CHAPTER 2.0
EXECUTIVE SUMMARY

This chapter is an executive summary of the Environmental Impact Report (EIR) for the proposed University Hills Area 9/2 Housing Project at the University of California, Irvine (UCI), prepared in compliance with the California Environmental Quality Act (CEQA). The program-level analysis for the 2007 LRDP is provided in Volumes I and II of this EIR. Comments on the Draft EIR, consisting of Volumes I through III, will be provided in Volume IV of the Final EIR. Volume IV will also include responses to received comments, a summary of revisions to the Draft EIR, and Mitigation Monitoring and Reporting Programs for the 2007 LRDP and Area 9/2 Housing Project.

This chapter highlights the major areas of importance in the environmental analysis for the Area 9/2 Housing Project, as required by CEQA Guidelines Section 15123. It also provides a brief description of the Area 9/2 Housing Project, project objectives, and alternatives to the Area 9/2 Housing Project. In addition, this chapter provides tables summarizing: (1) the direct and cumulative impacts from implementation of the Area 9/2 Housing Project; (2) the level of impact significance before mitigation; (3) the recommended mitigation measures that would avoid or reduce significant environmental impacts; and (4) the level of impact significance after mitigation measures are implemented. A table is also provided which compares the anticipated impacts of the Area 9/2 Housing Project with those of each project alternative.

2.1 OVERVIEW

As required by CEQA, Volume III of this Draft EIR (1) assesses the direct, indirect, and cumulative environmental effects of the proposed Area 9/2 Housing Project; (2) identifies potential feasible means of avoiding or substantially lessening significant adverse impacts; and (3) evaluates a range of reasonable alternatives to the Area 9/2 Housing Project, including the required No Project Alternative. The Board of Regents of the University of California is the "lead agency" for the Area 9/2 Housing Project evaluated in Volume III of this Draft EIR, and has the principal responsibility for certifying the EIR and approving the project. This EIR will be used by The Regents of the University of California to evaluate the environmental implications of approving the Area 9/2 Housing Project.

2.2 PROJECT DESCRIPTION

The Irvine Campus Housing Authority (ICHA) proposes to develop up to 120 for-sale homes with associated roads, utilities, and drainage infrastructure, and possible recreation elements. The residences

may be detached, attached, or some combination of both. The ultimate number of homes built would be determined by the mix selected; however, it would not exceed 120 homes. The residential lots and associated roadways would comprise approximately 10 acres of the site.

Site planning would generally be consistent with City of Irvine standards for residential development. The housing units, exterior finishes, colors, roof materials, and landscaping would be designed and constructed consistent with the quality and character of other recently constructed homes in University Hills and the neighboring off-campus communities. The units would be 2-3 story attached and/or detached single-family homes. The project would include an approximate 80-foot setback from Bonita Canyon Road (back of curb), and would comply with State Title 24 energy efficiency standards and the UC Policy on Sustainable Practices.

Vehicle access to Area 9/2 Housing Project would occur from a new street that would connect to California Avenue in the general vicinity of its intersection with Gabrielino Drive. The vehicle entrance may include a landscaped median and parkway located on either side of the roadway. Project roadways would include parkway landscaping and street trees consistent with the character of other areas of University Hills. The project would include pedestrian connections to other areas of University Hills, campus trails and bikeways, and the UCI Central Academic Core.

Based on the 2000 Census and California Department of Finance, the average number of persons per household in Irvine is 3.0, which is higher than the statewide average of 2.87. Therefore, the Area 9/2 Housing Project could accommodate up to approximately 360 people.

2.3 PROJECT OBJECTIVES

The objectives of the proposed Area 9/2 Housing Project are listed below:

1. Expand the supply of affordable, on-campus housing for UCI faculty and staff to support the recruitment and retention of faculty and staff in support of campus academic objectives;

2. Support the 2007 LRDP objective of providing on-campus housing to reduce impacts on the local community, including traffic impacts and impacts on the local supply of moderately priced housing;

3. Support City of Irvine General Plan objectives of encouraging UCI to maximize the amount of on-campus housing to serve the UCI community;

4. Develop the project site consistent with the Faculty/Staff Housing land use designation identified in the 2007 LRDP to build a cohesive academic community in residence on the campus; and

5. Provide housing to serve the projected future growth of UCI.

2.4 IMPACT SUMMARY

Volume III of this Draft EIR examines the environmental effects from implementation of the proposed Area 9/2 Housing Project, including information related to existing site conditions, analyses of the types and magnitude of individual and cumulative environmental impacts, and feasible mitigation measures that

could reduce or avoid environmental impacts. In accordance with Appendix G of the CEQA Guidelines, the environmental effects of the Area 9/2 Housing Project are analyzed for the following issue areas:

- Aesthetics
- Air Quality
- Biological Resource
- Cultural Resources
- Geology and Soils
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation, Traffic, and Parking
- Utilities and Service Systems

Tables 2-1 and 2-2, presented at the end of this chapter, provide summaries of the environmental impacts that could result from implementation of the Area 9/2 Housing Project and feasible 2007 LRDP mitigation measures that could reduce or avoid environmental impacts. For each impact, Tables 2-1 and 2-2 identify the significance of the impact before mitigation, applicable mitigation measures, and the level of significance of the impact after implementation of the mitigation measures.

The Initial Study for the 2007 LRDP indicated that implementation of projects under the 2007 LRDP, such as the proposed Area 9/2 Housing Project, would not result in significant impacts related to Agricultural Resources and Mineral Resources. Therefore, Agricultural Resources and Mineral Resources were determined to be "Effects Not Found to be Significant", according to Section 15128 of the CEQA Guidelines. These issues are discussed further in Chapter 5, Volume I of this Draft EIR.

2.5 ALTERNATIVES TO THE 2007 LRDP

The following alternatives were analyzed in detail in Volume III of this Draft EIR and compared to the proposed Area 9/2 Housing Project. The objective of the alternatives analysis is to consider a reasonable range of potentially feasible alternatives to foster informed decision-making and public participation. The Area 9/2 Housing Project alternatives include:

- **Alternative 1: No Project Alternative.** Under the No Project alternative, the Area 9/2 Housing Project would not be constructed, either on the proposed site or elsewhere. The project site would not be developed by ICHA for faculty/staff housing and would remain in its existing undeveloped condition.

- **Alternative 2: Reduced Development Alternative.** This alternative would reduce the number of homes constructed by 33 percent. All residential units would be constructed in the northern portion of the site. This would reduce the project footprint and leave an open space area between the proposed housing development and the southern project boundary. This open space area would connect with the campus open space system to the west of the project site.

