UC DAVIDS

HYATT PLACE HOTEL EXPANSION AND OLD DAVIS ROAD EXTENSION

Focused Tiered Draft Environmental Impact Report

Prepared By:

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Technical studies conducted in support of this Draft EIR are available at the following website:
http://sustainability.ucdavis.edu/progress/commitment/environmental_review/index.html
1 Environmental Review Process

This Focused Tiered Draft Environmental Impact Report (Draft EIR) has been prepared to provide an analysis of certain potentially significant environmental effects of the University of California Davis (UC Davis), Hyatt Place Hotel Expansion and Old Davis Road Extension projects. The purpose of this Draft EIR is to inform university decision-makers, public agencies, and the public of the environmental consequences of implementing the proposed projects. This Draft EIR has been prepared in accordance with the California Environmental Quality Act (CEQA), the State CEQA Guidelines, and the UC guidelines for the implementation of CEQA. The University of California is the lead agency for the proposed project and, as such, has authority over whether to approve or deny the proposed project.

In accordance with CEQA Guidelines Sections 15152 and 15168 and Public Resources Code Section 21094, this environmental analysis is tiered from the environmental impact report (EIR) for the UC Davis 2003 Long Range Development Plan (State Clearinghouse No. 2002102092) (the 2003 LRDP EIR). The 2003 LRDP is a comprehensive land use plan for guiding physical development on campus to accommodate projected enrollment increases and expanded and new program initiatives through the 2015-16 academic year. The proposed project is an element of the growth that was anticipated in the 2003 LRDP and evaluated in the 2003 LRDP EIR.

The CEQA concept of "tiering" refers to the evaluation of general environmental matters in a broad program level EIR, with subsequent focused environmental documents for individual projects that implement the program. CEQA and the CEQA Guidelines encourage the use of tiered environmental documents to reduce delays and excessive paperwork in the environmental review process. CEQA Guidelines Section 15168(d) provides for simplifying the preparation of environmental documents for individual parts of the program by incorporating by reference analyses and discussions that apply to the program as a whole. Where an EIR has been prepared or certified for a program or plan, the environmental review for a later activity consistent with the program or plan should be limited to potentially significant effects on the environment that were not analyzed as significant in the prior EIR, that are susceptible to substantial reduction or avoidance (CEQA Guidelines Section 15152[d]), or were not adequately addressed in the prior EIR (CEQA Guidelines Section 15152[fl]).

1.1 Draft Tiered Initial Study

UC Davis prepared a Notice of Preparation (NOP) and issued a Tiered Initial Study (Tiered IS) on March 23, 2011 (Appendix A) that was tiered from the 2003 LRDP EIR. The Tiered IS evaluated potential environmental effects of the proposed project, identified which issues were adequately addressed in the 2003 LRDP EIR, and identified which issues would require further analysis in the Focused Tiered Draft EIR. Based on the Tiered IS, UC Davis decided to prepare a Focused Tiered Draft EIR to evaluate potential impacts related to Aesthetics and Visual Resources, Air Quality, Cultural Resources, Greenhouse Gas Emissions, Noise, and Transportation and Circulation. Therefore, this Focused Tiered Draft EIR has been prepared to further evaluate the significance of impacts in these topic areas and to develop, if necessary, project specific mitigation measures.
1.2 **Scope and Purpose of the EIR**

The March 23, 2011 Initial Study concluded that the project may have potentially significant effects on the environment that were not previously addressed or adequately addressed in the 2003 LRDP EIR, or may have environmental effects that are less-than-significant but have been selected for further analysis and disclosure. This EIR analyzes the potential impacts of the proposed project on the topics of Aesthetics and Visual Resources, Air Quality, Cultural Resources, Greenhouse Gas Emissions, Noise, and Transportation and Circulation.

1.3 **Environmental Review and Approval Process**

Under CEQA, the lead agency for a project is the public agency with primary responsibility for carrying out or approving the project and for implementing the requirements of CEQA. CEQA Guidelines Section 15083 authorizes and encourages an early consultation or scoping process to help identify the range of actions, alternatives, mitigation measures, and significant effects to be analyzed and considered in an EIR and to help resolve the concerns of affected regulatory agencies, organizations, and the public. Scoping is designed to explore issues for environmental evaluation, ensuring that important considerations are not overlooked and uncovering concerns that might otherwise go unrecognized. UC Davis prepared a NOP and issued a Tiered IS on March 23, 2011 (Appendix A) (tiered from the 2003 LRDP EIR) to determine the scope of the environmental impact analyses that would be needed to adequately address the project. The NOP was circulated for a 30-day comment period from March 23, 2011 to April 21, 2011.

In response to the NOP, comments were received from five agencies or individuals. Copies of each comment letter are contained in Appendix B. Comments were submitted by:

- **State of California, Department of Transportation.**
- **State of California, Public Utilities Commission.**
- **Yolo-Solano Air Quality Management District (YSAQMD).**
- **City of Davis.**
- **Brian Neal, Solano Park Apartments Community Garden Committee.**

A summary of the issues raised by each commenter is provided in Section 2.5. The lead agency responsible for considering implementation of the project and for preparing this Draft EIR is The Regents of the University of California (The Regents). CEQA requires that state and local government agencies consider the environmental effects of projects over which they have discretionary authority before taking action on those projects (Pub. Res. Code Section 21000 et seq.). CEQA also requires that each public agency avoid or mitigate to less-than-significant levels, wherever feasible, the significant environmental effects of projects it approves or implements. After completion of the environmental review process, including required public review periods, The Regents, or its University of California delegate, will decide whether to certify the Final EIR as adequate according to CEQA, and whether to take action on the proposed projects.

As described above and in Section 15121(a) of the CEQA Guidelines, an EIR is an informational document for public agency decision-makers and the public that analyzes the significant environmental effects of a project, identifies possible ways to minimize significant effects, and describes reasonable alternatives to the project that could reduce or avoid its significant
environmental impacts. Public agencies with discretionary authority are required to consider the information in the EIR, along with any other relevant information, in making decisions on the proposed project. Those state and local agencies, other than the lead agency, that are responsible for carrying out or approving a project, or elements of a project, are termed "responsible agencies" under CEQA. These responsible agencies may need to approve portions of, grant permits for, or provide other discretionary approvals for the project. For this project, the only anticipated responsible agency is the Yolo-Solano Air Pollution Control District (YSAQMD).

1.3.1 Public and Agency Review

This Draft EIR will be circulated for a 45-day public and agency review period from June 15, 2011 to July 29, 2011. Comments on the Draft EIR must be received by 5:00 p.m. on July 29, 2011, and may be emailed to environreview@ucdavis.edu or sent to:

Sid England
Assistant Vice Chancellor - Environmental Stewardship and Sustainability
University of California
436 Mrak Hall
One Shields Avenue
Davis, CA 95616

Comments relating to this Draft EIR may also be presented orally during a public hearing on July 7, 2011, at 7:00 PM at the Buehler Alumni and Visitors Center Building on the UC Davis campus.

1.3.2 Availability of Documents

This Draft EIR, and documents incorporated by reference in this Draft EIR, are available for review during normal operating hours at the UC Davis Office of Environmental Stewardship and Sustainability 436 Mrak Hall on the UC Davis campus; at the Reserves in Shields Library on the UC Davis campus; at the Yolo County Public Library, 315 East 14th Street, Davis; and online during the public review period at http://sustainability.ucdavis.edu/progress/commitment/environmental_review/index.html. Copies of the 2003 LRDP and the 2003 LRDP EIR are available at the above locations. Reference materials used in the preparation of these documents are also available during normal office hours at the UC Davis Office Environmental Stewardship and Sustainability.

1.3.3 Project Approval

Following the public hearing on this Draft EIR and after the close of the public comment period, responses to written and oral comments on the Draft EIR will be prepared and published in a Focused Tiered Final EIR document. The Draft EIR and the Focused Tiered Final EIR (collectively the Final EIR) will be independently reviewed and considered by the University in connection with a decision on whether to approve the proposed project. It is anticipated that the proposed certification of the EIR and consideration of the project will occur in August or September of 2011.

1.3.4 CEQA Findings and Mitigation Monitoring

CEQA requires decision-makers to adopt mitigation measures to substantially lessen the proposed project’s significant impacts whenever feasible. Section 15091 of the CEQA Guidelines requires that, when approving a project, the lead agency makes certain findings with
respect to the significant effects of the project, whether such effects can be substantially lessened through mitigation or alternatives, whether the mitigation or alternatives are feasible, and responsibility for implementation of mitigation. Section 21081.6 of the California Public Resources Code and Sections 15091 (d) and 15097 of the CEQA Guidelines require public agencies "to adopt a reporting and monitoring program for changes to the project which it has adopted or made a condition of project approval in order to mitigate or avoid significant effects on the environment." In Chapter 4 of this Draft EIR, a project-specific mitigation measure was identified to eliminate entirely the project's less-than-significant impact due to greenhouse gas emissions, so that the proposed project would create no net increase in greenhouse gas emissions. If, at the time of project approval, any project-specific mitigation measures are adopted, a Mitigation Monitoring and Reporting Plan (MMRP) will be included in the Final EIR. The University of California will adopt project-specific findings to explain the relationship between the MMRP that was adopted for the 2003 LRDP EIR and the on-going implementation of mitigation measures in the 2003 LRDP EIR MMRP that are applicable to the proposed project.

1.4 RELATIONSHIP TO THE 2003 LRDP AND LRDP EIR

This environmental analysis is tiered from the 2003 LRDP EIR (State Clearinghouse No. 2002102092). The 2003 LRDP is a comprehensive land use plan that will guide physical development on campus to accommodate projected enrollment increases and expanded and new program initiatives through the 2015-16 academic year. The proposed projects are elements of the growth that were anticipated in the 2003 LRDP and evaluated in the 2003 LRDP EIR.

The 2003 LRDP provides for the campus to expand research facilities and projected an increase of 2.5 million assignable square feet (ASF) of new building space on the campus. The 2003 LRDP identified an objective of extending Old Davis Road along the alignment currently proposed for implementation (see UC Davis 2003 LRDP, page 78). The 2003 LRDP EIR evaluated the impacts of that projected growth, including the impacts of growth such as the hotel development that was planned for the South Entry District of the campus.

Tiering of the environmental analysis for the proposed project pursuant to the CEQA Guidelines allows this Focused Tiered Draft EIR to rely on the 2003 LRDP EIR for the following:

- A discussion of general background and setting information for environmental topic areas;
- Overall growth related issues;
- Issues that were evaluated in sufficient detail in the 2003 LRDP EIR for which there is no significant new information or change in circumstances that would require further analysis; and
- Assessment of cumulative impacts that were adequately analyzed in the 2003 LRDP EIR.

In addition, mitigation measures that were previously adopted for the 2003 LRDP EIR, and are related to and designed to reduce the impacts of this project, are identified in this Draft EIR. Because these mitigation measures are already being carried out as part of implementation of the 2003 LRDP, they are included in and are part of the proposed project and will not be readopted. Nothing in this Draft EIR in any way alters the obligations of the campus to implement the LRDP mitigation measures. Please see Section 1.2.2 regarding the availability of the 2003 LRDP EIR and other documents incorporated by reference.
1.5 **Organization of the EIR**

The content and format of this Draft EIR are designed to meet the requirements of CEQA and the CEQA Guidelines (Sections 15122 through 15132). The Draft EIR is organized into the following chapters so that the reader can easily obtain information about the proposed projects and the specific environmental issues:

- **Chapter 1, Environmental Review Process**, explains the CEQA process and the purpose of this Draft EIR; lists the lead and responsible agencies with discretionary authority over the proposed projects; provides information on the public and agency review and approval process; describes the relationship of the proposed projects and the 2003 LRDP EIR; and outlines the organization of this Draft EIR.

- **Chapter 2, Project Summary**, presents an overview of the proposed projects; a summary of the alternatives being considered; a discussion of known areas of controversy; and a listing of the impacts of the proposed projects and mitigation measures in a table format, including the significance of impacts before and after mitigation.

- **Chapter 3, Project Description**, provides background on the proposed projects; identifies the project objectives; lists the likely regulatory requirements of the project; and describes the facility-related and construction-related improvements that comprise the proposed projects.

- **Chapter 4, Environmental Setting, Impacts, and Mitigation Measures**, explains the approach to the environmental analysis for this EIR and includes a description of the baseline, or existing conditions, and the regulatory setting. Following the setting information, this section provides an analysis of impacts that would result from implementation of the proposed projects.

- **Chapter 5, Other CEQA-Required Sections**, identifies the growth-inducing impacts, the significant and unavoidable impacts of implementing the proposed projects, and the significant and irreversible commitment of resources.

- **Chapter 6, Alternatives**, analyzes the environmental impacts of three alternatives to the proposed projects and compares them to the proposed project. The chapter also serves to describe the alternatives to the proposed project that were considered but eliminated from further consideration. The environmentally superior alternative is also identified in this chapter.

- **Chapter 7, References and Acronyms/Abbreviations**, provides information about the published documents and other unpublished information (personal communications) cited in this Draft EIR and provides a list of acronyms/abbreviations that are used in the Draft EIR.

- **Chapter 8, Agencies and Persons Consulted**, lists the people and agencies consulted in preparation of this Draft EIR.

- **Chapter 9, Report Preparers**, lists the individuals who were involved in preparing this Draft EIR and the individuals who provided information.

- **Appendix A** contains the Tiered IS and NOP, **Appendix B** contains the comment letters that were submitted in response to the Tiered IS and NOP.
2 PROJECT SUMMARY

2.1 INTRODUCTION

This Focused Tiered Draft EIR evaluates the potential environmental impacts of two UC Davis projects: the Hyatt Place Hotel Expansion and the Old Davis Road Extension. This overview highlights the major areas of importance in the environmental analysis for the proposed projects, as required by Section 15123 of the CEQA Guidelines. It also provides a brief description of the projects, project objectives, community/agency issues, alternatives to the project, and areas of controversy known to the University. In addition, this chapter provides a table summarizing: (1) the potential environmental impacts that would occur as the result of implementation of the 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.

2.2 PROJECT DESCRIPTION AND OBJECTIVES

UC Davis proposes two projects on the south portion of the central campus. The first project would expand the existing campus hotel by adding 52 rooms to the existing 75 rooms, which would result in a total hotel capacity of 127 rooms. The hotel expansion would take place on a landscaped area within the developed parcel of the hotel to the north and east of the existing building. The existing parking lot for the hotel has sufficient capacity to accommodate the proposed parking demand associated with the 52-room expansion and would not need to be expanded.

The second project proposed for the south portion of UC Davis is the extension of Old Davis Road from its existing terminus east of the existing hotel to the southern terminus of A Street. The proposed extension of Old Davis Road was previously identified as a component of long-term UC Davis roadway plans and the road was partially extended by 800 feet in 2009 at the same time the conference center and hotel projects were constructed. The proposed extension would construct approximately 1,100 feet of new roadway and would connect to the south side of Parking Lot 5, allowing through access on the connected roadway. Once connected, the road extension would provide an alternate route to the existing Old Davis Road alignment. In addition, UC Davis would convert the existing Old Davis Road along the south side of the UC Davis Arboretum to a bike and pedestrian path with emergency vehicle and service vehicle access.

Hotel Expansion:
The Hotel Expansion will provide needed capacity for overnight accommodations in close proximity to the UC Davis conference center. The expanded capacity is expected to improve the ability of UC Davis to host academic conferences in furtherance of the teaching, research, and public service mission of the University. The project objectives are to:

- Provide opportunities to attract larger and more frequent conferences including academic and University-sponsored conferences to the UC Davis Conference Center to promote professional collaboration and academic synergies by providing additional hotel rooms in close proximity to the UC Davis Conference Center.
- Create additional hotel rooms at the UC Davis Hyatt Place Hotel to minimize the site development costs and environmental effects of providing additional hotel rooms in close proximity to the UC Davis Conference Center.
Minimize traffic impacts and associated contributions to global warming by enabling conference participants to minimize automobile travel between off-site hotel locations and the existing conference center.

**Old Davis Road Extension:**
The Old Davis Road Extension will implement a long-planned change to circulation at UC Davis. The project objectives are to:

- Simplify the routing and experience for new visitors to the UC Davis campus by making route-finding simpler and more intuitive so that new visitors better understand the concept of the campus loop road and the traffic flow along the loop road.
- Improve the connection between the UC Davis Mondavi Center for the Performing Arts, the UC Davis Conference Center, and the Hyatt Place Hotel, and the City of Davis downtown area.
- Convert the existing road alignment to a bike and pedestrian facility to facilitate these modes of travel, to expand the campus bicycle network and to enhance the exposure for arboretum uses by shifting motorized vehicles south, away from the arboretum.
- Identify a corridor for utility expansions or extensions that may be needed for future projects along the road extension that are consistent with the 2003 LRDP and the 2003 LRDP EIR.

2.3 **IMPACT SUMMARY**

Table 2-1 provides a complete list of the conclusions from the analyses of all potential project impacts, which are related to aesthetics, air quality, cultural resources, greenhouse gas emissions, noise, and traffic and circulation which this EIR is focused. As Table 2-1 shows, these potential impacts have been found to be less than significant, and no mitigation is required. While impact GHG-1 was found to be less-than-significant, the university has identified a mitigation measure to entirely eliminate the less-than-significant contribution of the proposed project to greenhouse gas emissions. This mitigation measure is shown below in Table 2-1.
<table>
<thead>
<tr>
<th>Impact</th>
<th>Level of Significance Before Mitigation</th>
<th>Mitigation Measures</th>
<th>Level of Significance After Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>AES-1</td>
<td>LS</td>
<td>No mitigation is needed</td>
<td>LS</td>
</tr>
<tr>
<td>AES-2</td>
<td>LS</td>
<td>No mitigation is needed</td>
<td>LS</td>
</tr>
<tr>
<td>AIR-1</td>
<td>LS</td>
<td>No mitigation is needed</td>
<td>LS</td>
</tr>
<tr>
<td>AIR-2</td>
<td>LS</td>
<td>No mitigation is needed</td>
<td>LS</td>
</tr>
<tr>
<td>AIR-3</td>
<td>LS</td>
<td>No mitigation is needed</td>
<td>LS</td>
</tr>
<tr>
<td>AIR-4</td>
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<td>LS</td>
</tr>
<tr>
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<td>LS</td>
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<tr>
<td>CUL-1</td>
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<td>No mitigation is needed</td>
<td>LS</td>
</tr>
<tr>
<td>CUL-2</td>
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<td>No mitigation is needed</td>
<td>LS</td>
</tr>
<tr>
<td>GHG-1</td>
<td>LS</td>
<td>No mitigation is needed (see Table 2-2)</td>
<td>No Impact</td>
</tr>
<tr>
<td>GHG-2</td>
<td>LS</td>
<td>No mitigation is needed (see Table 2-2)</td>
<td>No Impact</td>
</tr>
<tr>
<td>Impact</td>
<td>Level of Significance Before Mitigation</td>
<td>Mitigation Measures</td>
<td>Level of Significance After Mitigation</td>
</tr>
<tr>
<td>--------</td>
<td>---------------------------------------</td>
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</tr>
<tr>
<td>NOI-1</td>
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<td>LS</td>
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<td>No mitigation is needed</td>
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<td>No mitigation is needed</td>
<td>LS</td>
</tr>
<tr>
<td>TRA-3</td>
<td>SU</td>
<td>Previously adopted with 2003 LRDP EIR</td>
<td>SU</td>
</tr>
<tr>
<td>TRA-4</td>
<td>No Impact</td>
<td>No mitigation is needed</td>
<td>No Impact</td>
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<td>No mitigation is needed</td>
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<td>TRA-7</td>
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<td>TRA-8</td>
<td>SU</td>
<td>Previously adopted with 2003 LRDP EIR</td>
<td>SU</td>
</tr>
</tbody>
</table>

Note: LS denotes less-than-significant.
Table 2-2: Project-Specific Mitigation Summary

<table>
<thead>
<tr>
<th>Impact</th>
<th>Level of Significance</th>
<th>Mitigation Measures</th>
<th>Level of Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>GHG-1</td>
<td>LS</td>
<td><strong>Mitigation Measure GHG-1</strong>: Under the Strategic Energy Partnership Program, the Campus will fund energy-efficiency improvements in existing buildings on the campus that will achieve a minimum GHG emissions reduction of 641.48 MTCO2e per year, within two years of the occupancy of Hyatt Place Hotel Expansion Project and the construction of the Old Davis Road Extension Project. The SEPP is forecasted to achieve a reduction of approximately 18,900 MTCO2e by the year 2014.</td>
<td>No Impact</td>
</tr>
<tr>
<td>GHG-2</td>
<td>LS</td>
<td>No Impact</td>
<td></td>
</tr>
</tbody>
</table>

Note: LS denotes less-than-significant.

2.4 ALTERNATIVES TO THE PROPOSED PROJECT
The following alternatives are analyzed in detail in Chapter 6 of this Focused Tiered Draft EIR in comparison to the proposed project. The purpose of the alternatives analysis is to determine whether an alternative would feasibly attain some or most of the project objectives, while avoiding or substantially lessening some of the significant effects of the proposed project. A two-step process was used to conduct the alternatives analysis in this Draft EIR. First, potential alternatives were examined for their feasibility and ability to meet most of the project objectives. Those that clearly were found to be infeasible were rejected without further environmental review. Alternatives that may be feasible and that would attain most of the basic project objectives were carried forward and analyzed with regard to whether they would reduce or avoid any significant impacts of the project. The following table provides a summary of the alternatives analyzed in Chapter 6.
## Table 2-3: Alternatives Summary

<table>
<thead>
<tr>
<th>Alternatives Considered But Rejected</th>
<th>Description</th>
</tr>
</thead>
</table>
| **Hotel Expansion--Teleconference Promotion/Minimize Campus Conference Promotion** | Under this alternative, hotel expansion would not take place and the campus would promote teleconferencing as the preferred method for professional collaboration and would discourage (through incentives or disincentives) participation in conferences. In doing so, the need for additional hotel rooms adjacent to the existing conference center could potentially be reduced and perhaps the expansion of the hotel would not be needed.  
This alternative is infeasible and was rejected because employees would continue to use in-person conference sessions to collaborate and share work ideas; research opportunities and academic synergies and collaboration would be impaired if in-person conferences were not allowed. In doing so, the overall academic mission of the University would be hindered. Attempting to artificially discourage the practice of participating in professional conferences would result in conferences taking place at off-site locations with or without the participation of UC Davis employees. In addition, the alternative of reducing conference participation at UC Davis would not achieve the objective of utilizing the existing campus conference center efficiently through the provision of adjacent hotel rooms that could be booked for larger conference events. |
| **Hotel Expansion--Construction at Non-UC Davis Location** | This alternative would involve purchasing land and constructing the proposed facilities at a non-UC Davis location or requesting a third-party developer to expand hotel offerings at an off-campus location near the UC Davis conference center. The alternative would be similar to the proposed project except that: 1) the facility would not be constructed adjacent to the existing hotel; and 2) the project would not be as close to the proposed location as the proposed project because there are no other accessible off-campus locations in close proximity to the existing conference center.  
This alternative was rejected as infeasible because would not be in close proximity to the UC Davis conference center and would not facilitate drawing additional and larger conferences. In addition, a non-UC Davis location could require additional automobile parking facilities, additional land area, and additional utility connections all of which are available and appropriately sized for the proposed building addition at the site of the existing Hyatt Place Hotel. The increased distance between a potential off-site location and the existing conference center would not achieve the objective of providing a close option for conference attendees that would allow attendees to minimize automobile travel between the conference location and the hotel accommodation. |
| **Road Extension—Construction of Alternative Route** | This alternative would involve routing the proposed road extension toward the south and east. Rather than the proposed S-curve that is preferred in the proposed project, the road would extend along the north side of the railroad tracks and then curve gently north to connect with A Street. This alternative would require removal of approximately seven |
buildings within the Solano Park student housing area and would require removal of the entire Solano Park community garden area. The alternative would be similar to the proposed project in terms of traffic and circulation effects but would be very disruptive to the Solano Park housing complex.

