beyond those already incorporated into the academic growth estimates.

Table 3-42: Pierce College Facilities Master Plan Peak Parking Analysis: Academic Growth

	Existing (2001-2002)		2010 MP Buildout	
	Weekday Daytime [a]	**Weekday Evening (7 PM)**	**Weekday Daytime**	**Weekday Evening**
Student Population				
Enrollment [b]	18,118		23,252	
FTE [b]	13,591		16,423	
Non-Commuter FTE [c]	n/a		(600)	
Commuter FTE	n/a		17,450	
Parking Demand & Requirement				
Peak Parking Demand [d]				
Commuter Total [e]	2,972	2,551		
Student Housing Partnership [c]	n/a	n/a		
Total	n/a	n/a		
Contingency/Circulation Factor	10%	10%		
Parking Requirement				
Commuter Total [e]	3,269	2,806	3,813	3,260
Student Housing Partnership [c]	n/a	n/a	480	480
Total	n/a	n/a	4,293	3,740
Parking Requirement Ratio (Spaces per FTE)	0.241	0.206		
Parking Supply & Adequacy				
Parking Supply				
Existing On-Campus Spaces [f,g]	4,119	4,119	3,338	3,338
New On-Campus Spaces [h]	n/a	n/a	1,134	1,120
Off-Campus/On-Street Spaces	247	247	243	243
Total [e]	4,366	4,366	4,715	4,701
Surplus/(Shortfall)				
Relative to Requirement	1,097	1,560	422	961

Notes:

a. Peak weekday daytime parking demand at 11 AM, per campus parking utilization surveys conducted 2/26/02.

b. Existing enrollment is fall 2001; existing student FTE is 2001-2002 annual. Source: Pierce College, June 2002.

c. Parking requirement for 600 on-campus residents in 200 proposed student housing units (assumes 100 2-bed units and 100 4-bed units) not estimated as part of FTE growth but rather calculated separately as Student Housing Partnership (see Table 18). However, a separate student housing parking supply is not proposed; parking is to be part of general campus parking supply.

d. Source for existing peak parking demand: parking utilization surveys conducted 2/26/02 (see Appendix D). Future parking demand and requirement estimated using parking ratios empirically derived from surveys, applied to future FTE.

e. Includes vehicles parked off-campus in immediately-fronting street spaces.

f. Existing inventory includes approximately 170 unmarked parking spaces in dirt lots.

g. Changes to existing supply estimated from Land Use Master Plan and illustrative Master Plan maps (see Appendix F).

h. New on-campus academic spaces include unutilized future Equestrian Education Center and Science Partnership spaces.

i. Future on-street spaces reduced to reflect possible loss of spaces due to implementation of traffic mitigation measures.

Source: Kaku & Associates, Inc., 2002.

Table 3-43: Pierce College Facilities Master Plan Peak Parking Analysis: Non-Academic Projects

No	Description	Size	Peak Parking Ratios				Spaces Required		Spaces to be Provided [i]	Surplus/(Shortfall)	
			Weekday Daytime	Weekday Evening	Spaces Per Unit	Source [h]	Weekday Daytime	Weekday Evening		Weekday Daytime	Weekday Evening
Other Bond Projects											
1.	Child Development Center [a]	30 staff	1.0	1.0	spaces/staff	LA Co code	30	30			
		200 children	0.05	0.05	space/ student	LA Co code	10	10			
							40	40	40 total	0	0
2.	Equestrian Education Center [b]	300 spectators	0.00	0.33	spaces/seat	assumed	0	100	750 east lot		
	(public event)	100 stables	0	100	participant/ staff	FKG	0	100	144 west lot		
			28	28	bus spaces	FKG	28	28	28 bus		
			50	50	RV spaces	FKG	50	50	50 RV		
			40	40	trailer spaces	FKG	40	40	40 trailers		
							118	318	1,012 total	894	694
	Subtotal: Other Bond Projects						158	358	1,052	894	694
Public/Private Partnership Projects											
1.	Agricultural Education Center Partnership	25 acres									
	AEEP [c]		6	0	spaces	assumed	6	0			
	Produce Stand	5,000 sf	4	4	spaces/ksf	LA city code	20	20			
	Subtotal						26	20	60	34	40
2.	Science Partnership Building	100,000 sf	2	0.14	spaces/ksf	LA city code	200	14	400	200	386
3.	Horticulture Partnership [d]	2 classrooms	40	0	spaces	assumed	40	0	40	0	40
4.	Viticulture Partnership [e]	n/a					0	0	0	n/a	n/a
5.	Student Housing Partnership [f]	600 beds	0.8	0.8	spaces/bed	Pierce MP	480	480	[f]	[f]	
6.	Lifelong Learning Residences Partnership [g]										
	Multi-story, 1 bedroom	53 du	1.0	1.0	spaces/du	LA city code	53	53			
	Multi-story, 2 bedroom	106 du	1.5	1.5	spaces/du	LA city code	159	159			
	Multi-story, 3 bedroom	53 du	2.0	2.0	spaces/du	LA city code	106	106			
	Single-story casitas, 2-3 bedroom	38 du	2.0	2.0	spaces/du	LA city code	76	76			
	Subtotal	250 du					394	394	394	0	0

Table 3-43: Pierce College Facilities Master Plan Peak Parking Analysis: Non-Academic Projects

No	Description	Size	Peak Parking Ratios				Spaces Required		Spaces to be Provided [i]	Surplus/(Shortfall)	
			Weekday Daytime	Weekday Evening	Spaces Per Unit	Source [h]	Weekday Daytime	Weekday Evening		Weekday Daytime	Weekday Evening
	Subtotal: Public/Private Partnership Projects						1,140	908	894	(246)	(14)

Notes:

a. Using Los Angeles County code requirement of 1 space per staff plus 1 space per 20 students. Number of staff assumed.

b. Assumes maximum weeknight public event of 300 spectators, 3.0 spectators per vehicle, and 100 participant/staff vehicles.

c. Agriculture Education Experiences & Programs. Assumes 2 school buses at one time plus 4 accompanying private cars. Employees would be Pierce students. Assumes sufficient parking spaces to be provided to accommodate estimated need.

d. Horticulture Partnership project description: 2 classrooms with capacity for 25 to 30 students each, 40 to 50 persons present at a given time, classes 8 AM to 5 PM weekdays, some portion may share rental cars. Assumes 1.25 AVR.

e. Viticulture Partnership not expected to generate significant activity on their own. Would be for education purposes and possible use by Horticulture Partnership.

f. 600 on-campus residents in 200 proposed student housing units (assumes 100 2-bed units and 100 4-bed units). Separate parking supply not proposed; parking to be part of general campus parking supply.

g. Assumes 250 units: 15% single-story casitas (2-3 bedroom); 85% in 2-3 story buildings (25% 1 bedroom, 75% 2 bedroom, 25% 3 bedroom. Los Angeles City code is 1 space per du <3 habitable rooms, 1.5 spaces per du 3 habitable rooms, 2 spaces per du >3 habitable rooms. Sufficient parking spaces to be provided to accommodate requirement by expanding Lot 5.

h. LA code = Los Angeles City code; LA Co code = Los Angeles County code; CSUN = surveys conducted at Cal State Northridge in May 2000; FKG = Froehlich, Kow & Gong; ULI = Urban Land Institute.

i. Parking spaces to be provided, per draft EIR Project Description, Land Use Master Plan map, Master Plan staff, or Froehlich Kow & Gong April & May 2002.

Source: Kaku & Associates, Inc., 2002.

However, on weeknights and weekends, the Equestrian Education Center may host events that are open to the public. For estimation of weekday parking needs, it was assumed that public events would generate minimal parking demand during the daytime peak, solely related to participant RV or horse trailers that may be present onsite. Parking requirements for weeknight public events were estimated assuming that a weekday evening event would attract a maximum of 300 spectators, with an average vehicle occupancy of 3 persons per vehicle, generating a need for 100 parking spaces. In addition, as many as 190 participant vehicles (100 automobile, 50 recreational vehicles, and 40 horse trailers) may be present.

Parking requirements for a capacity weekend public event are estimated as 1,123 spaces, including 833 spaces for spectators (2,500 seats, 3 persons per vehicle) and 290 participant vehicles (200 automobile, 50 recreational vehicles, and 40 horse trailers).

- Public/Private Partnership Projects - Peak parking requirements were estimated for the public/private partnership projects described in the campus Master Plan as follows (see Table 3-43):

  - Agriculture Partnerships - The Agriculture Education Experiences & Programs (AEEP) component was assumed to generate a requirement for two school buses plus four accompanying private vehicles at any one time. Parking requirements for the proposed 5,000 square-foot produce stand were estimated using the Los Angeles City code requirement of 4 spaces per 1,000 square feet, yielding a requirement for 20 parking spaces.

  - Sciences Partnership Building - Weekday daytime parking requirements for the Sciences Partnership were estimated using the Los Angeles City code requirement of 2 spaces per 1,000 square feet, resulting in a requirement for 200 spaces. Weeknight needs were estimated by applying time-of-day factors from the Urban Land Institute's *Shared Parking* to the peak daytime need.

  - Horticulture Partnership - Parking requirements for the Horticulture Partnership were estimated assuming two classrooms with a capacity of 25 to 30 students each, classes between 8 AM and 5 PM on weekdays, 40 to 50 persons present at any given time, some portion sharing rental cars, and an average vehicle ridership of 1.25 persons per vehicle. This results in a projected need for 40 spaces at one time.

  - Viticulture Partnership - The Viticulture Partnership is not expected to generate parking demand on its own, but rather would support general educational purposes and would also possibly be used by the Horticulture Partnership.

  - Student Housing Partnership - Parking requirements for the proposed 600 students to be housed on-campus in the student housing partnership were estimated assuming a ratio of 0.8 spaces per bed. This presumes that 80 percent of all students residing on campus would have a car on campus. Based on available research for other colleges in the Los Angeles metropolitan area, this is believed

to represent a conservatively high estimate. Using the 0.8 spaces per bed ratio, a requirement for 480 spaces is estimated, both during daytime and evening hours.

- Life-Long Learning Residences Community Partnership - Parking requirements for the Life-Long Learning Residences Community Partnership were estimated through application of Los Angeles City code requirements for multi-family housing to the proposed mix of dwelling units (53 multi-story 1 bedroom units, 106 multi-story 2 bedroom units, 53 multi-story 3 bedroom units, 38 single-story 2 to 3 bedroom casittas), yielding an estimated requirement for 394 spaces. To be conservative, it was assumed that none of the residents would be Pierce students, faculty, or staff already parked on campus.

❑ Parking Supply and Demand Analysis

Academic Needs

Table 3-42 shows that the estimated future supply of parking available to support academic activities on campus (4,715 spaces weekday daytime and 4,701 spaces weeknights) would be adequate to accommodate the projected peak academic parking needs at buildout (4,293 spaces weekday daytime and 3,740 spaces weeknight, including students residing in the student housing partnership). Surpluses of about 422 spaces (weekday) to 961 spaces (weeknight) are projected. This suggests that, if the parking facilities are constructed as proposed, the surpluses could be held in reserve for possible future campus population growth beyond the 16,423 FTE projected for the 2010-2011 academic year.

