4.1 AESTHETICS

This section describes the visual setting of the UCI campus and evaluates the potential for changes in visual character due to development under the 2007 LRDP. This section analyzes the general aesthetic effects of future development on-campus that would result from implementation of the 2007 LRDP, including the potential loss of existing visual resources, effects on views, compatibility with visual characteristics of surrounding land uses, and the likelihood that that these uses would be disturbed by light and glare generated or reflected by new structures.

Assessing potential impacts to visual resources is a subjective process, yet researchers have identified generally consistent standards among professionals that evaluate visual quality. Modifications in a landscape that repeat the landscape's basic elements are said to be in harmony with their surroundings. Modifications that do not harmonize often appear out of place and are said to contrast, stand out, or be unpleasant. Also, the scenic quality of a landscape varies with the various visual elements that make up a landscape. These basic concepts are applied in the assessment of impacts for the 2007 LRDP.

4.1.1 ENVIRONMENTAL SETTING

The existing visual character of the UCI area is described in the following section. To define the visual character of both the campus and surrounding areas, this section includes a discussion of the landform, vegetation, development, visual characteristics of these features, and major viewers. The landform section describes the major topographic features of the area; the vegetation section describes the natural and ornamental vegetation of the area; the development section describes the general land use types (such as residential, commercial, open space) of the area; and the viewers section defines the groups that would be most impacted by the 2007 LRDP.

4.1.1.1 VISUAL CHARACTER OF UCI CAMPUS

Landform

The UCI campus is situated on the western edge of the San Joaquin Hills. The dominant landforms are characterized by rolling hills with moderately steep slopes, canyons, and ridges. The SJFM, which is located north of the Academic Core and east of the North Campus, serves as an important ecological reserve for plant and wildlife species. The landform for the rest of the campus and surrounding areas are characterized by rolling hills, ravines, small canyons, and gently rising ridges. On the higher elevations of the campus, significant landforms can be seen, such as the San Bernardino and Santa Ana mountains to the north and northeast, respectively, as well as the flatlands of the coastal basin. Rock outcroppings scattered throughout the area are other significant visual features that can be found on or near the campus.

Vegetation

Aldrich Park, the centerpiece of the campus landscape, is a 19-acre park which serves as the core of the campus. The park is characterized by large eucalyptus and other ornamental trees, informal landscaping, and a series of greenbelts radiating outward. The park and greenbelts provide psychological and visual relief and contrast to the developed portions of the campus. It is used for outdoor classes, social gatherings, casual recreation, graduation ceremonies, quiet refuge and study, and meetings. Other large open spaces within the campus include recreational fields located in the Crawford Athletics Complex and near the Anteater Recreation Center, park areas within individual residential neighborhoods, and the UCI Arboretum, located in the North Campus.

Beyond the interior of the campus lie several undeveloped natural areas that contain a diversity of biotic communities, such as the SJFM, the San Diego Creek, and coastal sage scrub and grassland communities. These open space areas are all connected, as described by the Open Space Element of the 2007 LRDP. The preservation of these open space areas is important to the character of the campus as they provide key view corridors and enhance the structural integrity of the campus.

Development

The UCI campus was developed using the theme of "University as a town." This concept created a sense of urban character. The physical plan of campus development arranges academic disciplines around a series of concentric circles. Six spokes emanate from the center of the circle creating six quadrangles, each representing an academic unit, at the rim of the circle. At the center of the circle is the 19-acre Aldrich Park, which offers relief from the more urban environment around it. Support services and administrative offices are integrated with academic and support facilities. Pedestrian pathways radiate from the center of the campus to create convenient access to all major neighborhoods of the campus.

The 2007 LRDP organizes the campus into five sectors. These sectors provide a systematic way to describe the planning and existing development throughout the campus. The following description of the existing development within each sector provides background regarding the development status of the campus. The locations of the five campus sectors are shown on Figure 3-3.

Central Campus. The Central Campus is referred to as the Academic Core. This area is the central hub of the campus and is located in the geographic center of the campus, contiguous to the east, south and west campus areas. The Central Campus consists of six academic quads including Biological Sciences, Engineering and Information and Computer Sciences, Physical Sciences, Social Sciences, Humanities and the Arts, and Gateway (Administration). This area of campus is highly developed with numerous academic buildings, the Student Center, two libraries, three undergraduate student housing communities, four parking structures, and multiple surface parking lots. Aldrich Park is also located in this area of campus. There is landscaping and vegetated pathways throughout the Central Campus and the Crawford Athletics Complex has open space in the form of athletic play fields.