This alternative was rejected as infeasible because, at this time, removal of student housing capacity at this location would conflict with the operational needs of the student housing program.

<table>
<thead>
<tr>
<th>Alternatives Evaluated in Detail</th>
<th>Hotel Expansion—No Project — No Build</th>
<th>Hotel Expansion—Construction at Alternative UC Davis Locations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hotel Expansion—No Project — No Build</strong></td>
<td>The No Project—No Build alternative would not construct the proposed hotel addition. This alternative would not meet the basic project objectives of adding additional hotel rooms in close proximity to the UC Davis Conference Center. To maximize the use of the existing conference facilities, additional hotel rooms in close proximity to the existing hotel are needed. Under this alternative, the desired on-going use of the conference center would result in decreased potential events and the missed opportunity of attracting larger conferences to the existing facility. Compared to the proposed project, the No Project-No Build alternative would have reduced environmental impacts because no construction would take place and the construction related impacts identified in the Tiered Initial Study and the Draft EIR (such as impacts to air quality from construction vehicle emissions) would not occur. This alternative is infeasible because it would not meet the project objectives, would result in insufficient hotel rooms to serve the existing conference facility and would not allow for expanded overnight accommodations at UC Davis.</td>
<td></td>
</tr>
<tr>
<td><strong>Hotel Expansion—Construction at Alternative UC Davis Locations</strong></td>
<td>This alternative would construct a new 52-room hotel structure somewhere else at UC Davis. The exact location for this alternative is not considered here, it could conceivably be selected to prominently identify and promote some portion of the UC Davis campus such as the Aggie Stadium, the College of Veterinary Medicine, West Village, the Arboretum, or the Mondavi Center for the Performing Arts. For some options such as the Arboretum or the Mondavi Center for the Performing Arts, the physical location would be close enough to the existing UC Davis Conference Center so that the hotel rooms would be attractive to conference participants. Under this alternative, additional efforts would be needed to book guests for one of the two hotels (the existing and the proposed) into the location most desired by the guests. In addition, the operators of the hotels would need to carefully explain the existence of two hotel locations and provide clear directions to each of the facilities. This alternative would not lessen any environmental effects compared to the proposed project. For some environmental resources topics such as utilities, geology and soils, and hydrology, the impacts would be higher because, rather than constructing a building addition on a previously prepared site with existing utility connections and available parking, this alternative would develop a new project site. In addition, to achieve 52 new hotel rooms, the construction at an Alternative UC Davis Location alternative would also need to construct a larger building to accommodate a hotel lobby, management offices, kitchen space, and utility space. The new project site would require adequate</td>
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</table>
space for the building, landscaping, parking, and driveway access. Accordingly, the soil disturbing impacts would be greater than the impact from the proposed project, and utility connections may not be available at an alternative location which would necessitate additional construction to extend utility lines to the alternative site. Consequently, this alternative would be expected to have increased environmental impacts compared to the proposed project.

This alternative is considered infeasible because while it would meet most of the project objectives it would have environmental impacts that would be higher than the proposed project and would have higher financial costs. This alternative would not meet the project objective of providing additional hotel rooms at the Hyatt Place Hotel to minimize the site development costs and environmental effects of providing additional hotel rooms in close proximity to the UC Davis Conference Center.

<table>
<thead>
<tr>
<th>Hotel Expansion—Construction of Reduced Facilities</th>
<th>Hotel Expansion</th>
</tr>
</thead>
<tbody>
<tr>
<td>This alternative would involve construction of a smaller building than the proposed project. The key elements of this alternative would be to construct a single building of only 15,000 square feet instead of the proposed 28,000 square feet and to provide approximately 26 new hotel rooms rather than the 52 rooms that are proposed for the Hyatt Place hotel expansion.</td>
<td></td>
</tr>
<tr>
<td>This alternative would have similar environmental effects to the proposed project but at a lower intensity because of the reduced construction impacts, a smaller increase in employee population, and a reduction in operational impacts. The overall reduction in operational impacts would extend to the air quality, greenhouse gas emissions, and utilities impacts evaluated in this EIR. Overall, the construction of Reduced Facilities Alternative would result in the same types of impacts as the proposed project, but at reduced intensities. The project would create the same type of site operational impacts such as trip generation and air quality emissions as the proposed project, but at a reduced level, and would not create any new environmental effects.</td>
<td></td>
</tr>
<tr>
<td>This alternative is considered infeasible because it would not fully meet the project objectives of providing additional hotel rooms to support large conferences.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Road Extension—No Project—No Build</th>
<th>Road Extension</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under the No Project Alternative for the road extension, no roadway modifications would occur. The new road extension would not be constructed and the existing route of Old Davis Road would not be converted to a bicycle and pedestrian path. The No Project—No Build alternative would not meet the basic project objectives. The road improvements to produce enhanced wayfinding on the campus loop road and conversion of the existing Old Davis Road to a bike and pedestrian facility would not occur.</td>
<td></td>
</tr>
<tr>
<td>Compared to the proposed project, the No Project-No Build alternative would have reduced environmental impacts because no construction would take place and the construction related impacts identified in the Tiered Initial Study and the Draft EIR (such as impacts to air quality and greenhouse gas emissions from construction vehicle emissions) would not occur.</td>
<td></td>
</tr>
<tr>
<td>This alternative is infeasible because it would not meet the project objectives and would not allow for improved circulation at UC Davis. This alternative is contrary to the planned improvements identified in the 2003 LRDP and would conflict with implementing the bicycle...</td>
<td></td>
</tr>
</tbody>
</table>
circulation plans approved in the 2008 UC Davis Bikeway and Transit Network Study.

<table>
<thead>
<tr>
<th>Road Extension—Construction of Reduced Facilities (no bike lanes)</th>
<th>Road Extension</th>
</tr>
</thead>
<tbody>
<tr>
<td>This alternative would involve construction of a similar road with landscaping and sidewalk as contemplated under the proposed project. Rather than including bike lanes within the proposed roadway, the road extension would be built narrower with the elimination of 6 feet of pavement width in each direction. The amount of paved surface would decrease and the construction activities would also decrease. Rather than directing bicycle traffic to the road extension, cyclists would instead be directed to use the converted Old Davis Road section immediately south of the Arboretum as the preferred cycling route. This alternative would have similar environmental effects to the proposed project but at a lower intensity because of the reduced construction impacts and decreased impervious surface. The reduction in construction impacts would extend to the air quality, cultural resources, and greenhouse gas emissions, and impacts evaluated in this EIR. Overall, the construction of the Reduced Facilities Alternative—No Bike Lanes would result in the same types of impacts as the proposed project, but at reduced intensities. This alternative is considered infeasible because it would not meet the project objectives of providing a street with bike lanes in accordance with campus plans for completing the bike network and providing comfortable cycling facilities along roadways.</td>
<td></td>
</tr>
</tbody>
</table>

2.5 **Known Areas of Controversy**

Section 15123 of the CEQA Guidelines requires that a summary of an EIR identify areas of controversy known to the Lead Agency, including issues raised by agencies and the public.

During the review Initial Study, five comment letters were received. An overview of the issues raised by each commenter is provided below. Copies of each comment letter are provided in Appendix B.

- **State of California, Public Utilities Commission.** The Public Utilities Commission commented that the project should consider rail safety issues that could be related to the proposed project.

- **State of California, Department of Transportation.** Caltrans commented that a specific intersection should be included in the traffic impact analysis for the projects and that a traffic management plan should also be developed.

- **Yolo-Solano Air Quality Management District (YSAQMD).** The YSAQMD provided comments indicating that District guidance for the air quality analysis should be consulted and that certain rules of the District may apply to the proposed project.

- **City of Davis.** The Davis City Council commented that a newly proposed hotel and conference center within the City of Davis could have effects that should be considered in combination with the EIR for the proposed UC Davis hotel expansion and road extension. The City of Davis provided further comments with regard to the project description, economic impacts, traffic analysis, alternatives analysis, and requesting an economic study.
• **Brian Neal, Solano Park Apartments Community Garden Committee.** Mr. Neal provided comments indicating a desire to keep the Solano Housing gardens in use for as long as possible and requesting UC Davis to provide a fence to separate the proposed road from the remaining garden area.
3 PROJECT DESCRIPTION

3.1 REGIONAL LOCATION
The approximately 5,300 acre UC Davis campus is located in Yolo and Solano Counties approximately 72 miles northeast of San Francisco, 15 miles west of the City of Sacramento, and adjacent to the City of Davis (see Figure 1). The campus is comprised of four campus units: the central campus, the south campus, the west campus, and Russell Ranch. Most academic and extracurricular activities occur within the central campus. The central campus is bounded generally by Russell Boulevard to the north, State Route 113 (SR 113) to the west, Interstate 80 (I-80) and the Union Pacific Railroad tracks to the south, and A Street to the east. The south campus is located south of I-80 and north of the South Fork of Putah Creek. The west campus is bounded by SR 113 to the east, Putah Creek to the south, Russell Boulevard to the north, and extends approximately one-half mile west of County Road 98. The south and west campus units are contiguous with the central campus, and are used primarily for field teaching and research. The approximately 1,600 acre Russell Ranch portion of the campus lies to the west, separated from the west campus by approximately one and one-half miles of privately owned agricultural land. Russell Ranch was purchased in 1990 for campus uses including large-scale agricultural and environmental research, study of sustainable agricultural practices, and habitat mitigation. Russell Ranch is bordered roughly by County Road 96 on the east, Putah Creek on the south, Covell Boulevard on the north, and Russell Boulevard and privately owned agricultural land on the west and northwest.

3.2 PROJECT OVERVIEW
UC Davis proposes two projects on the south portion of the central campus (see Figure 2). The first project would expand the existing campus hotel by adding 52 rooms to the existing 75 rooms, which would result in a total hotel capacity of 127 rooms. The existing Hyatt Place hotel at UC Davis was completed in 2010 and is built and operated by a third-party developer. The hotel expansion would take place on a landscaped area north and east of the existing building. The existing parking lot for the hotel has sufficient capacity to accommodate the proposed expansion and would not need to be expanded. The expanded hotel building would result in an additional 28,000 square feet of building area and, like the existing facility, would be four stories tall. The design of the hotel expansion would match the architecture and height of the existing building.

The second project proposed for the south portion of UC Davis is the extension of Old Davis Road from its existing terminus east of the existing hotel to the southern terminus of A Street. The proposed extension of Old Davis Road has been previously identified as a component of long-term UC Davis roadway plans (as shown in the 2003 LRDP, p. 78) and the road was partially extended by 800 feet in 2009 at the same time as the conference center and hotel projects. The proposed extension would construct approximately 1,100 feet of new roadway and would connect to the south side of Parking Lot 5, allowing through access on the connected roadway. Once connected, the road extension would provide an alternate route to the existing Old Davis Road alignment. In addition, UC Davis would convert the existing Old Davis Road along the south side of the UC Davis Arboretum to a bike and pedestrian path with emergency vehicle and service vehicle access.

The road extension would include two-lanes for motorized traffic (one lane in each direction) and bike lanes adjacent to the road curbs. The project would include a sidewalk on the north side of the road and landscaping along both sides of the road. A 15-foot-wide corridor south of the road would be designated as a future potential corridor for underground utilities, but no utility construction in this corridor is planned at this time. The extended road would replace the existing road connection located between Mrak Hall Drive and A Street.
Figure 3
Project Site
Aerial photo shows existing hotel development with expansion area at east side of building.
Architectural renderings show existing building with completed addition.
3.3 Project Site

Hotel Expansion:
The hotel expansion site is approximately 8,000 square feet immediately adjacent to the east side of the existing hotel building. The project site was used for construction staging during construction of the existing four-story hotel building and was landscaped with turf and shrubs upon completion of the hotel building. The proposed construction would take place entirely within the previously disturbed area at the hotel site, currently a landscaped area. The site planning for the original hotel placed the hotel driveway, parking area and visitor circulation to accommodate the potential future expansion of the hotel. In total, the site of the existing hotel is approximately three acres including the hotel, parking lot, driveways, and landscaping. The proposed expansion would take place on approximately 8,000 square feet within this three-acre area.

The hotel expansion site is in the southern portion of the central campus at UC Davis in Yolo County where UC Davis has built new buildings and infrastructure during the last 10 years. Previous projects in this area include the Mondavi Institute for Wine and Food Science, the South Entry Parking Structure, Parking Lots 1 and 2, the Mondavi Center for the Performing Arts, Vanderhoef Quad, Gallagher Hall for the Graduate School of Management, the Conference Center Building, and the existing hotel which was completed in 2010. Additional new infrastructure in this portion of campus includes the road and utilities that have been completed to serve these new buildings.

To the north of the hotel site is the environmental horticulture teaching and research area consisting of small one-story buildings and greenhouses and surrounding garden space for horticultural teaching and research. To the east of the hotel site is an undeveloped lawn and the community garden for the Solano Park housing area. To the south of the site is Old Davis Road and further south across a chainlink fence are the Union Pacific Railroad tracks (approximately 250 feet from the hotel building) and Interstate 80 (approximately 1,000 feet from the hotel building). To the west of the hotel site is the Conference Center building and Gallagher Hall home of the UC Davis Graduate School of Management.

The UC Davis 2003 LRDP designates the project site and these surrounding areas as areas intended for Academic and Administrative land uses, a designation that is intended for uses that fulfill the teaching, research, and public service mission of university and business/service activities that support the University mission.

Old Davis Road Extension:
The Old Davis Road Extension would take place from the current roadway terminus south of the existing hotel in a north and east direction for approximately 1,100 feet. A portion of the roadway and utility corridor would extend through and displace a portion of an area used as residential garden space by students living in the UC Davis Solano Park Housing complex. A portion of the area for the road extension is covered with mowed lawn and the project would also displace an outdoor basketball court. Land uses to the north of the road extension include a lawn area between the Environmental Horticulture buildings and the Nelson Hall Art Gallery (formerly the University Club). No off-campus land uses would be directly affected by the proposed road extension.

The 2003 LRDP includes the planned extension of Old Davis Road in the proposed alignment. The proposed project is consistent with the 2003 LRDP and helps to implement the circulation patterns that were anticipated in the 2003 LRDP. The 2003 LRDP designated the land area north of the road extension for Academic and Administrative land uses. The 2003 LRDP
designated the land area south of the road extension for Community Gardens and PE/ICA/Recreation uses.

3.4 **PROJECT OBJECTIVES**

The proposed project will provide needed improvements to UC Davis facilities and infrastructure. The specific objectives for each project component are provided below.

**Hotel Expansion:**
The Hotel Expansion will provide needed capacity for overnight accommodations in close proximity to the UC Davis conference center. The expanded capacity is expected to improve the ability of UC Davis to host academic conferences in furtherance of the teaching, research, and public service mission of the University. The project objectives are to:

- Provide opportunities to attract larger and more frequent conferences including academic and University-sponsored conferences to the UC Davis Conference Center to promote professional collaboration and academic synergies by providing additional hotel rooms in close proximity to the UC Davis Conference Center.
- Create additional hotel rooms at the UC Davis Hyatt Place Hotel to minimize the site development costs and environmental effects of providing additional hotel rooms in close proximity to the UC Davis Conference Center.
- Minimize traffic impacts and associated contributions to global warming by enabling conference participants to minimize automobile travel between off-site hotel locations and the existing conference center.

**Old Davis Road Extension:**
The Old Davis Road Extension will implement a long-planned change to circulation at UC Davis. The project objectives are to:

- Simplify the routing and experience for new visitors to the UC Davis campus by making route-finding simpler and more intuitive so that new visitors better understand the concept of the campus loop road and the traffic flow along the loop road.
- Improve the connection between the UC Davis Mondavi Center for the Performing Arts, the UC Davis Conference Center, and the Hyatt Place Hotel, and the City of Davis downtown area.
- Convert the existing road alignment to a bike and pedestrian facility to facilitate these modes of travel, to expand the campus bicycle network and to enhance the exposure for arboretum uses by shifting motorized vehicles south, away from the arboretum.
- Identify a corridor for utility expansions or extensions that may be needed for future projects along the road extension that are consistent with the 2003 LRDP and the 2003 LRDP EIR.
3.5 PROJECT ELEMENTS

3.5.1 Hotel Addition

The addition to the existing hotel would consist of approximately 28,000 square feet of new building space. The addition would consist of four floors to match the height of the existing building and each floor would provide approximately 6,900 square feet of space and 13 hotel rooms for a total addition of 52 new hotel rooms.

The architecture of the building addition would match the style, colors, and height of the existing building and is designed to ensure that the completed addition would appear as an integrally designed portion of the existing building. The proposed hotel addition would not include new landscaping at the project site. Upon completion of the original hotel building and parking lot, the area was landscaped with trees, shrubs, and groundcover.

3.5.2 Road Extension

The parking and roadway modifications associated with the road extension include the following:

- **Road Construction.** The project includes extension of the roadway from its existing terminus east of the hotel site to A Street at Parking Lot 5. The road would include one lane in each direction, bike lanes, curb, gutter, street lighting, landscaping and a sidewalk on the north side of the road. A fence will be included to separate the road area from the adjacent Solano Park Student Housing Community Garden area.

- **Modifications to Parking Lot 5.** Within Parking Lot 5, approximately 25 parking spaces would be removed to allow a portion of existing parking lot to function as a road corridor with bike lanes and sufficient width for motorized vehicles. The proposed design would utilize the existing curb and gutter within the parking lot driveway to function as a roadway. Additional driveway modifications may also be provided for Parking Lot 5 as part of the project completion and the project would include a four-way stop sign at the west side of Parking Lot 5 to allow access from the road extension to the Parking Lot 5 driveways.

- **Modifications to Nelson Hall exterior.** Nelson Hall (previously the University Club) would be accessed directly from the road extension instead of the existing Old Davis Road and modifications to the driveway drop-off and turnaround area for Nelson Hall would be provided as part of the proposed project.

- **Modifications to the existing Old Davis Road.** Upon completion of the road extension, UC Davis would also modify the existing segment of Old Davis Road between Mrak Hall Circle and A Street for improved bike and pedestrian access. Conversion of the roadway would include minor modifications such as installing bollards or an entry gate to restrict motor vehicles, new signs, narrowing of the asphalt area and planting additional landscaping and the provision of new bike path lighting along the route rather than the existing roadway lighting. These improvements will meet all California Manual on Uniform Traffic Control Devices (MUTCD) criteria for bicyclist and pedestrian circulation.

- **Future Utility Corridor.** The road extension design would place landscaping along the road edges and would designate an area south of the proposed landscaping as a corridor for future utilities. At this time, no utilities are proposed for the corridor. The benefit of designating the corridor will be that the initial tree planting efforts along the road will not be disrupted by the future excavation for underground utilities.
• **Landscaping.** The road extension project will include landscaping along the sides of the road to provide street trees and groundcover.

3.5.3 **Utilities and Infrastructure**

As discussed briefly in this section and analyzed in Section 7.16, below, the proposed project would require connections to campus utilities and infrastructure including domestic water, utility water, sanitary sewer, storm drainage, electricity, natural gas, and telecommunications.

• Domestic Water: Domestic water for the hotel building addition will be provided from the campus domestic water system and the building addition will connect to an existing water supply main within the project site. The road extension project will not affect domestic water supply.

• Utility Water: The hotel building addition will not utilize water from the campus utility water system. The road extension project will use utility water for roadway landscaping and will connect to an existing water supply main within the project site.

• Sanitary Sewer: The hotel building addition will connect to an existing sanitary sewer line within the project site. The sewer line is served by the campus wastewater treatment facility. The road extension project will not connect to the campus sanitary sewer system and will not generate demand for the sanitary sewer system.

• Storm Drainage: The hotel addition and the road extension will connect to the campus storm drainage system so that stormwater runoff from the project is directed to underground drains that would flow to the UC Davis arboretum waterway. For the hotel building addition, the existing drains at the project site would be utilized. For the road extension project, new project drain inlets would connect to a new underground drainage pipe that would extend from the road extension northward, past the west side of Nelson Hall and would then empty into the arboretum waterway.

• Electricity: The hotel addition and the road extension will connect to the campus grid at an existing connection point within each project site. The hotel addition will use electrical power for lighting and cooling. The road extension project will use electrical power for streetlights.

• Natural Gas: The hotel addition will connect to the Pacific Gas and Electric (PG&E) natural gas system at an existing connection point within the project site. The road extension would not utilize natural gas. No off-site trenching will be needed to utilize natural gas.

• Chilled Water: The hotel addition and the road extension will not utilize chilled water from the campus utility system.
• Steam: The hotel addition and the road extension will not utilize steam from the campus utility system.

• Telecommunications: The hotel addition will connect to the AT&T telecommunication infrastructure for network and telephone service. The project will utilize existing connections within the hotel building to obtain service. The road extension would not utilize telecommunications services.

3.5.4 Population

The project would result in additional employment from the building addition so that employment at UC Davis would increase by approximately 12 people. No new population is associated with the road extension project.