As mentioned previously, the projected future supply of academic parking assumes that all automobile spaces at the Equestrian Education Center would be available for academic use during weekdays, that a weeknight public event at the Equestrian Education Center would not exceed 300 spectators with excess spaces available for evening academic use, and that the Science Partnership would provide a supply of 400 spaces with excess unutilized spaces available for academic use during weekday and evening hours.

It should be noted that the projected academic parking demands shown in Table 3-42 assume continuation of existing mode splits and AVRs. To the extent that the College is successful in implementing additional transportation demand management measures (as discussed in the previous chapter), increased ridesharing and/or transit use could reduce projected future parking demands.

Other Bond Projects

Table 3-43 also shows that the parking supply to be provided at the new Child Development Center should be sufficient to accommodate its projected parking needs. In addition, an adequate drop-off/pick-up area should also be provided.

The 894 automobile spaces plus bus, recreational vehicle, and horse trailer spaces to be provided at the Equestrian Education Center would be more than adequate to accommodate the projected needs for a public event attracting 300 spectators on weeknights when evening class academic demands are also present on campus. On Friday nights and on weekends when other campus

demands are not as high, the Equestrian Education Center parking supply would provide sufficient parking for an event at about 80 percent of capacity. However, a sold-out Friday night or weekend public event would be able to use other campus parking (particularly the Sciences Partnership parking lot proposed to be located east of the equestrian center) as overflow parking.

Public/Private Partnership Projects

Table 3-43 shows that, with the exception of the Student Housing Partnership (which would not provide its own parking), the proposed parking supply to be provided by each of the public/private partnership projects is projected to be sufficient to accommodate the peak needs for each project.

Summary

Thus, with implementation of the parking supply proposed as part of the campus Master Plan, projected campus parking demands would be accommodated on campus and along immediate adjacent street frontages, and no significant parking impacts would be anticipated.

Congestion Management Program Analysis

This section presents the Congestion Management Program (CMP) transportation impact analysis for the proposed project. This analysis was conducted in accordance with the transportation impact analysis (TIA) procedures outlined in the *1999 Congestion Management Program for Los Angeles County* and the *Final Draft 2002 Congestion Management Program for Los Angeles County* (Los Angeles County Metropolitan Transportation Authority, December 1999 and June 2002). The CMP requires that, when an environmental impact report is prepared for a project, traffic and transit impact analyses be conducted for select regional facilities based on the quantity of project traffic expected to utilize these facilities.

❑ CMP Traffic Impact Analysis

CMP Analysis Locations

The CMP guidelines for determining the study area of the analysis for CMP arterial monitoring intersections and for freeway monitoring locations are:

- All CMP arterial monitoring intersections where the proposed project is expected to add 50 or more trips during either the AM or PM weekday peak hours of adjacent street traffic.

- All CMP mainline freeway monitoring locations where the proposed project is expected to add 150 or more trips, in either direction, during either the AM or PM weekday peak hours.

The Cumulative Plus Project traffic projections described in a previous section were used to track the locations where the incremental additional project-generated trips at buildout may exceed these thresholds.

Based on this evaluation, two CMP arterial monitoring intersections were identified where the project may add 50 or more trips per hour and are listed as follows:

- Topanga Canyon Boulevard & Victory Boulevard
- Winnetka Boulevard & Victory Boulevard

Two other study intersections, Winnetka Boulevard/Ventura Boulevard and Reseda Boulevard/Victory Boulevard, are also CMP arterial monitoring intersections. However, less than 50 project trips are projected to traverse these intersections in the AM and PM peak hours and thus CMP analysis of these intersections is not required.

In addition, one CMP mainline freeway monitoring location was identified where the proposed project may add 150 or more trips per hour in either direction:

- U.S. 101 at Winnetka Avenue

It should be noted that the proposed project is expected to add more new trips to the segment of U.S. 101 east of Winnetka Avenue than to any other freeway segment, either along U.S. 101 or other freeways. Thus, the maximum level of project impact on the freeway system would be expected at this location.

Level of Service Methodologies

The "Critical Movement Analysis" (CMA) method of intersection capacity analysis was used to determine the intersection volume to capacity ratio and corresponding level of service for the two CMP arterial monitoring stations being studied. Existing, cumulative base, and cumulative plus project conditions were analyzed with LADOT's CALCADB CMA software, using the turning movement volumes and intersection characteristics described previously. Both intersections are currently controlled by ATSAC. The Topanga Canyon/Victory intersection will be upgraded to ATCS as a cumulative base condition as part of the Warner Center Specific Plan. In accordance with LADOT procedures, a capacity increase of 7 percent (0.07 V/C adjustment) was applied to reflect the benefits of ATSAC control at those intersections included in the ATSAC program. The ATCS upgrade was credited with an additional 3 percent (0.03 V/C adjustment) benefit, as per LADOT procedures.

The freeway segment levels of service are determined based on the computed demand-to-capacity (D/C) ratios and the definitions shown in Table 3-44. In accordance with values established in the 1994 *Highway Capacity Manual*, a capacity of 2,300 vehicles per hour per lane (vphpl) was utilized for freeway mixed-flow lanes.

Table 3-44: Level of Service Definitions for Freeway Mainline Segments

Level of Service	Demand/Capacity Ratio
A	0.00 – 0.35
B	>0.35 – 0.54
C	>0.54 – 0.77
D	>0.77 – 0.93
E	>0.93 – 1.00
F(0)	>1.00 – 1.25
F(1)	>1.25 – 1.35
F(2)	>1.35 – 1.45
F(3)	>1.45

Source: Los Angeles County Metropolitan Transportation Authority, *1997 Congestion Management Program for Los Angeles County*, November 1997, Exhibit D-6.

Existing Conditions

Weekday AM and PM peak period intersection turning movement counts were conducted at the two CMP analysis intersections in February of 2002. The existing weekday peak hour turning movements at the analyzed intersections are summarized in Tables B-1 and B-2 in Appendix B of the Traffic and Parking Study.

These volumes were analyzed utilizing the CMA methodology described above. Table 3-45 presents the results of this analysis. As can be seen, the analysis indicates that one of the two intersections (Winnetka Avenue/Victory Boulevard) currently operates at LOS F conditions during the AM and PM peak hours.

Existing traffic volumes at the CMP freeway monitoring station were obtained from the Caltrans *2000 Traffic Volumes on California State Highways*. Freeway LOS was analyzed utilizing the D/C methodology described above. Table 3-45 presents the results of this analysis. As can be seen, the analysis indicates that U.S. 101 currently operates at LOS C or D east of Winnetka Avenue.

Criteria for Determination of Significant Impact

For the purpose of a CMP TIA, a significant project impact occurs when the addition of project traffic increases demand at a CMP facility by 2 percent of capacity (i.e., V/C increase $\geq$0.020), causing or worsening LOS F (V/C >1.000) operating conditions.

Arterial Intersection Impact Analysis

- Year 2010 projected traffic volumes at the two analyzed CMP arterial monitoring intersections with and without the proposed project were analyzed utilizing the V/C methodology described above. As shown in Table 3-45, the project is projected to create significant impacts at one of the two CMP arterial monitoring intersections under year 2010 conditions:

- Winnetka Avenue & Victory Boulevard

However, with implementation of the intersection mitigation measures described in the Mitigation Measures section below, these impacts would be mitigated.

Freeway Impact Analysis

Projected year 2010 traffic volumes and the resultant freeway capacity analysis for the cumulative base and cumulative plus project scenarios are presented in Table 3-46 for the one freeway analysis segment. As can be seen, based on the CMP significance criteria, no significant impact is projected on the U.S. 101 monitoring location at Winnetka Avenue with the proposed project.

Since the project is expected to contribute more new traffic to this segment than to any other freeway segment and the project's impact at this location would not be significant, it can be concluded that the project would not have significant impacts elsewhere on the freeway system.

❑ CMP Transit Impact Analysis

Summary of Existing and Proposed Transit Services

*Existing Transit Services***.** As discussed in Section 3-16.1c, Pierce College is currently served by bus service provided by the Los Angeles County Metropolitan Authority (LACMTA) and the Santa Clarita Transit Authority (SCTA). Three bus routes currently provide direct service along Victory Boulevard, Winnetka Avenue, and De Soto Avenue adjacent to the campus: LACMTA Line 164, LACMTA Line 243, and SCTA Commuter Route 796.

Current schedules indicate that LACMTA Lines 164 and 243 operate 55 and 30 buses per direction per weekday, respectively. In the AM peak hour (defined as 7:30 to 8:30 AM by the CMP), both bus routes operate 3 buses per direction. In the PM peak hour (defined as 4:30 to 5:30 PM by the CMP), Line 164 operates 3 buses per direction while Line 243 operates 2 buses per direction.

Currently, SCTA Line 796 operates 5 buses per direction per day. SCTA Line 796 operates only during the peak periods. Of these buses, 2 operate in the AM peak hour and 3 in the PM peak hour.

The three routes combined currently provide a total of 180 bus trips per weekday, of which 14 operate during the AM peak hour and 13 operate during the PM peak hour.

Table 3-45: CMP Arterial Intersection Impact Analysis

Intersection		Peak Hour	Existing		Cumulative Base		Cumulative + Project		Project Increase in V/C	Significant Project Impact	With Mitigation Scenario A		Project Increase in V/C	Residual Impacts	With Mitigation Scenario B		Project Increase in V/C	Residual Impacts
			V/C	LOS	V/C	LOS	V/C	LOS			V/C	LOS			V/C	LOS		
**11.	Topanga Cyn Blvd & Victory Blvd	AM	0.836	D	1.041	F	1.051	F	0.010	NO	1.048	F	0.007	NO	1.048	F	0.007	NO
		PM	0.863	D	1.224	F	1.240	F	0.016	NO	1.212	F	-0.012	NO	1.212	F	-0.012	NO
*15.	Winnetka Av & Victory Blvd	AM	1.101	F	1.270	F	1.338	F	0.068	YES	1.248	F	-0.022	NO	1.248	F	-0.022	NO
		PM	1.005	F	1.253	F	1.289	F	0.036	YES	1.223	F	-0.030	NO	1.223	F	-0.030	NO

Notes:

* Intersection is currently operating under ATSAC system.

** Intersection is currently operating under ATSAC system, but will be upgraded to ATCS under Cumulative Base and Cumulative Plus Project Conditions.

Source: Kaku & Associates, Inc., 2002.

Table 3-46: CMP Freeway Mainline Impact Analysis

					EXISTING CONDITIONS						CUMULATIVE BASE						CUMULATIVE PLUS PROJECT									
Freeway Analysis Locations	City	Peak	Capacity		EB			WB			EB			WB			EB					WB				
			EB	WB	Volume	D/C	LOS*	Volume	D/C	LOS*	Volume	D/C	LOS*	Volume	D/C	LOS*	Volume	D/C	LOS*	D/C Change	Sig Impact	Volume	D/C	LOS*	D/C Change	Sig Impact
US101 east of Winnetka	Los Angeles	AM	11,500	11,500	8,604	0.748	C	9,336	0.812	D	10,292	0.895	D	11,127	0.968	E	10,346	0.900	D	0.005	no	11,259	0.979	E	0.011	NO
		PM	11,500	11,500	8,379	0.729	C	9,340	0.812	D	9,927	0.863	D	11,146	0.969	E	10,016	0.871	D	0.008	no	11,241	0.977	E	0.008	NO

* Note that F(0) through F(3) represent gradations of LOS F (see Table 15).