- **Alternative 3: Alternative Location on Campus Drive.** This alternative would develop the entire proposed project at an alternative site on campus, located on existing Parking Lot 1A adjacent to Campus Drive between East Peltason, Adobe Circle North, and California Avenue.

Detailed descriptions and an analysis of potential impacts of each alternative are presented in Chapter 6, Alternatives (in Volume III of this Draft EIR). Table 2-3 presents the significant environmental impacts of these alternatives compared to those of the proposed Area 9/2 Housing Project. The environmentally superior alternative would be the Reduced Development Alternative. This alternative would reduce the number of homes constructed by 33 percent and would locate these residential units in the northern portion of the site, thereby reducing the project footprint and providing additional open space on-site. Because the footprint would be decreased, impacts to air quality, biological resources, cultural resources, hydrology and water quality, noise, and traffic would be less than the impacts for the proposed project. However, the impacts to aesthetics, hazards and hazardous materials, and utilities would be similar to impacts from the proposed project. The Reduced Development Alternative would accomplish three of the five goals of the Area 9/2 Housing Project.

Table 2-1. Project Impacts and Mitigation Measures*

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
4.1 Aesthetics				
Scenic Vistas and Visual Character and Quality	Implementation of the Area 9/2 Housing Project would substantially degrade the existing visual character and quality of the South Campus as viewed from Bonita Canyon Drive.	S	***LRDP MM*** ***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. Establish a 50-foot wide (minimum) landscaped buffer 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.	LS
Lighting and Glare	Implementation of the Area 9/2 Housing Project would create new sources of light which could adversely affect nighttime views within the project area or the immediate vicinity.	S	***LRDP MM*** ***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.	LS

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
4.2 Air Quality				
Consistency with Applicable Air Quality Plan	The proposed project would not conflict with, or obstruct implementation of, an applicable air quality plan.	None	No mitigation is required.	N/A
Consistency with Air Quality Standards	Construction emissions from the proposed project would exceed significance thresholds for NO_x. Operational emissions are not expected to exceed significance thresholds.	SU	***LRDP MM Air-2B*** Prior to initiating on-site construction for future projects that implement the 2007 LRDP, UCI shall ensure that the project construction contract includes a construction emissions mitigation plan, including measures compliant with SCAQMD Rule 403 (Fugitive Dust) to be implemented and supervised by the on-site construction supervisor, which shall include, but not be limited to, the following BMPs: i. During grading and site preparation activities, exposed soil areas shall be stabilized via frequent watering, non-toxic chemical stabilization, or equivalent measures at a rate to be determined by the on-site construction supervisor. ii. During windy days when fugitive dust can be observed leaving the construction site, additional applications of water shall be required at a rate to be determined by the on-site construction supervisor. iii. Disturbed areas designated for landscaping shall be prepared as soon as possible after completion of construction activities. iv. Areas of the construction site that will remain inactive for three months or longer following clearing, grubbing and/or grading shall receive appropriate BMP treatments (e.g., revegetation, mulching, covering with tarps, etc.) to prevent fugitive dust generation. v. All exposed soil or material stockpiles that will not be used within 3 days shall be enclosed, covered, or watered twice daily, or shall be stabilized with approved non-toxic chemical soil binders at a rate to be determined by the on-site construction supervisor. vi. Unpaved access roads shall be stabilized via frequent watering, non-toxic chemical stabilization, temporary paving, or equivalent measures at a rate to be determined by the on-site construction supervisor. vii. Trucks transporting materials to and from the site shall allow for at least two feet of freeboard (i.e., minimum vertical distance between the top of the load and the top of the trailer). Alternatively, trucks transporting materials shall be covered.	LS

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			viii. Speed limit signs at 15 mph or less shall be installed on all unpaved roads within construction sites. ix. Where visible soil material is tracked onto adjacent public paved roads, the paved roads shall be swept and debris shall be returned to the construction site or transported off site for disposal. x. Wheel washers, dirt knock-off grates/mats, or equivalent measures shall be installed within the construction site where vehicles exit unpaved roads onto paved roads. xi. Diesel powered construction equipment shall be maintained in accordance with manufacturer's requirements, and shall be retrofitted with diesel particulate filters where available and practicable. xii. Heavy duty diesel trucks and gasoline powered equipment shall be turned off if idling is anticipated to last for more than 5 minutes. xiii. Where feasible, the construction contractor shall use alternatively fueled construction equipment, such as electric or natural gas-powered equipment or biofuel. xiv. Heavy construction equipment shall use low NO_x diesel fuel to the extent that it is readily available at the time of construction. xv. To the extent feasible, construction activities shall rely on the campus's existing electricity infrastructure rather than electrical generators powered by internal combustion engines. xvi. The construction contractor shall develop a construction traffic management plan that includes the following: • Scheduling heavy-duty truck deliveries to avoid peak traffic periods • Consolidating truck deliveries xvii. Where possible, the construction contractor shall provide a lunch shuttle or on-site lunch service for construction workers. xviii. The construction contractor shall, to the extent possible, use pre-coated architectural materials that do not require painting. Water-based or low VOC coatings shall be used that are compliant with SCAQMD Rule 1113. Spray equipment with high transfer efficiency, such as the high volume-low pressure spray method, or manual coatings application shall be used to reduce VOC emissions to the extent possible.	

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			xix. Project constructions plans and specifications will include a requirement to define and implement a work program that would limit the emissions of reactive organic gases (ROG's) during the application of architectural coatings to the extent necessary to keep total daily ROG's for each project to below 75 pounds per day, or the current SCAQMD threshold, throughout that period of construction activity to the extent feasible. The specific program may include any combination of restrictions on the types of paints and coatings, application methods, and the amount of surface area coated as determined by the contractor. xx. The construction contractor shall maintain signage along the construction perimeter with the name and telephone number of the individual in charge of implementing the construction emissions mitigation plan, and with the telephone number of the SCAQMD's complaint line. The contractor's representative shall maintain a log of any public complaints and corrective actions taken to resolve complaints.	
Sensitive Receptors	Implementation of the Area 9/2 Housing Project may expose sensitive receptors to substantial pollutant concentrations.	LS	No mitigation is required.	N/A
Objectionable Odors	Implementation of the proposed project is not likely to produce objectionable odors affecting a substantial number of people.	LS	No mitigation is required.	N/A
4.3 Biological Resources				
Candidate, Sensitive, or Special Status Plant Species	The Area 9/2 Housing Project is unlikely to impact sensitive plant species as none have been observed on or adjacent to the project site, although there is potential for southern tarplant (List-1B) to occur in these areas.	LS	No mitigation is required.	N/A
Candidate, Sensitive, or Special Status Animal Species	The Area 9/2 Housing Project has the potential to impact sensitive animal species due to suitable western burrowing owl habitat on site. In addition, raptor nests could occur within 500 feet of project related construction activities and in such case would be indirectly impacted.	S	***LRDP MM*** ***Bio-2A*** Prior to initiating on-site construction for future projects in the east campus and west campus that implement the 2007 LRDP and involve land clearing, grading, or similar land development activities adjacent to suitable habitat for the western burrowing owl (i.e., large open areas of non-native grassland, ruderal (weedy) areas, and scrub habitat), UCI shall retain a qualified biologist to conduct a burrowing owl survey of the respective habitat areas within 300 feet of the approved limits of disturbance. If occupied burrows are detected from the survey, then they shall not be disturbed during the nesting season (February 1 through August 31) until the biologist verifies through noninvasive methods that either: (1) the birds have not begun egg-laying and incubation; or (2) juveniles from the occupied burrows are foraging	LS