3.6 Construction Schedule and Staging

Construction of the proposed hotel expansion project is anticipated to begin in Fall 2011 and end in Summer of 2012 with an estimated 8-month construction period. Construction of the road extension project is currently not scheduled but could occur in 2011, 2012 or in future years. Construction of the road is anticipated to take approximately five months. Construction staging and contractor parking associated with the proposed project would occur on the developed portion of the existing hotel parking lot.
4 ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION MEASURES

4.1 INTRODUCTION

This section of the Focused Tiered Draft EIR presents potential environmental impacts of the proposed Hyatt Place Hotel Expansion and Old Davis Road Extension projects. The scope of the analysis and key attributes of the analytical approach are presented below to assist readers in understanding the manner in which the impact analysis has been conducted in this Focused Tiered Draft EIR.

The preparation of this Focused Tiered Draft EIR was preceded by the Tiered Initial Study for the Hyatt Place Hotel Expansion and Old Davis Road Extension projects (included in Appendix A) which determined that an EIR would be prepared to consider potential project impacts to Aesthetics, Air Quality, Cultural Resources, Greenhouse Gas Emissions, Noise, and Transportation.

This chapter examines potential impacts related to these environmental topics, presenting the environmental setting, regulatory setting, standards of significance, methodology of the analysis, impacts of the proposed project on the environment, and proposed measures to mitigate significant impacts. The environmental setting subsections provide an overview of the existing physical environmental conditions at the time the NOP was issued. Much of this information is incorporated by reference from the 2003 LRDP EIR, from which this EIR is tiered. The environmental setting is the environmental baseline to which the proposed project is compared to determine its impacts. The regulatory setting subsections identify the environmental laws and regulations that are relevant to each topical section. Standards of significance are identified for each environmental topic. These standards are the thresholds used to determine whether implementing the project would result in a significant environmental impact.

Impacts are presented for each environmental topic identified above, and a significance determination is provided at the end of each discussion. A significant impact is defined under CEQA as a substantial adverse change to the physical environment. The analysis in this EIR determined that no project-specific significant impacts would result; however, project-specific greenhouse gas mitigation measures are identified to further reduce the project’s greenhouse gas impacts to net zero.

4.2 SCOPE OF THE EIR

4.2.1 Definition of Baseline

The environmental setting consists of the physical environmental conditions at the time the NOP for this Focused Tiered Draft EIR was released, in March 2011.

4.2.2 Definition of Study Area

For Aesthetics and Visual Resources, the environmental setting area (the study area) consists of areas at existing hotels in the city of Davis and the properties immediately adjacent to existing hotels because this EIR analyzes the potential for significant adverse physical deterioration (as defined in section 4.3.3, below) of visual conditions in the general area of hotel properties that could result from project implementation through the potential indirect effect of closures to area hotels. The aesthetic and visual resources impacts at the project sites for the Hotel Expansion and the Road Extension were evaluated in the Initial Study (Appendix A, Section 7.1).
For Air Quality, the environmental setting area evaluated consists of both the local project area around the project site and the Sacramento Valley Air Basin, which is the combined air quality planning area for the Sacramento area.

For Cultural Resources, the environmental setting area consists of the area of disturbance for the proposed Old Davis Road Extension project. The hotel expansion site, by contrast, was previously excavated and consists entirely of previously disturbed soil.\(^1\)

For Greenhouse Gas Emissions, the study area consists of the emission sources from the proposed projects that could contribute to global climate change due to greenhouse gas emissions.

For Noise, the study area consists of the area along the north side of the Solano Park student housing complex which could be affected by increased noise from the proposed road extension project.

For Transportation and Circulation, the study area is the roadway system that could be affected by the proposed project.

4.2.3 Basis of Impact Analysis

The analysis of impacts in this Draft EIR is based on the location and magnitude of the physical effects that are projected to occur as a result of the implementation of the project. Impacts are evaluated in terms of changes to existing conditions that would be caused by the proposed project. For aesthetics and visual resources, air quality, cultural resources, greenhouse gas emissions, noise, and transportation and circulation, the conditions that would result from implementation and operation of the project at full capacity are compared to baseline conditions to characterize the change.

4.2.4 Cumulative Impacts

The CEQA Guidelines, Section 15130, require that an EIR discuss cumulative impacts of a project when the project’s incremental effect is "cumulatively considerable." According to Section 15065, "cumulatively considerable" means the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects as defined in Section 15130. Pursuant to Section 15130 of the CEQA Guidelines, "the discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided for the effects attributable to the project alone. The discussion should be guided by the standards of practicality and reasonableness, and should focus on the cumulative impacts to which the identified other projects contribute rather than the attributes of other projects which do not contribute to the cumulative impact."

Mitigation measures are to be developed to reduce the project’s contribution to significant cumulative effects whenever feasible. The CEQA Guidelines acknowledge that sometimes the only feasible method for mitigating or avoiding significant cumulative effects is to adopt ordinances or regulations that apply to all projects that contribute to the cumulative effect. Further, there must be a fair and reasonable relationship between the project’s contribution to a significant effect and its level of mitigation. Also, Section 15130(a)(3) of the CEQA Guidelines states that an EIR may determine that a project’s

\(^1\) Page 45 of the Initial Study contained a typographical error in the third sentence of Cultural Resource impacts for items -b,d- with the statement that "The proposed excavation for the hotel would not remove previously disturbed soils in the hotel area." The statement should have read "The proposed excavation for the hotel would remove previously disturbed soils in the hotel area."
contribution to a significant cumulative impact will be rendered less than cumulatively considerable, and thus not significant, if a project is required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact.

The 2003 LRDP EIR evaluated the cumulative environmental impacts of campus programs and initiatives, development of new facilities, and population growth that would occur through the 2015–2016 academic year under the guidance of the 2003 LRDP, together with the impacts from other regional development. The proposed project is part of the overall campus expansion evaluated in the 2003 LRDP EIR. The potential contribution of the proposed project to cumulative impacts for aesthetics and visual resources, air quality, cultural resources, greenhouse gas emissions, noise, and transportation and circulation is addressed in each of the specific impact analysis sections in Sections 4.3 (Aesthetics and Visual Resources), 4.4 (Air Quality), 4.5 (Cultural Resources), 4.6 (Greenhouse Gas Emissions), 4.7 (Noise), and 4.8 (Transportation and Circulation).
4.3 AESTHETICS AND VISUAL RESOURCES

This section of the Focused Tiered Draft EIR presents potential aesthetic and visual resources impacts of the proposed Hotel Expansion. The preparation of this Focused Tiered Draft EIR was preceded by the Tiered Initial Study for the projects which determined that an EIR would be prepared to consider the potential for the Hotel Expansion to result in significant impacts from physical blight in the Davis community. As described in the Tiered Initial Study the proposed hotel expansion would introduce additional hotel rooms to the Davis area and these additional rooms may affect occupancy rates at other hotels. To evaluate the potential effects of these changes, the campus has conducted an economic impact assessment to determine whether the proposed project could cause any hotel closures (HVS 2011a and 2011b). The Tiered Initial Study determined that the Old Davis Road Extension project would have no visual effects that would be analyzed in the Tiered Draft EIR. The analysis in the Tiered Initial Study is provided in Appendix A, Section 7.1 of the Tiered Draft EIR. The economic impact report is available at the following website:
http://sustainability.ucdavis.edu/progress/commitment/environmental_review/index.html

This section presents the environmental setting, regulatory setting, standards of significance, methodology of the analysis, and impacts of the proposed project on the environment. The environmental setting subsections provide an overview of the existing physical environmental conditions. Information is incorporated by reference from the 2003 LRDP EIR, from which this EIR is tiered. The environmental setting is the environmental baseline to which the proposed project is compared to determine its impacts. A standard of significance is identified and used to determine whether implementing the project would result in a significant environmental impact. A significant impact is defined under CEQA as a substantial adverse change to the environment.

4.3.1 Environmental Setting

Section 4.1 of the 2003 LRDP EIR addresses the aesthetics effects of campus growth under the 2003 LRDP. The relevant topic for consideration is the existing setting of the on-campus hotel as well as off-campus hotels in the City of Davis.

Hotels in the City of Davis

To evaluate the existing conditions of hotels in the City of Davis, the consulting firm HVS conducted an impact study of the proposed Hyatt Place Hotel Expansion (HVS 2011a). The impact study evaluated the condition of the existing Hyatt Place Hotel, the condition of hotels in the City of Davis, and historical occupancy and rate information for the Hyatt Place Hotel and for hotels in the City of Davis.

The existing 75-room Hyatt Place UC Davis is located on the UC Davis campus adjacent to the City of Davis. Including the existing Hyatt Place Hotel, the Davis lodging market is composed of 11 full-service and limited-service hotels offering a total of 695 guestrooms. The two largest hotels in the market are the 134-room Hallmark Inn and the 103-room Motel 6. The two smallest properties in the market are the 27-room Best Western Palm Court and 26-room Econo Lodge. UC Davis is Davis' primary generator of hotel lodging demand. Six properties of the 11 identified, offering 347 guestrooms, are located in downtown Davis or on the UC Davis campus, which comprises approximately 50% of the Davis lodging supply. Table 4.3-1 lists the area hotels and Table 4.3-2 lists the occupancy data for select hotels from 2000 to January of 2011. Additional data from February through April of 2011 were available after completion of the HVS report. The additional data support the trends and conclusions reached in the HVS report (HVS 2011b).
### Table 4.3-1 Davis Area Hotels

<table>
<thead>
<tr>
<th>Hotels Included in Evaluation</th>
<th>Address</th>
<th>Number of Rooms</th>
<th>Year Opened</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hyatt Place UC Davis</td>
<td>UC Davis—Old Davis Road</td>
<td>75</td>
<td>2010</td>
</tr>
<tr>
<td>Comfort Suites Davis</td>
<td>1640 Research Park Drive, Davis</td>
<td>71</td>
<td>2000</td>
</tr>
<tr>
<td>La Quinta Inn and Suites Davis</td>
<td>1771 Research Park Drive, Davis</td>
<td>51</td>
<td>1997</td>
</tr>
<tr>
<td>Best Western Palm Court Hotel</td>
<td>234 D Street, Davis</td>
<td>27</td>
<td>1994</td>
</tr>
<tr>
<td>Hallmark Inn</td>
<td>110 F Street, Davis</td>
<td>134</td>
<td>1990</td>
</tr>
<tr>
<td>Aggie Inn</td>
<td>245 1st Street, Davis</td>
<td>33</td>
<td>1990</td>
</tr>
<tr>
<td>Motel 6 Davis Sacramento Area</td>
<td>4835 Chiles Road, Davis</td>
<td>103</td>
<td>1978</td>
</tr>
<tr>
<td>Days Inn Davis</td>
<td>4100 Chiles Road, Davis</td>
<td>78</td>
<td>1974</td>
</tr>
<tr>
<td>Best Western University Lodge</td>
<td>123 B Street, Davis</td>
<td>52</td>
<td>1968</td>
</tr>
<tr>
<td>Econo Lodge Davis</td>
<td>221 D Street, Davis</td>
<td>26</td>
<td>1963</td>
</tr>
<tr>
<td>University Park Inn</td>
<td>1111 Richards Boulevard, Davis</td>
<td>45</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

Source: HVS 2011a.

### Table 4.3-1 Occupancy Data Davis Area Hotels 2000 to 2011*

<table>
<thead>
<tr>
<th>Year</th>
<th>Occupied Room Nights</th>
<th>Change (%)</th>
<th>Occupancy (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>120,149</td>
<td>--</td>
<td>60.9</td>
</tr>
<tr>
<td>2001</td>
<td>126,349</td>
<td>5.2</td>
<td>61.4</td>
</tr>
<tr>
<td>2002</td>
<td>126,550</td>
<td>0.2</td>
<td>61.5</td>
</tr>
<tr>
<td>2003</td>
<td>125,320</td>
<td>(1.0)</td>
<td>60.9</td>
</tr>
<tr>
<td>2004</td>
<td>122,619</td>
<td>(2.2)</td>
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<tr>
<td>2005</td>
<td>118,797</td>
<td>(3.1)</td>
<td>57.7</td>
</tr>
<tr>
<td>2006</td>
<td>112,699</td>
<td>(5.1)</td>
<td>54.7</td>
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<tr>
<td>2007</td>
<td>116,287</td>
<td>3.2</td>
<td>56.5</td>
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<tr>
<td>2008</td>
<td>109,030</td>
<td>(6.2)</td>
<td>53.0</td>
</tr>
<tr>
<td>2009</td>
<td>102,963</td>
<td>(5.6)</td>
<td>48.9</td>
</tr>
<tr>
<td>2010</td>
<td>117,293</td>
<td>13.9</td>
<td>50.2</td>
</tr>
<tr>
<td><strong>2010</strong></td>
<td>103,755</td>
<td>0.8</td>
<td>49.0</td>
</tr>
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</table>

Year to date through January

<table>
<thead>
<tr>
<th>Year</th>
<th>Occupied Room Nights</th>
<th>Change (%)</th>
<th>Occupancy (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>6,679</td>
<td>--</td>
<td>37.3</td>
</tr>
<tr>
<td>2011</td>
<td>8,458</td>
<td>26.6</td>
<td>42.0</td>
</tr>
<tr>
<td><strong>2011</strong></td>
<td>7,226</td>
<td>8.2</td>
<td>40.5</td>
</tr>
</tbody>
</table>

* Does not include the University Park Inn because this property does not report lodging data to Smith Travel Research.

** Reflects market performance excluding Hyatt Place data after opening in 2010.

Source: HVS 2011a.
Section 4 beginning on page 23 of the HVS report provides a market area analysis with details of new facilities at UC Davis, regional employment conditions, UC Davis student enrollment trends, conference facilities at UC Davis, hotel occupancy tax data, commercial office space conditions, and tourist attractions and events. The market area analysis of existing conditions concluded that:

- The Davis economy was negatively impacted by recent recessionary conditions, as evidenced by a spike in regional unemployment levels, decreased passenger counts at the Sacramento Metropolitan Airport, decreased amounts of hotel occupancy taxes collected, and increased commercial office-space vacancy rates.

- Employment in the Davis area is largely related to UC Davis and the stability of UC Davis and projected growth of the university are considered to be positive factors relating to lodging demand for the local hotel market.

- UC Davis’s recently completed projects, including the recently opened UC Davis Conference Center, are expected to generate increasing levels of visitation and lodging demand to the university and the city of Davis. The 2010 opening of a state-of-the-art meeting facility, in conjunction with the addition of an upscale select-service hotel with a strong national brand such as the Hyatt Place, has helped to establish Davis as a viable meeting and hotel option within the greater Sacramento area. Based on discussions with the university conference center management, the facility’s ramp-up is currently challenged by capacity constraints for group hotel room blocks at the Hyatt Place.

Section 5 beginning on page 42 of the HVS report provides a supply and demand analysis for hotel conditions in the Davis area including the existing UC Davis Hyatt Place Hotel and the hotels in the City of Davis. The supply and demand analysis utilizes data from 2000 to 2011 to characterize the existing supply and demand for hotel rooms. The HVS report summarizes that overall lodging demand in Davis has been steadily declining since reaching a peak in 2002. Given the university’s steady expansion and increasing student enrollment over the last decade, HVS reports that the decline of 14,000 room nights from 2003 to 2007 is counterintuitive given that the national economy was in a healthy expansion phase during that period. HVS concludes that the data reflect a stagnant lodging market suffering from external competitive pressure and that unaccommodated demand during peak periods is likely resulting in decreased lodging occupancy in the Davis area. The HVS study states that in 2010 the Davis-area hotel market experienced a healthy rebound in lodging demand driven by the opening of the UC Davis Hyatt Place Hotel and adjacent conference center in March 2010 as well as the beginning of a recovery from the recent economic recession (Table 4.3-1). HVS describes that the Davis hotel market appears poised to benefit from a new supply of hotel rooms that could help fill unaccommodated demand and create induced demand.

Furthermore, the HVS report describes the interaction between the UC Davis conference center and the existing Hyatt Place Hotel. Potential conference reservations totaling 4,610 room nights have been unfilled during part of 2010 and part of 2011 because the existing Hyatt Place Hotel cannot provide sufficient hotel rooms for prospective conference organizers (HVS 2011a, page 75).

4.3.2 Regulatory Consideration

Visual and aesthetic impact assessment for local development proposals is not regulated by state or federal laws. Accordingly, this section does not utilize regulatory guidance for the contextual descriptions or impact assessment related to physical blight in the community.
4.3.3 Standards of Significance

The 2003 LRDP EIR considers an aesthetic impact significant if growth under the 2003 LRDP would:

- Have a substantial adverse effect on a scenic vista.
  A scenic vista is defined as a publicly accessible viewpoint that provides expansive views of a highly valued landscape. On campus, the open view across agricultural lands west to the Coast Range is considered a scenic vista. This vista is primarily viewed from public viewpoints along SR 113, Hutchison Drive, La Rue Road, and Russell Boulevard.

- Substantially degrade the existing visual character or quality of the site and its surroundings.
  For the campus, this standard is interpreted in terms of the effect of development under the 2003 LRDP on the valued elements of the visual landscape identified in the LRDP, or the effect associated with allowing incompatible development in or near areas with high visual quality such as Putah Creek and the Arboretum Waterway.

- Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area.

Impacts related to the standards of significance were addressed on pages 23 and 24 in the Tiered Initial Study.

In addition, the project would result in significant adverse physical deterioration or blight if it would:

- Result in significant adverse physical deterioration of properties or structures, or urban decay, affecting the general area due to economic impacts on existing businesses and the inability of property owners to lease existing vacant buildings and buildings that may be vacated as a consequence of economic impacts resulting from the proposed project.

4.3.4 Methodology

The analytical methodology for assessment of aesthetic impacts was designed as a two-step evaluation process to determine: 1) whether hotels would be closed as a result of the proposed project; and, 2) if Davis hotels would be closed, whether such closures would lead to physical impacts.

To evaluate the aesthetic impacts associated with the potential for significant adverse physical deterioration in the Davis area, a hotel market impact study was completed for the proposed Hyatt Place expansion. The study evaluated the potential effects of the proposed addition of 52 hotel rooms on the overall demand for hotel rooms in the Davis area to determine whether hotels were likely to remain in business after completion of the proposed project. In addition, the report analyzed the potential cumulative impacts to area hotels from the proposed project in combination with a recently proposed conference center and hotel addition (the University Park Inn) in the City of Davis.

Based on the results of the hotel impact study, the planned methodology was to compare the potential closure of hotels to the possibility that closed hotels could create physical blight in the Davis area.
4.3.5 LRDP Mitigation Measures Included in the Proposed Project

As described in Section 7.1 of the Tiered Initial Study, the following mitigation measures from the 2003 LRDP EIR are applicable to the proposed project. Since these previously adopted mitigation measures are already being carried out as part of implementation of the 2003 LRDP, they are included in and are a part of the proposed project and will not be readopted.

### 2003 LRDP EIR Mitigation Measures

#### AESTHETICS

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1-3(a)</td>
<td>Design for specific projects shall provide for the use of textured nonreflective exterior surfaces and nonreflective glass.</td>
</tr>
<tr>
<td>4.1-3(b)</td>
<td>Except as provided in LRDP Mitigation 4.1-3(c), all new outdoor lighting shall utilize directional lighting methods with shielded and cutoff type light fixtures to minimize glare and upward directed lighting.</td>
</tr>
<tr>
<td>4.1-3(c)</td>
<td>Non-cutoff, non-shielded lighting fixtures used to enhance nighttime views of walking paths, specific landscape features, or specific architectural features shall be reviewed by the Campus Design Review Committee prior to installation to ensure that: (1) the minimum amount of required lighting is proposed to achieve the desired nighttime emphasis, and (2) the proposed illumination creates no adverse effect on nighttime views.</td>
</tr>
<tr>
<td>4.1-3(d)</td>
<td>The campus will implement the use of the specified lighting design and equipment when older lighting fixtures and designs are replaced over time.</td>
</tr>
<tr>
<td>4.1-6(a)</td>
<td>Implement LRDP Mitigation 4.1-3(a) and (b).</td>
</tr>
<tr>
<td>4.1-6(b)</td>
<td>The City of Davis and other surrounding jurisdictions can and should adopt (if necessary) and implement development standards and guidelines, which support the minimal use of site lighting for new developments.</td>
</tr>
</tbody>
</table>

4.3.6 Project Impacts and Mitigation Measures

**IMPACTS ADEQUATELY ANALYZED IN THE 2003 LRDP EIR OR NOT APPLICABLE TO THE PROJECT**

As determined in the Tiered Initial Study for the project, potential impacts to aesthetics were addressed in the 2003 LRDP EIR and the 2003 LRDP EIR included mitigation measures to further reduce the significance of certain impacts. The Tiered Initial Study found that LRDP Impacts 4.1-3 and 4.1-6 and corresponding LRDP Mitigation Measures 4.1-3 (a-d) and 4.1-6 (a,b), which were adopted and incorporated in the LRDP EIR, are relevant to the proposed project and reduce the significance of aesthetics impacts to the extent feasible. Pages 22 and 23 of the Tiered Initial Study (Appendix A) contain the full text of these impacts and mitigation measures and include explanations of the relevance of each impact to the proposed project. The Tiered Initial Study further explains that analysis would be conducted in the Tiered Draft EIR for potential impacts related to the issue of physical blight to evaluate the potential adverse environmental impacts of expanding the existing hotel.
Project Level Impacts

Impact AES-1: Construction of the proposed hotel expansion would not result in hotel closures that would lead to physical blight. *(Less than Significant)*

As described above, the consulting firm HVS completed an impact study for the proposed Hyatt Place Expansion project. The impact study considered relevant regional and local economic data to project future hotel occupancy and overall demand that would result with implementation of the proposed 52-room expansion of the Hyatt Place Hotel.

The HVS report projected the occupancy levels after the proposed construction of the Hyatt Place Hotel expansion of 52 rooms would increase from the 2010 occupancy level of 50.5 percent to a 2015 occupancy level of 60.3 percent. Figure 5-9 in the HVS report illustrates the expected occupancy levels through 2015 and pages 68 to 71 explain the expected demand increases through 2015 (HVS 2011a). The economic impact report is available at the following website:
http://sustainability.ucdavis.edu/progress/commitment/environmental_review/index.html

Based on the projection for future demand and the conditions of the existing hotels in Davis, the HVS report concluded that:

- The Davis hotel market suffers from both curable and incurable obsolescence due to the introduction of new modern lodging supply in the area with the opening of new supply not only in Davis but in surrounding market areas as well. Based on the ages of Davis hotels, it is likely that potential lodging demand is being accommodated by the Sacramento hotel market and other surrounding areas.

- The expansion of the Hyatt Place Hotel will continue to accelerate hotel obsolescence and while existing hotels may experience economic pressure from this effect, the phenomenon is part of a typical cycle for aging facilities and provides new and refreshed lodging products for the consumer and generally improves the overall condition of the hotels in the market as property owners decide to undertake minor or major renovation efforts.