Source: Kaku & Associates, Inc., 2002.

Future Transit Services. The proposed San Fernando Valley East-West Transit Corridor Project will enhance transit access to Pierce College in the future. The proposed dedicated transit corridor would extend from North Hollywood to the east of Pierce College to Warner Center immediately west of the College. It will add bus rapid transit service, transit stations and park-n-ride lots along Victory Boulevard immediately north of Pierce College.

The operating scenario described in the *Final Environmental Impact Report, San Fernando Valley East–West Transit Corridor* (Metropolitan Transportation Authority, February 2002) projects that the bus rapid transit (BRT) project would provide 5-minute bus frequencies during peak periods (12 buses per hour in each direction) along the BRT alignment in the vicinity of Pierce College by year 2020, including 10-minute headways for the BRT service itself and 10-minute headways for a separate parallel feeder route operating along the corridor (the latter would replace the existing Route 164). In addition, the BRT also includes improved headways on feeder bus routes on north-south streets, including 13-minute headways during peak periods on Route 243 serving Winnetka Avenue and De Soto Avenue (approximately five buses per hour in each direction).

These anticipated increases in service levels translate to a fourfold increase in east-west bus frequencies along the Victory Boulevard/BRT corridor over existing Route 164 levels and a doubling of service levels on Winnetka Avenue and De Soto Avenue over existing Route 243 levels serving the Pierce College campus. The proportional increase in bus system passenger capacity would be even greater, since a substantial portion of the BRT buses are proposed to be articulated buses.

Significance Criteria

Project impacts on public transit services would be considered significant if the project results in a substantial increase in ridership on the existing public transit system, creating capacity shortages on the system and thereby necessitating system improvements to accommodate additional transit service.

Projected Increase in Pierce College Transit Trips

Potential increases in transit person trips generated at the Pierce College campus were estimated as follows. The estimated number of existing and future vehicle trips was converted to person trips by multiplying the number of vehicle trips by a factor of 1.16 (the estimated existing average vehicle ridership from the 2001 Pierce College employee AVR survey, and assuming for purposes of this analysis that the ratio can be extended to students). Baseline future transit trips were then estimated by multiplying the future person trips by the existing transit mode split of 2.6 percent (also from the 2001 Pierce College employee AVR survey). As shown in Table 3-47 , this results in an estimated increase in campus-generated transit person trips based solely on the projected increases in academic population and public/private partnership projects of approximately 228 daily trips, 20 trips during the AM peak hour, and 20 trips during the PM peak hour.

Table 3-47: CMP Transit Impact Analysis

	Factor	Daily	AM Peak Hour	PM Peak Hour
Existing Trips				
Vehicle Trips [a]		27,140	2,475	1,836
Person Trips [b]	1.16	31,482	2,871	2,130
Transit Person Trips [c]	2.26	819	75	55
Future Trips				
Vehicle Trips [a]		34,710	3,139	2,493
Person Trips [b]	1.16	40,264	3,641	2,892
Transit Person Trips [c]				
Existing Mode Split [c,d]	2.6%	1,047	95	75
Increased Transit Use [e]	5.2%	2,094	189	150
Net New Trips				
Vehicle Trips [a]		7,570	664	657
Person Trips [b]		8,782	770	762
Transit Person Trips [c]				
Existing Mode Split [c,d]		228	20	20
Increased Transit Use [e]		1,275	114	95

Notes:
[a]Estimated existing and future vehicle trips from 3-38.
[b] Person trips estimated from vehicle trips via application of 1.16 person to vehicle ratio from Pierce College 2001 employee AVR survey.
[c] Existing transit mode split from Pierce College 2001 employee AVR survey.
[d] Assumes continuation of existing mode splits and AVR.
[e] Future transit person trips assuming doubling of existing transit mode split due to enhanced TDM/trip reduction measures and proximity of San Fernando Valley East-West BRT.

Source: Kaku Associates, Inc., 2002.

However, as discussed above, the campus is located immediately adjacent to the future San Fernando Valley East-West bus rapid transit project. Also, as discussed previously, vehicular trip reductions due to enhanced transportation demand management measures are also anticipated as part of the proposed traffic mitigation program. Therefore, the potential future increase in transit person trips generated on the Pierce College campus was also estimated assuming a doubling of the existing transit mode split consistent with the anticipated vehicular trip reductions and to reflect proximity to the BRT. Such an increased use of transit would apply to both existing and future persons on the Pierce College campus, not just the net growth in persons. As shown in Table 3-47, under this scenario, net increases in transit trips generated on the campus of about 1,275 daily, 114 AM peak hour, and 95 PM peak hour trips are projected.

Transit Impact Analysis

With the proposed addition of the San Fernando Valley East–West Transit Corridor, future transit service levels and capacity would be increased substantially in the vicinity of the Pierce College campus (including along the BRT corridor itself and on feeder bus lines such as Line 243 on Winnetka Avenue and De Soto Avenue). While transit trips generated on the Pierce College campus are projected to increase, significant impacts on transit system capacity are not

anticipated, given the number of new transit trips projected relative to the planned substantial increases in future transit system capacity.

❑ Neighborhood Impact Analysis

Five neighborhood street segments were selected for analysis of potential neighborhood intrusion impacts of the proposed project. The five street segments include:

- Calvert Street east of Winnetka Avenue
- Oxnard Street east of Winnetka Avenue
- Hatteras Street east of Winnetka Avenue
- Oxnard Street west of Winnetka Avenue
- Oxnard Street east of De Soto Avenue

Daily Traffic Projections

Existing 24-hour machine counts were conducted at the five locations in February 2002. These volumes were compared to manual turning movement counts conducted at the Calvert Street/Brahma Drive/Winnetka Avenue, Oxnard Street/Winnetka Avenue, and Oxnard Street/De Soto Avenue intersections during the AM and PM peak periods. The comparison showed that the turn counts near the Calvert Street segment were 5 to 6 times higher than the machine count. Given this large disparity, it was concluded that the machine count for Calvert Street was flawed. The sum of the AM and PM peak period turning movement counts (6 hours total) was therefore used instead of the machine count at this location. Given the significance criteria discussed below, the use of the AM and PM peak periods as a proxy for daily volume is a conservative approach because it would lead to the overestimation of project percent of total traffic.

Future daily traffic volumes were projected in a manner similar to that used for the AM/PM peak hour analysis of the 30 intersections. Eight percent ambient growth and related project volumes were added to Year 2002 existing volumes to obtain Year 2010 Cumulative Base projections.

Daily project volumes were added to Cumulative Base projections to obtain Cumulative Plus Project projections. The distribution of daily project volumes was based on the distribution used for the AM and PM peak hour analysis. The distribution was refined using zip code data and driveway turning movement counts to better reflect the potential use of residential streets east of Winnetka Avenue. Given the percentage of students living in the neighborhood south of Victory Boulevard, east of Winnetka Avenue, and west of Reseda Boulevard (including areas south of Ventura Boulevard), about 1.5 percent of daily Pierce College traffic was estimated to travel on Oxnard Street, Hatteras Street, and Calvert Street east of Winnetka Avenue. Based on count data at the Calvert Street/Brahma Drive driveway, about a third of these trips (i.e., 0.5 percent of daily Pierce College traffic) was estimated to travel on Calvert Street. The remaining 1 percent was split between Oxnard and Hatteras Streets. The daily traffic volumes for both the existing and future conditions are summarized in Table 3-48.

Table 3-48: Neighborhood Impact Analysis

Street Segment	Weekday 2-Way Daily Volume				Impact Analysis		
	Existing	Cumulative Base	Project Only	Cumulative Plus Project	Project %	Impact Criteria	Significant Impact?
Calvert Street, east of Winnetka Avenue	453	489	38	527	7.2%	16%	NO
Oxnard Street, east of Winnetka Avenue	4,995	7,491	38	7,529	0.5%	8%	NO
Hatteras Street, east of Winnetka Avenue	1,388	1,501	38	1,539	2.5%	12%	NO
Oxnard Street, west of Winnetka Avenue	7,701	12,487	76	12,563	0.6%	8%	NO
Oxnard Street, east of De Soto Avenue	7,370	10,446	76	10,522	0.7%	8%	NO

Source: Kaku Associates, Inc., 2002.

The existing daily traffic volumes on weekdays vary from a low of about 453 vehicles per day (vpd) on Calvert Street to a high of about 7,701 vpd on Oxnard Street. The proposed project is projected to add approximately 38 to 76 vpd on the five segments.

Neighborhood Impact Significance Criteria

The City of Los Angeles has established criteria for determining significant impacts on neighborhood streets. A local residential street is deemed to be significantly affected based on an increase in the projected average daily traffic (ADT) volumes as follows:

Projected Daily Traffic With Project (Final ADT)	Project-Related Increase in Daily Traffic
0 to 999	16 percent or more of final ADT
1,000 or more	12 percent or more of final ADT
2,000 or more	10 percent or more of final ADT
3,000 or more	8 percent of more of final ADT

The threshold for significance decreases as the volume on the residential street increases. An 8 percent increase would be significant if a segment's volume was over 3,000 vpd, but it would not be significant if the volume was less than 3,000 vpd.

Assessment of Significant Traffic Impact

The potential impacts of the proposed project traffic on the adjacent neighborhood impacts were assessed by applying the City's significance criteria to the projected traffic volumes. The results of the analysis, which are summarized in Table 3-48, indicate that the proposed project would not have a significant impact on any of the five neighborhood street segments studied.

3-16.3 Mitigation Measures

The traffic impact analysis presented above determined that buildout of the Pierce College Master Plan would result in significant impacts on operating conditions at 19 of the 30 study intersections. Potential mitigation measures to address these impacts are discussed below. The mitigation program consists of the following two elements:

- transportation demand management measures to reduce vehicular tripmaking and
- intersection improvements at specific intersections

a. Transportation Demand Management Measures

Pierce College has an ongoing rideshare program to encourage the use of alternative travel modes. Pierce College currently implements various transportation demand management (TDM) measures in compliance with South Coast Air Quality Management District (SCAQMD) Rule 2202. These measures are intended to encourage reductions in vehicle commute trips through use of alternative travel modes, primarily on the part of faculty and staff employees. A sampling of measures currently implemented by the campus includes the following:

- Trip reduction program marketing
- Various on-site services and amenities (e.g., cafeteria/lunch room, vending machines, ATM, day care center, student store, showers, bike racks)
- Transit display rack
- On-site sale of transit passes
- Preferential parking spaces for employees
- Rideshare matching service for employees
- Guaranteed return trip for employees
- Personalized commute assistance offered by on-site employee transportation coordinator
- Compressed work week
- Bicycle program
- Distance learning (per Pierce College, 1 percent of student FTE is currently via on-line distance learning)

In addition, the campus is serviced by two MTA bus routes, and the MTA proposed San Fernando Valley East-West Bus Rapid Transit line would be located across Victory Boulevard from the campus.

Information from the Pierce College 2001 employee AVR survey indicates that approximately 79 percent of faculty and staff currently drive alone, 16 percent carpool, 3 percent use public transit, 2 percent have compressed work week schedules, and less than 1 percent walk or bicycle. These mode splits imply an existing average vehicle ridership (AVR) of 1.16.