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			independently and are capable of independent survival. If owls must be moved away from the disturbance area, passive relocation is preferable to trapping. A time period of at least one week is recommended to allow the owls to move and acclimate to alternate burrows. When destruction of occupied burrows is unavoidable, relocation burrows shall be created (by installing artificial burrows) at a ratio of 1:1 in suitable foraging habitat. The biologist shall document all findings and results in a report submitted to UCI. ***Bio-2B*** Prior to initiating on-site construction for future projects that implement the 2007 LRDP and that involve land clearing, grading, or similar land development activities adjacent to habitat areas identified as suitable for sensitive wildlife species, UCI shall retain a qualified biologist to conduct a sensitive wildlife survey of the respective areas within 150 feet of the approved limits of disturbance. If sensitive wildlife species are detected from the survey, then UCI shall approve contractor specifications that include measures to reduce indirect construction and post-construction impacts to the identified species, to the maximum extent feasible. These measures shall include, but are not limited to, the following: i. A pre-construction meeting shall be held to ensure that construction crews are informed of the sensitive wildlife and habitats in the vicinity of the construction site. Prior to commencement of clearing or grading activities, a biologist (or other qualified person) shall supervise the installation of temporary construction fencing along the approved limits of disturbance to discourage errant intrusions into the identified sensitive wildlife habitats by construction vehicles or personnel. All construction access and circulation shall be limited to designated construction zones. This fencing shall be removed upon completion of construction activities. ii. If suitable habitat for raptors or protected bird species is present and raptors or protected bird species are observed in the vicinity, the pre-construction surveys for active nests shall be performed within 30 calendar days prior to commencement of clearing or grading activities during the breeding season for raptors and protected bird species (generally February 1 through August 31) at locations where suitable nesting habitat exists within 500 feet of the approved limits of disturbance. Construction activities within 500 feet of active raptor nests (300 feet for protected bird species) shall be monitored by the biologist and modified as directed by the biologist until the	

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			iii. biologist determines that the nest is no longer active. Construction activity may encroach into the 500-foot buffer area only at the discretion of the biologist. iv. Refer to mitigation measure Noi-2A for noise abatement measures during construction. v. Storm water treatment and erosion control measures or facilities shall be maintained in a manner that avoids the discharge of polluted runoff and erosion impacts to the identified sensitive plants. vi. Refer to mitigation measure Air-2B for dust control measures during construction. vii. Night lighting shall be avoided during construction. Any necessary lighting shall be shielded to minimize temporary lighting of the surrounding habitat. viii. A biological monitor shall be present on-site on at least a weekly basis during rough grading to ensure that the fenced construction limits are not exceeded. vii. Permanent lighting adjacent to natural habitat areas shall be selectively placed, shielded and directed to minimize impacts to sensitive wildlife.	
Riparian Habitat and Other Sensitive Natural Communities	The Area 9/2 Housing Project would directly impact remnant areas of mule fat scrub located on the southern border of the project site, but would not indirectly impact any sensitive habitats.	S	***LRDP MM*** ***Bio-3A*** For future projects that implement the 2007 LRDP and are located on sites containing mule fat scrub or herbaceous wetland habitats, UCI shall retain a qualified biologist to conduct a survey of these habitats. If project-level surveys determine that mule fat scrub riparian habitat and/or herbaceous wetland habitat may be impacted by the project, then mitigation measures Bio-3B and 3C shall be implemented. ***Bio-3B*** For future projects that implement the 2007 LRDP and could impact mule fat scrub riparian habitat and/or herbaceous wetland habitats as determined by mitigation measure Bio-3A, design features shall be considered to avoid and/or minimize direct impacts to these sensitive vegetation communities, to the extent feasible. If it is not feasible to avoid these impacts, then mitigation measure Bio-3C shall be implemented. ***Bio-3C*** For future projects that implement the 2007 LRDP and would impact mule fat scrub riparian habitat and/or herbaceous wetland habitat, if these areas contain jurisdictional wetlands, all	LS

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			necessary regulatory permits shall be obtained and impacts shall be mitigated through implementation of Mitigation Measure Bio 4A. If no jurisdictional wetlands are present, impacts to mulefat scrub riparian habitat and/or herbaceous wetland habitat of greater than 0.1 acre shall be mitigated at ratios of 1:1 through habitat creation, restoration, or enhancement. Mitigation shall occur within dedicated campus open space areas where feasible, or at off-campus locations if on-site mitigation is not feasible. A qualified biologist shall assist in preparation, implementation, and monitoring of a habitat restoration plan, identifying the site preparation and installation requirements, establishment, monitoring, and long term management of the mitigation areas. Impacts to less than 0.1 acre of these habitat types, where no jurisdictional wetlands are present, would not require mitigation. ***Bio-3D*** As early as possible in the planning process for future projects that implement the 2007 LRDP and are adjacent to designated campus open space areas containing riparian or wetland vegetation, UCI shall ensure that the projects include a 50-foot setback from the flow line, to the extent practicable. Implementation of mitigation measure Bio-1A would reduce the indirect impacts to sensitive vegetation communities to a level of Less than Significant.	
Wetlands	The Area 9/2 Housing Project would directly impact remnant areas of mule fat scrub located on the southern border of the project site, which is protected under the Clean Water Act.	S	***Bio-4A*** For future projects that implement the 2007 LRDP and are located on sites containing (or within 50 feet of) wetlands or other jurisdictional areas, or on sites containing (or within 25 feet of) a natural drainage course, UCI shall retain a qualified biologist to prepare a jurisdictional delineation. The jurisdictional delineation shall identify the presence of any areas that are subject to USACE, CDFG, or RWQCB jurisdiction, and the potential for the project to adversely affect these jurisdictional areas. If there is potential for the project to adversely affect jurisdictional areas all necessary regulatory permits shall be obtained and impacts shall be avoided or mitigated through implementation of mitigation measures established through consultation with regulatory agencies and as specified in the final regulatory permits and conditions.	LS
Wildlife Movement Corridors	Implementation of the Area 9/2 Housing Project would not interfere with wildlife movement corridors or impede movement of native species.	None	No mitigation is required.	N/A