East Campus. This sector is located on the eastern side of the UCI campus, east of East Peltason Drive. Five existing student housing neighborhoods with associated parking lots and residential open space, and some smaller campus support buildings are located in this area. The Anteater Recreation Center, with numerous play fields, is located in the Center of the East Campus. This sector includes the largest amount of undeveloped land on the campus.

South Campus. This area of campus is located south of the central campus. The South Campus contains housing for faculty and staff and is developed with single-family homes, townhouse, and apartment complexes. This area also contains recreation areas, parks, and footpaths to encourage walking or biking to campus. This sector of the campus contains a mix of developed areas, future development areas, and open space areas that provides a buffer at the edge of the campus.

West Campus. This area of campus is located west of the central campus. The University Research Park, Biomedical Research Center, and Health Sciences Complex are all located in this section of campus. The majority of this area consists of developed property housing academic and clinical facilities with some undeveloped or underutilized land areas in the south near the Biomedical Research Center and Bison Avenue and in the west near California Avenue.

North Campus. UCI's North Campus is located north of University Drive, east of MacArthur Boulevard, and south of Jamboree Road and is adjacent to the SJFM. This area contains the UCI corporation yard and other support facilities, with large areas of undeveloped or underutilized land areas. Existing UCI facilities are concentrated in the northernmost portion of this area at the corner of Jamboree Road and Campus Drive.

Viewers

People potentially affected by changes in the campus's visual environment include both on- and off-campus viewers. One group of viewers of the UCI campus includes students, faculty, and staff that study, work, and, in some cases, live on-campus. A second group of campus viewers includes members of the off-campus community, who live nearby or visit the campus for any number of reasons including recreation, cultural events, theater, lectures, seminars, and concerts. The third potential group of viewers includes motorists who use roads and highways that are located adjacent to the campus. However, motorists may be less sensitive to alterations on the campus due to obstructions, limited duration, and location in relation to their point of focus.

4.1.1.2 VISUAL CHARACTER OF AREAS SURROUNDING THE CAMPUS

The UCI campus is surrounded by a variety of land uses and landforms, as shown in Figure 3-4. For the purpose of this analysis, visually sensitive areas are defined as viewsheds that are visible from communities, public use areas, and travel corridors, or that may have a scenic or historic value.

Scenic vistas are normally considered to be visually sensitive because they provide expansive views of highly valued landscapes. No scenic vistas have been identified in either the 2007 LRDP or this EIR. Panoramic views are typically associated with scenic vistas that provide a sweeping geographic orientation. Examples of panoramic views include urban skylines, valleys, mountain ranges, or large bodies of water. The SJFM located between the North and Central Campuses, and the view of the South Campus from Bonita Canyon Drive provide panoramic views and are the only visually sensitive areas adjacent to the campus; however, these areas are not defined as scenic vistas. Other viewsheds surrounding the campus are not considered visually sensitive because they are highly urbanized areas that are interior-oriented. Interior-oriented land uses are areas that are located in the interior of highly urbanized areas where long range views or views of sensitive areas are obstructed by surrounding land uses.

This section discusses the visual character and visual sensitivity of the areas surrounding the UCI Campus.

Areas Surrounding the West Campus

For the most part, the views from neighboring land uses west of the West Campus are limited and are not considered sensitive because SR-73 separates the West Campus from adjacent land uses. The land uses west of SR-73 are primarily residential with either limited or no views of the campus. These residential communities are located approximately one-thousand to two-thousand feet from the campus. Some homes located along the edges of these residential communities or at higher elevations have views across the SR-73 to University Research Park or the UCI ecological reserve. Views from other homes in this area are blocked by topography and a large barrier wall that runs parallel with SR-73. However, views from these homes to the campus are considered an insignificant feature due to the substantial difference in elevation and distance from the campus.

The University Research Park (URP) includes an on-campus and off-campus land area. The off-campus area is located on land owned by the Irvine Company. The 84-acre on-campus area is located on land owned by the University in the west campus and is bounded by California Avenue on the east and MacArthur Boulevard on the west. Outside business entities lease research and development and office space from the Irvine Company on land leased from the University. The URP serves as an extension of the campus that generates income to support University programs and promotes research interaction between UCI and the private sector.