The College is continuing to implement on-line distance learning, and anticipates that distance learning could accommodate 2 percent of student FTE by the 2007/2008 academic year. As part of the Master Plan, the College is also planning to provide an enlarged Child Development Center serving children of Pierce faculty, staff, and students. The College could potentially develop and implement additional measures to further encourage alternative modes and reduce both tripmaking and parking demands, both for faculty/staff and for students. Examples of such measures could include: enhanced trip reduction program marketing, recruitment, and incentives; provision of preferential parking spaces and rideshare matching services for students; providing transit passes at discounted rates; and/or modifying parking rates (e.g., reducing parking fees for carpool drivers, raising parking fees for solo drivers, selling permits allowing parking for a reduced number of days in a month for persons using alternative modes but needing the flexibility to drive to the campus on certain days).

The College should also require that private developers with whom it partners for development of proposed public-private partnership projects develop and implement trip reduction programs for employees at the public-private partnerships.

As an example of the extent to which increased ridesharing and/or transit use could reduce projected future campus tripmaking, if the College were to be successful in increasing the faculty/staff AVR from 1.16 to 1.25 and increasing the student AVR similarly, it is estimated that the total future vehicle trip generation of campus students and faculty/staff could be reduced approximately 7 percent. Similar reductions could be achieved for public/private partnership employees such as at the Sciences Partnership. As this reduction would apply to all student, faculty/staff, and partnership employee trips generated on the campus including existing students and faculty/staff (not just to incremental new trips generated by future population increases), the net effect would be to reduce the projected net growth in campus-generated trips by an estimated 32 percent during the AM peak hour and 24 percent during the PM peak hour.

b. Intersection Improvements

A series of potential intersection improvements were identified to mitigate the projected significant impacts of the project on the surrounding street system. Table 3-49 describes the suggested intersection mitigation measures. Depending on location, the mitigations consist of physical and/or operational improvements or fair share contributions toward implementation of the City of Los Angeles' ATSAC and/or ATCS signal control systems at various affected intersections.

As indicated in Table 3-49, alternative mitigation measures have been identified for four of the affected intersections (Mason Avenue/Saticoy Street, Winnetka Avenue/Vanowen Street, Corbin Avenue/Victory Boulevard, and Tampa Avenue/Victory Boulevard). At these locations, implementation of either of the alternative mitigation measures (but not both) would be needed to mitigate the project impact.

Table 3-49: Intersection Mitigation Measures

Intersection	Project Mitigation	Comments	Alternative Mitigation	Comments
1. De Soto Av. & Saticoy St.	*[Project impact not significant; no mitigation required.]*			
2. Mason Av. & Saticoy St.	• Restripe Saticoy to provide an exclusive right-turn lane on the EB approach.		• Contribute fair share towards implementation of ATSAC/ATCS as part of LADOT proposed north of Victory/east of De Soto ATSAC/ATCS system.	
3. Winnetka Av. & Saticoy St.	*[Project impact not significant; no mitigation required.]*			
4. De Soto Av. & Sherman Way	*[Project impact not significant; no mitigation required.]*			
5. Mason Av. & Sherman Way	*[Project impact mitigated by TDM trip reduction.]*			
6. Winnetka Av. & Sherman Way	*[Project impact mitigated by TDM trip reduction.]*			
7. De Soto Av. & Vanowen St.	*[Project impact not significant; no mitigation required.]*			
8. Mason Av. & Vanowen St.	• Contribute fair share towards implementation of ATSAC/ATCS as part of LADOT proposed north of Victory/east of De Soto ATSAC/ATCS system.			
9. Winnetka Av. & Vanowen St.	• Restripe Vanowen to provide an exclusive right-turn lane on the EB approach.		• Contribute fair share towards implementation of ATSAC/ATCS as part of LADOT proposed north of Victory/east of De Soto ATSAC/ATCS system.	• WCSP cumulative mitigation.
10. Shoup Av. & Victory Bl.	*[Project impact not significant; no mitigation required.]*			
11. Topanga Canyon Bl. & Victory Bl.	• Widen Topanga Canyon to provide an exclusive right-turn lane on the NB approach.	• WCSP intersection (share mitigation). • NB right-turn lane may require minor ROW acquisition.		

Table 3-49: Intersection Mitigation Measures

Intersection	Project Mitigation	Comments	Alternative Mitigation	Comments
12. Canoga Av. & Victory Bl.	• Provide second exclusive left-turn lane on EB Victory approach. Modify signal phasing as appropriate. • Widen Canoga to provide an exclusive right-turn lane on the SB approach.	• WCSP intersection (share mitigation). • SB right-turn lane may require ROW acquisition from Boeing parking lot.		
13. De Soto Av. & Victory Bl.	• Widen east side of De Soto to provide an exclusive right-turn lane on the NB approach. • Restripe De Soto to provide an exclusive right-turn lane on the SB approach.	• WCSP intersection (share mitigation). • NB right-turn lane may require dedication of ROW from Pierce campus.		
14. Mason Av. & Victory Bl.	• Restripe Mason to allow right-turns from rightmost through lane and left-turns from leftmost through lane on SB approach, resulting in one exclusive left-turn lane, one shared left-turn/through lane, one shared through/right-turn lane, and one exclusive right-turn lane on the SB approach. • Implement split phasing for north and south Mason approaches. • Widen Pierce College Mason driveway to provide an exclusive right-turn lane on the NB approach.			
15. Winnetka Av. & Victory Bl.	• Restripe Victory to provide dual left-turn lanes on both the EB and WB approaches.	• WCSP cumulative mitigation. • May require removal of 3 to 4 parking spaces on Victory adjacent to Pierce campus.		
16. Corbin Av. & Victory Bl.	• Restripe Victory to provide an exclusive right-turn lane on the WB approach.		• Contribute fair share towards implementation of ATCS.	
17. Tampa Av. & Victory Bl.	• Restripe Tampa to provide an exclusive right-turn lane on the SB approach.		• Contribute fair share towards implementation of ATCS.	
18. Wilbur Av. & Victory Bl.	*[Project impact not significant; no mitigation required.]*			

Table 3-49: Intersection Mitigation Measures

Intersection	Project Mitigation	Comments	Alternative Mitigation	Comments
19. Reseda Bl. & Victory Bl.	*[Project impact not significant; no mitigation required.]*			
20. De Soto Av. & El Rancho Dr.	• Widen El Rancho to provide one exclusive left-turn lane and one exclusive right-turn lane on the WB approach.			
21. Winnetka Av & Calvert St./ Brahma Dr.	• Restripe Winnetka to provide a second left-turn lane on the NB approach. • Modify signal to provide a right-turn arrow allowing EB right-turn movements during the NB left-turn phase.	• May require minor widening of Winnetka.		
22. De Soto Av. & Oxnard St.	*[Project impact not significant; no mitigation required.]*			
23. Winnetka Av. & Oxnard	• Contribute fair share towards implementation of ATCS.			
24. De Soto Av. & Burbank Bl. west	*[Project impact not significant; no mitigation required.]*			
25. De Soto Av. & US 101 WB ramps	• Restripe the SB De Soto approach to permit right-turns from both the exclusive right-turn lane and the rightmost through lane.	• WCSP intersection (share mitigation).		
26. De Soto Av. & US 101 EB ramps	*[Project impact mitigated by TDM trip reduction.]*			
27. De Soto Av. & Ventura Bl.	*[Project impact not significant; no mitigation required.]*			
28. Winnetka Av. & US 101 WB ramps	*[Project impact mitigated by TDM trip reduction.]*			
29. Winnetka Av. & US 101 EB ramps	• Widen US 101 EB off-ramp to provide third lane at Winnetka, striped as one exclusive left-turn lane, one shared left-turn/though/right-turn lane, and one exclusive right-turn lane.	• May require retaining wall(s) and/or fill.		
30. Winnetka Av. & Ventura Bl.	*[Project impact not significant; no mitigation required.]*			

Source: Kaku & Associates, Inc., 2002.

Four of the affected intersections at which mitigation measures are suggested (Topanga Canyon Boulevard/Victory Boulevard, Canoga Avenue/Victory Boulevard, De Soto Avenue/Victory Boulevard, and De Soto Avenue/US 101 westbound ramps) are also study intersections identified in the Warner Center Specific Plan (WCSP) for future improvement. Suggested improvements at two additional intersections (Winnetka Avenue/Vanowen Street and Winnetka Avenue/Victory Boulevard) are identified as cumulative mitigations in the WCSP Transportation Improvement and Management Program (TIMP). The WCSP TIMP provides that future intersection improvements at these locations are to be funded in part by Warner Center Transportation Impact Assessment (TIA) fees paid by development within Warner Center. However, these improvements are not fully funded by the Warner Center TIA fee since the WCSP determined that a portion of the need for these improvements would be generated by existing traffic and other future development in the area outside of Warner Center (such as Pierce College growth). Therefore, it is proposed that the suggested mitigation measures at these locations could be shared between future Warner Center development and the proposed project, with the project contributing its fair share toward implementation of the improvements. Table 3-49 notes which improvements are related to improvements in the WCSP TIMP.

c. Effectiveness of Mitigation Program

Projected year 2010 intersection operating conditions with trip reductions due to enhanced TDM measures and implementation of the intersection mitigation measures described above are shown in the final columns Table 3-40. For the four intersections at which alternative mitigation measures have been identified, Table 3-40 displays the projected conditions for both sets of mitigations.

As indicated in the table, the proposed trip reductions and intersection improvements would fully mitigate the project impacts at all of the 19 affected intersections. Thus, with the proposed trip reductions, intersection improvements identified herein, no unavoidable significant impacts are anticipated.

It should be noted that the City of Los Angeles has ownership of the study intersections. Additionally, the State of California Department of Transportation (Caltrans) has shared ownership over the US 101 ramp intersections with De Soto Avenue and Winnetka Avenue. Although the proposed mitigations appear feasible based on preliminary field review conducted at the time of preparation of the Draft EIR, their implementation depends on factors outside of the control of Pierce College. If, during the project development and review process, the mitigation measures at particular intersection(s) are determined to be infeasible by responsible agency(ies), the project impact identified herein at any such intersection(s) would remain significant and unavoidable.

d. Mitigation Phasing Program

The Pierce College Facilities Master Plan is intended to guide development on the campus to a buildout currently anticipated at year 2010. As discussed previously, the Master Plan includes projects supporting continued academic growth on the campus (to a projected student FTE of 16,423 at buildout) as well as a number of public/private partnership projects. Since the plan will be implemented over a period of time, its related traffic growth and thus the traffic impacts

identified earlier in this section will also occur over a period of time. Some impacts will be triggered at earlier stages of campus growth and development and others will be triggered at later stages. Therefore, a mitigation phasing program was developed in order to provide flexibility to accommodate implementation of different Master Plan elements over time while ensuring that the necessary improvements are implemented when and where needed to achieve mitigation as growth and development occurs. The mitigation phasing program includes mitigation thresholds designed to ensure that the required mitigation measures are implemented as needed to mitigate traffic impacts as growth and development proceeds on the campus, without requiring "front-loading" of the mitigations.

Intersection Impact Thresholds

The magnitudes of the project impacts at the various affected intersections were reviewed to determine the percentage of the projected project traffic increase at each location where the project impacts would be triggered. Table 3-50 lists the affected intersections sorted by the percentage of trip increase impacting the intersection, grouped by 10 percent increments. As can be seen, the intersections are also sorted separately for AM peak hour impacts versus PM peak hour impacts.