- There is no evidence that the proposed expansion would lead to significant urban decay, but rather, the newly opened UC Davis conference center has generated new and additional demand for lodging, which has been facilitated by the adjacent Hyatt Place Hotel.

- Finally, the proposed expansion of the Hyatt Place Hotel will result in a net benefit to the primary and secondary hotel market in the City of Davis. Accordingly, the proposed expansion is not expected to lead to general deterioration of hotel conditions in the Davis market area.

Based on these conclusions, the proposed project is not expected to produce economic decline and associated significant physical deterioration of the aesthetic environment. The potential impact would be less than significant.

**Mitigation Measures:** No mitigation required.
Cumulative Impacts and Mitigation Measures

Impact AES-2: The proposed hotel expansion project would not, when considered in combination with other proposed or foreseeable development/growth in the City of Davis, result in a cumulatively considerable contribution to economic decline that could produce physical blight. (Less than Significant)

CEQA defines cumulative impacts as two or more individual effects which, when considered together, are either significant or "cumulatively considerable," meaning they add considerably to a significant environmental impact. Cumulative impacts can result from individually minor but collectively significant projects (CEQA Guidelines Section 15355). An adequate cumulative impact analysis considers a project over time and in conjunction with other past, present, and reasonably foreseeable future projects whose impacts might compound those of the project being assessed.

The HVS Hotel Impact Study evaluated the proposed expansion of the Hyatt Place Hotel and the proposed University Park Inn expansion and new conference center. The University Park Inn would be located on Richards Boulevard at the site of the existing University Park Inn and an adjacent restaurant. The new facility would increase the number of hotel rooms from 25 to 95 and would provide 17,200 square feet of meeting and event space. The HVS report considered the additional supply of 70 hotel rooms that would result from the University Park Inn and concluded that the new development would induce additional demand to the Davis market. Based on this result, HVS concluded that the proposed Hyatt Place Expansion in combination with the proposed University Park Inn expansion would not lead to general deterioration in the Davis hotel market. No closures of Davis area hotels are expected. The potential impact would be less than significant.

Mitigation Measures: No mitigation required.

4.3.7 References
HVS. 2011a. Hyatt Place UC Davis Hotel Impact Study. 2011. HVS.

4.4 AIR QUALITY

This section of the Focused Tiered Draft EIR presents potential air quality impacts of the proposed Hyatt Place Hotel Expansion and Old Davis Road Extension. The preparation of this Focused Tiered Draft EIR was preceded by the Tiered Initial Study for the projects which determined that an EIR would be prepared to consider the potential for the proposed project to result in significant impacts on air quality.

This section presents the environmental setting, regulatory setting, standards of significance, methodology of the analysis, impacts of the proposed project on the environment, and proposed measures to mitigate the significant impacts. The environmental setting subsections provide an overview of the existing physical environmental conditions. Information is incorporated by reference from the 2003 LRDP EIR, from which this EIR is tiered. The environmental setting is the environmental baseline to which the proposed project is compared to determine its impacts. The regulatory setting subsections identify the environmental laws and regulations that are relevant to air quality. Standards of significance are identified and used to determine whether implementing the project would result in a significant environmental impact. A significant impact is defined under CEQA as a substantial adverse change to the environment.

The analysis in this Draft EIR determined that the proposed project would result in less than significant air quality impacts and that project-specific mitigation measures would not be required. Copies of the modeling runs to estimate air pollutant emissions associated with the proposed project and supporting technical data are found in Appendix B of this EIR.

The following sources were used to prepare this section of the Draft EIR:
- UC Davis 2003 Long Range Development Plan (2003 LRDP) and 2003 LRDP EIR
- YSAQMD’s Handbook for Assessing and Mitigating Air Quality Impacts

4.4.1 Environmental Setting

Section 4.3 of the 2003 LRDP EIR addresses the existing environmental setting for air quality assessments for campus through the 2015-16 academic year (UCD LRDP 2003). The following discussion summarizes information presented in the ‘Environmental Setting’ subsection of Section 4.3 of the 2003 LRDP EIR, updated with current data as necessary.

Climate and Topography
The California Air Resources Board (CARB) has divided California into regional air basins according to topographic features. The proposed project is located in the Yolo County portion of the Sacramento Valley Air Basin (SVAB). The SVAB includes Butte, Colusa, Glenn, Sacramento, Shasta, Sutter, Tehama, Yolo, and Yuba counties, the western urbanized portion of Placer County, and the eastern portion of Solano County. The portion of the SVAB in which the proposed project is located is under the jurisdiction of the Yolo-Solano Air Quality Management District (YSAQMD) for issues related to air quality planning.

The SVAB occupies 15,040 square miles and has a population of more than 2 million people. The SVAB is bounded by the North Coast Ranges on the west and Northern Sierra Nevada Mountains on the east. The intervening terrain is flat and is often described as a bowl shaped valley. Because of its inland location, the climate of the SVAB is more extreme than the climate in the San Francisco Bay Area Air Basin or South Coast Air Basin. The Sacramento Valley has a Mediterranean climate, characterized by hot dry summers and mild rainy winters. During the year the temperature may range from 20 to 115 degrees Fahrenheit, with summer highs usually in the 90s and winter lows occasionally below freezing. Average annual rainfall is about 20
inches with snowfall being very rare. The prevailing winds are moderate in strength and vary from moist breezes from the south to dry land flows from the north.

The mountains surrounding the Sacramento Valley create a barrier to airflow, which can trap air pollutants in the valley when meteorological conditions are right and a temperature inversion exists. The highest frequency of air stagnation occurs in the autumn and early winter when large high-pressure cells lie over the valley. The lack of surface wind during these periods and the reduced vertical flow caused by less surface heating reduces the influx of outside air and allows air pollutants to become concentrated in the air. The surface concentrations of pollutants are highest when these conditions are combined with smoke from agricultural burning or when temperature inversions trap cool air, fog, and pollutants near the ground. The ozone season (May through October) in the Sacramento Valley is characterized by stagnant morning air or light winds with the Delta sea breeze arriving in the afternoon out of the southwest.

**Ambient Air Quality Standards for Criteria Pollutants**

Both the federal government and the State of California have established ambient air quality standards for several different pollutants. The United States Environmental Protection Agency (U.S. EPA) sets National Ambient Air Quality Standards (NAAQS) for the following seven "criteria" pollutants: carbon monoxide (CO), nitrogen dioxide (NO2), ozone (O3), sulfur dioxide (SO2), respirable particulate matter (PM10), fine particulate matter (PM2.5), and lead. California Ambient Air Quality Standards (CAAQS) have been adopted for these pollutants, as well as for sulfates, visibility-reducing particles, hydrogen sulfide, and vinyl chloride. California standards are generally stricter than national standards. While reactive organic gases (ROGs) are not considered to be criteria air pollutants, they are widely emitted from land development projects and undergo photochemical reactions in the atmosphere to form O3; therefore, ROGs are relevant to this project and are of concern in the area (U.S. EPA 2010).

The ambient air quality standards identify the level of air quality considered safe to protect the public health and welfare, especially for those most susceptible to respiratory distress such as asthmatics, the very young, the elderly, people weak from other illness or diseases, or persons who engage in heavy work or exercise. Healthy adults can tolerate periodic exposure to air pollution levels somewhat above these standards before adverse health effects are observed. Emissions limitations are typically imposed upon individual sources of air pollutants by local agencies or upon certain large or unique facilities by the U.S. EPA. Mobile sources of air pollutants such as automobiles, aircraft, and trains are controlled primarily through state and federal agencies.

A summary of state and federal ambient air quality standards and the effects of the exceedance of these standards on health are shown in Table 4.1-1, Ambient Air Quality Standards and Health Effects. For some pollutants, separate standards have been set for different periods. Most standards have been set to protect public health. For some pollutants, standards have been based on other values, such as protection of crops, protection of materials, or avoidance of nuisance conditions.
<table>
<thead>
<tr>
<th>Air Pollutant</th>
<th>Concentration/Averaging Time</th>
<th>State Standard</th>
<th>Federal Primary Standard</th>
<th>Most Relevant Health Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ozone(^1)</td>
<td></td>
<td>0.09 ppm, 1-hr. avg.</td>
<td>0.075 ppm, 8-hr avg.</td>
<td>(a) Pulmonary function decrements and localized lung edema in humans and animals; (b) Risk to public health implied by alterations in pulmonary morphology and host defense in animals; (c) Increased mortality risk; (d) Risk to public health implied by altered connective tissue metabolism and altered pulmonary morphology in animals after long-term exposures and pulmonary function decrements in chronically exposed humans; (e) Vegetation damage; and (f) Property damage</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.070 ppm, 8-hr avg.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nitrogen Dioxide(^2)</td>
<td></td>
<td>0.18 ppm, 1-hr avg.</td>
<td>0.100 ppm, 1-hr avg.</td>
<td>(a) Potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups; (b) Risk to public health implied by pulmonary and extrapulmonary biochemical and cellular changes and pulmonary structural changes; and (c) Contribution to atmospheric discoloration</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.030 ppm, annual</td>
<td>0.053 ppm, annual</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>arithmetic mean</td>
<td>arithmetic mean</td>
<td></td>
</tr>
<tr>
<td>Respirable Particulate Matter (PM10)</td>
<td>50 µg/m(^3), 24-hr avg.</td>
<td>150 µg/m(^3), 24-hr avg.</td>
<td></td>
<td>(a) Exacerbation of symptoms in sensitive patients with respiratory or cardiovascular disease; (b) Declines in pulmonary function growth in children; and (c) Increased risk of premature death from heart or lung diseases in the elderly</td>
</tr>
<tr>
<td></td>
<td></td>
<td>20 µg/m(^3), annual</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>arithmetic mean</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fine Particulate Matter (PM2.5)</td>
<td>12 µg/m(^3), annual</td>
<td>35 µg/m(^3), 24-hr avg.</td>
<td></td>
<td>(a) Exacerbation of symptoms in sensitive patients with respiratory or cardiovascular disease; (b) Declines in pulmonary function growth in children; and (c) Increased risk of premature death from heart or lung diseases in the elderly</td>
</tr>
<tr>
<td></td>
<td></td>
<td>arithmetic mean</td>
<td>(three-year average of 98th percentile)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>15 µg/m(^3), annual</td>
<td>3-year average</td>
<td></td>
</tr>
<tr>
<td>Carbon Monoxide</td>
<td>20 ppm, 1-hr avg.</td>
<td>35 ppm, 1-hr avg.</td>
<td></td>
<td>(a) Aggravation of angina pectoris and other aspects of coronary heart disease; (b) Decreased exercise tolerance in persons with peripheral vascular disease and lung disease; (c) Impairment of central nervous system functions; and (d) Possible increased risk to fetuses</td>
</tr>
<tr>
<td></td>
<td>9.0 ppm, 8-hr avg.</td>
<td>9 ppm, 8-hr avg.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulfur Dioxide(^3)</td>
<td>0.25 ppm, 1-hr. avg.</td>
<td>0.075 ppm, 1-hr avg.</td>
<td></td>
<td>Bronchoconstriction accompanied by symptoms, which may include wheezing, shortness of breath and chest tightness, during exercise or physical activity in person with asthma</td>
</tr>
<tr>
<td></td>
<td>0.04 ppm, 24-hr avg.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Air Pollutant</td>
<td>Concentration/Averaging Time</td>
<td>Federal Primary Standard</td>
<td>Most Relevant Health Effects</td>
<td></td>
</tr>
<tr>
<td>--------------------------------</td>
<td>--------------------------------------------------------------------------------------------</td>
<td>------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Lead</td>
<td>1.5 µg/m³, 30-day avg.</td>
<td>1.5 µg/m³, calendar quarter 0.15 µg/m³, three month rolling average</td>
<td>(a) Increased body burden, and (b) Impairment of blood formation and nerve conduction</td>
<td></td>
</tr>
<tr>
<td>Visibility-Reducing Particles</td>
<td>Reduction of visual range to less than 10 miles at relative humidity less than 70%, 8-hour avg. (10:00 AM–6:00 PM)</td>
<td>None</td>
<td>Visibility impairment on days when relative humidity is less than 70%</td>
<td></td>
</tr>
<tr>
<td>Sulfates</td>
<td>25 µg/m³, 24-hr avg.</td>
<td>None</td>
<td>(a) Decrease in ventilatory function, (b) Aggravation of asthmatic symptoms, (c) Aggravation of cardio-pulmonary disease, (d) Vegetation damage, (e) Degradation of visibility, and (f) Property damage</td>
<td></td>
</tr>
<tr>
<td>Hydrogen Sulfide</td>
<td>0.03 ppm, 1-hr avg.</td>
<td>None</td>
<td>Odor annoyance</td>
<td></td>
</tr>
<tr>
<td>Vinyl Chloride</td>
<td>0.01 ppm, 24-hr avg.</td>
<td>None</td>
<td>Known carcinogen</td>
<td></td>
</tr>
</tbody>
</table>


µg/m³ = microgram per cubic meter.
ppm = parts per million by volume.

1 On March 12, 2008, the U.S. EPA revised the federal ozone standard from 0.08 ppm to 0.075 ppm. The standard became effective on May 27, 2008.
2 On January 25, 2010, the U.S. EPA promulgated a new 1-hour NO₂ standard. The new 1-hour standard is 0.100 parts per million (188 micrograms per cubic meter) and became effective on April 12, 2010.
3 On June 3, 2010, the U.S. EPA issued a new 1-hour SO₂ standard. The new 1-hour standard is 0.075 parts per million (196 micrograms per cubic meter). The U.S. EPA also revoked the existing 24-hour and annual standards citing a lack of evidence of specific health impacts from long-term exposures. The new 1-hour standard becomes effective 60 days after publication in the Federal Register.
4 CARB has identified lead and vinyl chloride as “toxic air contaminants” with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
5 On October 15, 2008, the U.S. EPA revised the federal lead standard to include 0.15 µg/m³ based on a three-month rolling average.

### Ambient Air Monitoring for Criteria Pollutants

CARB has established and maintains a network of sampling stations in conjunction with local air pollution control districts (APCDs) and air quality management districts (AQMDs), private contractors, and the National Park Service. The air quality sampling stations are referred to as the State and Local Air Monitoring Stations (SLAMS) network. The closest monitoring station to the project is located within the UC Davis campus. This station monitors ambient pollutant concentrations of O₃ and NO₂. The next nearest monitoring station to the site is located in Woodland on Gibson Road, approximately 14 miles northwest of the project site. This station monitors ambient pollutant concentrations of PM₁₀ and PM₂.₅. The nearest monitoring station to the project site that monitors CO and SO₂ is located at Del Paso Manor in Sacramento, approximately 25 miles to the east of the project site.

Table 4.1-2, Ambient Pollutant Concentrations Registered Nearest to the Project Site, lists the measured ambient pollutant concentrations and the violations of state and federal standards.
that have occurred at the above mentioned monitoring stations from 2007 through 2009, the most recent years for which data are available. As shown, the monitoring stations have registered values above state and federal standards for O₃ and PM10, and the federal standard for PM2.5. Concentrations of CO, NO₂, SO₂, lead and sulfate have not been exceeded anywhere within the basin for several years. Values for lead and sulfate are not presented in the table below since ambient concentrations are well below the state standards. Hydrogen sulfide, vinyl chloride, and visibility reducing particles were not monitored by CARB or the YSAQMD in the SVAB during the period from 2007 to 2009.

Table 4.1-2
Ambient Pollutant Concentrations Registered Nearest to the Project Site

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Standards¹</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>2007</td>
</tr>
<tr>
<td>OZONE (O₃)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum 1-hour concentration monitored (ppm)</td>
<td>0.105</td>
<td>0.112</td>
</tr>
<tr>
<td>Maximum 8-hour concentration monitored (ppm)</td>
<td>0.091</td>
<td>0.099</td>
</tr>
<tr>
<td>Number of days exceeding state 1-hour standard</td>
<td>0.09 ppm</td>
<td>2</td>
</tr>
<tr>
<td>Number of days exceeding state 8-hour standard</td>
<td>0.070 ppm</td>
<td>4</td>
</tr>
<tr>
<td>Number of days exceeding federal 8-hour standard²</td>
<td>0.075 ppm</td>
<td>3</td>
</tr>
<tr>
<td>CARBON MONOXIDE (CO)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum 1-hour concentration monitored (ppm)</td>
<td>2.90</td>
<td>2.49</td>
</tr>
<tr>
<td>Maximum 8-hour concentration monitored (ppm)</td>
<td>9.0 ppm</td>
<td>0</td>
</tr>
<tr>
<td>Number of days exceeding federal 8-hour standard</td>
<td>9 ppm</td>
<td>0</td>
</tr>
<tr>
<td>NITROGEN DIOXIDE (NO₂)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum 1-hour concentration monitored (ppm)</td>
<td>0.046</td>
<td>0.048</td>
</tr>
<tr>
<td>Annual average concentration monitored (ppm)</td>
<td>0.008</td>
<td>0.009</td>
</tr>
<tr>
<td>Number of days exceeding state 1-hour standard</td>
<td>0.18 ppm</td>
<td>0</td>
</tr>
<tr>
<td>Number of days exceeding federal 8-hour standard³</td>
<td>0.100 ppm</td>
<td>0</td>
</tr>
<tr>
<td>PARTICULATE MATTER (PM10)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum 24-hour concentration monitored (µg/m³)</td>
<td>119.0</td>
<td>183.3</td>
</tr>
<tr>
<td>Annual average concentration monitored (µg/m³)</td>
<td>25.3</td>
<td>33.4</td>
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<tr>
<td>Number of samples exceeding state standard⁴</td>
<td>50 µg/m³</td>
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</tr>
<tr>
<td>Number of samples exceeding federal standard</td>
<td>150 µg/m³</td>
<td>0</td>
</tr>
<tr>
<td>PARTICULATE MATTER (PM2.5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum 24-hour concentration monitored (µg/m³)</td>
<td>42.0</td>
<td>41.9</td>
</tr>
<tr>
<td>Annual average concentration monitored (µg/m³)</td>
<td>8.2</td>
<td>7.5</td>
</tr>
<tr>
<td>Number of samples exceeding federal standard</td>
<td>35 µg/m³</td>
<td>4</td>
</tr>
<tr>
<td>SULFUR DIOXIDE (SO₂)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum 1-hour concentration monitored (ppm)</td>
<td>0.004</td>
<td>0.002</td>
</tr>
<tr>
<td>Maximum 24-hour concentration monitored (ppm)</td>
<td>0.04 ppm</td>
<td>0</td>
</tr>
<tr>
<td>Number of samples exceeding state 24-hour standard</td>
<td>0.14 ppm</td>
<td>0</td>
</tr>
</tbody>
</table>
### Pollutant Standards

<table>
<thead>
<tr>
<th>Year</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
</table>

**Sources:**


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1. Parts by volume per million of air (ppm), micrograms per cubic meter of air (µg/m³), or annual arithmetic mean (aam).
2. Federal 8-hour O₃ standard was revised to 0.075 ppm in March 2008. Statistics are based on the current standard.
3. The U.S. EPA has promulgated a new 1-hour NAAQS for NO₂. The new 1-hour standard is 0.100 parts per million (188 micrograms per cubic meter) and became effective on April 12, 2010.
4. PM10 samples are usually taken every 6 days whereas PM2.5 samples are collected every 3 days.

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### Toxic Air Contaminants

In addition to criteria pollutants, CARB periodically assesses the health impacts and ambient levels of toxic air contaminants in California. The U.S. EPA assesses health impacts for hazardous air pollutants. A toxic air contaminant is defined by California Health and Safety Code (CARB 2008):

> “Toxic air contaminant” means an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health. A substance that is listed as a hazardous air pollutant pursuant to subsection (b) of Section 112 of the federal act (42 U.S.C. Sec. 7412(b)) is a toxic air contaminant.

As noted in the definition above, all U.S. EPA hazardous air pollutants are considered to be toxic air contaminants. CARB has assessed inhalation cancer risk for the state and has provided risk maps based on the Assessment System for Population Exposure Nationwide (ASPEN) dispersion model (U.S. EPA n.d.(a)). Based on CARB’s assessment, the largest contributor to inhalation cancer risk is diesel emissions, which is consistent with the result of other studies, such as the South Coast Air Quality Management District’s Multiple Air Toxics Exposure Study III (SCAQMD 2008).

In 2004, CARB conducted a health risk assessment of airborne particulate matter emissions from diesel-fueled locomotives at the Union Pacific J.R. Davis Yard located in Roseville, California. The study found that the background cancer risk for the broader Sacramento region was 360 in a million for diesel particulate matter and 520 in a million for all toxic air contaminants (CARB 2004).

### Sensitive Receptors

Sensitive populations (sensitive receptors) are more susceptible to the effects of air pollution than is the population at large. Sensitive receptors include hospitals, schools, convalescent facilities, and residential areas or other facilities that house or attract children, the elderly, or people with illnesses or others who are especially sensitive to the effects of air pollutants (YSAQMD 2007). Sensitive receptors that are near localized sources of criteria pollutants, toxic air contaminants and CO are of particular concern. For the purposes of impact assessment, the definition of sensitive receptors is typically expanded to include residences, playgrounds, rehabilitation centers, and athletic facilities.
The UC Davis Solano Park student/family housing area is adjacent to the project site along the south side of the proposed road extension and is considered a sensitive receptor for purposes of this EIR analysis.

4.4.2 Regulatory Consideration

Section 4.3 of the 2003 LRDP EIR addresses the regulatory background for air quality assessments for the campus through the 2015-16 academic year (UCD LRDP 2003). The following discussion summarizes information presented in the 'Environmental Setting' subsection of Section 4.3 of the 2003 LRDP EIR, updated with current data as necessary.

The project area is subject to major air quality planning programs established under both the federal Clean Air Act (CAA) and the California Clean Air Act (CCAA). Both the federal and state statutes provide for ambient air quality standards to protect public health, timetables for progressing toward achieving and maintaining ambient standards, and the development of plans to guide the air quality improvement efforts of state and local agencies.

Federal

The U.S. EPA is responsible for enforcing the federal CAA and the NAAQS that the act establishes. This agency also has regulatory and enforcement jurisdiction over emission sources beyond state waters (outer continental shelf), and those that are under the exclusive authority of the federal government, such as aircraft, locomotives, and interstate trucking.

The CAA was originally adopted in 1970, but was amended most recently in 1990 with regulations that better protect the public’s health and create more efficient methods of lowering pollutant emissions. The amendments established more stringent standards for hydrocarbons, NOX, and CO emissions in order to reduce O3 and CO levels in heavily populated areas. Fuels became more strictly regulated, requiring new fuels to be less volatile, contain less sulfur (regarding diesel fuels), and have higher levels of oxygenates (oxygen-containing substances to improve fuel combustion).