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
4.4 Cultural Resources				
Archaeological Resources	While no resources are know to occur on-site, unrecorded subsurface archaeological resources have the potential to occur.	S	***LRDP MM*** ***Cul-1C*** In the event of an unexpected archeological discovery during grading, the on-site construction supervisor shall redirect work away from the location of the archaeological find. A qualified archaeologist shall oversee the evaluation and recovery of archaeological resources, in accordance with mitigation measures Cul-1A and Cul-1B, after which the on-site construction supervisor shall be notified and shall direct work to continue in the location of the archaeological find. A record of monitoring activity shall be submitted to CEP each month and at the end of monitoring.	LS
Historical Resources	There are no historical resources on the project site.	None	No mitigation is required.	N/A
Human Remains	Human remains are unlikely to occur under the project site; however, because human remains have been discovered in the vicinity of UCI, the project may uncover unknown remains.	LS	No mitigation is required.	N/A
Paleontological Resources	Implementation of the proposed project has the potential to impact unique paleontological resources during construction activities.	S	***LRDP MM*** ***Cul-4A*** Prior to grading or excavation for future projects that implement the 2007 LRDP and would excavate sedimentary rock material other than topsoil, UCI shall retain a qualified paleontologist to monitor these activities. In the event fossils are discovered during grading, the on-site construction supervisor shall be notified and shall redirect work away from the location of the discovery. The recommendations of the paleontologist shall be implemented with respect to the evaluation and recovery of fossils, in accordance with mitigation measures Cul-4B and Cul-4C, after which the on-site construction supervisor shall be notified and shall direct work to continue in the location of the fossil discovery. A record of monitoring activity shall be submitted to UCI each month and at the end of monitoring. ***Cul-4B*** If the fossils are determined to be significant, then mitigation measure Cul-4C shall be implemented. ***Cul-4C*** For significant fossils as determined by mitigation measure Cul-4B, the paleontologist shall prepare and implement a data recovery plan. The plan shall include, but not be limited to, the following measures: a. The paleontologist shall ensure that all significant fossils collected are cleaned, identified, catalogued, and permanently curated with an appropriate institution with a research interest in the materials (which may include UCI);	LS

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			b. The paleontologist shall ensure that specialty studies are completed, as appropriate, for any significant fossil collected; and c. The paleontologist shall ensure that curation of fossils are completed in consultation with UCI. A letter of acceptance from the curation institution shall be submitted to UCI.	
4.5 Geology and Soils				
Exposure to Seismic-Related Hazards	The Area 9/2 Housing Project site is considered to be prone to seismic hazards and would comply with the California Building Code and UC Seismic Safety Policy to reduce seismic related hazards to people and structures.	LS	No mitigation is required.	N/A
Soil Erosion or Topsoil Loss	Because of CBC and NPDES permit requirements, the Area 9/2 Housing Project would not likely result in increased erosion associated with construction activities.	LS	No mitigation is required.	N/A
Soil Instability	Due to unsuitable soils for structures, the Area 9/2 Housing Project could result in impacts due to soils instability.	LS	No mitigation is required.	N/A
Expansive Soils	Expansive soils are located throughout the project area and would be removed during site preparation.	LS	No mitigation is required.	N/A
4.6 Hazards and Hazardous Materials				
Transport, Use, and Disposal of Hazardous Materials	The Area 9/2 Housing Project would result in minimal transport, use, or disposal of hazardous materials.	LS	No mitigation is required.	N/A
Accidental Releases	The Area 9/2 Housing Project could use minimal hazardous materials and the potential for an accidental release is low.	LS	No mitigation is required.	N/A
Hazards to Nearby Schools	Although the project site is within one-quarter mile of existing schools; no activities that involve hazardous materials would be associated with the Area 9/2 Housing Project.	LS	No mitigation is required.	N/A
Listed Hazardous Materials Sites	No closed or active hazardous material sites are located on or near the project site and there is a low potential for unrecorded contamination to occur on the project site.	LS	No mitigation is required.	N/A
Hazards from Nearby Airports	Activities from John Wayne Airport are not likely to pose safety hazards to development of the Area 9/2 Housing Project.	LS	No mitigation is required.	N/A

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
Emergency Response And Evacuation Plans	Temporary road closures or detours associated with construction of the proposed Area 9/2 Housing Project could require alternate emergency response or evacuation routes.	S	***LRDP MM*** ***Haz-6A*** Prior to initiating on-site construction for future projects that implement the 2007 LRDP and would involve a lane or roadway closure, the construction contractor and/or UCI Design and Construction Services shall notify the UCI Fire Marshal. If determined necessary by the UCI Fire Marshal, local emergency services shall be notified of the lane or roadway closure by the Fire Marshal.	LS
Wildland Fires	The Area 9/2 Housing Project would employ fire protection measures to reduce the impact of wildland fire.	LS	No mitigation is required.	N/A
4.7 Hydrology and Water Quality				
Drainage and Hydrology	Implementation of the Area 9/2 Housing Project would have the potential to substantially alter drainages and hydrology which could increase runoff volumes, but compliance with NPDES requirements would reduce impacts from flooding and erosion. In addition, estimated runoff volumes would not exceed the capacity of the existing storm water drainage system.	LS	No mitigation is required.	N/A
Water Quality	Implementation of the proposed project would generate urban runoff pollutants that could violate waste discharge requirements.	S	***LRDP MM*** ***Hyd-2B*** Prior to design approval for the Area 9/2 Housing Project, UCI shall ensure that the project includes the design features listed below, or their equivalent. Equivalent design features may be applied consistent with applicable MS4 permits (UCI's SWMP) at that time. All applicable design features shall be incorporated into project development plans and construction documents; shall be operational at the time of project occupancy; and shall be maintained by UCI. i. All new storm drain inlets and catch basins within the project site shall be marked with prohibitive language and/or graphical icons to discourage illegal dumping per UCI standards. ii. Outdoor areas for storage of materials that may contribute pollutants to the storm water conveyance system shall be covered and protected by secondary containment. iii. Permanent trash container areas shall be enclosed to prevent off-site transport of trash, or drainage from open trash container areas shall be directed to the sanitary sewer system. iv. At least one treatment control is required for new parking areas or structures, or for any other new uses identified by UCI as having the potential to generate substantial pollutants. Treatment controls include, but are not limited to, detention basins, infiltration basins, wet ponds or wetlands,	LS