Areas Surrounding the East Campus

The majority of uses surrounding the East Campus are multi-family residential with some mixed use, school, park, and open space uses. Most of these areas are not considered sensitive from a visual standpoint because they are interior-oriented land uses located in a highly urbanized area with limited views of the campus. Certain areas that border the campus or are located in higher elevation areas overlooking the campus may be potentially impacted by on-campus development. Limited areas of Turtle Rock, Spy Glass, and Harbor View communities were previously identified in the 1989 LRDP EIR as being potentially impacted visually by on-campus development and since 1989 areas within Turtle Ridge residential community south of the campus have been developed. Since the 1989 LRDP, the development of the Anteater Recreation Center (ARC) and Playing Fields and the Vista Del Campo Housing community now obstruct views from the lower elevations of the Turtle Rock community. Certain communities that are situated at the higher elevations (e.g. above elevation 175 feet) continue to have long-range scenic views of the campus and background foothills, cities, and mountains.

Areas Surrounding the North Campus

As discussed in Section 4.8 of this EIR, land uses to the north, northwest, and northeast of the North Campus are primarily mid-rise residential, commercial, industrial, and research uses. The North Campus is separated from neighboring land uses to the northwest by Jamboree Road; to the northeast by Campus Drive; and to the west by Fairchild Road and MacArthur Boulevard. While the North Campus consists of approximately 45 acres of mixed use land use designations, only 12 acres is actually developed. Existing development on the North Campus consists of facilities management operations, campus offices, and research laboratories. The remaining 23 acres would be developed under the 2007 LRDP. In addition, the North Campus also consists of 11 acres of open space/recreation and 35 acres of a closed municipal landfill. The landfill is designated as open space.

The SJFM and the San Diego Creek Channel are located in the lowlands of the San Joaquin Hills. These two wetland areas physically divide the North Campus from the Central Campus. The SJFM is one of many reserves that are owned and operated by the University of California through the UC Natural Reserve System and is connected to other reserves and regional open space system corridors managed by the University and other public and private landowners such as the Upper Newport Bay Ecological Reserve. The Marsh is not formally part of the UCI campus or the LRDP, but plays a vital role in the visual integrity of the area. High quality views of these two areas can easily be observed in the foreground and middle ground views from both University Drive and the North Campus. Viewers of these areas include UCI students, faculty and staff, local residents, motorists, and visitors. The surrounding land uses adjacent to these two areas consist of commercial, industrial, open space, and mid- to high-density residential uses. Adjacent LRDP land uses include mixed use, academic and support, student housing, and open space.

Areas Surrounding the South Campus

University Hills, located on the South Campus, is located on the highest elevation area on the campus. Long-range views of the San Bernardino Mountains, the San Joaquin Hills, a large portion of the Orange County coastal plain, and the City's urban skylines can be seen from the highest areas of the community. The southern UCI campus boundary runs parallel to Bonita Canyon Road, which separates UCI South Campus land uses from off-campus community uses south of the campus. Off-campus land uses along Bonita Canyon Road consist of Turtle Ridge Apartment Homes, Mariners Church and Community Center, and the Tarbut V' Torah School. Undeveloped portions of the campus adjacent to Bonita Canyon Road consist of rolling topography covered with annual grasses, providing for a high scenic quality by breaking up the continuity of the urban development.

4.1.1.3 LIGHTING AND GLARE

There is substantial nighttime lighting on-campus, as well as in much of the area surrounding the campus. Major campus roadways and walkways are well lit for the safety of students, faculty, and staff that may be driving or walking through campus after dark. Residential and commercial areas surrounding the UCI campus also contribute to the existing ambient light in the campus vicinity. Due to the urban nature of the City and the University, there is a substantial existing amount of ambient light both on-campus and in the immediate surrounding area. UCI Department of Physics and Astronomy manages an observatory located in the South Campus approximately one-quarter mile southwest of the intersection of Anteater Drive and California Avenue. However, the observatory is not impacted by excessive nighttime lighting.

4.1.2 REGULATORY FRAMEWORK

4.1.2.1 CITY OF IRVINE GENERAL PLAN

While UCI is not subject to local land use regulations, the campus may voluntarily decide to comply with them. The City of Irvine General Plan does not specifically dedicate an element to visual resources or aesthetics guidelines. However, there is a policy which addresses hillside character in the Land Use Element. Objective A-3 is to "encourage land use development that preserves the beauty of the natural environment." Policy (b), in support of Objective A-3, is to "ensure development in the hillside areas retains the character and aesthetic value of the natural landform through the use of the Hillside Development Ordinance." The intent of the Hillside Development Ordinance is to identify which areas of the hillside are safe to build and which should be left as open space. This Ordinance also specifies restrictions on development in designated hillside areas.