Project Element Contribution to Peak Hour Trip Increase

Table 3-51 presents the estimated contribution percentages of each of the Master Plan elements to the project's total net increase in peak hour trips. As can be seen, academic growth to a student FTE of 16,423 and a commuter student FTE of 15,823 is projected to represent about 61 percent of the future net increase in AM peak hour trips generated on the campus and about 47 percent of the net increase in PM peak hour trips. To allow for the phasing of mitigations over time, the academic population growth was divided into increments of 400 commuter FTE, with each such increment representing approximately 11 percent of the AM peak hour net trip increase and about 8.5 percent of the PM peak hour net trip increase. Note that these increments are based on commuter FTE, defined to be the total student FTE less students residing on-campus (since the trip contribution by the proposed student housing partnership is incorporated into the mitigation phasing program separately).

Table 3-50: ***Mitigation Phasing Program – Percent of Projected Trip Increase Triggering Impacts at Study Intersections***

Percent of Projected Net Increase in Pierce College Trips	Intersections at Which Project Impact First Triggers During AM Peak Hour	Intersections at Which Project Impact First Triggers During PM Peak Hour
1%-10%	(none)	(none)
11%-20%	Winnetka Avenue & Calvert Street Winnetka Avenue & Victory Boulevard Mason Avenue & Victory Boulevard	Mason Avenue & Victory Boulevard
21%-30%	Winnetka Avenue & US 101 EB ramps	Winnetka Avenue & US 101 EB ramps Winnetka Avenue & Victory Boulevard
31%-40%	Mason Avenue & Vanowen Street De Soto Avenue & Victory Boulevard	Winnetka Avenue & Oxnard Street
41%-50%	De Soto Avenue & US 101 WB ramps Winnetka Avenue & Oxnard Street	De Soto Avenue & El Rancho Drive
51%-60%	Corbin Avenue & Victory Boulevard	Mason Avenue & Vanowen Street Canoga Avenue & Victory Boulevard
61%-70%	Tampa Avenue & Victory Boulevard	Topanga Canyon Boulevard & Victory Boulevard De Soto Avenue & US 101 EB ramps
71%-80%	Canoga Avenue & Victory Boulevard Winnetka Avenue & Vanowen Street Mason Avenue & Saticoy Street	Mason Avenue & Saticoy Street De Soto Avenue & Victory Boulevard Winnetka Avenue & Vanowen Street
81%-90%	(none)	Mason Avenue & Sherman Way
91%-100%	Winnetka Avenue & Sherman Way Topanga Canyon Boulevard & Victory Boulevard	Winnetka Avenue & US 101 WB ramps

Source: Kaku Associates, Inc., 2002.

As shown in Table 3-51, weekday evening public events at the Equestrian Education Center are projected to contribute no traffic to the AM peak hour but about 8 percent of the net increase in PM peak hour trips. The proposed public/private partnership projects combined are projected to contribute about 39 percent of the AM peak hour net trip increase and about 45 percent of the PM peak hour net trip increase, with the projected individual contributions for each partnership shown in the table.

Table 3-51: Estimated Percent Contribution of Master Plan Elements to Total Net Increase in AM and PM Peak Hour Trips

		Commuter FTE [a]	AM Peak Hour	PM Peak Hour
Academic Growth (Commuter FTE)				
	Begin (2002)	13,591		
	End (2010)	15,823		
	Net Increase	2,232	61%	47%
	Increment for Mitigation Phasing	400	11%	8.5%
	Begin (2002)	13,591	0%	0.0%
	1st 400 Commuter FTE Increment	13,991	11%	8.5%
	2nd 400 Commuter FTE Increment	14,391	22%	17.0%
	3rd 400 Commuter FTE Increment	14,791	33%	25.5%
	4th 400 Commuter FTE Increment	15,191	44%	34.0%
	5th 400 Commuter FTE Increment	15,591	55%	42.5%
	End (2010)	15,823	61%	47.0%
Other Bond Facility Projects				
1.	Child Development Center		0%	0%
2.	Equestrian Education Center (public events)		0%	8%
Subtotal			0%	8%
Public/Private Partnership Projects				
1.	Agricultural Education Center Partnership		2%	5%
2.	Science Partnership Building		19%	17%
3.	Horticulture Partnership		6%	6%
4.	Viticulture Partnership		0%	0%
5.	Student Housing Partnership		5%	6%
6.	Lifelong Learning Residences Partnership		7%	11%
Subtotal			39%	45%
Total			100%	100%

Note:
a. Commuter FTE is defined as total FTE less students residing on-campus in student housing partnership.

Source: Kaku Associates, Inc., 2002.

Mitigation Phasing Program Implementation

The suggested mitigation phasing program would entail the monitoring of both academic growth and non-academic development on the campus on a periodic (e.g., annual or semi-annual) basis. At each periodic review, the then-current commuter FTE level would be determined, and the increment(s) of commuter FTE growth anticipated to occur over the next two years would be identified. Similarly, any portions of the individual public/private partnership projects or Equestrian Education Center expected to be developed over the next two years would also be identified. For the identified FTE increments and projects, the contribution percentages of each would be tallied separately for the AM and PM peak hours, based on the percentages in Table 3-51. These percentages would be added to cumulative percentage totals to be maintained separately for both the AM and PM peak hours. The cumulative percentage totals would then be compared to the intersection impact thresholds listed in Table 3-50 to identify those intersections first affected at that particular level of trip increase (whether during the AM or PM peak hours). Mitigation measures at these intersections would then need to be implemented by the time the anticipated growth and/or the specific development occurs.

3-16.4 Unavoidable Significant Adverse Impacts

Implementation of the proposed mitigation measures mitigation described above would reduce impacts at all 19 of the affected intersections to a level of insignificance. However, also as noted above, if responsible agencies with jurisdiction over the affected intersections determine based on further review that mitigation measures at a particular intersection are infeasible, the impacts at that intersection would be significant and unavoidable.

3-17 PUBLIC UTILITIES

3-17.1 Environmental Setting

a. Water Supply

The capacity to supply water is a function both of available sources (which are typically controlled by a utility and not directly by the project proponent) and conveyance (which typically is a pressurized underground pipeline system) capacity. In the case of water, there are two kinds of supply sources: natural resources and reclamation. Water is used for fire control purposes as well as drinking (potable water), washing, flushing, recreational purposes, and other domestic consumption. For the proposed project, some portion of the private water conveyance system would be dedicated to fire control purposes and other portions would be dedicated to potable domestic uses. Reclaimed water is wastewater that has been treated to a sufficient degree for certain types of uses. Reclaimed water is non-potable and must be conveyed in a separate system from potable water to avoid the possibility of direct human consumption.

Regional Conditions

Water is supplied to the project area by the City of Los Angeles Department of Water and Power (LADWP). As the major purveyor of water in Los Angeles County, LADWP is the largest water retailer in Southern California. The existing capacity of LADWP's water system (as a function of total supply, water mains, pumping stations, etc.) to deliver water to LADWP's customers is in excess of 1.117 billion gallons per day. LADWP estimates that the long-term safe yield of its water supplies is approximately 1.098 billion gallons per day.

Annual water demand in Los Angeles is approximately 660,000 acre-feet (AF) with an average per capita use of 150 gallons per day. The City's water demand is expected to grow to 756,000 AF per year by 2015, an increase to support the projected population of 4,550,000.[49]

In the 2000-2001 fiscal year, the Los Angeles Aqueduct provided approximately 238,997 AF or 36 percent of the City's water. An additional 85,067 AF or 13 percent was groundwater from local wells, and the remaining 343,403 or 51 percent was water purchased from the Metropolitan Water District of Southern California.[50]

The San Fernando Valley receives surface water that is treated at the Los Angeles Aqueduct Filtration Plant (LAAFP). The surface water is a blend of two sources: Los Angeles Aqueduct water and Metropolitan Water District water. This water is either served directly to customers from LAAFP or stored in a distribution reservoir for use during peak demand. In addition to surface water sources, groundwater from the Tujunga and Mission well fields supplies the valley.

[49] LADWP Water Supply Fact Sheet, May 2002.
[50] *The Los Angeles Department of Water and Power Water Urban Management Plan,* 2000-2001.

Local and Onsite Conditions

The existing campus water distribution system was constructed of asbestos cement pipe in the 1950s and 1960s. It distributes water for domestic use as well as for fire protection. The existing pipe should continue to perform well for the delivery of water for domestic use; however, based on a preliminary utility infrastructure survey this system is inadequate to accommodate required fire flow levels for the proposed new structures in the Master Plan.[51] The campus has a separate system for supplying water for landscape irrigation.

The LADWP provides water to the combined domestic and fire water systems at two locations. The larger of the two services enters the campus from Victory Boulevard, approximately 250 feet east of Mason Avenue. This 10-inch service originates at a 24-inch main. The water is conveyed to the campus distribution network via a 12-inch asbestos cement pipe. The smaller of the two services is located at the intersection of Calvert Street and Winnetka Avenue. This 6-inch service originates at a 12-inch main. The water is then conveyed to campus via a 6-inch asbestos cement pipe.[52]

The campus distribution network is comprised mainly of 6-inch asbestos cement pipe but also contains an 8-inch asbestos cement pipe connected to the 12-inch main line and several 4-inch lines that service areas north and south of El Rancho Drive. As part of the Parking Lot #7 Replacement Project, the portion of the existing 12-inch main line that runs under the lot would be upgraded to a 16-inch ductile pipeline and an existing 4-inch line would be upgraded to a 6-inch line.

b. Wastewater

Utilities include both consumption aspects, where a resource is consumed by a project, and generation aspects, where a waste product is created that requires disposal. Sewage is an example where water is the consumption aspect and wastewater is the generation aspect. Wastewater flows are therefore directly proportionate to water usage. In the case of sewage, the capacity to dispose of the material is a function both of wastewater treatment capacity (which may occur by law prior to ultimate disposal) and conveyance (which usually is a gravity-driven underground pipeline system) capacity.

Regional Conditions

The City of Los Angeles wastewater system serves over 4 million people in the City and 29 contract cities. It is comprised of more than 6,500 miles of sewer pipelines, 54 pump plants, and 4 wastewater treatment plants that can process approximately 550 million gallons of flow each day. Wastewater in the proposed project area flows to and is treated at the Hyperion Treatment Plant (HTP). The HTP presently provides primary treatment for all influent flow. Hyperion also has the capacity to provide secondary treatment for 450 million gallons per day (mgd) of

[51] *Draft Preliminary Utility Evaluation for Pierce College Los Angeles Community College District*, February 11, 2002, Psomas.
[52] *Draft Preliminary Utility Evaluation for Pierce College Los Angeles Community College District*, February 11, 2002, Psomas.

wastewater. After secondary treatment is completed, the water is discharged into Santa Monica Bay via a 5-mile-long outfall pipe. The sludge generated during the treatment process is collected in tanks at the plant and is anaerobically digested in order to reduce volume and to produce valuable methane gas for energy recovery. Presently, 100 percent of the resultant sludge is beneficially reused, either as an agricultural soil additive, as compost, as a fuel source, or as a chemically treated soil substitute. No sludge is dumped into the Pacific Ocean.