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			bio-swales, filtration devices/inserts at storm drain inlets, hydrodynamic separator systems, increased use of street sweepers, pervious pavement, native California plants and vegetation to minimize water usage, and climate controlled irrigation systems to minimize overflow. Treatment controls shall incorporate volumetric or flow-based design standards to mitigate (infiltrate, filter, or treat) storm water runoff, as appropriate.	
Seiches, Tsunamis, and Mudflows	Implementation of the proposed project would not expose people or structures to tsunami because of the project site's distance and elevation from the coastline.	None	No mitigation is required.	N/A
4.8 Land Use and Planning				
Applicable Land Use Plans, Policies, and Regulations	Implementation of the Area 9/2 Housing Project would not result in inconsistencies with applicable land use plans, policies, or regulations.	None	No mitigation is required.	N/A
Incompatibilities with Adjacent Land Uses	Implementation of the Area 9/2 Housing Project would not result in incompatibilities between campus development and adjacent community land uses.	None	No mitigation is required.	N/A
4.9 Noise				
Permanent Increases in Ambient Noise	Project-generated traffic would not subject residents of the proposed project nor residents of the surrounding area to substantial increase in ambient noise levels and noise from future traffic volumes on Bonita Canyon Drive would not significantly impact the proposed project.	LS	No mitigation is required.	N/A
Temporary Increases in Ambient Noise	Construction activities associated with development of the Area 9/2 Housing Project would result in temporary increases in ambient noise levels.	S	***LRDP MM Noi-2A*** Prior to initiating on-site construction for future projects that implement the 2007 LRDP, UCI shall approve contractor specifications that include measures to reduce construction/demolition noise to the maximum extent feasible. These measures shall include, but are not limited to, the following: i. Noise-generating construction activities occurring Monday through Friday shall be limited to the hours of 7:00 am to 7:00 pm, except during summer, winter, or spring break at which construction may occur at the times approved by UCI. ii. Noise-generating construction activities occurring on weekends in the vicinity of (can be heard from) off-campus land uses shall be limited to the hours of 9:00 am to 6:00 pm on Saturdays, with no construction occurring on Sundays or holidays.	LS

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			iii. Noise-generating construction activities occurring on weekends in the vicinity of (can be heard from) on-campus residential housing shall be limited to the hours of 9:00 am to 6:00 pm on Saturdays, with no construction on Sundays or holidays. However, as determined by UCI, if on-campus residential housing is unoccupied (during summer, winter, or spring break, for example), or would otherwise be unaffected by construction noise, construction may occur at any time. iv. Construction equipment shall be properly outfitted and maintained with manufacturer recommended noise-reduction devices to minimize construction-generated noise. v. Stationary construction noise sources such as generators, pumps or compressors shall be located at least 100 feet from noise-sensitive land uses (i.e., campus housing, classrooms, libraries, and clinical facilities), as feasible. vi. Laydown and construction vehicle staging areas shall be located at least 100 feet from noise-sensitive land uses (i.e., campus housing, classrooms, libraries, and clinical facilities), as feasible. vii. All neighboring land uses that would be subject to construction noise shall be informed at least two weeks prior to the start of each construction project, except in an emergency situation. viii. Loud construction activity such as jackhammering, concrete sawing, asphalt removal, pile driving, and large-scale grading operations occurring within 600 feet of a residence or an academic building shall not be scheduled during any finals week of classes. A finals schedule shall be provided to the construction contractor.	
Exposure to Aircraft Noise	Implementation of the Area 9/2 Housing Project would not expose people residing or working in the project area to noise from aircraft.	LS	No mitigation is required.	N/A
Excessive Groundborne Vibration or Noise	Implementation of the Area 9/2 Housing Project could result in groundborne vibration from construction activities that might affect residences and sensitive equipment.	S	***LRDP MM Noi-4A*** Prior to initiating on-site construction for future projects that implement the 2007 LRDP and are located within 100 feet of vibration-sensitive uses (i.e., buildings containing vibration-sensitive instruments or operations, or buildings that are considered vibration sensitive due to their age, construction type and/or fragile condition), UCI shall approve a construction vibration mitigation program as part of the contractor specifications that includes	LS

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			measures to reduce vibration resulting from construction activities to the maximum extent practicable. The program shall include measures to establish baseline vibration conditions, vibration monitoring, work methods or equipment necessary to reduce vibration, and a pre-construction notification process for impacted building occupants (six-month and one-month interval prior to construction). If pile driving is proposed, building occupants within 600 feet of the pile-driving site shall be notified of construction at six-month and one-month intervals prior to the start of construction.	
4.10 Population and Housing				
Inducement of Substantial Population Growth	The Area 9/2 Housing Project is part of UCI's response to statewide population growth, and is part of the 2007 LRDP's planned growth of the campus.	LS	No mitigation is required.	N/A
Indirect Inducement of Substantial Population Growth	The Area 9/2 Housing Project would result in immeasurable or no indirect inducement of population growth beyond the campus.	None	No mitigation is required.	N/A
Displacement of Housing	The Area 9/2 Housing Project would not displace existing housing.	None	No mitigation is required.	N/A
Displacement of People	The Area 9/2 Housing Project would not displace people living on or off campus.	None	No mitigation is required.	N/A
4.11 Public Services				
Fire Protection	Implementation of the Area 9/2 Housing Project is not likely to result in increased demand for fire service which could contribute to the need for new or physically altered fire protection facilities, the construction of which could cause an adverse physical environmental effect.	LS	No mitigation is required.	N/A
Police Protection	Implementation of the Area 9/2 Housing Project is not likely to result in increased demand for police service that would require new facilities that could result in a significant physical impact to the environment.	LS	No mitigation is required.	N/A
Public Schools	Implementation of the Area 9/2 Housing Project could contribute to demand for local public schools; however, it is unlikely that new or altered school facilities would be necessary.	LS	No mitigation is required.	N/A
4.12 Recreation				
Deterioration of Parks and Recreational Facilities	The Area 9/2 Housing Project would increase use of on- and off- campus recreational facilities. However, substantial deterioration of the facilities is not anticipated.	LS	No mitigation is required.	N/A
Construction of New Recreational Facilities	The Area 9/2 Housing Project would construct connections to existing trails and bicycle paths which would not have an adverse physical effect on the environment.	LS	No mitigation is required.	N/A