The 1990 Clean Air Act Amendments (CAA) lists 189 hazardous air pollutants (HAPs), which are carcinogenic, mutagenic, and/or reproductive toxicants, to be reduced. The air toxics program under the CAA involves locating all major (greater than 10 tons per year [tpy]) stationary and area emission sources in order to implement Maximum Achievable Control Technology (MACT) to reduce HAP emissions and their associated health impacts.

Based on monitoring results, the U.S. EPA designates air basins or portions of air basins as being in "attainment" or "nonattainment" for each of the criteria pollutants. Areas that do not meet the standards are classified as nonattainment areas. The NAAQS (other than O3, PM10, PM2.5, and those based on annual averages or arithmetic mean) are not to be exceeded more than once per year. The NAAQS for O3, PM10, and PM2.5 are based on statistical calculations over one- to three-year periods, depending on the pollutant. The status of Yolo County with respect to attainment with the NAAQS is summarized in Table 4.1-3.

States with basins that are not in attainment with the NAAQS are required to submit a State Implementation Plan (SIP) that describes how the air basin will achieve the federal standards by specified dates. The SIP includes strategies and control measures to attain the NAAQS by deadlines established by the CAA. SIPs are not single documents, but are a compilation of state
regulations, air quality management/attainment plans, programs, and air district rules that are continuously revised to meet CAA amendment requirements. Local air districts, such as the YSAQMD, and other agencies prepare air quality management/attainment plans and submit them to CARB for review and approval. Once a plan is approved, CARB forwards the plan to the U.S. EPA as a SIP revision. The U.S. EPA reviews the plan to determine if it conforms to the 1990 amendments and would achieve that air basin’s air quality goals.

**Table 4.1-3**

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Federal Standards</th>
<th>State Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ozone 1-hour</td>
<td>No federal standard</td>
<td>Nonattainment/Serious</td>
</tr>
<tr>
<td>Ozone 8-hour</td>
<td>Nonattainment/Severe-15</td>
<td>Nonattainment</td>
</tr>
<tr>
<td>PM10</td>
<td>Attainment/Unclassified</td>
<td>Nonattainment</td>
</tr>
<tr>
<td>PM2.5</td>
<td>Nonattainment (Eastern Part)</td>
<td>Unclassified</td>
</tr>
<tr>
<td>Carbon Monoxide</td>
<td>Attainment/Unclassified</td>
<td>Attainment</td>
</tr>
<tr>
<td>Nitrogen Dioxide</td>
<td>Attainment/Unclassified</td>
<td>Attainment</td>
</tr>
<tr>
<td>Sulfur Dioxide</td>
<td>Attainment/Unclassified</td>
<td>Attainment</td>
</tr>
<tr>
<td>Lead</td>
<td></td>
<td>Attainment</td>
</tr>
<tr>
<td>Hydrogen Sulfide</td>
<td>No federal standards</td>
<td>Unclassified</td>
</tr>
<tr>
<td>Sulfates</td>
<td>No federal standards</td>
<td>Attainment</td>
</tr>
<tr>
<td>Vinyl Chloride</td>
<td>No federal standards</td>
<td>Unclassified</td>
</tr>
<tr>
<td>Visibility-Reducing Particulates</td>
<td>No federal standards</td>
<td>Unclassified</td>
</tr>
</tbody>
</table>


1. A formal request for voluntary reclassification from “serious” to “severe” for the 8-hour ozone nonattainment area with an associated attainment deadline of June 15, 2019, was submitted by CARB to the U.S. EPA on February 14, 2008. The US EPA approved the reclassification request on April 15, 2010.

2. The U.S. EPA has promulgated a new 1-hour NAAQS for NO\(_2\). The new 1-hour standard is 0.100 parts per million (188 micrograms per cubic meter) and became effective on April 12, 2010. The U.S. EPA will make nonattainment area designations for the 1-hour standard by 2012.

Upon a satisfactory review, approval of the plan is published in the Federal Register. In general, air quality management/attainment plans contain a discussion of ambient air data and trends; a baseline emissions inventory; future-year projections of emissions, which account for growth projections and already adopted control measures; a comprehensive control strategy of additional measures needed to reach attainment; attainment demonstration, which generally involves complex modeling; and contingency measures. Plans may also include interim milestones for progress toward attainment.

**State**

The California Clean Air Act (CCAA) established a legal mandate for air basins to achieve the CAAQS by the earliest practical date. The CAAQS, established by CARB, apply to the same seven pollutants as the NAAQS, as well as to sulfates, visibility-reducing particles, hydrogen...
sulfide, and vinyl chloride. CAAQS are more stringent than the NAAQS, and in the case of PM10 and SO2, far more stringent.

As a branch of the California Environmental Protection Agency (CalEPA), CARB oversees air quality monitoring, planning, and control throughout California. It is primarily responsible for implementing the CCAA, ensuring conformance with CAA requirements, and for regulating emissions from motor vehicles and consumer products within the state. In addition, CARB sets the CAAQS and control measures for toxic air contaminants (TACs). CARB approves the regional air quality management/attainment plans for incorporation into the SIP and is responsible for preparing those portions of the SIP related to mobile source emissions. CARB establishes new standards for vehicles sold in California and for various types of commercially available equipment. It also sets fuel specifications to further reduce vehicular emissions.

Based on monitoring results, the CARB designates air basins or portions of air basins as being in “attainment” or “nonattainment” for each of the criteria pollutants and other pollutants. Health and Safety Code Section 39607(e) requires CARB to establish and periodically review area designation criteria. These designation criteria provide the basis for CARB to designate areas of the state as “attainment,” “nonattainment,” or “unclassified” according to state standards. In addition, Health and Safety Code Section 39608 requires CARB to use the designation criteria to classify areas of the state and to annually review those area designations. The CAAQS are not to be exceeded during a three-year period. The status of Yolo County with respect to attainment with the CAAQS is summarized in Table 4.1-3, above.

Regional

Sacramento Area Council of Governments

The Sacramento Area Council of Governments (SACOG) is an association of local governments in the Sacramento region that provides transportation planning and funding for the region. Although SACOG is not an air quality management agency, it is responsible for several air quality planning issues. Specifically, as the designated Metropolitan Planning Organization for the Sacramento region, it is responsible, pursuant to Section 176(c) of the 1990 amendments to the federal CAA, for providing current population, employment, travel, and congestion projections for regional air quality planning efforts. These projections are used by the APCDs and AQMDs in the Sacramento region in their air quality management plans.

Yolo-Solano Air Quality Management District

The YSAQMD has jurisdiction over air quality in the Davis area, including all of Yolo County and the northeastern portion of Solano County. The YSAQMD is one of five air districts located in the SVAB. The YSAQMD regulates most air pollutant sources (stationary sources), with the exception of motor vehicles, aircraft, and agricultural equipment, which are regulated by the CARB or U.S. EPA. State and local government projects, as well as projects proposed by the private sector, are subject to requirements of the local air district and the state CCAA if the sources are regulated by the YSAQMD.

The YSAQMD and the four other air districts in the SVAB are responsible for developing regional air quality management plans that satisfy the requirements of the federal CAA and the CCAA. The plans include strategies and measures that demonstrate attainment of the ambient air quality standards. A summary of the federal and state plans is provided in the following sections.
YSAQMD Air Quality Plans
Sacramento Region Clean Air Plan (CAP) Update/Sacramento Regional Nonattainment Area 8-Hour Ozone Rate-of-Progress Plan
The Sacramento Region CAP Update/Sacramento Regional Nonattainment Area 8-Hour Ozone Rate-of-Progress Plan (8-Hour Ozone Plan) updates the region’s CAP to addresses the conformity lapse through updates to the emission inventory and establishing new motor vehicle emission budgets. In addition to updating the CAP, the Plan also fulfills the federal 8-hour ozone requirements for the 2002-2008 Rate-of-Progress Plan for the Sacramento regional nonattainment area. The Sacramento region was designated as a “serious” nonattainment area for the federal 8-hour ozone standard with an attainment deadline of June 2013. The 8-Hour Ozone Plan addresses how the region will meet the federal 8-hour ozone standard by this attainment deadline.

Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan
The 2009 Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan was adopted on December 19, 2008. The Sacramento region was classified by the U.S. EPA as a “serious” nonattainment area on June 15, 2004, for the federal 8-hour ozone standard with an attainment deadline of June 15, 2013. However, since the Sacramento region needs to rely on the longer term emission reduction strategies from state and federal mobile source control programs, the 2013 attainment date cannot be met. Consequently, on February 14, 2008, CARB, on behalf of the air districts in the Sacramento region, submitted a letter to the U.S. EPA requesting a voluntary reclassification (bump-up) of the Sacramento federal nonattainment area from a “serious” to a “severe-15” 8-hour ozone nonattainment area with an extended attainment deadline of June 15, 2019.2 The U.S. EPA approved the reclassification request on April 15, 2010. The 8-Hour Ozone Attainment Plan includes the information and analyses to fulfill the federal CAA requirements for demonstrating reasonable further progress and attainment of the 1997 8-hour ozone NAAQS for the Sacramento region.

Air Quality Attainment Plan
The CCAA of 1988 requires areas not attaining the CAAQS to achieve and maintain the state standards by the earliest practicable date. Air districts designated as nonattainment for all criteria pollutants are required to prepare an attainment plan (California Health and Safety Code Section 40911). In compliance with the CCAA, the YSAQMD prepared the 1992 Air Quality Attainment Plan (AQAP) to address the non-attainment status for ozone. The 1992 AQAP was designed to make progress toward attaining the state ozone standard and contained preliminary implementation schedules for control programs on stationary sources, transportation, and indirect sources, and a vehicle and fuels program. Yolo County is also nonattainment for state PM10 standard. The YSAQMD is not required to prepare a PM10 attainment plan, but is required to list cost effective particulate matter control measures and develop a schedule for their implementation.

The CCAA requires that air districts assess their progress toward attaining the CAAQS once every three years. The triennial assessment is to report the extent of air quality improvement and the amounts of emission reductions achieved from control measures for the preceding three year period. The YSAQMD adopted the most recent 2010 Triennial Assessment and Plan Update in May 2010. The report identifies all feasible measures the YSAQMD will study or adopt over the next three years. The report also describes historical trends in air quality, updates emissions inventories, and evaluates the YSAQMD’s implementation of air pollution control measures.

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2 In order to attain by June 15th, the prior year’s ozone season would need to be in attainment, making 2018 to be the attainment demonstration analysis year.
YSAQMD Handbook for Assessing and Mitigating Air Quality Impacts

CEQA requires local governments to assess air quality impacts, and recommend and enforce feasible mitigation of potential air quality impacts by conditioning discretionary permits, and by monitoring and ensuring implementation of the mitigation. To facilitate compliance with CEQA requirements, the YSAQMD has published a Handbook for Assessing and Mitigating Air Quality Impacts (CEQA Handbook), which was most recently updated in 2007. The CEQA Handbook provides methods for the analysis and review of air quality impacts from land use development projects. It also provides useful tools to identify proposed development projects that may have a significant adverse effect on air quality. In addition, the CEQA Handbook also provides mitigation strategies project proponents can integrate into their projects to reduce air quality impacts.

YSAQMD Rules and Regulations

The YSAQMD's primary means of implementing its attainment plans is through its adopted rules and regulations. The proposed project would be subject to the rules adopted by the YSAQMD that are designed to reduce and control pollutant emissions throughout the basin. A summary of the noteworthy regulations and rules is provided below:

- **Rule 2-3 (Ringelmann Chart/Opacity):** This rule limits the discharge of air contaminants (i.e., fugitive dust, diesel exhaust) into the atmosphere through visible emissions and opacity.

- **Rule 2-5 (Nuisance):** This rule applied to any source operation that emits air contaminants or other materials which cause injury, detriment, nuisance or annoyance to any considerable number of persons or the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause or have natural tendency to cause injury or damage to business or property. In the event that the project or construction of the project creates a public nuisance, it could be in violation and subject to district enforcement action.

- **Rule 2-11 (Particulate Matter Concentration):** The purpose of this rule is to limit the quantity of particulate matter in the atmosphere through establishment of an emission concentration limit.

- **Rule 2-12 (Specific Contaminants):** The purpose of this rule is to limit the emission of sulfur compounds and combustion contaminants through establishment of emission concentrations.

- **Rule 2-14 (Architectural Coatings):** The purpose of this rule is to limit the quantity of ROGs in architectural coatings supplied, sold, offered for sale, applied, solicited for application, or manufactured for use within the District.

- **Regulation III (Permit System):** This rule requires that any project constructing, altering, replacing, or operating any stationary source operation, the use of which emits, may emit, or may reduce emissions, to obtain an Authority to Construct (ATC) and a Permit to Operate (PTO). This rule applies to the construction and operation of new or modified processes and equipment, except those specifically exempted from permitting requirements.

- **Rule 3-4 (New Source Review):** This rule applies to all new and modified stationary sources that would emit, after construction, a criteria pollutant for which there is an established NAAQS or CAAQS. The rule provides mechanisms by which an ATC can be granted without interfering with the basin’s attainment with ambient air quality standards.
These mechanisms offer methods to generate no net increases in emissions of nonattainment pollutants over specific thresholds as detailed in the rule.

Local Plans and Policies
This environmental analysis is tiered from the 2003 LRDP EIR. The 2003 LRDP is a comprehensive land use plan that was adopted in 2003 to guide physical development on campus to accommodate projected enrollment increases and expanded and new program initiatives through the 2015-16 academic year. The proposed projects are an element of the growth that was anticipated in the 2003 LRDP and evaluated in the LRDP EIR. The 2003 LRDP noted that the campus would expand research facilities, construct an additional 2.5 million assignable square feet (ASF) of building space on the campus, and identified an objective extending Old Davis Road along the alignment currently proposed for implementation (see UC Davis 2003 LRDP, page 78). The 2003 LRDP EIR evaluated the impacts of that projected growth, including the impacts of growth such as the hotel development that was planned for the South Entry District of the campus.

Tiering of the environmental analysis for the proposed project pursuant to the CEQA Guidelines allows this Focused Tiered Draft EIR to rely on the 2003 LRDP EIR for the following:

- A discussion of general background and setting information for environmental topic areas;
- Overall growth related issues;
- Issues that were evaluated in sufficient detail in the 2003 LRDP EIR for which there is no significant new information or change in circumstances that would require further analysis; and
- Assessment of cumulative impacts that were adequately analyzed in the 2003 LRDP EIR.

In addition, mitigation measures that were previously adopted for the 2003 LRDP EIR that are related to, and designed to reduce the impacts of, this project are identified in this Draft EIR. Since these mitigation measures are already being carried out as part of implementation of the 2003 LRDP, they are included in the proposed project and would not be readopted. Nothing in this Draft EIR in any way alters the obligations of the campus to implement the LRDP mitigation measures.

4.4.3 Standards of Significance
The impacts from the implementation of the proposed project on air quality would be considered significant if they would exceed the following Standards of Significance, in accordance with Appendix G of the State CEQA Guidelines and the UC CEQA Handbook:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors);
- Expose sensitive receptors to substantial pollutant concentrations; or
- Create objectionable odors affecting a substantial number of people.
The State CEQA Guidelines further state that the significance thresholds established by the applicable air quality management or air pollution control district may be relied on to make the determinations above. Therefore, the air quality significance thresholds contained in the YSAQMD’s CEQA Handbook were used to assess the project's impact relative to the significance criteria listed above. These thresholds are based on the Appendix G checklist. The YSAQMD’s thresholds of significance for construction- and operational-related emissions are presented in Table 4.1-4, YSAQMD Air Quality Significance Thresholds. If the proposed project’s emissions would exceed any of the emission thresholds listed in Table 4.1-4, the impact from the emissions of the specific pollutant will be considered a significant impact.

Table 4.1-4
YSAQMD Air Quality Significance Thresholds

<table>
<thead>
<tr>
<th>Phase</th>
<th>Emissions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ROG</td>
</tr>
<tr>
<td></td>
<td>(tpy)</td>
</tr>
<tr>
<td>Construction</td>
<td>10</td>
</tr>
<tr>
<td>Operational</td>
<td>10</td>
</tr>
</tbody>
</table>

Note: tpy denotes tons per year and lbs/day denotes pounds per day.

In addition to the mass emission thresholds presented in Table 4.1-4, the YSAQMD’s CEQA Handbook states that a project's impact is considered significant if it would result in the:

- Probability of contracting cancer for the Maximally Exposed Individual (MEI) equal to 10 in one million or more; or
- Ground-level concentrations of non-carcinogenic toxic air contaminants that would result in a Hazard Index equal to 1 for the MEI or greater.

While the YSAQMD Risk Management Policy provides a basis for the thresholds for TACs from stationary sources, this policy does not cover TACs from mobile sources. The YSAQMD has no permitting or other regulatory authority over mobile sources. Therefore, no specific mobile source TAC threshold is applicable.

According to the YSAQMD CEQA Handbook, offensive odors should be evaluated with respect to the general nuisance rule (California Health and Safety Code Section 41700 and YSAQMD Rule 2-5). A project would have a significant odor impact if it would:

- Reasonably be expected to generate odorous emissions in such quantities as to cause detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which may endanger the comfort, repose, health, or safety of any such person or the public, or which may cause, or have a natural tendency to cause, injury or damage to business or property.

The YSAQMD recommends that projects evaluate cumulative air quality impacts on ozone and localized pollutants. The proposed project would result in cumulatively significant impacts under the following conditions:
• Any proposed project that would individually have a significant air quality impact (see Table 4.1-4 above for project level significance thresholds) would also be considered to have a significant cumulative impact.

• CO impacts are cumulatively significant when modeling shows that the combined emissions from the project and other existing and planned projects (i.e., background concentration) will exceed ambient air quality standards. The cumulative impact should be evaluated using the screening criteria in the YSAQMD CEQA Handbook.

4.4.4 Methodology

The methodology used to evaluate the air quality impacts associated with construction and operation of the proposed project is based on the YSAQMD’s CEQA Handbook and the CalEEMod emissions modeling software. The emissions estimates are based on typical construction phasing schedules and equipment activity levels. Some elements of this analysis are based on data provided by the campus such as trip generation rates. While not a requirement of CEQA, the analysis of potential adverse air quality impacts in this Draft EIR incorporates a conservative approach. This approach entails the premise that whenever the analysis requires that assumptions be made, the assumptions that result in the greatest reasonable adverse impacts are typically chosen. This method ensures that no potential effects of the proposed project are understated. Emission calculations and air quality modeling conducted for the project are provided in Appendix B.

The purpose of CalEEMod is to provide a uniform platform for government agencies, land use planners, and environmental professionals to estimate potential emissions associated with both construction and operational use of land use projects. It is intended that these emission estimates are suitable for use in California Environmental Quality Act (CEQA) compliant documents for air quality and climate change impacts.

CalEEMod utilizes widely accepted models for emission estimates combined with appropriate default data that can be used if site-specific information is not available. These models and default estimates use sources such as the United States Environmental Protection Agency (USEPA) AP-42 emission factors, California Air Resources Board (ARB) vehicle emission models, studies commissioned by California agencies such as the California Energy commission (CEC) and Calrecycle.

CalEEMod provides a simple platform to calculate both construction emissions and operational emissions from a land use project. It calculates both the daily max and annual average for criteria pollutants as well as total or annual greenhouse gas (GHG) emissions. Specifically the model aids the user in the following calculations:

Short term construction emissions associated with demolition, site preparation, grading, building, coating, and paving from the following sources

• Off-road construction equipment
• On-road mobile equipment associated with workers, vendors, and hauling
• Fugitive dust associated with grading, demolition, truck loading, and roads (Fugitive dust from wind blown sources such as storage piles are not quantified in CalEEMod which is consistent with approaches taken in other comprehensive models.)
• Volatile emissions of reactive organic gasses (ROG) from architectural coating and paving.

http://www.caleemod.com/
Operational emissions associated with the fully built out land use development
- On-road mobile vehicle traffic generated by the land uses
- Fugitive dust associated with roads
- Volatile emissions of ROG from architectural coating
- Off-road emissions from landscaping equipment
- Volatile emissions of ROG from consumer products and cleaning supplies
- Wood stoves and hearth usage
- Natural gas usage in the buildings
- Electricity usage in the buildings (GHG only)
- Water usage by the land uses (GHG only)
- Solid waste disposal by the land uses (GHG only)

4.4.5 LRDP Mitigation Measures Included in the Proposed Project

Mitigation measures in the 2003 LRDP EIR that are applicable to the proposed project are presented below. Since these previously adopted mitigation measures are already being carried out as part of implementation of the 2003 LRDP, they are included in and are a part of the proposed project and will not be readopted.
Table 4.1-5
Mitigation Measures Incorporated in the 2003 LRDP EIR

<table>
<thead>
<tr>
<th>Mitigation Measure</th>
<th>Description</th>
</tr>
</thead>
</table>
| 4.3-3(a)           | The campus shall include in all construction contracts the measures specified below to reduce fugitive dust impacts, including but not limited to the following:  
  - All disturbed areas, including storage piles, which are not being actively utilized for construction purpose, shall be effectively stabilized of dust emissions using water, chemical stabilizer/suppressant, or vegetative ground cover.  
  - All on-site unpaved roads and off-site unpaved access roads shall be effectively stabilized of dust emissions using water or chemical stabilizer/suppressant.  
  - All land clearing, grubbing, scraping, excavation, land leveling, grading, cut and fill, and demolition activities shall be effectively controlled of fugitive dust emissions utilizing application of water or by presoaking.  
  - When demolishing buildings up to six stories in height, all exterior surfaces of the building shall be wetted during demolition.  
  - When materials are transported off-site, all material shall be covered, effectively wetted to limit visible dust emissions, or at least two feet of freeboard space from the top of the container shall be maintained.  
  - All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at least once every 24 hours when operations are occurring. The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit the visible dust emissions. Use of blower devices also is expressly forbidden.  
  - Following the addition of materials to, or the removal of materials from, the surface of outdoor storage piles, said piles shall be effectively stabilized of fugitive dust emissions by utilizing sufficient water or chemical stabilizer/ suppressant. |
| 4.3-3(b)           | The campus shall include in construction contracts for large construction projects near receptors, the following control measures:  
  - Limit traffic speeds on unpaved roads to 15 mph.  
  - Install sandbags or other erosion control measures to prevent silt runoff to public roadways from sites with a slope greater than one percent.  
  - To the extent feasible, limit area subject to excavation, grading, and other construction activity at any one time.  
  - Limit the area subject to excavation, grading, and other construction activity at any one time. |
| 4.3-3(c)           | The campus shall implement the following control measures to reduce emissions of ozone precursors from construction equipment exhaust:  
  - To the extent that equipment is available and cost effective, the campus shall encourage contractors to use alternate fuels and retrofit existing engines in construction equipment.  
  - Minimize idling time to a maximum of 5 minutes when construction equipment is not in use.  
  - To the extent practicable, manage operation of heavy-duty equipment to reduce emissions.  
  - To the extent practicable, employ construction management techniques such as timing construction to occur outside the ozone season of May through October, or scheduling equipment use to limit unnecessary concurrent operation. |

Source: UC Davis, 2003 LRDP EIR, Section 4.3, Air Quality.
4.4.6 Project Impacts and Mitigation Measures

**Impacts Adequately Analyzed in the 2003 LRDP EIR or Not Applicable to the Project**

As determined in the Tiered Initial Study for the project, potential impacts to air quality were addressed in the 2003 LRDP EIR and the 2003 LRDP EIR included mitigation measures to further reduce the significance of certain impacts. The Tiered Initial Study found that LRDP Impacts 4.3-1, 4.3-3, 4.3-6, and 4.3-8 and corresponding LRDP Mitigation Measures 4.3-1 (a-c), 4.3-3 (a-c), 4.3-6, and 4.3-8, which were adopted and incorporated in the LRDP EIR, are relevant to the proposed project and reduce the significance of air quality impacts to the extent feasible. Pages 28 and 30 of the Tiered Initial Study (Appendix A) contain the full text of these impacts and mitigation measures and include explanations of the relevance of each impact to the proposed projects. The Tiered Initial Study further explains that analysis would be conducted in this Tiered Draft EIR to confirm the findings in LRDP EIR and to quantify the potential impacts from construction and operation of the proposed projects.