4.1.2.2 UCI POLICIES AND PROGRAMS

UCI Campus Standards and Design Criteria

UCI's Campus Standards and Design Criteria outlines the requirements of construction and design for new buildings including material standards, building system standards, sustainability and energy efficiency criteria, and site improvement. Since 1992, new buildings are designed to achieve five broad goals:

1. New buildings must "create a place" rather than constitute stand-alone structure, forming social, contextually sensitive relationships with neighboring buildings and the larger campus.

2. New buildings reinforce a consistent design framework of classical contextual architecture, applied in ways that convey a feeling of permanence and quality and interpreted in ways that meet the contemporary and changing needs of a modern research university.
3. New buildings employ material, systems, and design features that will be long lasting and avoid the expense of major maintenance (defined as greater than one percent of the value) for twenty years,
4. New buildings apply "sustainability" principles including LEED Certification or equivalent and outperforming Title 24 (California's energy code) by at least 20 percent.
5. New buildings are designed and delivered within the approved project budget, scope, and schedule to provide high quality space to achieve campus academic objectives.

Campus Lighting Policy

The UCI Campus Lighting Policy applies to all UCI projects that could occur under the purview of the 2007 LRDP. The policy applies to all exterior lighting, whether free-standing or attached to buildings, or other structures. The Campus Standards and Design Criteria provide guidance in the practical implementation of the policy. The primary goal of the Campus Lighting Policy is to reduce nighttime light pollution radiating from campus facilities, ensure adequate lighting levels for safety and security, and promote energy efficiency. Another important goal of the UCI Lighting Policy is to limit nuisance light and glare impacts to adjacent properties. This limitation of luminosity aims to avoid adverse visual impacts to the surrounding community as UCI facilities are constructed.

4.1.3 PROJECT IMPACTS AND MITIGATION

4.1.3.1 ISSUE 1 – SCENIC VISTAS AND VISUAL CHARACTER AND QUALITY

Aesthetics Issue 1 Summary

Would implementation of the 2007 LRDP have a substantial adverse effect on a scenic vista or substantially degrade the existing visual character or quality of the site and its surroundings?

Impact: Implementation of residential and mixed use projects along the southern edge of the campus under the 2007 LRDP would substantially degrade the existing visual character and quality of the South Campus as viewed from Bonita Canyon Drive (Aes-1).

Mitigation: Projects planned on the South Campus which would be visible from Bonita Canyon Drive would require review of design elements by UCI Design Review Team for visual compatibility (Aes-1A).

Significance Before Mitigation: Significant

Significance After Mitigation: Less than significant

Standards of Significance

Based on Appendix G of the CEQA Guidelines, implementation of the 2007 LRDP may have a significant impact if it would have a substantial adverse effect on a scenic vista or substantially degrade the existing visual character or quality of the project site and its surroundings. However, because no scenic vistas have been identified in the 2007 LRDP and this EIR, only the potential to substantially degrade existing visual character will be discussed in the sections below.

Impact Analysis

Academic Core

The Academic Core is visible along Campus Drive. Off-campus adjacent land uses are residential and commercial land uses. Views from these land uses looking south towards the campus consist of academic buildings, student housing, and parking. This viewshed is completely developed with compatible land uses and implementation of the 2007 LRDP would not result in a significant impact to the visual quality of the area. Therefore, impacts will be less than significant. Figure 4.1-1 shows the locations of the viewpoints discussed below.

West Campus

The West Campus is bordered on the west by SR-73. As previously mentioned in Section 4.1.1.2, the view from SR-73 is not considered to be sensitive as all UCI areas along the West Campus edge are developed and many eastward views are limited by topography or the SR-73 toll road. All future west campus development will occur within the interior of the west campus, outside of the primary viewshed of off-campus areas. Further, the available limited views from high elevation residences located west of SR-73 to distant areas of the campus are considered too distant (approximately 0.5 miles to the South Campus and the Academic Core) to be significantly impacted by further development in the campus. On-campus homes along the western edge of University Hills overlook portions of the West Campus that will be subject to future development for student housing and academic and support uses, which are consistent with development of surrounding parcels and will follow campus planning and design guidelines. Therefore, implementation of the 2007 LRDP will have a less than significant impact on the visual character of the West Campus.

East Campus

To facilitate the development of apartments and support facilities to accommodate an estimated 3,000 students on UCI's East Campus, in January 2002 UCI and the City of Irvine entered into a Memorandum of Understanding (MOU) for the project. The MOU included design guidelines to limit potential visual impacts of the East Campus Student Apartments on neighboring off-campus communities. The design guidelines identified building setbacks, building height restrictions, and landscape buffers along the edge of the project site to ensure visual compatibility with adjacent residential areas in the City. Implementation of the project proceeded in conformance with these guidelines. The first phase of the project (Vista del Campo) was completed in 2004 with the second, and final, phase (Vista del Campo Norte) completed in 2006.