Issue	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
4.13 Transportation, Traffic, and Parking				
Increases in Traffic	Implementation of the Area 9/2 Housing Project would generate traffic consistent with overall campus-wide growth as discussed in the 2007 LRDP EIR. Construction could affect local street traffic near the site.	LS	No mitigation required.	N/A
Parking Capacity	Implementation of the proposed project would not result in the elimination of parking and or impact parking capacity on or off-campus.	None	No additional mitigation is required.	N/A
Alternative Transportation Plans, Policies, and Programs	Implementation of the Area 9/2 Housing Project is not likely to conflict with adopted policies, plans, or programs supporting alternative transportation.	None	No additional mitigation is required.	N/A
4.14 Utilities, Service Systems, and Energy				
Wastewater Treatment	Because the Area 9/2 Housing Project is under the 2007 LRDP, the proposed project would not result in impacts to wastewater treatment.	LS	No mitigation is required.	N/A
New Water or Wastewater Facilities	The proposed Area 9/2 Housing Project would not result in the development of new water and wastewater facilities.	None	No mitigation is required.	N/A
Impacts from New Storm Water Facilities	Implementation of the proposed project could cause the capacity of storm water facilities to be exceeded and result in the need to construct or expand existing facilities.	S	Implementation of 2007 LRDP mitigation measure Hyd-1A, discussed above in Section 4.7.3.1would reduce the potentially significant impacts associated with storm water facility capacity to a less than significant level.	LS
Water Supply Availability	The IRWD's UWMP can accommodate campus growth.	LS	No mitigation is required.	N/A
Landfill Capacity	Solid waste disposal needs would be served by adequate existing and planned future landfill capacity in the County of Orange.	LS	No mitigation is required.	N/A
Applicable Solid Waste Regulations	Implementation of the proposed project would not result in UCI's failure to comply with relevant regulations regarding solid waste.	None	No mitigation is required.	N/A
Energy Consumption	Implementation of the proposed project would create additional demand for energy which would likely require development of new facilities, but would not result in the wasteful, inefficient, or unnecessary use of energy.	LS	No mitigation is required.	N/A

SU = Significant, unavoidable; S = Significant; LS = Less than Significant;
* Cumulative impacts and mitigation measure are summarized in Table 2-2.

Table 2-2. Cumulative Impacts and Mitigation Measures

Issue	Geographic Scope of Cumulative Impact Analysis	Significance of Cumulative Impact	Area 9/2 Housing Project Contribution	Mitigation Measures	Area 9/2 Housing Project Significance Considering Mitigation
4.1 Aesthetics					
Scenic Views and Visual Character: Development of the Area 9/2 Housing Project would not significantly alter the visual character within the UCI Campus because the propose project would be similar to existing development.	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.	Less than significant.	N/A	No mitigation is required.	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.	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.	Significant.	Not cumulatively considerable with implementation of LRDP MM Aes-2B.	No mitigation is required.	N/A
4.2 Air Quality					
Consistency with Applicable Air Quality Plan: Because the 2007 LRDP would not conflict with the 2007 AQMP or the SIP, there is no analysis of cumulative impacts.	No project-level impact.	N/A	N/A	N/A	N/A
Construction and Operational Emissions: Air quality impacts from construction activities that would exceed air quality standards for NO_x.	South Coast Air Basin	Significant.	Cumulatively considerable.	Implementation of mitigation measure Air-B.	Cumulatively considerable and unavoidable.
Sensitive receptors: Exposure of people to substantial carcinogenic, non-carcinogenic, and localized CO pollutant concentrations.	South Coast Air Basin	Significant (carcinogenic, non-carcinogenic pollutants); less than significant (CO "hot spots").	Cumulatively considerable for carcinogenic, non-carcinogenic pollutants; not cumulatively considerable for CO "hot spots".	Implementation of energy-saving programs for carcinogenic, non-carcinogenic pollutants; no mitigation is required for CO "hot spots."	Not cumulatively considerable.

Issue	Geographic Scope of Cumulative Impact Analysis	Significance of Cumulative Impact	Area 9/2 Housing Project Contribution	Mitigation Measures	Area 9/2 Housing Project Significance Considering Mitigation
Objectionable Odors: Because the 2007 LRDP would not generate objectionable odors, there is no analysis of cumulative impacts.	No project-level impact.	N/A	N/A	N/A	N/A
4.3 Biological Resources					
Candidate, Sensitive, or Special Status Plant Species: Regional loss of southern tarplant.	Subregional NCCP Reserve System for the sensitive plant species "covered" under the NCCP/HCP for the County of Orange Central and Coastal sub-region and the Orange County region for the sensitive plant species that are not covered under the NCCP	Significant.	Not cumulatively considerable.	No mitigation is required.	N/A
Candidate, Sensitive, or Special Status Animal Species: Regional loss of sensitive animal species.	Subregional NCCP Reserve System for the sensitive plant species "covered" under the NCCP/HCP for the County of Orange Central and Coastal sub-region and the Orange County region for the sensitive plant species that are not covered under the NCCP	Significant.	Not cumulatively considerable with implementation of LRDP mitigation measures Bio-1A, Bio-2A, and Bio-2B.	No mitigation is required.	N/A
Riparian Habitat and Other Sensitive Natural Communities: Regional loss of western burrowing and foraging habitat for raptors.	Orange County region	Significant.	Not cumulatively considerable with implementation of LRDP mitigation measures Bio-2A and Bio-2B.	No mitigation is required.	N/A
Wetlands: Regional loss of wetlands.	Orange County region	Significant.	Not cumulatively considerable with implementation of LRDP mitigation measure Bio-4A.	No mitigation is required.	N/A
Wildlife Movement Corridors: Because the project would not impact wildlife corridors, there is no analysis of the cumulative impact.	No project-level impact.	N/A	N/A	N/A	N/A
4.4 Cultural Resources					
Archaeological Resources: Regional loss of archeological resources.	Orange County region	Significant.	Not cumulatively considerable with implementation of LRDP mitigation measure Cul-1C.	No mitigation is required.	N/A