**Project Level Impacts**

**Impact AIR-1:** Construction of the proposed project would not result in construction emissions that exceed the YSAQMD thresholds of significance. *(Less than Significant)*

The proposed project would result in the construction of an approximately 28,000 gross square foot (GSF) hotel building with 52 hotel rooms and extension of Old Davis Road for approximately 1,100 linear feet of roadway construction. Construction-related emissions can be designated as on-site or off-site. On-site emissions generated during construction primarily consist of exhaust emissions (ROGs, NOX, CO, SOX, PM10, and PM2.5) from heavy-duty diesel powered construction equipment operation, fugitive dust (PM10 and PM2.5) from disturbed soil, and evaporative ROG emissions from asphalt paving and architectural coatings (i.e., painting). Off-site emissions during the construction phase normally consist of exhaust emissions from worker commute trips and on-road haul and vendor trucks. Construction of the project is anticipated to last approximately eight months. Construction activities would involve the use of heavy duty equipment, such as graders, bulldozers, loaders, water trucks, cranes, forklifts, and paving equipment. The majority of the equipment are conservatively assumed to operate continuously for six to eight hours per day.

The CalEEMod Software was used to estimate the emissions associated with construction of the proposed project. The CalEEMod model is designed to estimate regional air emissions from new land use development projects. The model accounts for certain meteorological conditions for the Davis area. The model was developed by Southcoast Air Pollution Control District and the California Association of Air Pollution Control Officers. The model requires the user to input certain variables for calculating emissions. The information described in the previous paragraph, which was used as input variables in the model, is based on conservative or high-end estimates. Normal day-to-day variability in construction activities introduces uncertainties when quantifying daily maximum emissions. However, by relying on high-end estimates, the emissions calculated from the model would account for any emission peaks associated with day-to-day variability.

Based on the above information, the estimated construction emissions are provided below in Table 4.1-6, Estimated Construction Emissions. As the results in the table show, construction of the project would not result in emissions that would exceed the YSAQMD thresholds of significance for construction. Therefore, this impact would be less than significant.
Table 4.1-6
Estimated Unmitigated Construction Emissions

<table>
<thead>
<tr>
<th>Construction Emissions</th>
<th>Emissions</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ROG</td>
<td>NOx</td>
<td>CO</td>
<td>SOx</td>
<td>PM10</td>
<td>PM2.5</td>
</tr>
<tr>
<td>Hyatt Place Hotel Expansion Maximum Pounds per Day (lbs/day)</td>
<td>70.05</td>
<td>43.54</td>
<td>26.63</td>
<td>0.04</td>
<td>7.78</td>
<td>4.78</td>
</tr>
<tr>
<td>Old Davis Road Extension Maximum Pounds per Day (lbs/day)</td>
<td>11.13</td>
<td>89.88</td>
<td>51.97</td>
<td>0.08</td>
<td>22.92</td>
<td>14.55</td>
</tr>
<tr>
<td>Combined Hotel Expansion and Old Davis Road Extension Maximum Pounds per Day (lbs/day)</td>
<td>81.18</td>
<td>133.42</td>
<td>78.6</td>
<td>0.12</td>
<td>30.7</td>
<td>19.33</td>
</tr>
<tr>
<td>Hyatt Place Hotel Expansion Maximum Tons per Year (tpy)</td>
<td>0.99</td>
<td>3.39</td>
<td>2.26</td>
<td>0.00</td>
<td>0.27</td>
<td>0.25</td>
</tr>
<tr>
<td>Old Davis Road Extension Maximum Tons per Year (tpy)</td>
<td>0.84</td>
<td>5.68</td>
<td>3.40</td>
<td>0.01</td>
<td>0.43</td>
<td>0.40</td>
</tr>
<tr>
<td>Combined Hotel Expansion and Old Davis Road Extension Maximum Tons per Year (tpy)</td>
<td>1.83</td>
<td>9.07</td>
<td>5.66</td>
<td>0.01</td>
<td>0.7</td>
<td>0.65</td>
</tr>
<tr>
<td>YSAQMD Threshold</td>
<td>10 tpy</td>
<td>10 tpy</td>
<td>—</td>
<td>—</td>
<td>80 lbs/day</td>
<td>—</td>
</tr>
<tr>
<td>Exceeds Threshold?</td>
<td>NO</td>
<td>NO</td>
<td>—</td>
<td>—</td>
<td>NO</td>
<td>—</td>
</tr>
</tbody>
</table>

Source: CalEEMod output files.
Note: Emissions reporting is provided for ROG, NOx, CO, SOx, PM10, and PM2.5 to disclose the full modeling results for the proposed projects. The ROG tpy, NOx tpy, and PM10 lbs/day are the emissions with applicable thresholds of significance as defined by the YSAQMD. Totals in the table may not appear to add exactly due to rounding in the computer model calculations.

Mitigation Measures: No mitigation required.

Impact AIR-2: Operation of the proposed project would not result in operational emissions that exceed the YSAQMD thresholds of significance. (Less than Significant)

The proposed project would result in the operation of the proposed building addition to the Hyatt Place hotel. The building addition would be a four-story addition providing a total of 28,000 square feet of building space containing 52 hotel rooms. Total new staff associated with the project is approximately 12 people. Full development and occupancy is assumed to occur by 2012 for purposes of analysis in this Draft EIR. The proposed project would also extend Old Davis Road to connect with Parking Lot 5 and convert the existing Old Davis Road to a bike and pedestrian path. The Old Davis Road Extension was projected to have no operational emissions to GHG because no new trips would be caused by the road realignment project.

Operational emissions would be generated by mobile sources, area sources, and stationary sources as a result of normal day-to-day activity at the project site. Mobile source emissions would be generated by motor vehicles traveling to and from the project site, and using the Old Davis Road extension to travel between the existing hotel and Parking Lot 5 toward downtown Davis. Area source emissions would be generated by the operation of landscape maintenance.
equipment, and the application of architectural coatings. Stationary source emissions would be generated from point (stationary) sources located on the project site. The CalEEMod software was used to calculate project emissions from the Hyatt Place Hotel expansion and the Old Davis Road extension. The model was set to use Davis area climate data and was used as a screening tool with primarily utilizing default model values for hotel and asphalt paving development and operation. Based on the above information, the project’s estimated operational emissions are provided below in Table 4.1-7, Estimated Operational Emissions. As the results in the table show, operation of the project would not result in emissions that would exceed the YSAQMD thresholds of significance for operations. Therefore, this impact would be less than significant.

Table 4.1-7
Estimated Unmitigated Operational Emissions

<table>
<thead>
<tr>
<th>Operational Emissions</th>
<th>Emissions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ROG</td>
</tr>
<tr>
<td>Hotel Expansion Maximum Tons per Year (tpy)</td>
<td></td>
</tr>
<tr>
<td>Area Sources</td>
<td>0.15</td>
</tr>
<tr>
<td>Energy Sources</td>
<td>0.00</td>
</tr>
<tr>
<td>Mobile Sources</td>
<td>0.45</td>
</tr>
<tr>
<td>Total</td>
<td>0.60</td>
</tr>
<tr>
<td>Hotel Expansion Maximum Pounds per Day (lbs/day)</td>
<td></td>
</tr>
<tr>
<td>Area Sources</td>
<td>0.83</td>
</tr>
<tr>
<td>Energy Sources</td>
<td>0.02</td>
</tr>
<tr>
<td>Mobile Sources</td>
<td>2.83</td>
</tr>
<tr>
<td>Total</td>
<td>3.68</td>
</tr>
<tr>
<td>YSAQMD Threshold</td>
<td>10 tpy</td>
</tr>
<tr>
<td>Exceeds Threshold?</td>
<td>NO</td>
</tr>
</tbody>
</table>

Source: CalEEMod Software output.
Note: Emissions reporting is provided for ROG, NOx, CO, SOx, PM10, and PM2.5 to disclose the full modeling results for the proposed projects. The ROG tpy, NOx tpy, and PM10 lbs/day are the emissions with applicable thresholds of significance as defined by the YSAQMD. Totals in table may not appear to add exactly due to rounding in the computer model calculations.

Mitigation Measures: No mitigation required.

Impact AIR-3: The proposed project would not expose sensitive receptors to substantial concentrations of carbon monoxide that exceed the ambient air quality standards. (Less than Significant)

The proposed project would result in approximately 455^4 new vehicle trips per day. These trips would occur primarily during the morning and afternoon commuting hours, with lesser numbers

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^4 Section 5.2, Transportation and Circulation in this EIR projects that 464 new vehicle trips per day would result from the proposed project. The air quality modeling was completed prior to the final vehicle trip generation estimates and is 9 trips per day lower than the transportation modeling. This discrepancy of 9 trips per day would not substantially alter the expected emissions levels from the proposed projects.
occurring throughout the workday. The YSAQMD’s CEQA Handbook states that projects that would cause the peak-hour Level of Service (LOS) on one or more streets or at one or more intersections in the project vicinity to be reduced to an unacceptable LOS (typically LOS E or F) or would substantially worsen an already existing peak-hour LOS F on one or more streets or at one or more intersections in the project vicinity, could expose sensitive receptors to substantial concentrations of CO.

Cumulative development of the campus plus cumulative background growth would result in peak hour traffic volumes at the worst-case project intersection of Anderson Road and La Rue Road of 4,300 cars in the peak hour (UC Davis 2003 LRDP EIR, page 4.14-32). The proposed project is part of the projected LRDP growth and the new vehicle trips associated with the proposed project are a portion of the traffic analyzed in the LRDP EIR. The results of the 2003 LRDP EIR show that traffic under full development of the campus under the 2003 LRDP at Anderson and La Rue Roads (the heaviest traveled intersection in the study area) would not cause a violation of the CO standards. Therefore, the proposed project would not contribute to a violation of the CO standard and would result in a less-than-significant impact.

**Mitigation Measures:** No mitigation required.

**Impact AIR-4:** The proposed project would not expose sensitive receptors to substantial concentrations of toxic air contaminants and the probability of contracting cancer for the Maximally Exposed Individual (MEI) would be less than 10 in one million and the non-carcinogenic Hazard Index would be less than 1.0. *(Less than Significant)*

Health risk assessment (HRA) calculations from campus operations through academic year 2015-16 were performed as part of the 2003 LRDP EIR. The analysis included all sources of TACs that existed in 2002-03 as well as projected future sources of TACs that are expected to be added to the campus as part of the growth on the campus envisioned through 2015-16 under the 2003 LRDP. These projected future sources included additional building space in the South Entry District of campus. The analysis revealed that the cancer risk from full development under the 2003 LRDP, including the development proposed on the hotel site and the Old Davis Road extension, would be less than 10 in one million for both the off-campus and on-campus Maximally Exposed Individual (MEI), assuming a 70-year exposure period for on- and off-site sensitive receptors. The non-cancer health risk was calculated in terms of a Hazard Index and was determined to be below 1.0. Therefore, the 2003 LRDP EIR concluded that development under the 2003 LRDP would not exceed either health risk standard, and the impact associated with TAC emissions would be less than significant. As this project is consistent with the 2003 LRDP Academic and Administrative land use designation and is a small portion of the growth that was anticipated in the 2003 LRDP EIR, the proposed project would result in an incremental increase in TAC emissions that is within the levels modeled in the 2003 LRDP EIR and found to be less than significant. Therefore, the project’s impacts from emissions of TACs would be less than significant.

**Mitigation Measures:** No mitigation required.

**Cumulative Impacts and Mitigation Measures**

**Impact AIR-5:** The proposed project would not result in a cumulatively considerable net increase of a criteria pollutant for which the project region is nonattainment...
under an applicable federal or state ambient air quality standard. (*Less than Significant*)

CEQA defines cumulative impacts as two or more individual effects which, when considered together, are either significant or “cumulatively considerable,” meaning they add considerably to a significant environmental impact. Cumulative impacts can result from individually minor but collectively significant projects (CEQA Guidelines Section 15355). An adequate cumulative impact analysis considers a project over time and in conjunction with other past, present, and reasonably foreseeable future projects whose impacts might compound those of the project being assessed.

According to the YSAQMD’s CEQA Handbook, project emissions that exceed the YSAQMD emission thresholds would have a significant cumulative impact unless offset. As shown in Table 4.1-6 and Table 4.1-7, the proposed project would not exceed the construction- or operational-related emission thresholds. In addition, as noted above, cumulative CO impacts from buildout of the 2003 LRDP would not exceed the ambient air quality standards and would be less than significant. Also as noted above, cumulative health impacts from buildout of the 2003 LRDP would not exceed a cancer risk probability of 10 in one million or a Hazard Index of 1.0 at the MEI and would be less than significant. Based on this analysis, the proposed project would result in a less than significant cumulative impact.

**Mitigation Measures:** No mitigation required.

**4.4.7 References**


This section presents the environmental setting, regulatory setting, standards of significance, methodology of the analysis, and potential impacts of the proposed project on the environment. The environmental setting subsections provide an overview of the existing physical environmental conditions. Information is incorporated by reference from the 2003 LRDP EIR, from which this EIR is tiered. The environmental setting is the environmental baseline to which the proposed project is compared to determine its impacts. Standards of significance are identified and used to determine whether implementing the project would result in a significant environmental impact. A significant impact is defined under CEQA as a substantial adverse change to the environment. The analysis in this Draft EIR determined that the proposed project would result in less than significant cultural resources impacts and that project-specific mitigation measures would not be required.

4.5.1 Environmental Setting
Section 4.5 of the 2003 LRDP EIR addresses the existing environmental setting for cultural resources campus through the 2015-16 academic year (UCD LRDP 2003). The following discussion summarizes information presented in the 'Environmental Setting' subsection of Section 4.5 of the 2003 LRDP EIR, updated with current data as necessary.

Cultural resources on campus include prehistoric and historic resources. Prehistoric resources are those sites and artifacts associated with the indigenous, non-Euroamerican population, generally dating prior to contact with people of European descent. Historic resources include structures, features, artifacts, and sites that date from Euroamerican settlement of the region.

Archaeological Resources
The campus lies in the ethnographic territory of the Patwin. Since 1991, extensive archaeological investigations (survey, testing, monitoring, and/or excavation) have been conducted on campus in conjunction with the development of campus projects (Nadolski 2003). Patwin sites, including burials, have been identified at several locations on the central campus. Areas within 800 feet of the banks of the historic channel of Putah Creek and its tributaries and slough channels, and within 800 feet of specific known archaeological sites, have been identified as archaeologically sensitive zones on campus.

Historic Resources
The earliest direct historic contacts in the Davis area probably occurred during 1806 to 1808. Farming on a large scale began in the Davis area in the 1850s. A "university farm" was established at Davis in 1906, classes began in 1909, and Davis became a general University of California campus in 1959. No properties within the campus are listed on the National Register of Historic Places. Six properties on or near the campus have been recorded with the California
Inventory of Historic Resources. Historic architectural features typically must be at least 50 years of age to be considered for listing on the California Register of Historical Resources (CRHR).

Project Site

Cultural resource surveys have previously been conducted near the Old Davis Road extension area. The results of the prior surveys have indicated the potential for significant cultural resources in this portion of the UC Davis campus. To examine the project area for cultural resources, a detailed review of prior testing efforts was reviewed and additional field investigations were conducted in 2011 (Pacific Legacy 2011). The results of the investigation are described below in the impact assessment CUL-1.

4.5.2 Standards of Significance

The following archaeological and historical standards of significance were identified in the 2003 LRDP EIR. An additional standard from the CEQA Guidelines' Environmental Checklist related to paleontological resources and unique geologic features was found not applicable to campus growth under the 2003 LRDP.

Archaeological Resources

The 2003 LRDP EIR considers an impact on archaeological resources significant if growth under the 2003 LRDP would:

- Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to CEQA Guideline § 15064.5.
- Disturb any human remains, including those interred outside of formal cemeteries.

A "unique archaeological resource" is defined under CEQA through Public Resources Code Section 21083.2(g). A unique archaeological resource implies an archaeological artifact, object, or site about which it can be clearly demonstrated that there is a high probability that it meets one of the following criteria:

- The archaeological artifact, object, or site contains information needed to answer important scientific questions and there is a demonstrable public interest in that information, or
- The archaeological artifact, object, or site has a special and particular quality, such as being the oldest of its type or the best available example of its type, or
- The archaeological artifact, object, or site is directly associated with a scientifically recognized important prehistoric or historic event or person.

For a resource to qualify as a unique archaeological resource, the agency must determine that there is a high probability that the resource meets one of these criteria without merely adding to the current body of knowledge (PRC § 21083.2(g)). An archaeological artifact, object, or site that does not meet the above criteria is a nonunique archaeological resource (PRC § 21083.2(h)). An impact on a nonunique resource is not a significant environmental impact under CEQA (CEQA Guidelines § 15064.5(c)(4)). If an archaeological resource qualifies as a
historical resource under CRHR or other criteria, then the resource is treated as a historical resource for the purposes of CEQA (CEQA Guidelines § 15064.5(c)(2)).

Section 15064.5 of the CEQA Guidelines assigns special importance to human remains and specifies procedures to be used when Native American remains are discovered. These procedures are detailed under PRC § 5097.98. California Health and Safety Code § 7050.5(b) prohibits disturbance of human remains uncovered by excavation until the Coroner has made a finding relative to PRC § 5097 procedures.

4.5.3 Methodology

The methodology used to evaluate the cultural resources impacts associated with construction and operation of the Old Davis Road extension project was based on continuing the campus practice of surveying proposed construction sites for buried cultural resource materials to assess the likelihood that project site could contain significant materials.

4.5.4 LRDP Mitigation Measures Included in the Proposed Project

Mitigation measures in the 2003 LRDP EIR that are applicable to the proposed project are presented below. Since these previously adopted mitigation measures are already being carried out as part of implementation of the 2003 LRDP, they are included in and are a part of the proposed project and will not be readopted.
Table 4.1-5
Mitigation Measures Incorporated in the 2003 LRDP EIR

<table>
<thead>
<tr>
<th>Mitigation Measure</th>
<th>Description</th>
</tr>
</thead>
</table>
| 4.5-1(a)           | • As early as possible in the project planning process, the campus shall define the project's area of potential effects (APE) for archaeological resources and, if structures are present on the site, for historic structures. The campus shall determine the potential for the project to result in cultural resource impacts, based on the extent of ground disturbance and site modification anticipated for the proposed project. Based on this information, the campus shall:
  (i) Prepare an inventory of all buildings and structures within the APE that will be 50 years of age or older at the time of project construction for review by a qualified architectural historian. If no structures are present on the site, there would be no impact to historic built environment resources from the project. If potentially historic structures are present, LRDP Mitigation 4.5-1(c) shall be implemented.
  (ii) Determine the level of archaeological investigation that is appropriate for the project site and activity, as follows:
    • Minimum: excavation less than 18 inches deep and in a relatively small area (e.g., a trench for lawn irrigation, tree planting, etc.). Implement LRDP Mitigation 4.5-1(b)(i).
    • Moderate: excavation below 18 inches deep and/or over a large area on any site that has not been characterized and is not suspected to be a likely location for archaeological resources. Implement LRDP Mitigation 4.5-1(b)(i) and (ii).
    • Intensive: excavation below 18 inches and/or over a large area on any site that is within 800 feet of the historic alignment of Putah Creek, or that is adjacent to a recorded archaeological site. Implement LRDP Mitigation 4.5-1 (i), (ii) and (iii). |
| 4.5-1(b)           | During the planning phase of the project, the campus shall implement the following steps to identify and protect archaeological resources that may be present in the APE:
  (i) For project sites at all levels of investigation, contractor crews shall be required to attend an informal training session prior to the start of earth moving, regarding how to recognize archaeological sites and artifacts. In addition, campus employees whose work routinely involves disturbing the soil shall be informed how to recognize evidence of potential archaeological sites and artifacts. Prior to disturbing the soil, contractors shall be notified that they are required to watch for potential archaeological sites and artifacts and to notify the campus if any are found. In the event of a find, the campus shall implement item (vi), below.
  (ii) For project sites requiring a moderate or intensive level of investigation, a surface survey shall be conducted by a qualified archaeologist during project planning and design and prior to soil disturbing activities. For sites requiring moderate investigation, in the event of a surface find, intensive investigation will be implemented, as per item (iii), below. Irrespective of findings, the qualified archaeologist shall, in consultation with the campus, develop an archaeological monitoring plan to be implemented during the construction phase of the project. The frequency and duration of monitoring shall be adjusted in accordance with survey results, the nature of construction activities, and results during the monitoring period. In the event of a discovery, the campus shall implement item (vi), below.
  (iii) For project sites requiring intensive investigation, irrespective of subsurface finds, the campus shall retain a qualified archaeologist to conduct a subsurface investigation of the project site, to ascertain whether buried archaeological materials are present and, if so, the extent of the deposit relative to the project’s area of potential effects. If an archaeological deposit is discovered, the archaeologist will prepare a site record and file it with the California Historical Resource Information System.
  (iv) If it is determined through step (iii), above, that the resource extends into the project’s area of potential effects, the resource will be evaluated by a qualified archaeologist, who will determine whether it qualifies as a historical resource or a unique archaeological resource under the criteria of CEQA Guidelines § 15064.5. If the resource does not qualify, or if no resource is present within the project area of potential effects (APE), this will be noted in the environmental document and no further mitigation is required unless there is a discovery during construction (see (vi), below).
  (v) If a resource within the project APE is determined to qualify as an historical resource or a unique archaeological resource (as defined by CEQA), the campus shall consult with the qualified archaeologist to consider means of avoiding or reducing ground disturbance within
Mitigation Measure | Description
---|---

the site boundaries, including minor modifications of building footprint, landscape modification, the placement of protective fill, the establishment of a preservation easement, or other means that will permit avoidance or substantial preservation in place of the resource. If avoidance or substantial preservation in place is not possible, the campus shall implement LRDP Mitigation 4.5-2(a).