The East Campus Student Apartments project occupies the majority of the eastern edge of the UCI campus designated for development. As a result, the viewshed over the East Campus would not be significantly impacted by future development under the 2007 LRDP. In addition, future East Campus projects within the viewshed will at a minimum be consistent with City of Irvine development standards to ensure design compatibility with the surrounding community. Off-campus land use areas would be developed with a compatible design character. Off-campus land uses consisting of single and multi-family homes in the communities of Turtle Rock and Turtle Ridge contain westerly and northwesterly views of on-campus student apartment buildings, open space recreation areas, and undeveloped property. Views of existing on-campus buildings would be masked by the 100-foot landscape buffer, which is under construction on the east side of Culver Drive and the 35-foot landscape buffer on the west (UCI) side of Culver Drive. These buffers reduce visual impacts and impacts resulting from light and glare from student housing and associated development to the adjacent residential areas east of campus. Furthermore, views to the campus from the adjacent community would not be significantly impacted because existing

development located along the majority of the East Campus edge. Therefore, much of the viewshed of future 2007 LRDP development in the East Campus would be limited by the landscape buffers or obstructed by the existing development, as shown in Figure 4.1-2 (Photo 1). Therefore, this viewshed is not considered to be a visually sensitive area and impacts to the visual quality or character would be less than significant.

North Campus

The North Campus viewshed consists of views looking southeast and east towards the campus from Jamboree Road and Fairchild Road. Views from Jamboree Road to the North Campus (Figure 4.1-2) (Photo 2) consist of 17 acres of development and 36 acres of undeveloped land. The undeveloped parcel of land is designated in the 2007 LRDP as mixed use, with future development consistent with the land use designation proposed for this area under the 2007 LRDP. Because this area is designated for commercial, office, research and development, and residential uses consistent with existing surrounding land uses, the future development is not expected to result in a significant visual impact to the area, which is also compatible with on-campus land uses. This same rationale applies to the views from off-campus areas west of the North Campus which are partially buffered by the 30-acre UCI land fill site (Figure 4.1-3) (Photo 3).

Future development of UCI Support Services may occur on portions of the landfill near Fairchild Road. This area is within the viewshed of existing commercial uses near Fairchild and motorists on SR-73. These facilities would be developed consistent with the general character of other areas of the UCI campus and adjacent land areas, therefore are not expected to result in significant visual impacts to the area.

Segments of University Drive and Campus Drive offer close range panoramic views of the SJFM and San Diego Creek to motorists. Existing views to the Marsh and Creek would be unaffected by LRDP development. Therefore, impacts to the SJFM and San Diego Creek viewshed looking northwest from University Drive and southwest from Campus Drive would be less than significant.

South Campus

Views looking north towards the South Campus along Bonita Canyon Drive are characterized by steep slopes and rolling hills, as shown in Figure 4.1-3 (Photo 4). The topography gradually levels as it descends in elevation near Bonita Canyon Road. The designated land use for the South Campus is faculty and staff housing which consists of the existing University Hills community and future faculty and staff housing. The majority of the community has been implemented with the exception of land areas located between Bonita Canyon Drive and California Avenue (Photo 4). The 2007 LRDP retains a landscaped buffer along Bonita Canyon Drive from SR-73 to Newport Coast Drive. Campus land areas along Bonita Canyon Drive east of Newport Coast Drive would be developed for faculty, staff, or student housing under the 2007 LRDP “Housing Reserve” land use designation.

As shown in Figure 4.1-3, residential development under the 2007 LRDP would significantly alter the existing visual character of the area. Residential and institutional uses adjacent to the South Campus have unobstructed views of the rolling hills in the South Campus. Development of residential uses under the 2007 LRDP would substantially impact the views from these off-campus areas looking north. Although the off-campus community has long been aware of this land use designation and its compatibility with off-campus adjacent land uses since the initial UCI LRDP in 1965, campus residential development will change the existing visual quality and character of the area for those viewers. Therefore, implementation of the 2007 LRDP on the South Campus would result in a significant impact to this viewshed.