Issue	Geographic Scope of Cumulative Impact Analysis	Significance of Cumulative Impact	Area 9/2 Housing Project Contribution	Mitigation Measures	Area 9/2 Housing Project Significance Considering Mitigation
Historic Resources: Regional loss of historical resources.	Orange County region	Significant.	Not cumulatively considerable.	No mitigation is required.	N/A
Human Remains: Regional disturbance of human remains.	Orange County region	Significant.	Not cumulatively considerable with implementation of LRDP mitigation measure Cul-3A.	No mitigation is required.	N/A
Paleontological Resources: Regional loss of paleontological resources.	Orange County region	Less than significant.	N/A	No mitigation is required.	N/A
4.5 Geology and Soils					
Seismic Related Hazards: Cumulative development in the region would expose a greater number of people and structures to seismic-related hazards.	Limited to the immediate area of the geologic constraint with the exception of some geologic impacts that are regional, such as regional earthquake risk.	Significant.	Not cumulatively considerable.	No mitigation is required.	N/A
Soil Erosion and Topsoil Loss: Cumulative development at UCI and throughout the City of Irvine could result in excessive erosions; however, development projects are subject to numerous regulations to prevent soil erosion.	San Diego Creek and Bonita Creek subwatersheds	Less than significant	N/A	No mitigation is required.	N/A
Soil and Slope Instability: Development occurring on unstable soils and slopes requires specific site preparation measures be applied to reduce hazards associated with unstable soils and slopes.	Limited to the immediate area of the geologic constraint with the exception of some geologic impacts that are regional, such as regional earthquake risk.	Less than significant	N/A	No mitigation is required.	N/A
Expansive Soils: Development occurring on expansive soils require specific site preparation measures be applied to reduce hazards associated with expansive soils.	Limited to the immediate area of the geologic constraint with the exception of some geologic impacts that are regional, such as regional earthquake risk.	Less than significant	N/A	No mitigation is required.	N/A
4.6 Hazards and Hazardous Materials					
Transport, Use, and Disposal of Hazardous Materials: Increased regional development that increases the amount of hazardous materials transported, used, and disposed would be subject to laws and regulations.	Ranges from the immediate surrounding area to the City of Irvine region	Less than significant.	N/A	No mitigation is required.	N/A

Issue	Geographic Scope of Cumulative Impact Analysis	Significance of Cumulative Impact	Area 9/2 Housing Project Contribution	Mitigation Measures	Area 9/2 Housing Project Significance Considering Mitigation
Accidental Releases: Increased regional development may increase the amount of hazardous materials transported in the region; however, laws and regulations would reduce the potential for accidental release.	Ranges from the immediate surrounding area to the City of Irvine region	Less than significant.	N/A	No mitigation is required.	N/A
Hazards to Nearby Schools: Laws and regulations would reduce or eliminate potential impacts to nearby schools associated with hazardous materials.	City of Irvine region	Less than significant.	N/A	No mitigation is required.	N/A
Listed Hazardous Materials Sites: Future development would comply with laws and regulations regarding hazardous materials sites.	City of Irvine region	Less than significant.	N/A	No mitigation is required.	N/A
Hazards from nearby airports: Future developments would be reviewed and regulated through the Land Use Plan for John Wayne Airport and the Airport Land Use Commission.	Limited to the immediate area dependent on location of airports	Less than significant.	N/A	No mitigation is required.	N/A
Emergency Response and Evacuation Plans: Future developments would undergo CEQA review and be required to implement measures to mitigate impacts.	City of Irvine region	Less than significant.	N/A	No mitigation is required.	N/A
Wildland Fires: Increase development in fire prone areas would subject additional structures And people to risks associated with wildland fires.	Orange County region	Significant.	Not cumulatively considerable.	No mitigation is required.	N/A
4.7 Hydrology and Water Quality					
Drainage and Hydrology: Increased development within the San Diego Creek Watershed would result in an increase of impervious surfaces and a potential increase of flooding and erosions.	San Diego Creek Watershed	Significant.	Not cumulatively considerable with implementation of LRDP MM Hyd-1A.	No mitigation is required.	N/A
Water Quality: Increased development within the San Diego Creek Watershed would result in increases in pollutant sources that could adversely affect receiving waters.	San Diego Creek Watershed	Significant.	Not cumulatively considerable with implementation of LRDP MM Hyd-2A and Hyd-2B.	No mitigation is required.	N/A

Issue	Geographic Scope of Cumulative Impact Analysis	Significance of Cumulative Impact	Area 9/2 Housing Project Contribution	Mitigation Measures	Area 9/2 Housing Project Significance Considering Mitigation
Seiches, Tsunamis, and Mudflows: These events are not likely to occur in the vicinity of the UCI campus and increased development in this area would not increase the likelihood of such events.	UCI Campus vicinity	Less than significant	N/A	No mitigation is required.	N/A
4.8 Land Use and Planning					
Applicable Land Use Plans, Policies, and Regulations: Future development project would be evaluated for consistency with applicable plans and policies; however, some future development projects may not be consistent.	City of Irvine General Plan and City of Newport Beach General Plan	Less than significant.	N/A	No mitigation is required.	N/A
Incompatibilities with Adjacent Land Uses: Development of mixed, urban, and industrial uses of the North Campus may be incompatible with the San Joaquin Freshwater March.	Vicinity of UCI Campus	Significant.	Not cumulatively considerable.	No mitigation is required.	N/A
4.9 Noise					
Roadway Noise: Permanent traffic noise impacts along on- and off-campus roads due to increased traffic volumes.	UCI, adjacent uses, and affected roadways.	Significant.	Not cumulatively considerable.	No mitigation is required.	N/A
Operational Noise: Permanent noise impacts at noise-sensitive land uses on and adjacent to the campus from new stationary noise sources in both locations.	Vicinity of UCI Campus	Less than significant.	N/A	No mitigation is required.	N/A
Temporary Noise: Temporary noise impacts at noise-sensitive land uses on and adjacent to the campus from construction activities in both locations, including the possible increase of outdoor events at UCI.	Vicinity of UCI Campus	Less than significant.	N/A	No mitigation is required.	N/A
Airport Noise: Because noise-sensitive land uses on campus would not be affected by airport noise, there is no analysis of cumulative impacts.	No project-level impact.	N/A	N/A	N/A	N/A