(vi) If a resource is discovered during construction (whether or not an archaeologist is present), all soil disturbing work within 100 feet of the find shall cease. The campus shall contact a qualified archaeologist to provide and implement a plan for survey, subsurface investigation as needed to define the deposit, and assessment of the remainder of the site within the project area to determine whether the resource is significant and would be affected by the project. LRDP Mitigation 4.5-1(b), steps (iii) through (vii) shall be implemented.

(vii) A written report of the results of investigations will be prepared by a qualified archaeologist and filed with the appropriate Information Center of the California Historical Resources Information System.
<table>
<thead>
<tr>
<th>Mitigation Measure</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.5-4 (a)</td>
<td>Implement LRDP Mitigation 4.5-1, 4.5-2 and 4.5-3 to minimize the potential for disturbance or destruction of human remains in an archaeological context and to preserve them in place, if feasible.</td>
</tr>
<tr>
<td>4.5-4 (b)</td>
<td>Provide a representative of the local Native American community an opportunity to monitor any excavation (including archaeological excavation) within the boundaries of a known Native American archaeological site.</td>
</tr>
<tr>
<td>4.5-4 (c)</td>
<td>In the event of a discovery on campus of human bone, suspected human bone, or a burial, all excavation in the vicinity will halt immediately and the area of the find will be protected until a qualified archaeologist determines whether the bone is human. If the qualified archaeologist determines the bone is human, or if a qualified archaeologist is not present, the campus will notify the Yolo or Solano County Coroner (depending on the county of the find) of the find before additional disturbance occurs. Consistent with California Health and Safety Code § 7050.5(b), which prohibits disturbance of human remains uncovered by excavation until the Coroner has made a finding relative to PRC 5097 procedures, the campus will ensure that the remains and vicinity of the find are protected against further disturbance. If it is determined that the find is of Native American origin, the campus will comply with the provisions of PRC § 5097.98 regarding identification and involvement of the Native American Most Likely Descendant (MLD). If human remains cannot be left in place, the campus shall ensure that the qualified archaeologist and the MLD are provided opportunity to confer on archaeological treatment of human remains, and that appropriate studies, as identified through this consultation, are carried out prior to reinterment. The campus shall provide results of all such studies to the local Native American community, and shall provide an opportunity of local Native American involvement in any interpretative reporting. As stipulated by the provisions of the California Native American Graves Protection and Repatriation Act, the campus shall ensure that human remains and associated artifacts recovered from campus projects on state lands are repatriated to the appropriate local tribal group if requested.</td>
</tr>
</tbody>
</table>

Source: UC Davis, 2003 LRDP EIR, Section 4.5, Cultural Resources.
4.5.5  Project Impacts and Mitigation Measures

Impacts Adequately Analyzed in the 2003 LRDP EIR or Not Applicable to the Project
As determined in the Tiered Initial Study for the project, potential impacts to cultural resources were addressed in the 2003 LRDP EIR and the 2003 LRDP EIR included mitigation measures to further reduce the significance of certain impacts. The Tiered Initial Study found that LRDP Impacts 4.5-1 (a,b), 4.5-2 (a), 4.5-3, and 4.5-4 (a-d), which were adopted and incorporated in the LRDP EIR, are relevant to the proposed project and reduce the significance of air quality impacts to the extent feasible. Pages 43 and 45 of the Tiered Initial Study (Appendix A) contain the full text of these impacts and mitigation measures and include explanations of the relevance of each impact to the proposed projects. The Tiered Initial Study further explains that analysis would be conducted in the Tiered Draft EIR for confirm the findings in LRDP EIR and to quantify the potential impacts from construction of the proposed road extension.

Project Level Impact
Impact CUL-1: The proposed Old Davis Road extension project would not cause a substantial adverse change to the significance of an archaeological resource pursuant to Section 15604.5. (Less than Significant)

The campus has conducted prior surveys in the vicinity of the proposed project and also conducted a project-specific survey to sample soil within the proposed road extension corridor in April 2011 (Pacific Legacy 2011). The April 2011 survey of the roadway realignment included a surface survey and 15 subsurface auger borings and did not find significant archaeological resources (Pacific Legacy 2011). On the basis of these surveys, the proposed project appears to not include an area with a high-likelihood for discovering buried materials. There is a low potential for such resources to be present and to be affected by ground disturbance that would take place during project construction. LRDP Mitigations 4.5-1 through 4.5-4, included in the proposed project, would ensure that any archaeological resources encountered during construction would be protected from destruction that might take place from development through measures including identification, avoidance, preservation in place or recovery, treatment, data recovery, and curation. Therefore, this impact would be less than significant.

Mitigation Measures: No project-specific mitigation required.

Impact CUL-2: The proposed Old Davis Road extension project would not disturb any human remains, including those interred outside of formal cemeteries. (Less than Significant)

The 2003 LRDP EIR found the potential for development under the 2003 LRDP to disturb human remains, including those interred outside of formal cemeteries (LRDP Impact 4.5-4). LRDP Mitigation 4.5-4(a-d), included in the proposed project, would ensure that human remains in archaeological and isolated contexts would be protected from destruction that might take place from development through measures including identification, Native American consultation, preservation in place or recovery, respectful treatment and study, and reinterment. Therefore, this impact would be less than significant.

4.5.6  References
4.6 **GREENHOUSE GAS EMISSIONS**

The 2003 LRDP EIR was certified before the passage of Assembly Bill 32 (Global Warming Solutions Act of 2006) and therefore did not analyze greenhouse gas emissions or climate change. Accordingly, the Tiered Initial Study for the Hyatt Place Hotel Expansion and Old Davis Road Extension determined that this EIR would consider potential project impacts associated with GHG emissions.

This section discusses the existing global, national, and statewide conditions related to greenhouse gases (GHG) and global climate change and evaluates the potential impacts on global climate from the implementation of the proposed project. The section also provides a brief discussion of the applicable federal, state, regional, and local agencies that regulate, monitor, and control GHG emissions. The analysis in this Draft EIR determines that the proposed project would result in less than significant GHG impacts. Copies of the modeling runs to estimate GHG emissions associated with the proposed project and supporting technical data are found in Appendix C.

The following sources were used to prepare this section of the Draft EIR:
- UC Davis 2003 Long Range Development Plan (2003 LRDP)
- YSAQMD’s Handbook for Assessing and Mitigating Air Quality Impacts
- CalEEMod emission model User’s Guide Version 2011.1
- The UC Davis 2009-2010 Climate Action Plan

4.6.1 **Environmental Setting**

**Background**

Global climate change refers to any significant change in climate measurements, such as temperature, precipitation, or wind, lasting for an extended period (i.e., decades or longer) (U.S. EPA 2008a). Climate change may result from:

- natural factors, such as changes in the sun’s intensity or slow changes in the Earth’s orbit around the sun;
- natural processes within the climate system (e.g., changes in ocean circulation, reduction in sunlight from the addition of GHG and other gases to the atmosphere from volcanic eruptions); and
- human activities that change the atmosphere’s composition (e.g., through burning fossil fuels) and the land surface (e.g., deforestation, reforestation, urbanization, desertification).

The primary change in global climate has been a rise in the average global tropospheric temperature of 0.2 degree Celsius per decade, determined from meteorological measurements worldwide between 1990 and 2005. Climate change modeling using 2000 emission rates shows that further warming is likely to occur, which would induce further changes in the global climate system during the current century (IPCC 2007). Changes to the global climate system and ecosystems, and to California, could include:

- declining sea ice and mountain snowpack levels, thereby increasing sea levels and sea surface evaporation rates with a corresponding increase in tropospheric water vapor due to the atmosphere’s ability to hold more water vapor at higher temperatures (IPCC 2007);
• rising average global sea levels primarily due to thermal expansion and the melting of glaciers, ice caps, and the Greenland and Antarctic ice sheets (model-based projections of global average sea level rise at the end of the 21st century (2090–2099) range from 0.18 meter to 0.59 meter or 0.59 foot to 1.94 feet) (IPCC 2007);
• changing weather patterns, including changes to precipitation, ocean salinity, and wind patterns, and more energetic aspects of extreme weather including droughts, heavy precipitation, heat waves, extreme cold, and the intensity of tropical cyclones (IPCC 2007);
• declining Sierra snowpack levels, which account for approximately one-half of the surface water storage in California, by 70 percent to as much as 90 percent over the next 100 years (Cal EPA 2006);
• increasing the number of days conducive to ozone formation by 25 to 85 percent (depending on the future temperature scenario) in high ozone areas located in the Southern California area and the San Joaquin Valley by the end of the 21st century (Cal EPA 2006);
• increasing the potential for erosion of California’s coastlines and sea water intrusion into the Sacramento and San Joaquin Delta and associated levee systems due to the rise in sea level (California EPA 2006);
• increasing pest infestation, making California more susceptible to forest fires (Cal EPA 2006);
• increasing the demand for electricity by 1 to 3 percent by 2020 due to rising temperatures resulting in hundreds of millions of dollars in extra expenditures (Cal EPA 2006); and
• summer warming projections in the first 30 years of the 21st century ranging from about 0.5 to 2 degrees Celsius (°C) (0.9 to 3.6 °F) and by the last 30 years of the 21st century, from about 1.5 to 5.8 °C (2.7 to 10.5 °F) (Cal EPA 2006).

The natural process through which heat is retained in the troposphere\(^5\) is called the "greenhouse effect." The greenhouse effect traps heat in the troposphere through a threefold process as follows: (1) short-wave radiation in the form of visible light emitted by the Sun is absorbed by the Earth as heat; (2) long-wave radiation is re-emitted by the Earth; and (3) GHGs in the upper atmosphere absorb or trap the long-wave radiation and re-emit it back towards the Earth and into space. This third process is the focus of current climate change actions.

While water vapor and carbon dioxide (CO\(_2\)) are the most abundant GHGs, other trace GHGs have a greater ability to absorb and re-radiate long-wave radiation. To gauge the potency of GHGs, scientists have established a Global Warming Potential (GWP) for each GHG based on its ability to absorb and re-emit long-wave radiation over a specific time period. The GWP of a gas is determined using CO\(_2\) as the reference gas, which has a GWP of 1 over 100 years (IPCC 1996).\(^6\) For example, a gas with a GWP of 10 is 10 times more potent than CO\(_2\) over 100 years. The use of GWP allows GHG emissions to be reported using CO\(_2\) as a baseline. The sum of each GHG multiplied by its associated GWP is referred to as "carbon dioxide equivalents" (CO\(_2\)e). This essentially means that 1 metric ton of a GHG with a GWP of 10 has the same climate change impacts as 10 metric tons of CO\(_2\).

**Greenhouse Gases**

State law defines GHGs to include the following compounds:

\(^5\) The troposphere is the bottom layer of the atmosphere, which varies in height from the Earth’s surface to 10 to 12 kilometers).
\(^6\) All Global Warming Potentials are given as 100-year values.
- **Carbon Dioxide (CO2)**. Carbon dioxide primarily is generated by fossil fuel combustion from stationary and mobile sources. Due to the emergence of industrial facilities and mobile sources over the past 250 years, the concentration of carbon dioxide in the atmosphere has increased 35 percent (U.S. EPA 2008b). Carbon dioxide is the most widely emitted GHG and is the reference gas (GWP of 1) for determining the GWP of other GHGs. In 2004, 82.8 percent of California’s GHG emissions were carbon dioxide (California Energy Commission 2007).

- **Methane (CH4)**. Methane is emitted from biogenic sources (i.e., resulting from the activity of living organisms), incomplete combustion in forest fires, landfills, manure management, and leaks in natural gas pipelines. In the United States, the top three sources of methane are landfills, natural gas systems, and enteric fermentation. Methane is the primary component of natural gas, which is used for space and water heating, steam production, and power generation. The GWP of methane is 21.

- **Nitrous Oxide (N2O)**. Nitrous oxide is produced by natural and human-related sources. Primary human-related sources include agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuel, adipic acid production, and nitric acid production. The GWP of nitrous oxide is 310.

- **Hydrofluorocarbons (HFCs)**. HFCs typically are used as refrigerants in both stationary refrigeration and mobile air conditioning. The use of HFCs for cooling and foam-blowing is growing particularly as the continued phase-out of chlorofluorocarbons (CFCs) and hydrochlorofluorocarbons (HCFCs) gains momentum. The GWP of HFCs ranges from 140 for HFC-152a to 6,300 for HFC-236fa.

- **Perfluorocarbons (PFCs)**. Perfluorocarbons are compounds consisting of carbon and fluorine. They are primarily created as a byproduct of aluminum production and semiconductor manufacturing. Perfluorocarbons are potent GHGs with a GWP several thousand times that of carbon dioxide, depending on the specific PFC. Another area of concern regarding PFCs is their long atmospheric lifetime (up to 50,000 years) (Energy Information Administration 2007). The GWPs of PFCs range from 5,700 to 11,900.

- **Sulfur Hexafluoride (SF6)**. Sulfur hexafluoride is a colorless, odorless, nontoxic, nonflammable gas. It is most commonly used as an electrical insulator in high voltage equipment that transmits and distributes electricity. Sulfur hexafluoride is the most potent GHG that has been evaluated by the Intergovernmental Panel on Climate Change, with a GWP of 23,900. However, its global warming contribution is not as high as the GWP would indicate due to its low mixing ratio, as compared to carbon dioxide (4 parts per trillion [ppt] in 1990 versus 365 parts per million [ppm] of CO2).

**Contributions to Greenhouse Gas Emissions**

**Global**

Worldwide anthropogenic (man-made) GHG emissions are tracked for industrialized nations (referred to as Annex I) and developing nations (referred to as Non-Annex I). Man-made GHG emissions for Annex I nations are available through 2007. Man-made GHG emissions for Non-Annex I nations are available through 2005. The sum of these emissions totaled approximately 42,133 million metric tons of CO2 equivalents (MMTCO2E). It should be noted that global

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7 The CO2 equivalent emissions commonly are expressed as million metric tons of carbon dioxide equivalent (MMTCO2E). The carbon dioxide equivalent for a gas is derived by multiplying the tons of the gas by the associated GWP, such that MMTCO2E = (million metric tons of a GHG) x (GWP of the GHG). For example, the
emissions inventory data are not all from the same year and may vary depending on the source of the emissions inventory data. The top five countries and the European Union accounted for approximately 55 percent of the total global GHG emissions according to the most recently available data (See Table 4.2-1, Top Five GHG Producer Countries and the European Union [Annual]). The GHG emissions in more recent years may differ from the inventories presented in Table 4.2-1; however, the data are representative of currently available global inventory data.

Table 4.2-1
Top Five GHG Producer Countries and the European Union (Annual)

<table>
<thead>
<tr>
<th>Emitting Countries</th>
<th>GHG Emissions (MMTCO\textsubscript{2}e)</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>7,250</td>
</tr>
<tr>
<td>United States</td>
<td>7,217</td>
</tr>
<tr>
<td>European Union (EU), 27 Member States</td>
<td>5,402</td>
</tr>
<tr>
<td>Russian Federation</td>
<td>2,202</td>
</tr>
<tr>
<td>India</td>
<td>1,863</td>
</tr>
<tr>
<td>Japan</td>
<td>1,412</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>25,346</strong></td>
</tr>
</tbody>
</table>

Source: World Resources Institute, “Climate Analysis Indicators Tool (CAIT),” http://cait.wri.org/. 2010.  Excludes emissions and removals from land use, land-use change and forestry (LULUCF). Note: Emissions for Annex I nations are based on 2007 data. Emissions for Non-Annex I nations (e.g., China, India) are based on 2005 data).

United States
As noted in Table 4.2-1, the United States was the number two producer of global GHG emissions as of 2005. The primary GHG emitted by human activities in the United States was CO\textsubscript{2}, representing approximately 84 percent of total GHG emissions (U.S. EPA 2008a). Carbon dioxide from fossil fuel combustion, the largest source of GHG emissions, accounted for approximately 80 percent of U.S. GHG emissions.\textsuperscript{9}

State of California
The California Air Resources Board compiles GHG inventories for the State of California. Based on the 2006 GHG inventory data for the 2000–2006 GHG emissions inventory, California emitted 484 million metric tons of carbon dioxide equivalent (MMTCO\textsubscript{2}e) including emissions resulting from imported electrical power in 2006 (CARB 2009). Based on the CARB inventory data and GHG inventories compiled by the World Resources Institute, California's total statewide GHG emissions rank second in the United States (Texas is number one) with emissions of 434 MMTCO\textsubscript{2}e excluding emissions related to imported power (CARB 2009).

GWP for methane is 21. This means that the emission of one million metric tons of methane is equivalent to the emission of 21 million metric tons of CO\textsubscript{2}.

\textsuperscript{8} The global emissions are the sum of Annex I and non-Annex I countries, without counting Land-Use, Land-Use Change and Forestry (LULUCF). For countries without 2005 data, the UNFCCC data for the most recent year were used. United Nations Framework Convention on Climate Change, —Annex I Parties – GHG total without LULUCF,” http://unfccc.int/ghg_emissions_data/ghg_data_from_unfccc/time_series_annex_i/items/3841.php and –Flexible GHG Data Queries” with selections for total GHG emissions excluding LULUCF/LUCF, all years, and non-Annex I countries, http://unfccc.int/di/FlexibleQueries/Event.do?event= showProjection. n.d.

\textsuperscript{9} Supra no. 4.
A California Energy Commission (CEC) emissions inventory report placed CO2 produced by fossil fuel combustion in California as the largest source of California’s GHG emissions in 2004, accounting for 80 percent of the total GHG emissions (California Energy Commission 2006a). Emissions of CO2 from other sources contributed 3.1 percent of the total GHG emissions; methane emissions contributed 6.4 percent; nitrous oxide emissions contributed 7.6 percent; and the remaining 3.2 percent was composed of emissions of high-GWP gases (California Energy Commission 2006a). These high GWP gases are largely composed of refrigerants, with small contributions of SF6 used in connection with insulating materials for electricity transmission and distribution.

The primary contributors to GHG emissions in California are transportation, electric power production from both in-state and out-of-state sources, industry, agriculture and forestry, and other sources, which include commercial and residential activities. Table 4.2-2, Annual GHG Emissions in California, provides a summary of GHG emissions reported in California in 1990 and 2006 separated by categories defined by the United Nations Intergovernmental Panel on Climate Change (IPCC).

Between 1990 and 2008, the population of California grew by approximately 8.1 million (from 29.8 to 37.9 million) (U.S. Census Bureau 2009; California Department of Finance 2010). This represents an increase of approximately 27.2 percent from 1990 population levels. In addition, the California economy, measured as gross state product, grew from $788 billion in 1990 to $1.8 trillion in 2008, representing an increase of approximately 128 percent (over twice the 1990 gross state product) (California Department of Finance 2009). Despite the population and economic growth, California’s net GHG emissions only grew by approximately 11 percent. The California Energy Commission (CEC) attributes the slow rate of growth to the success of California’s renewable energy programs and its commitment to clean air and clean energy (California Energy Commission 2006a).