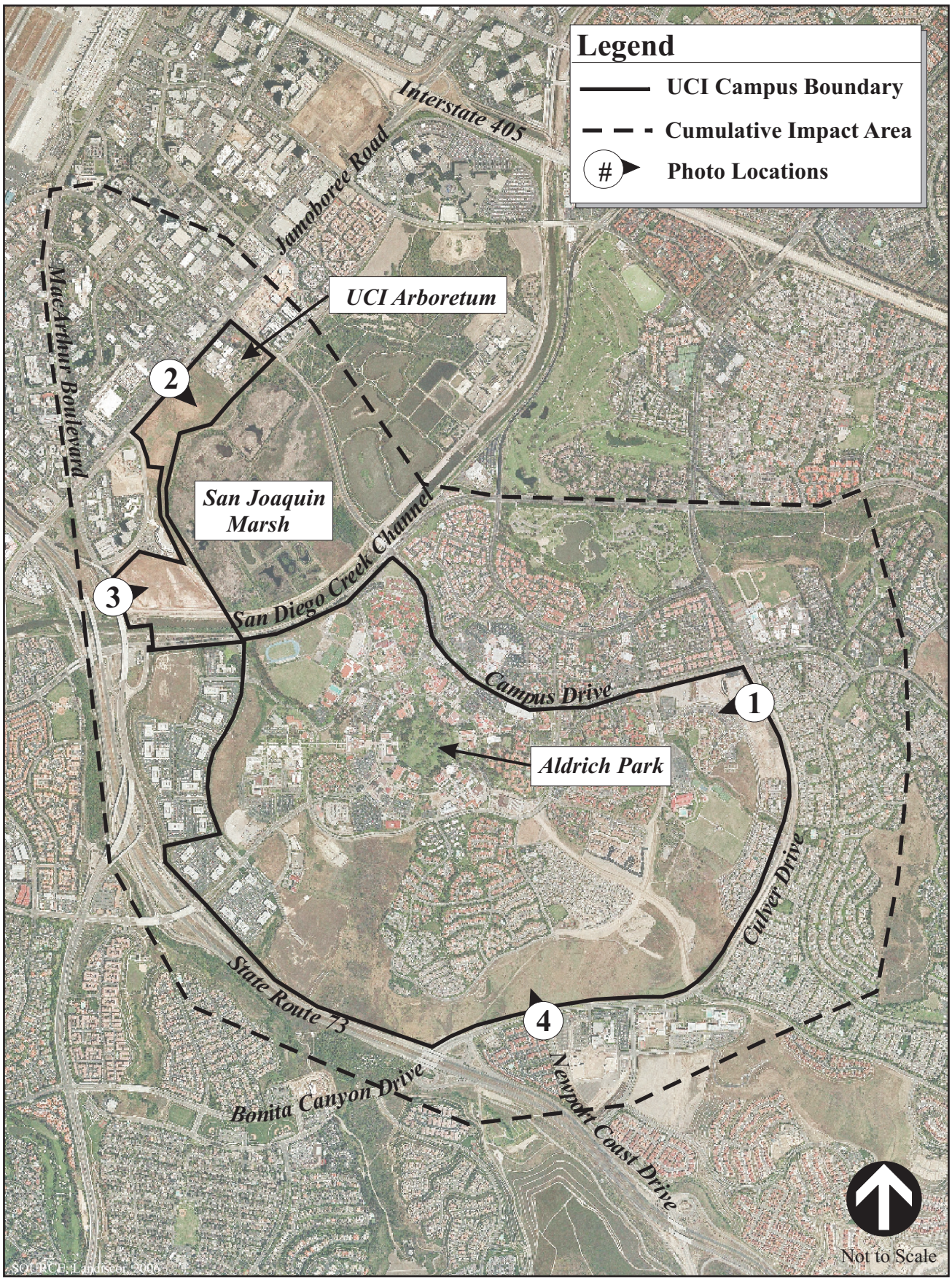

PHOTO LOCATIONS AND CUMULATIVE IMPACT AREA

FIGURE 4.1-1

Photo 1: View of East Campus looking west from Bonita Canyon Road, south of Campus Drive

Photo 2: View of North Campus looking southeast from Jamboree Road between Campus Drive and Fairchild Drive

VIEWS OF EAST CAMPUS AND NORTH CAMPUS **FIGURE 4.1-2**

Photo 3: View of North Campus looking east from MacArthur Boulevard between Fairchild Drive and University Drive

Photo 4: View of South Campus looking north from Bonita Canyon Drive/Newport Coast Drive

VIEWS OF NORTH CAMPUS AND SOUTH CAMPUS **FIGURE 4.1-3**

Impact Aes-1 Implementation of residential and mixed use projects along the southern edge of the campus under the 2007 LRDP would substantially degrade the existing visual character and quality of the South Campus as viewed from Bonita Canyon Drive.