Based on flow data,[53] the HTP treats an average flow of 362 mgd with a capacity of 450 mgd for both primary and secondary treatment. Based on city projections of the capacity or service life of HTP, it is expected that treatment capacity will not be exceeded before the year 2010.

In order to ease treatment capacity demand on the HTP, the City operates two additional wastewater treatment plants: the Donald C. Tillman Water Reclamation Plant (Tillman Plant) and the Glendale Water Reclamation Plant (Glendale Plant). The Tillman plant serves the western San Fernando Valley area and several communities and contract agencies of the northeastern San Fernando Valley. The Tillman plant has a current capacity of 80 mgd. The Glendale Plant, which serves the southwestern corner of the Glendale area, is designed to treat an average dry weather flow of 20 mgd. All waste (sludge) from the Tillman Plant and the Glendale Plant is transported to the Hyperion Treatment Plant for final treatment. Future proposed increases in treatment capacities at the Tillman Plant and Glendale Plant would reduce wastewater flows at the Hyperion Treatment Plant.

Local and Onsite Conditions

The existing sanitary sewer system was constructed using vitrified clay pipe in the 1950s and 1960s. These sewer lines range from 6-inches to 12-inches in diameter. The system drains to the intersection of Mason Street and Victory Boulevard, where it connects to a 15-inch offsite sewer main. The 15-inch main discharges north until it feeds into a 27-inch interceptor. In addition to sewage flows generated on campus, the system also receives flows from 147 residences located south of the campus. The 15-inch main currently transports approximately 140,580 gallons per day at a flow rate of 0.2175 cubic feet per second. This 15-inch pipe can accommodate a full flow capacity of approximately 3.393 cubic feet per second. As such existing flow capacity conditions are acceptable. Based on the 25,000-gpd water demand for 2001, the existing average day wastewater flow on the campus is 20,000 gpd or 0.031 cubic feet per second (cfs).[54]

c. Solid Waste

Solid waste within the City of Los Angeles is collected and disposed of by the Bureau of Sanitation or by private haulers. The City provides collection services for single-family residences and also collects waste from some smaller multi-family residences, City Hall and other public buildings and parks. Multi-family residences, such as apartment complexes and condominiums, and commercial and industrial buildings, contract with private companies to collect and transport their solid waste for disposal or recycling. In 1994, in response to

[53] www.ladwp.com/water/supply/facts/index.htm, April 2002.
[54] Daily water demand is generally accepted to be 125% of the average daily wastewater generation.

diminishing landfill capacity in the County, the City of Los Angeles adopted a long-range, 30-year Solid Waste Management Policy Plan for managing the City's solid waste. An objective of the plan was to maximize waste diversion through source reduction and recycling.

The County Sanitation Districts of Los Angeles County (Districts) are a confederation of 25 independent special districts serving the solid waste management needs of about 5.3 million people in Los Angeles County. The Districts' service area covers approximately 810 square miles and encompasses 78 cities and unincorporated territory within the County. The role of the Districts is to provide for disposal and management of solid wastes, including refuse transfer and resource recovery. The solid waste system operated by the County includes sanitary landfills, recycling centers, a materials recovery facility, transfer stations, gas-to-energy facilities, and refuse-to-energy facilities. Individual cities and private companies also operate landfills and transfer stations. Availability at each landfill and transfer station is limited by several factors, some of which include the following: 1) restrictions to accepting waste generated only within a landfill's particular jurisdiction and/or waste-shed boundary; 2) tonnage permit limitations; 3) operational constraints; and 4) corporate objectives of landfill owners and operators. Three active sanitary landfills within the County currently handle approximately 20,000 tons per day (tpd), of which 16,000 tpd are disposed of and 4,000 tpd are recycled.

Table 3-52 identifies landfills that received solid waste generated in the City of Los Angeles in 2000. While there are a number of other landfills in the County, the Sanitation District's Board of Directors prohibits the District from accepting waste generated within the City of Los Angeles.[55]

Table 3-52: Landfills

Landfill Site	Availability and Restrictions
Azusa Land Reclamation Landfill	Azusa Western Landfill currently has unlimited capacity and will remain open for up to the next 30 years. Azusa Western is an inert landfill operated by Azusa Land Reclamation Company, Inc. This landfill can handle up to 6,500 tons of solid waste per day.
Bradley Landfill and Recycling Center	Bradley West Landfill handles approximately 7,200 tons of solid waste per day. The landfill is nearing capacity and will be closed in 2 to 3 years. The closure of Bradley West Landfill may affect other landfills. This landfill is operated by Waste Management, Inc. In 2000, the Bradley landfill collected approximately 36% of the solid waste originating in the City of Los Angeles.
Calabasas Landfill	Calabasas is operated by LA County Sanitation Districts. The landfill can accept approximately 3,500 tons per day.
Chiquita Canyon Landfill	Chiquita Canyon currently handles 5,000 to 6,000 tons of solid waste per day. Closure is not expected until 2019. The Landfill is privately operated by Republic Services of California I, L.L.C. In 2000, Chiquita Canyon accepted about 14% of the solid waste originating in the City of Los Angeles.

[55] The following landfills in the County of Los Angeles do not accept solid waste collected by the City of Los Angeles: Scholl Canyon Landfill, Southeast Resource Recovery Facility, South Gate Transfer Center, Antelope Valley Landfill Center, Puente Hills, Calabasas (only accepts solid waste generated west of the I-405).

Table 3-52: Landfills

Landfill Site	Availability and Restrictions
Commerce Refuse-To-Energy Facility	The Commerce Refuse-To-Energy Facility is operated by LA County Sanitation Districts. The facility can accept about 1,000 tons of solid waste per day.
Nu-Way Live Oak Landfill	The Nu-Way Live Oak Landfill is privately operated by Sanifill of California, Inc. Nu-Way can handle 6,000 tons of solid waste per day.
Peck Road Gravel Pit	Peck Road Gravel Pit can handle 1,210 tons of waste per day. It is operated by S.L.S. & N. INC.
Puente Hills Landfill	Puente Hills, operated by LA County Sanitation Districts, can handle 13,200 tons of solid waste per day. The landfill is prohibited, by the Sanitation Districts" Board of Directors" ordinance, from accepting waste generated within the City of Los Angeles and the County of Orange.
Reliance Pit Landfill	Reliance Pit Landfill can accept 6,000 tons per day. It is operated by Calmat Properties Company.
Scholl Canyon Landfill	Scholl Canyon Landfill, operated by LA County Sanitation Districts, handles up to 3,400 tons of solid waste per day.
Southeast Resource Recovery Facility	The Southeast Resource Recovery Facility (SERRF) is operated by the City of Long Beach. The facility can handle 2,240 tons per day of solid waste.
Sunshine Canyon Landfill	Sunshine Canyon Landfill is expected to remain open for approximately 2 to 4 more years with an unlimited capacity. This landfill will then remain open for an estimated 10 years with a restricted capacity unless expansion proposals are approved. With expansion, Sunshine Canyon expects to remain open for another 26 years. Sunshine Canyon Landfill is operated by Browning Ferris Industries (BFI) under the direction of LA County Sanitation Districts. Sunshine Canyon accepts approximately 25% of the solid waste collected from the City of Los Angeles.

Source: Myra L. Frank & Associates, Inc., April 2001; Los Angeles County Department of Public Works, Environmental Programs Division, 2001.

d. Energy

Electricity

Conserving energy has become an increasingly important issue within the State of California. While there are many technologies available to generate electricity, market demands have increased[56] while capacity has decreased. Some electric providers have implemented rolling blackout programs in an effort to conserve electricity resources while others continue to operate within planning parameters. The most recent rotating outage occurred in March 2001. Due to conservation efforts implemented throughout the State, no outages were necessary during the Summer of 2001. By October 2001, 42 projects representing 2,236 megawatts (MW) of new generation became operational. About 60 percent of these new additions were four large generation facilities licensed by the California Energy Commission. Other additions included the California Independent System Operator peaker projects, several biomass projects that came

[56] http://www.energy.ca.gov/electricity/consumption_by_sector.html, April 2002.

back online, a peaker facility approved by the Energy Commission, new renewable facilities, and re-rate projects.[57] Electrical providers who have sufficient capacity to accept additional demand continue to be responsive to market demands. In either case, infrastructure is commonly already in place within a built environment (contrasting to building in an undeveloped area). The delivery of electricity involves system components that are unique to the industry; namely substations and distribution transformers that "step-down" or lower transmission line power (voltage) to a level suitable for onsite distribution and use. The capacity of the local system, then, is typically a function of the adequacy of system components to handle distribution.

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 Los Angeles, electricity is provided by the Los Angeles Department of Water and Power (LADWP). The largest single source of LADWP's power supply is coal burning power plants, which provide 58 percent of the City's energy. Natural gas provides about 20 percent, hydroelectricity about 5 percent, nuclear energy about 5 percent, and the remainder, which comes from purchased power, about 14 percent. The sources of coal-fired power production are power plants located outside California, in which the DWP owns shares. These plants are located near Delta, Utah, in southern Nevada, and near Page, Arizona.

In 2000, LADWP customers in the City consumed electricity at a rate of approximately 22,535 gigawatt-hours (Gwh) per year and had sales of approximately 4,800 (Gwh) to other utilities.[58] Most of LADWP's nearly 1.2 million customers are residential. Business and industry customers, however, consume about 70 percent of the electricity. As a result of increasing demand resulting from economic growth and the ramifications of deregulation of the power industry, in 2000 California experienced an energy shortage, with rolling blackouts occurring in parts of the state. As noted above the last required rolling outages were in March 2001. During this time LADWP experienced no electricity shortfalls and had sufficient generating capacity to meet its customers' needs and also provide surplus energy to other parts of the state.

The Southern California Gas Company (The Gas Company) provides natural gas service throughout Los Angeles County. Several other natural gas providers also service the region. The Gas Company receives its supplies from production fields in the southwestern United States, the Rocky Mountain area, and western Canada. Natural gas consumption is expected to grow at a slow rate over the next 10 years. Industrial use is forecast to grow from about 6,400 million therms to 7,225 million therms by 2010 (a 1.1 percent annual increase). Industrial consumption of natural gas is expected to increase from about 44 percent to 46 percent by 2010. [59]

[57] California Energy Commission, 2002-2012 Electricity Outlook Report, February 2002.
[58] LADWP, Energy Services Facts, May, 2002.
[59] California Energy Commission 2000-2010 California Energy Demand, June 2000.

Local and Onsite Conditions

Over 90 percent of the campus (East and Central) is served by 33-Kilovolt (kV) LADWP service at the main utility substation near Winnetka Avenue. Three 4.16-kV main feeders run through the campus, two of them in an open loop configuration. The west side of campus is fed from a separate, pole-mounted 5 kV-service.

Two gas meters serve the campus. A 2-inch meter, medium pressure system, on Winnetka Avenue, south of the main entrance, serves the Horticulture area. A 6-inch meter is located between the Men's Gym and the Campus Police Station. This is a medium pressure system that serves the rest of the Campus. Located next to the gas meter between the Men's Gym and the Campus Police Station is a system consisting of a 10,000- to 15,000-gallon underground tank, a vaporizer, and accessories that produce a propane-air compatible mixture that can be burned in natural gas burners. This system can provide full emergency backup power to the campus for 3 to 5 days.

e. Storm Drains

The City of Los Angeles storm drain system carries water runoff from city streets and routes it into curb side catch basins and then into the municipal storm drain system. This system ultimately drains into the Santa Monica and San Pedro Bays.