Issue	Geographic Scope of Cumulative Impact Analysis	Significance of Cumulative Impact	Area 9/2 Housing Project Contribution	Mitigation Measures	Area 9/2 Housing Project Significance Considering Mitigation
Ground-Borne Vibration: Temporary ground-borne vibration impacts at vibration-sensitive land uses on and adjacent to the campus from construction activities in both locations.	Vicinity of UCI Campus	Less than significant.	N/A	No mitigation is required.	N/A
4.10 Population and Housing					
Direct Inducement of Substantial Population Growth: The population in Orange County is forecasted to increase by approximately 9.5 percent.	Orange County region	Significant.	Not cumulatively considerable.	No mitigation required.	N/A
Indirect Inducement of Substantial Population Growth: Much of the Orange County region is developed; therefore, it is unlikely that the future development would indirectly induce population growth.	Orange County region	Less than significant.	N/A	No mitigation required.	N/A
Displacement of Housing: Increases in infill and redevelopment projects may result in the displacement of existing housing.	Orange County region	Significant	Not cumulative considerable.	No mitigation required.	N/A
Displacement of People: Increase in infill and redevelopment projects may result in the displacement of people.	Orange County region	Significant	Not cumulatively considerable.	No mitigation required.	N/A
4.11 Public Services					
Fire Protection: Increased need for fire protection services would require new facilities potentially resulting in adverse physical impacts.	City of Irvine region including the UCI campus, Irvine Business Complex (IBC), and John Wayne Airport (JWA) area	Less than significant.	N/A	No mitigation required.	N/A
Police Protection: Increased need for police protection services would require new facilities potentially resulting in adverse physical impacts.	City of Irvine near the UCI campus	Less than significant.	N/A	No mitigation required.	N/A
Public Schools: Need for new public schools would result in adverse physical impacts.	Irvine Unified School District	Less than significant.	N/A	No mitigation required.	N/A

Issue	Geographic Scope of Cumulative Impact Analysis	Significance of Cumulative Impact	Area 9/2 Housing Project Contribution	Mitigation Measures	Area 9/2 Housing Project Significance Considering Mitigation
4.12 Recreation					
Deterioration of Parks and Recreational Facilities: Future development would increase the amount of recreational facilities in the local area through in-lieu fees or through the donation of parkland.	City of Irvine	Less than significant.	N/A	No mitigation is required.	N/A
Construction of New Recreational Facilities: Future development of recreational facilities could result in significant unavoidable impacts.	City of Irvine	Less than significant.	N/A	No mitigation is required.	N/A
4.13 Transportation, Traffic, and Parking					
Traffic Increases: Regional decreases in traffic LOS.	LRDP traffic study area	Significant.	Not cumulatively considerable with implementation of LRDP MM Tra-1A through Tra-1J.	No mitigation is required.	N/A
Parking Capacity: Because the 2007 LRDP would not result in inadequate parking capacity in the surrounding vicinity, there is no analysis of cumulative impacts.	No project-level impact.	N/A	N/A	N/A	N/A
Alternative Transportation Programs: Because the 2007 LRDP would not result in regional conflicts with alternative transportation plans and policies, there is no analysis of cumulative impacts.	No project-level impact.	N/A	N/A	N/A.	N/A
4.14 Utilities, Service Systems, and Energy					
Wastewater Treatment: Proposed expansion of IRWS facilities would accommodate projected population growth.	Irvine Ranch Water District service area	Less than significant.	N/A	No mitigation is required	N/A
New Water or Wastewater Facilities: Installation and construction of additional facilities could result in adverse physical impacts to the environment.	Irvine Ranch Water District service area	Significant.	Not cumulatively considerable.	No mitigation is required	N/A

Issue	Geographic Scope of Cumulative Impact Analysis	Significance of Cumulative Impact	Area 9/2 Housing Project Contribution	Mitigation Measures	Area 9/2 Housing Project Significance Considering Mitigation
Impacts from New Storm Water Facilities: The construction of additional storm water facilities could result in adverse physical impacts to the environment.	UCI Campus and vicinity	Significant.	Not cumulatively considerable, with implementation of LRDP MM Hyd-1A.	No mitigation is required	N/A
Water Supply Availability: IRWD's recently adopted Urban Water Management Plan is projected to accommodate future growth and water demand.	Irvine Ranch Water District service area	Less than significant.	N/A	No mitigation is required	N/A
Landfill Capacity: A recently approved project will extend the life of the FRB landfill to 2053.	Orange County region	Less than significant.	N/A	No mitigation is required	N/A
Applicable Solid Waste Regulations: Previous difficulties in complying with AB 939 are likely to continue as population levels increase in Orange County.	Orange County region	Significant.	Not cumulatively considerable.	No mitigation is required	N/A
Energy Consumption: Increasing population would increase the demand for energy and energy facilities which would result in adverse physical impacts to the environment.	Southern California Edison (SCE) service area.	Significant.	Not cumulatively considerable.	No mitigation is required	N/A

Table 2-3. Summary of Analysis for Alternatives to the 2007 LRDP

2007 LRDP			Alternatives to the 2007 LRDP		
Issue Areas with Potential for Significant Impacts under the 2007 LRDP or its Alternatives	**Without Mitigation**	**With Mitigation**	**No Project**	**Reduced Development Alternative**	**Alternative Location on Campus Drive**
4.1 Aesthetics					
Visual Character and Quality	S	LS	▼	—	▼
Lighting and Glare	S	LS	▼	—	▼
4.2 Air Quality					
Consistency with Applicable Air Quality Standards					
Construction related impacts	S	SU	▼	▼	—
Operational and vehicle related impacts*	LS	-	▼	▼	—
Cumulative impacts from CO, NO_x, VOCs, PM_{10}, and $PM_{2.5}$ emissions	S	SU	▼	▼	—
4.3 Biological Resources					
Sensitive and Special Status Plant Species *	LS	-	▼	▼	—
Sensitive and Special Status Animal Species	S	LS	▼	▼	—
Riparian Habitat and Other Sensitive Natural Communities	S	LS	▼	▼	—
Wetlands	S	LS	▼	▼	—
4.4 Cultural Resources					
Archeological Resources	S	LS	▼	▼	▼
Paleontological Resources	S	LS	▼	▼	▼
4.6 Hazardous Materials					
Construction-related Road Closure Affecting Emergency Response	S	LS	▼	—	—
4.7 Hydrology and Water Quality					
Site Drainage and Hydrology	S	LS	▼	▼	—
Water Quality	S	LS	▼	▼	—
4.9 Noise					
Exposure to Permanent Ambient Noise	LS	-	▼	▼	—
Temporary Increases in Ambient Noise	S	LS	▼	▼	—
Excessive Ground borne Vibration or Noise	S	LS	▼	▼	—
4.13 Transportation, Traffic, and Parking					
Increases in Traffic*	LS	LS	▼	▼	—
4.14 Utilities, Service Systems, and Energy					
Impacts from New Storm Water Facilities	S	LS	▼	—	▼

▲ Alternative is likely to result in greater impacts to issue when compared to proposed project
— Alternative is likely to result in a similar impacts to issue when compared to proposed project
▼ Alternative is likely to result in less impacts to issue when compared to proposed project, however, impacts would still be significant before mitigation.
S Significant impact
LS Less than significant impact
SU Significant and unavoidable impact
* This less than significant impact was included in Table 6-1 because one or more of the alternatives would result in greater impacts to this issue area than the 2007 LRDP. The alternatives would result in similar or fewer impacts to the remaining less than significant impacts.