Mitigation Measures

The following mitigation measure is designed to address the significant impacts to the views of the South Campus from Bonita Canyon Drive. However, Mitigation Measure Aes-1A would apply to any project that would substantially degrade the visual character of any project site. With implementation of the following measures, impacts to the views from Bonita Canyon Drive would be less than significant.

Aes-1A Prior to project design approval for future projects that implement the 2007 LRDP and are located in the South Campus, in the vicinity of Bonita Canyon Drive, UCI shall ensure that the projects include design features to minimize visual impacts from off-campus areas. These design features shall include, but are not limited to, the following:

i. A 50-foot wide (minimum) landscaped buffer located along the edge of the campus along the project frontage;

ii. Building mass and/or proportions and exterior treatments and/or colors that are compatible with the surrounding development and visual character; and

iii. Project landscape design that reduces visual impacts and integrates the project into the visual landscape.

4.1.3.2 ISSUE 2 – LIGHTING AND GLARE

Aesthetics Issue 2 Summary

Would implementation of the 2007 LRDP create a new source of substantial light or glare on campus or in the immediate vicinity that would adversely affect day or nighttime views?

Impact: Additional lighting from new development in the North and South Campuses as a result of implementation of the 2007 LRDP could significantly impact sensitive biological resources in the SJFM and residential areas along Bonita Canyon Drive. New development throughout the campus could produce additional buildings which would significantly increase glare impacts to both on- and off-campus viewers and create locations with an increase in light impacts resulting from additional vehicles (Aes-2).

Mitigation: Nonreflective exteriors and glass (Aes-2A); direction and shielding of outdoor lighting and vehicle headlights (Aes-2B).

Significance Before Mitigation: Significant.

Significance After Mitigation: Less than significant.

Standards of Significance

Based on Appendix G of the CEQA Guidelines, implementation of the 2007 LRDP may have a significant adverse impact if it would create a new source of substantial light or glare on campus or in the immediate vicinity that would adversely affect day or nighttime views in the area.

Impact Analysis

Implementation of the 2007 LRDP would result in the development of new structures that would have the potential to increase sources of light and/or glare. Potential new sources of light would include exterior building illumination, lighting for parking lots, landscaped areas, roadways, and specialized functions such as recreation and athletic fields. New sources of glare could result from reflective building surfaces or from the headlights of vehicular traffic. A significant area of the campus has been developed and the majority of future development would occur in the vicinity of existing development.

The addition of new sources of light and glare as a result of implementation of the 2007 LRDP would contribute to an increase in ambient lighting on campus and at the periphery. Potential impacts from glare would primarily occur from the sun reflecting off reflective building surfaces. Daytime views that are in the Bonita Canyon Drive and the SJFM viewsheds are considered sensitive. The SJFM viewshed could be subject to a substantial amount of new glare because of new development in this area. Residential development in the South Campus along Bonita Canyon Drive would be subject to design review consistent with Mitigation Measure Aes-1A which includes review of reflected glare and other visual impacts. However, additional light from future residential areas may impact the existing residential areas along Bonita Canyon Drive. Therefore, impacts from new development in the South Campus would be significant. In addition, new sources of glare in other locations of the campus could result from infill, redevelopment, or expansion under the LRDP, which could result in localized distraction or nuisance by interfering with daytime visibility and a significant impact.

Impact Aes-2 Additional lighting from new development in the North and South Campuses as a result of implementation of the 2007 LRDP could significantly impact sensitive biological resources in the SJFM and residential areas along Bonita Canyon Drive. New development throughout the campus could produce additional buildings which would significantly increase glare impacts to both on- and off-campus viewers and create locations with an increase in light impacts resulting from additional vehicles.

Mitigation Measures

Implementation of the following mitigation measures would reduce impacts from light and glare to a less than significant level. Aes-2A would reduce potential significant daytime glare impacts to less than significant level and Aes-2B would reduce significant nighttime impacts from new lighting and headlights to less than significant level.

Aes-2A Prior to project design approval for future projects that implement the 2007 LRDP, UCI shall ensure that the projects include design features to minimize glare impacts. These design features shall include use of non-reflective exterior surfaces and low-reflectance glass (e.g., double or triple glazing glass, high technology glass, low-E glass, or equivalent materials with low reflectivity) on all project surfaces that could produce glare.