The campus storm drainage system consists of earthen and concrete-lined channels, vitrified clay pipe, corrugated metal pipe, and concrete pipe, which were installed from the 1950's to present.[60]

3-17.2 Environmental Impacts

a. Significance Criteria

Water Supply

For the purposes of the analyses in this EIR, the proposed Los Angeles Pierce College Facilities Master Plan 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.

Wastewater

For the purposes of the analyses in this EIR, the proposed Los Angeles Pierce College Facilities Master Plan would have a significant impact if project-generated wastewater flows would:

[60] *Draft Preliminary Utility Evaluation for Pierce College Los Angeles Community College District*, February 11, 2002, Psomas.

- 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 Los Angeles Pierce College Facilities Master Plan would have a significant environmental impact if it generated solid waste that:

- exceeded the capacity of the landfill(s) serving the project site; or
- required or resulted 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 Los Angeles Pierce College Facilities Master Plan 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; or
- 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; or
- conflicts with adopted 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 Los Angeles Pierce College Facilities Master Plan would have a significant environmental impact if it:

- requires or results in the need for new or expanded water drainage facilities, the construction of which would cause a substantial adverse physical change in the environment.

b. Impacts Discussion

Water Supply

As shown in Table 3-53, based on an internal audit, the College's water consumption for July 2001 through May 2002 was approximately 191,263 gallons per day (gpd) or 133 gallons per minute (gpm). This consumption includes both domestic water demand (31,125 gpd) and

irrigation water demand (160,048 gpd). Based on an FTE of 13,591 students for the 2001-2002 academic year, the average domestic water consumption per student is approximately 2.3 gpd.[61]

Table 3-53: Estimated Current and Future Water Demand

Measured Unit	Existing Water Demand 2001-2002		Future Water Demand 2010-2011	
	Gallons per Day (gpd)	Gallons per Minute (gpm)	Gallons per Day (gpd)	Gallons per Minute (gpm)
FTE Students	31,125 gpd	22 gpm	37,773 gpd[a]	26 gpm
Irrigation	160,048 gpd	111 gpm	254,154 gpd[b]	171 gpm
Science Partnership Building	N/A	N/A	25,000 gpd[c]	17 gpm
Student Dormitory	N/A	N/A	63,750 gpd[c]	44 gpm
Events Center	N/A	N/A	20,313 gpd[c]	14 gpm
Equestrian Education Center Stables	N/A	N/A	1,004 gpd[c]	0.7 gpm
Life-Long Learning Residences	N/A	N/A	62,500 gpd[c]	43 gpm
TOTAL DEMAND	**191,173 gpd**	**133 gpm**	**464,791 gpd**	**322 gpm**
NET INCREASE	**273,618 gpd**			

Note: [a] Based on a generation factor of 2.3 gpd per student.
[b] The future water irrigation demand does not discount existing irrigation use north of El Rancho Drive. Thus, this projected demand is a conservative projection and may be higher than typical demand.
[c] Projected at 125% of wastewater demand.

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

Projected FTE enrollment for the 2010-2011 academic year is 16,423 students. Based on a water consumption rate of 2.3 gpd per student, domestic water demand on the campus would increase to approximately 37,773 gpd. Implementation of the Agriculture Partnerships would increase the amount of water demand for irrigation needs on the campus. These Partnerships would encompass approximately 21 to 23 acres of land. It is anticipated that these 23 acres would require approximately 105.4 acre/feet of water per year. One acre/foot of water is equivalent to 325,889 gallons of water. As such, irrigation demand for these partnerships would be approximately 94,106 gpd. New irrigation pipelines are proposed to accommodate this increased demand per a utility infrastructure upgrade project.

Based on these student and irrigation projections and estimated water demand due to other proposed academic facilities, estimated future (2010-2011) water demand would increase to approximately 464,791 gpd, or 322 gpm, a net increase of 273,618 gpd. This increase would occur over a 9-year time period. As such the College's demand would increase an average of 30,402 gpd per year. This increase would not create a significant impact on LADWP's water supply. LADWP estimates that the long-term safe yield of its water supplies is approximately 1.098 billion gallons per day. Consequently, a net increase of 273,618 gpd by 2010 represents approximately 0.025 percent of LADWP's long-term safe yield estimate.

[61] The generation factor of 2.3 gpd per student is based on domestic water demand.

By 2010, domestic flows for the campus are estimated to be as follows:[62]

- Average Day Flow = 125% of Average Sewer Flow Rate (167,614 gpd) = 145 gpm
- Maximum Day Flow = 200% of Average Day Flow (145 gpm) = 290 gpm
- Peak Hour Flow = 200% of Maximum Day Flow (290 gpm) = 580 gpm

The City of Los Angeles Fire Department, Hydrant Division, has set the following criteria for new construction:[63]

- A minimum flow of 1,500 gpm from the most remote fire hydrant, plus
- Concurrent flows of 1,500 gpm from three other fire hydrants, plus
- Concurrent domestic water usage.

As such, estimated total flow for the campus is as follows:

Total Flow = (4 x 1,500 gpm) + Peak Hour Flow (580 gpm) = 6,580 gpm.

The 10-inch and 6-inch services have a rated flow capacity of 5,000 gpm and 2,500 gpm respectively. With total flow estimated to reach 6,580 gpm by 2010 and the current water distribution system able to provide a maximum of 7,500 gpm (without accounting for pressure loss due to pipe friction) the current distribution system appears to be adequate to accommodate the proposed development in the Master Plan. However, pressure loss due to pipe friction may decrease the amount of water the system can provide to below the anticipated demand. Consequently, new pipelines and service would need to be installed, a potentially significant impact. While Pierce College will implement water saving features in its new and renovated buildings, the existing water distribution system could be inadequate to meet future needs.

Consequently, prior to mitigation, implementation of the Master Plan would have a significant impact on water supply as new water service and pipelines would be needed to accommodate anticipated demand. This conclusion is consistent with a Preliminary Utility Evaluation that was conducted by the College. The College does have plans to upgrade its existing utilities to meet future needs as a project separate from the Master Plan. Implementation of proposed upgrades as outlined in the study would reduce any impacts of the proposed Master Plan developments on water supply to less than significant (see water supply mitigation measures below). It should also be noted that the Parking Lot # 7 Replacement Project includes the upgrade of an existing 12-inch line to a 16-inch line and the upgrade of an existing 4-inch line to a 6-inch line.

Reclaimed water, either from the proposed Water Reclamation Facility or pipelines from the Tillman plant, would provide an alternative source for non-potable needs in the new facilities on campus, thus decreasing the future irrigation water demand.

The Los Angeles Community College District Board, at its March 6, 2002 meeting, voted 7-0 to adopt a sustainable building plan that requires new Proposition A buildings include "green" design features or elements to conserve resources and promote a cleaner environment. These "green" design elements are based on the national Leadership in Energy & Environmental

[62] The irrigation water pipe lines are a separate system from the water pipe lines for domestic use and are not factored into fire-flow requirments.

[63] *Draft Preliminary Utility Evaluation for Pierce College Los Angeles Community College District*, February 11, 2002, Psomas.

Design (LEED™) sustainable building standards. Pierce College has already started implementing these guidelines in existing buildings and will continue to apply these design elements throughout the Master Plan process. The College intends to plant water efficient landscaping, install high efficiency fixtures, and possibly use gray water for non-potable applications. These strategies will help reduce the demand on the water supply and system.

Wastewater

Based on the 31,125-gpd domestic water demand for 2001-2002, the existing average day sewer flow on the campus is 24,900 gpd or 0.031 cubic feet per second (cfs).[64] Based on an FTE of 13,591 students for the 2001-2002 academic year, the wastewater generation factor is approximately 1.8 gpd per student. The following City of Los Angeles Bureau of Engineering criteria have been used in determining average day flow rates for the campus:

- Child Development Center – 10 gallons per day per child
- Student Housing – 85 gallons per day per resident
- Non-academic Office Building – 200 gallons per day per gross square foot
- Life-Long Learning Residences – 200 gallons per day per dwelling unit

Based on these criteria, Table 3-54 shows the average day wastewater flow rate for 2010 projected for the campus.

Table 3-54: Average Wastewater Flow Rate for Year 2010

Measured Item	Units	Wastewater Generation Rate	Wastewater Flow	
			Gallons per Day (gpd)	Cubic Feet per Second (cfs)
2010-2011 FTE Students	16,423 students	1.8 gpd/student	29,561 gpd	0.0457 cfs
Science Partnership Building	100,000 sf	200 gpd/1,000 sf	20,000 gpd	0.0309 cfs
Student Dormitory	600 students	85 gpd/student	51,000 gpd	0.0789 cfs
Events Center	3,250 seats	5 gpd/seat	16,250 gpd	0.0251 cfs
Equestrian Education Center Stables	32,136 sf	25 gpd/1,000sf	803 gpd	0.0012 cfs
Life-Long Learning Residences	250 units	200 gpd/unit	50,000 gpd	0.0774 cfs
TOTAL WASTEWATER FLOW GENERATED			**167,614gpd**	**0.259cfs**
Note: The Exhibition/Events Center wastewater flow is during peak use for an event. This is not typical of daily use of the Center. As such the total estimated wastewater flow for 2010 is conservative.				

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

The City of Los Angeles Bureau of Engineering criteria for new sewer design limits the flow depth to one-half the pipe diameter and requires a minimum velocity of 3 feet per second (fps).

[64] Daily water demand is generally accepted to be 125% of the average daily wastewater generation.

The increase in wastewater generation may create wastewater depths that exceed 0.50 pipe diameter in a number of exiting campus sewers. However, the City of Los Angeles Bureau of Engineering, Valley Division, indicated that flow depths in existing sewers of up to three-quarters the pipe diameter are acceptable for in-fill development.[65] It is not expected that flow depths would exceed 0.75 pipe diameter. These flow depths are currently being analyzed and calculated as part of the Preliminary Utility Evaluation.

Currently many existing sewer pipelines do not conform to the 3 fps criteria. A minimum velocity of 2 fps is typically used in general practice as it is considered to be self-scouring. However, many existing pipelines do not conform to this standard either. If new sewer lines are not constructed this deficiency will continue to exist. However, the negative effects can be partially mitigated by flushing the sewers on a routine basis[66] to ensure that sediment does not build up in the pipes.

It should be noted that in the Preliminary Utility Evaluation, construction of new sewer lines has been proposed as part of an infrastructure upgrade project. If these new sewer lines are constructed, the above noted issues would be alleviated.

By 2010 the campus will experience an increase in average day wastewater flow rates of 142,714 gpd. This increase would be spread out over a 9-year period, which would produce an average increase of 15,857 gpd per year. This increase of 142,714 gpd represents 0.18 percent of the existing daily capacity of the Tillman Water Reclamation Facility and 0.03 percent of the existing daily capacity of the Hyperion Treatment Facility. As such, it is expected that both the Tillman Water Reclamation Facility and the Hyperion Treatment Plant would have adequate treatment capacity to accommodate the proposed project and other related development in the treatment plants' service areas through the year 2010. Therefore, the proposed project would not have a significant impact on the wastewater treatment system.

The main campus sewers have adequate hydraulic capacity to serve the expanded population. Consequently implementation of the Master Plan is not expected to create any significant impacts to wastewater services. It should be noted that a Water Reclamation Facility is proposed under the Master Plan. However, the location, size, and other characteristics of this facility have yet to be defined (thus further environmental review pursuant to CEQA will be required). This facility would help reduce flows in the existing system.

As noted earlier in this Section, implementation of the Master Plan would follow green, energy efficient, sustainable design guidelines as set forth in the Leadership in Energy & Environmental Design Guidelines. Pierce College has already started implementing these guidelines in existing buildings and will continue to apply these design elements throughout the Master Plan process. High efficiency wastewater fixtures will be installed during construction and renovation on the campus. These fixtures will help to decrease the amount of sewage generation from the campus.

[65] *Draft Preliminary Utility Evaluation for Pierce College Los Angeles Community College District*, February 11, 2002, Psomas.
[66] Ibid.

Solid Waste

Pierce College generated 1,188 tons (2,376,000 pounds) of solid waste during 2001-2002. Approximately 66 percent (784 tons) of the waste generated by the College was diverted. The remaining 34 percent (404 tons) was disposed of. Some of the waste materials that were able to be diverted include: business source reduction waste, material exchange waste, beverage containers, cardboard, white office paper, mixed office paper, xeriscaping, grasscycling, self-haul greenwaste, wood waste, and tires.[67] The resulting solid waste factor, based on total waste generated for 2001-2002, applied to the number of FTE students during 2001-2002 (13,591) is approximately 175 pounds of solid waster per year per student. By the 2010-2011 academic year, FTE students are projected to increase by 2,832 students to 16,423. Applying the generation factor, Pierce College would have an increase in solid waste generation of approximately 495,600 pounds. Assuming the College maintains its 66 percent diversion rate, the amount of solid waste disposed of would increase by approximately 168,504 pounds. This increase would occur over a 9-year span. As such, the average increase per year is approximately 18,723 pounds. This additional solid waste contribution would be negligible. Area landfills are expected to have adequate capacity to meet these demands.

Proposed Master Plan projects would follow green, energy efficient, sustainable design guidelines as set forth in the Leadership in Energy & Environmental Design Guidelines. The College has, in fact, already started implementing these guidelines in existing buildings and has also implemented waste diversion practices. When appropriate, existing building equipment will be reused in the new and renovated facilities. A construction waste management plan will be considered to recycle or salvage construction, demolition, and land clearing waste.

Energy

Pierce College's current yearly electricity consumption is approximately 2,750,000 kWh.[68] This yearly consumption applied to the 2001-2002 FTE of 13,591 students creates a generating factor of approximately 202 kWh/year per student. Table 3-55 shows the anticipated future electricity consumption for year 2010, after full buildout of the Master Plan.

As shown in Table 3-55, the net increase in electricity consumption through 2010 would be approximately 9,114,544 kWh per year. This increase would be spread over a 9-year period. As such the average increase per year would be approximately 1,012,727 kWh per year. This increase of 9,114,544 kWh/year represents only 0.033 percent of the 27,250 million kWh that is consumed annually in the LADWP service area. LADWP is expected to have adequate supplies of electricity to meet the needs of its customers in the near future. Existing infrastructure should be adequate to meet the demands of the new facilities. However some structures may need to have power lines run to them from the campus's main circuits. Installation of these lines is not expected to result in a significant impact.

Proposed Master Plan projects would follow green, energy efficient, sustainable design guidelines as set forth in the Leadership in Energy & Environmental Design Guidelines

[67] Los Angeles Community College – Pierce College Solid Waste Generation Annual Report Summary. May 29, 2002.
[68] Charlie Ng, Pierce College Plant Facilities Manger, May 2002.

(LEED™). The College has, in fact, already started implementing these guidelines in existing buildings. Following such practices would reduce the amount of electricity consumed by the College. As such the electricity consumption estimated identified above could be significantly reduced with the implementation of energy efficient, green, and sustainable design.

Table 3-55: Projected Electricity Consumption For The Year 2010

Use	Unit	Electricity Category	Generation Factor	Annual Usage (kWh)
Students	16,423 (FTE)	School/College	202[b]	3,317,446
Science Partnership Building	100,000 sf	Office/Professional Building	34.2[a]	3,420,000
Student Dormitory	250,000 sf	Apartment	4.4[a]	1,100,000
Events Center	95,000 sf	Recreation	32.5[a]	2,437,500
Equestrian Education Center Stables	32,136 sf	Warehouse	14.4[a]	462,758
Life-Long Learning Residences	256,100 sf	Apartment	4.4[a]	1,126,840
TOTAL PROJECTED ELECTRICITY CONSUMPTION FOR 2010				11,864,544
NET INCREASE IN ELECTRICITY CONSUMPTION				**9,114,544**

Notes:
[a]Factors for electrical consumption for land use taken from the *City of Los Angeles EIR Manual for Private Projects,* 1975 and are kWh/sq.ft./year.
[b]Generation factor of 202 kWh/year per student.

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

The LEED™ program encourages increasing the self-supply of energy through renewable technologies to reduce environmental impacts associated with fossil fuel energy use. Projects should be assessed for renewable energy potential including solar, wind, geothermal, biomass, hydro, and biogas strategies. The use of photocells accomplishes this objective by providing a renewable solar energy source for the campus. The District is in the process of establishing renewable energy guidelines for use by all of its colleges, which will be incorporated into the programming and design of Pierce College's future projects. The College is currently installing capstone mircoturbines to reduce the need for LADWP-supplied power during periods of peak loads and to cogenerate power. Heating, ventilation, and air conditioning (HVAC) equipment will be reused when appropriate and all new HVAC equipment will not use CFC refrigerants.

The College has completed negotiations with Viron/CMS for a comprehensive electrical generation package that will produce enough electricty to meet 20 percent of the College's demand. The package includes six 60-KW capstone microturbines and 159 KW photovoltaics to be installed in the north and south gyms. The purpose of this program is to: a) supply additional campus generated power during periods of peak load, b) enable the six 60KW capstone microturbines to heat the College swimming pool through cogeneration and provide electricity throughout the campus, and c) to provide approximately one-half of the campus' electricity requirement in the event of emergency power needs. This program would allow the campus to surpass the LEED requirement that 10 percent of the project's energy is from renewable energy

generated on site. In the future, as new buildings are designed and constructed, they will incorporate energy efficient green and sustainable energy designs in accordance with Districts policies and guidelines.

Consequently, implementation of the Master Plan would not have any significant adverse impacts on electricity consumption or demand.

The College is currently consuming an estimated 167,949 therms[69] natural gas per year. By applying this yearly consumption to the 2001-2002 FTE of 13,591, each student consumes approximately 12 therms per year. As such, natural gas consumption by 2010 would be approximately 197,076 therms per year. This increase would occur over a 9-year time span. Thus the average increase per year would be approximately 3,236 therms per year. This increase over time would be minimal and the existing distribution system is adequate to meet demands. The College's gas consumption in 2010 represents approximately 0.003 percent of the projected industrial use in that year. No adverse significant impacts would occur.

As noted above implementation of renewable energy sources by the College in accordance with the LEED program would reduce any environmental impacts associated with fossil fuel energy use.

Storm Drains

According to Pierce College Plant Facilities Office, the existing storm drainage system performs adequately, with the exception of the area south of Victory Boulevard and west of Mason Street, which floods during large runoff events. This area receives overland flows of runoff from the west (Canyon de Lana drainage), piped flows from the south (Farrowing drainage), and some overland flows from the area immediately north (between Facilities and Victory Boulevard).[70]

Development of the proposed academic, residential, and office buildings under the Master Plan would increase storm water runoff. The area that would incur the greatest impact is the one discussed above. Development of the Sciences Partnership Building, New Plant Facilities, the Equestrian Education Center, and the New Child Development Center would increase the amount of impervious surfaces in the drainage area west of Mason Street. This development would result in greater flows into a system that is currently inadequate.[71] This is a potentially significant impact.

Drainage improvements are proposed in the Preliminary Utility Evaluation as part of an infrastructure study and upgrade project. Implementation of the Parking Lot # 7 Replacement project includes upgrades to the drainage channel north of the parking lot and the creation of a detention pond in the athletic fields to the east of the lot. These improvements would help accommodate any increased storm water flows that may occur due to development in the academic core of the campus.

[69] Charlie Ng, Pierce College Plant Facilities Manger, May 2002.
[70] *Draft Preliminary Utility Evaluation for Pierce College Los Angeles Community College District*, February 11, 2002, Psomas.
[71] Ibid.

3-17.3 Mitigation Measures

a. Water Supply

The following improvements identified in the Preliminary Utility Evaluation and listed below shall be implemented to ensure that the campus wastewater supply is adequate to meet fire flow requirements:

WS-1 A 12-inch pipeline shall be installed from the main campus along El Rancho Drive to a new 8-inch service line off of DeSoto Avenue; or

An 8-inch service line shall be installed at Victory Boulevard along the east edge of Lot #7, a 12-inch main line shall be installed along the east edge of Lot #7, and either a new 10-inch service line off of DeSoto Avenue or a new main line along El Rancho Drive from the main campus shall be installed to provide adequate fire service to the proposed Equestrian Education Center.

WS-2 Three new 12-inch distribution lines shall be installed to convey fire flows to the vicinity of the proposed new facilities while providing tie points to the existing distribution piping.

To reduce the amount of water used to irrigate the proposed row crops and pizza farm, the following measures shall be implemented:

WS-3 Drip irrigation methods shall be used to water proposed cropland where feasible.

WS-4 Crops shall be planted that require low amounts of water for growth.

b. Wastewater

Although no significant impacts are anticipated, the following measures shall be implemented:

WW-1 Existing campus sewer lines shall be flushed on a regular basis to mitigate negative effects of below criteria velocity flows.

WW-2 All new construction and renovation shall include water conservation measures, such as low flush toilets.

c. Solid Waste

No significant solid waste impacts are anticipated. Consequently, no mitigation measures are necessary.

d. Energy

No significant energy impacts are anticipated. Consequently, no mitigation measures are necessary.

e. Storm Drains

The following mitigation measure shall be implemented:

SD-1 The area west of Mason Street and south of Victory Boulevard shall be upgraded during development of the specific projects in that area (as was done with Parking Lot #7) to develop a system that can adequately handle the existing and future runoff. Proposed enhancements may include those identified in the Preliminary Utility Evaluation report.

3-17.4 Unavoidable Significant Adverse Impacts

a. Water Supply

Implementation of the mitigation measures above would reduce impacts below a level of significance. As such, implementation of Master Plan would result in no significant adverse impacts to water supply services after mitigation.

b. Wastewater

Implementation of the Master Plan would result in no significant adverse impacts to wastewater services. Implementation of the mitigation measures above would ensure that impacts remain below a level of significance.

c. Solid Waste

Implementation of the Master Plan would not result in any unavoidable significant adverse impacts to solid waste facilities.

d. Energy

Implementation of the Master Plan would not result in any unavoidable significant adverse impacts to energy infrastructure and systems.

e. Storm Drains

Implementation of the mitigation measures above would reduce impacts below a level of significance. As such, implementation of the Master Plan would result in no significant adverse impacts to the storm drainage system after mitigation.