Aes-2B Prior to approval of construction documents for future projects that implement the 2007 LRDP, UCI shall approve an exterior lighting plan for each project. In accordance with *UCI's Campus Standards and Design Criteria* for outdoor lighting, the plan shall include, but not be limited to, the following design features:

i. Full-cutoff lighting fixtures to direct lighting to the specific location intended for illumination (e.g., roads, walkways, or recreation fields) and to minimize stray light

spillover into adjacent residential areas, sensitive biological habitat, and other light-sensitive receptors;

ii. Appropriate intensity of lighting to provide campus safety and security while minimizing light pollution and energy consumption; and

iii. Shielding of direct lighting within parking areas, parking structures, or roadways away from adjacent residential areas, sensitive biological habitat, and other light-sensitive receptors through site configuration, grading, lighting design, or barriers such as earthen berms, walls, or landscaping.

4.1.4 CUMULATIVE IMPACTS AND MITIGATION

Aesthetics Cumulative Issue Summary

Would implementation of the 2007 LRDP have a cumulatively considerable contribution to a cumulative aesthetic impact considering past, present, and probable future projects?

Cumulative Impact	Significance	LRDP Contribution
Scenic Views and Visual Character: New development would not significantly alter the visual character because new development would be similar to existing development.	Less than significant.	N/A
Lighting and Glare: Because light pollution is not regulated within either the City of Irvine or the County of Orange, additional development may result in significant regional light pollution.	Significant.	Not cumulatively considerable.

4.1.4.1 SCENIC VISTAS AND VISUAL CHARACTER AND QUALITY

The geographic context for the analysis of cumulative impacts for scenic vistas and visual character and quality is limited to the vicinity of the UCI Campus. Specifically, the area of consideration is in the City of Irvine and extends from SR-73 to south of Bonita Canyon Drive to east of Culver Drive, along University Drive to east of Campus Drive to the intersection of Campus Drive and MacArthur Boulevard, along MacArthur Boulevard to SR-73, as shown in Figure 4.1-1.As shown on Figure 4.1-1, the area surrounding the main portion of the campus is developed with an office complex and SR-73 to the east, residential areas to the south and west, and a mixed-use area to the north. The area west and north of the North Campus is also developed with industrial uses, while the area to the south of the North Campus is dedicated open space (SJFM) that would not be developed. There are no identified scenic vistas in this area. Because the area surrounding the main portion of the campus is already developed, the development of additional projects in these areas would not alter the existing visual character. Therefore, the cumulative impact to scenic vistas and visual character is less than significant. Likewise, the additional development in the vicinity of the North Campus would be limited to the area to the north where industrial development already exists and no development would occur in the Marsh area. Therefore, the cumulative impacts to visual character in the North Campus would also be less than significant.

4.4.1.2 LIGHTING AND GLARE

The geographic context for the analysis of cumulative impacts due to lighting and glare is limited to the vicinity of the UCI Campus. Specifically, the area of consideration is in the City of Irvine and extends

from SR-73 to south of Bonita Canyon Drive to east of Culver Drive, along University Drive to east of Campus Drive to the intersection of Campus Drive and MacArthur Boulevard, along MacArthur Boulevard to SR-73, as shown in Figure 4.1-1.

The City of Irvine and the University are both highly developed urban areas with substantial existing amounts of ambient light. There are no known sensitive areas that would be affected by off-campus and on-campus light pollution, such as a large observatory that conducts research and services the county. UCI does own and operate a small observatory that is primarily used for introductory instruction purposes by the Department of Physics and Astronomy. This facility is located on campus as an interim use and will be removed as a part of campus residential development of the south campus.

At this time, neither the County nor the City has a regional light pollution policy in place to determine if the cumulative adverse impact of development in the Orange County region on the nighttime sky has or may become significant. Therefore, the cumulative impact of development on lighting and glare is considered significant. With implementation of mitigation measure Aes-2B, future development under the 2007 LRDP would conform to the *UCI's Campus Standards and Design Criteria*, which requires that direct lighting be shielded from sensitive light receptors, such as sensitive biological habitat, and that lighting is directed to a specific location intended of illumination such as sports fields, roads, or walkways. Therefore, because mitigation measure Aes-2B would regulate the use of outdoor lighting, implementation of the 2007 LRDP would not result in a cumulatively considerable contribution to regional light pollution.

4.1.5 CEQA Checklist Items Adequately Addressed in the Initial Study

The initial study for the 2007 LRDP indicated that development on the UCI campus would not substantially damage scenic resources such as trees, rock outcroppings, and historic buildings within a state scenic highway; therefore, it is considered not to be significant and additional analysis is not required in this EIR or the 2007 LRDP.

4.1.6 References

EIP Associates. 1991. *Environmental Impact Report for the University of California, Irvine North Campus Mixed –Use Development.* April 1991.

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U.S. Green Building Council. 2005. LEED – NC Application Guide for Multiple Buildings and On-Campus Building Projects. October 2005.