<table>
<thead>
<tr>
<th>Source Category</th>
<th>1990 (MMTCO2e)</th>
<th>Percent of Total</th>
<th>2008 (MMTCO2e)</th>
<th>Percent of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ENERGY</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Energy Industries</td>
<td>386.41</td>
<td>89.2%</td>
<td>413.80</td>
<td>86.6%</td>
</tr>
<tr>
<td>Manufacturing Industries &amp; Construction</td>
<td>157.33</td>
<td>36.3%</td>
<td>171.23</td>
<td>35.8%</td>
</tr>
<tr>
<td>Transport</td>
<td>24.24</td>
<td>5.6%</td>
<td>16.67</td>
<td>3.5%</td>
</tr>
<tr>
<td>Other (Residential/Commercial/Institutional)</td>
<td>48.19</td>
<td>11.1%</td>
<td>46.59</td>
<td>9.8%</td>
</tr>
<tr>
<td>Non-Specified</td>
<td>1.38</td>
<td>0.3%</td>
<td>0.00</td>
<td>0.0%</td>
</tr>
<tr>
<td>Fugitive Emissions from Oil &amp; Natural Gas</td>
<td>2.94</td>
<td>0.7%</td>
<td>3.28</td>
<td>0.7%</td>
</tr>
<tr>
<td>Fugitive Emissions from Other Energy Production</td>
<td>2.31</td>
<td>0.5%</td>
<td>2.09</td>
<td>0.4%</td>
</tr>
<tr>
<td><strong>INDUSTRIAL PROCESSES &amp; PRODUCT USE</strong></td>
<td>18.34</td>
<td>4.2%</td>
<td>30.11</td>
<td>6.3%</td>
</tr>
<tr>
<td>Mineral Industry</td>
<td>4.85</td>
<td>1.1%</td>
<td>5.35</td>
<td>1.1%</td>
</tr>
<tr>
<td>Chemical Industry</td>
<td>2.34</td>
<td>0.5%</td>
<td>0.06</td>
<td>0.0%</td>
</tr>
<tr>
<td>Non-Energy Products from Fuels &amp; Solvent Use</td>
<td>2.29</td>
<td>0.5%</td>
<td>1.97</td>
<td>0.4%</td>
</tr>
<tr>
<td>Electronics Industry</td>
<td>0.59</td>
<td>0.1%</td>
<td>0.80</td>
<td>0.2%</td>
</tr>
<tr>
<td>Substitutes for Ozone Depleting Substances</td>
<td>0.04</td>
<td>0.0%</td>
<td>13.89</td>
<td>2.9%</td>
</tr>
<tr>
<td>Other Product Manufacture and Use</td>
<td>3.18</td>
<td>0.7%</td>
<td>1.66</td>
<td>0.3%</td>
</tr>
<tr>
<td>Other</td>
<td>5.05</td>
<td>1.2%</td>
<td>6.39</td>
<td>1.3%</td>
</tr>
<tr>
<td><strong>AGRICULTURE, FORESTRY, &amp; OTHER LAND USE</strong></td>
<td>19.11</td>
<td>4.4%</td>
<td>24.42</td>
<td>5.1%</td>
</tr>
</tbody>
</table>
**EMISSIONS SUMMARY**

<table>
<thead>
<tr>
<th>Source Category</th>
<th>1990 (MMTCO₂e)</th>
<th>Percent of Total (1990)</th>
<th>2008 (MMTCO₂e)</th>
<th>Percent of Total (2008)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Livestock</td>
<td>11.67</td>
<td>2.7%</td>
<td>16.28</td>
<td>3.4%</td>
</tr>
<tr>
<td>Land</td>
<td>0.19</td>
<td>0.0%</td>
<td>0.19</td>
<td>0.0%</td>
</tr>
<tr>
<td>Aggregate Sources &amp; Non-CO₂ Sources on Land</td>
<td>7.26</td>
<td>1.7%</td>
<td>7.95</td>
<td>1.7%</td>
</tr>
<tr>
<td><strong>WASTE</strong></td>
<td><strong>9.42</strong></td>
<td><strong>2.2%</strong></td>
<td><strong>9.41</strong></td>
<td><strong>2.0%</strong></td>
</tr>
<tr>
<td>Solid Waste Disposal</td>
<td>6.26</td>
<td>1.4%</td>
<td>6.71</td>
<td>1.4%</td>
</tr>
<tr>
<td>Wastewater Treatment &amp; Discharge</td>
<td>3.17</td>
<td>0.7%</td>
<td>2.70</td>
<td>0.6%</td>
</tr>
<tr>
<td><strong>Gross California Emissions</strong></td>
<td><strong>433.29</strong></td>
<td></td>
<td><strong>477.74</strong></td>
<td></td>
</tr>
<tr>
<td>Sinks from Forests and Rangelands</td>
<td>-6.69</td>
<td></td>
<td>-3.98</td>
<td></td>
</tr>
<tr>
<td><strong>Net California Emissions</strong></td>
<td><strong>426.60</strong></td>
<td></td>
<td><strong>473.76</strong></td>
<td></td>
</tr>
</tbody>
</table>

Sources:  

### 4.6.2 Regulatory Considerations

**Intergovernmental Panel on Climate Change**

The World Meteorological Organization (WMO) and United Nations Environmental Program (UNEP) established the IPCC in 1988. The goal of the IPCC is to evaluate the risk of climate change caused by human activities. Rather than performing research or monitoring climate, the IPCC relies on peer-reviewed and published scientific literature to make its assessment. While not a regulatory body, the IPCC assesses information (i.e., scientific literature) regarding human-induced climate change and the impacts of human-induced climate change, and recommends options to policy makers for the adaptation and mitigation of climate change. The IPCC reports its evaluations in special reports called “assessment reports.” The latest assessment report (i.e., Fourth Assessment Report, consisting of three working group reports and a synthesis report based on the first three reports) was published in 2007. In its 2007 report, the IPCC stated that global temperature increases since the mid-20th century were “very likely” attributable to man-made activities (greater than 90 percent certainty) (IPCC 2007).

**Federal**

In Massachusetts vs. EPA, the Supreme Court held that United States Environmental Protection Agency (U.S. EPA) has the statutory authority under Section 202 of the Clean Air Act (CAA) to regulate GHGs from new motor vehicles. The court did not hold that the U.S. EPA was required to regulate GHG emissions; however, it indicated that the agency must decide whether GHGs from motor vehicles cause or contribute to air pollution that is reasonably anticipated to endanger public health or welfare. Upon the final decision, the President signed Executive Order 13432 on May 14, 2007, directing the U.S. EPA, along with the Departments of Transportation, Energy, and Agriculture, to initiate a regulatory process that responds to the Supreme Court’s decision.

In December 2007, the President signed the Energy Independence and Security Act of 2007, which sets a mandatory Renewable Fuel Standard (RFS) requiring fuel producers to use at

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10 The IPCC’s Fourth Assessment Report is available online at http://www.ipcc.ch/.
least 36 billion gallons of biofuel in 2022 and sets a national fuel economy standard of 35 miles per gallon by 2020. The act also contains provisions for energy efficiency in lighting and appliances and for the implementation of green building technologies in federal buildings. On July 11, 2008, the U.S. EPA issued an Advanced Notice of Proposed Rulemaking (ANPRM) on regulating GHGs under the CAA. The ANPRM reviews the various CAA provisions that may be applicable to the regulation of GHGs and presents potential regulatory approaches and technologies for reducing GHG emissions. On April 10, 2009, the U.S. EPA published the Proposed Mandatory Greenhouse Gas Reporting Rule in the Federal Register (U.S. EPA 2009). The rule was adopted on September 22, 2009 and covers approximately 10,000 facilities nationwide, accounting for 85 percent of U.S. GHG emissions.

On September 15, 2009, the U.S. EPA and the Department of Transportation’s (DOT) National Highway Traffic Safety Administration (NHTSA) issued a joint proposal to establish a national program consisting of new standards for model year 2012 through 2016 light-duty vehicles that will reduce GHG emissions and improve fuel economy. The proposed standards would be phased in and would require passenger cars and light-duty trucks to comply with a declining emissions standard. In 2012, passenger cars and light-duty trucks would have to meet an average standard of 295 grams of CO2 per mile and 30.1 miles per gallon. By 2016, the vehicles would have to meet an average standard of 250 grams of CO2 per mile and 35.5 miles per gallon.11 These standards were formally adopted by the U.S. EPA and DOT on April 1, 2010.

On December 7, 2009, the U.S. EPA Administrator signed two distinct findings regarding GHGs under section 202(a) of the Clean Air Act:

- **Endangerment Finding:** The Administrator finds that the current and projected concentrations of the six key well-mixed GHGs (carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride) in the atmosphere threaten the public health and welfare of current and future generations.

- **Cause or Contribute Finding:** The Administrator finds that the combined emissions of these well-mixed greenhouse gases from new motor vehicles and new motor vehicle engines contribute to the greenhouse gas pollution which threatens public health and welfare.

While these findings do not impose additional requirements on industry or other entities, this action was a prerequisite to finalizing the U.S. EPA’s proposed GHG emissions standards for light-duty vehicles, which were jointly proposed by the U.S. EPA and DOT.

**State**

Key state laws and regulations related to GHG emissions are described below. Additional assembly bills as well as non-regulatory advisory activities are summarized in Appendix C.

**Executive Order S-3-05 and the Climate Action Team**

In June 2005, Governor Schwarzenegger established California’s GHG emissions reduction targets in Executive Order S-3-05. The Executive Order established the following goals: GHG emissions should be reduced to 2000 levels by 2010, 1990 levels by 2020, and 80 percent below 1990 levels by 2050. The Secretary of Cal EPA is required to coordinate efforts of various agencies in order to collectively and efficiently reduce GHGs. Some of the agency representatives involved in the GHG reduction plan include the Secretary of the Business, Transportation and Housing Agency, the Secretary of the Department of Food and Agriculture, the Secretary of the Environmental Protection Agency, and the Secretary of the State Water Resources Control Board.

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11 The CO2 emission standards and fuel economy standards stated are based on U.S. EPA formulas.
Representatives from each of the aforementioned agencies comprise the Climate Action Team. The Cal/EPA secretary is required to submit a biannual progress report from the Climate Action Team to the governor and state legislature disclosing the progress made toward GHG emission reduction targets. In addition, another biannual report must be submitted illustrating the impacts of global warming on California’s water supply, public health, agriculture, coastline, and forests, and reporting possible mitigation and adaptation plans to combat these impacts. The Climate Action Team has fulfilled both of these report requirements through its March 2006 Climate Action Team Report to Governor Schwarzenegger and the Legislature (2006 CAT Report) (Cal EPA 2006). Some strategies currently being implemented by state agencies include CARB introducing vehicle climate change standards and diesel anti-idling measures, the Energy Commission implementing building and appliance efficiency standards, and the Cal/EPA implementing its green building initiative. The Climate Action Team also recommends future emission reduction strategies, such as using only low-GWP refrigerants in new vehicles, developing ethanol as an alternative fuel, reforestation, solar power initiatives for homes and businesses, and investor-owned utility energy efficiency programs. According to the report, implementation of current and future emission reduction strategies have the potential to achieve the goals set forth in Executive Order S-3-05.

Assembly Bill 32
In furtherance of the goals established in Executive Order S-3-05, the legislature enacted Assembly Bill 32 (AB 32, Nuñez and Pavley), the California Global Warming Solutions Act of 2006, which Governor Schwarzenegger signed on September 27, 2006. AB 32 represents the first enforceable statewide program to limit GHG emissions from all major industries with penalties for noncompliance. AB 32 requires the State to undertake several actions – the major requirements are discussed below:

CARB Early Action Measures
CARB is responsible for carrying out and developing the programs and requirements necessary to achieve the goal of AB 32—the reduction of California’s GHG emissions to 1990 levels by 2020. The first action under AB 32 resulted in CARB’s adoption of a report listing three specific early-action greenhouse gas emission reduction measures on June 21, 2007. On October 25, 2007, CARB approved an additional six early-action GHG reduction measures under AB 32. CARB has adopted regulations for all early action measures. The early-action measures are divided into three categories:

- Group 1 – GHG rules for immediate adoption and implementation
- Group 2 – Several additional GHG measures under development
- Group 3 – Air pollution controls with potential climate co-benefits

The original three adopted early action regulations meeting the narrow legal definition of “discrete early action GHG reduction measures” include:

- A low-carbon fuel standard to reduce the “carbon intensity” of California fuels;
- Reduction of refrigerant losses from motor vehicle air conditioning system maintenance to restrict the sale of “do-it-yourself” automotive refrigerants; and
• Increased methane capture from landfills to require broader use of state-of-the-art methane capture technologies.

The additional six early action regulations adopted on October 25, 2007, also meeting the narrow legal definition of "discrete early action GHG reduction measures," include:

• Reduction of aerodynamic drag, and thereby fuel consumption, from existing trucks and trailers through retrofit technology;
• Reduction of auxiliary engine emissions of docked ships by requiring port electrification;
• Reduction of perfluorocarbons from the semiconductor industry;
• Reduction of propellants in consumer products (e.g., aerosols, tire inflators, and dust removal products);
• The requirement that all tune-up, smog check and oil change mechanics ensure proper tire inflation as part of overall service in order to maintain fuel efficiency; and
• Restriction on the use of sulfur hexafluoride (SF6) from non-electricity sectors if viable alternatives are available.

State of California Greenhouse Gas Inventory and 2020 Limit
As required under AB 32, on December 6, 2007, CARB approved the 1990 greenhouse gas emissions inventory, thereby establishing the emissions limit for 2020. The 2020 emissions limit was set at 427 MMTCO2e. CARB also projected the state’s 2020 GHG emissions under "business as usual" (BAU) conditions—that is, emissions that would occur without any plans, policies, or regulations to reduce GHG emissions. CARB used an average of the State’s GHG emissions from 2002 through 2004 and projected the 2020 levels based on population and economic forecasts. The projected net emissions totaled approximately 596 MMTCO2e. Therefore, the state must reduce its 2020 BAU emissions by approximately 29 percent in order to meet the 1990 target.

The inventory revealed that in 1990, transportation, with 35 percent of the state’s total emissions, was the largest single sector, followed by industrial emissions, 24 percent; imported electricity, 14 percent; in-state electricity generation, 11 percent; residential use, 7 percent; agriculture, 5 percent; and commercial uses, 3 percent (these figures represent the 1990 values, compared to Table 4.2-2, which presents 2006 values). AB 32 does not require individual sectors to meet their individual 1990 GHG emissions inventory; the total statewide emissions are required to meet the 1990 threshold by 2020, however.

CARB Mandatory Reporting Requirements
In addition to the 1990 emissions inventory, CARB also adopted regulations requiring the mandatory reporting of GHG emissions for large facilities on December 6, 2007. The mandatory reporting regulations require annual reporting from the largest facilities in the state, which account for approximately 94 percent of point source greenhouse gas emissions from industrial and commercial stationary sources in California. About 800 separate sources fall under the new reporting rules and include electricity-generating facilities, electricity retail providers and power marketers, oil refineries, hydrogen plants, cement plants, cogeneration facilities, and industrial sources that emit over 25,000 tons of carbon dioxide each year from on-site stationary combustion sources. Transportation sources, which account for approximately 35 percent of California’s total greenhouse gas emissions, are not covered by these regulations but will continue to be tracked through existing means. Affected facilities began tracking their emissions...
in 2008, and began reporting in 2009. Beginning in 2010, however, emissions reporting requirements are more rigorous and are subject to third-party verification. Verification will take place annually or every three years, depending on the type of facility.

**AB 32 Climate Change Scoping Plan**

As indicated above, AB 32 requires CARB to adopt a scoping plan indicating how reductions in significant GHG sources will be achieved through regulations, market mechanisms, and other actions. After receiving public input on the discussion draft of the Climate Change Proposed Scoping Plan released in June 2008, CARB released the Climate Change Proposed Scoping Plan in October 2008 that contains an outline of the proposed state strategies to achieve the 2020 greenhouse gas emissions limits. The CARB Governing Board approved the Climate Change Scoping Plan on December 11, 2008. Key elements of the Scoping Plan include the following recommendations:

- Expanding and strengthening existing energy efficiency programs as well as building and appliance standards;
- Achieving a statewide renewable energy mix of 33 percent;
- Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system;
- Establishing targets for transportation-related greenhouse gas emissions for regions throughout California and pursuing policies and incentives to achieve those targets;
- Adopting and implementing measures pursuant to existing State laws and policies, including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard; and
- Creating targeted fees, including a public goods charge on water use, fees on high global warming potential gases, and a fee to fund the administrative costs of the state's long-term commitment to AB 32 implementation.

Under the Scoping Plan, approximately 85 percent of the state's emissions are subject to a cap-and-trade program where covered sectors are placed under a declining emissions cap. The emissions cap incorporates a margin of safety whereas the 2020 emissions limit will still be achieved even in the event that uncapped sectors do not fully meet their anticipated emissions reductions. Emissions reductions will be achieved through regulatory requirements and the option to reduce emissions further or purchase allowances to cover compliance obligations. It is expected that emission reduction from this cap-and-trade program will account for a large portion of the reductions required by AB 32.12

Table 4.2-3, AB 32 Scoping Plan Measures (SPMs), lists CARB's preliminary recommendations for achieving greenhouse gas reductions under AB 32 along with a brief description of the requirements and applicability.

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12 On March 17, 2011, the San Francisco County Superior Court found that CARB’s adoption of the cap-and-trade program did not comply with CEQA. (Association of Irritated Residents, et al. v. California Air Resources Board [Case No. CPF-09-5095 62].) The litigation is ongoing in the Court of Appeal as of the date of publication of this EIR. (1st District Ct. App. Case No. A132165).
<table>
<thead>
<tr>
<th>Scoping Plan Measure</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPM-1: California Cap-and-Trade Program linked to Western Climate Initiative</td>
<td>Implement a broad-based cap-and-trade program that links with other Western Climate Initiative Partner programs to create a regional market system. Ensure California’s program meets all applicable AB 32 requirements for market-based mechanisms. Capped sectors include transportation, electricity, natural gas, and industry. Projected 2020 business-as-usual emissions are estimated at 512 MTCO&lt;sub&gt;2&lt;/sub&gt;e; preliminary 2020 emissions limit under cap-and-trade program are estimated at 365 MTCO&lt;sub&gt;2&lt;/sub&gt;e (29 percent reduction).</td>
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<tr>
<td>SPM-2: California Light-Duty Vehicle GHG Standards</td>
<td>Implement adopted Pavley standards and planned second phase of the program. AB 32 states that if the Pavley standards (AB 1493) do not remain in effect, CARB shall implement equivalent or greater alternative regulations to control mobile sources.</td>
</tr>
<tr>
<td>SPM-3: Energy Efficiency</td>
<td>Maximize energy efficiency building and appliance standards, and pursue additional efficiency efforts. The Scoping Plan considers green building standards as a framework to achieve reductions in other sectors, such as electricity.</td>
</tr>
<tr>
<td>SPM-4: Renewables Portfolio Standard</td>
<td>Achieve 33 percent Renewables Portfolio Standard by both investor-owned and publicly owned utilities.</td>
</tr>
<tr>
<td>SPM-5: Low Carbon Fuel Standard</td>
<td>CARB identified the Low Carbon Fuel Standard as a Discrete Early Action item and the final regulation was adopted on April 23, 2009. In January 2007, Governor Schwarzenegger issued Executive Order S-1-07, which called for the reduction of the carbon intensity of California’s transportation fuels by at least 10 percent by 2020.</td>
</tr>
<tr>
<td>SPM-6: Regional Transportation-Related Greenhouse Gas Targets</td>
<td>Develop regional greenhouse gas emissions reduction targets for passenger vehicles. SB 375 requires CARB to develop, in consultation with metropolitan planning organizations (MPOs), passenger vehicle greenhouse gas emissions reduction targets for 2020 and 2035 by September 30, 2010. SB 375 requires MPOs to prepare a sustainable communities strategy to reach the regional target provided by CARB.</td>
</tr>
<tr>
<td>SPM-7: Vehicle Efficiency Measures</td>
<td>Implement light-duty vehicle efficiency measures. CARB is pursuing fuel-efficient tire standards and measures to ensure properly inflated tires during vehicle servicing.</td>
</tr>
<tr>
<td>SPM-8: Goods Movement</td>
<td>Implement adopted regulations for port drayage trucks and the use of shore power for ships at berth. Improve efficiency in goods movement operations.</td>
</tr>
<tr>
<td>SPM-9: Million Solar Roofs Program</td>
<td>Install 3,000 MW of solar-electric capacity under California’s existing solar programs.</td>
</tr>
<tr>
<td>SPM-10: Heavy/Medium-Duty Vehicles</td>
<td>Adopt heavy- and medium-duty vehicle and engine measures targeting aerodynamic efficiency, vehicle hybridization, and engine efficiency.</td>
</tr>
<tr>
<td>SPM-11: Industrial Emissions</td>
<td>Require assessment of large industrial sources to determine whether individual sources within a facility can cost-effectively reduce greenhouse gas emissions and provide other pollution reduction co-benefits. Reduce greenhouse gas emissions from fugitive emissions from oil and gas extraction and gas transmission. Adopt and implement regulations to control fugitive methane emissions and reduce flaring at refineries.</td>
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<tr>
<td>SPM-12: High Speed Rail</td>
<td>Support implementation of a high-speed rail (HSR) system. This measure supports implementation of plans to construct and operate a HSR system between Northern and Southern California serving major metropolitan centers.</td>
</tr>
<tr>
<td>Scoping Plan Measure</td>
<td>Description</td>
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<tr>
<td>SPM-13: Green Building</td>
<td>Expand the use of green building practices to reduce the carbon footprint of California’s new and existing inventory of buildings.</td>
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<tr>
<td>SPM-14: High GWP Gases</td>
<td>Adopt measures to reduce high global warming potential gases. The Scoping Plan contains 6 measures to reduce high-GWP gases from mobile sources, consumer products, stationary sources, and semiconductor manufacturing.</td>
</tr>
<tr>
<td>SPM-16: Sustainable Forests</td>
<td>Preserve forest sequestration and encourage the use of forest biomass for sustainable energy generation. The federal government and California’s Board of Forestry and Fire Protection have the regulatory authority to implement the Forest Practice Act to provide for sustainable management practices. This measure is expected to play a greater role in the 2050 goals.</td>
</tr>
<tr>
<td>SPM-17: Water</td>
<td>Continue efficiency programs and use cleaner energy sources to move water. California will also establish a public goods charge for funding investments in water efficiency that will lead to as yet undetermined reductions in greenhouse gases.</td>
</tr>
<tr>
<td>SPM-18: Agriculture</td>
<td>In the near-term, encourage investment in manure digesters and at the five-year Scoping Plan update determine if the program should be made mandatory by 2020. Increase efficiency and encourage use of agricultural biomass for sustainable energy production. CARB has begun research on nitrogen fertilizers and will explore opportunities for emission reductions.</td>
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</table>


Senate Bill 97 (CEQA Guidelines)
In August 2007, the legislature enacted SB 97 (Dutton), which directed the Governor’s Office of Planning and Research (OPR) to develop guidelines under CEQA for the mitigation of greenhouse gas emissions. A number of actions have taken place under SB 97, which are discussed below.

OPR Climate Change Technical Advisory
On June 19, 2008, OPR issued a technical advisory as interim guidance regarding the analysis of GHG emissions in CEQA documents (OPR 2008). The advisory indicated that a project's GHG emissions, including those associated with vehicular traffic, and construction activities, should be identified and estimated. The advisory further recommended that the lead agency determine significance of the impacts and impose all mitigation measures that are necessary to reduce GHG emissions to a less than significant level. The advisory did not recommend a specific threshold of significance. Instead, OPR requested that CARB recommend a method for setting thresholds that lead agencies may adopt (OPR 2009).

CEQA Guideline Amendments

Senate Bill 375
The California legislature passed SB 375 (Steinberg) on September 1, 2008. SB 375 requires CARB to set regional greenhouse gas reduction targets after consultation with local
governments. The target must then be incorporated within that region’s regional transportation plan (RTP), which is used for long-term transportation planning, in a Sustainable Communities Strategy. SB 375 also requires each region’s regional housing needs assessment (RHNA) to be adjusted based on the Sustainable Communities Strategy in its RTP. Additionally, SB 375 reforms the environmental review process to create incentives to implement the strategy, especially transit priority projects. The governor signed SB 375 into law on September 30, 2008. On February 17, 2011, CARB adopted regional GHG emission reduction targets for automobiles and light trucks.

**Title 24 Building Standards Code**

The California Energy Commission first adopted Energy Efficiency Standards for Residential and Nonresidential Buildings (California Code of Regulations, Title 24, Part 6) in 1978 in response to a legislative mandate to reduce energy consumption in the state. Although not originally intended to reduce GHG emissions, increased energy efficiency, and reduced consumption of electricity, natural gas, and other fuels would result in fewer GHG emissions from residential and nonresidential buildings subject to the standard. The standards are updated periodically to allow for the consideration and inclusion of new energy efficiency technologies and methods. The latest revisions were adopted in 2008 and became effective on January 1, 2010.

Part 11 of the Title 24 Building Standards Code is referred to as the California Green Building Standards Code (CALGreen Code). The purpose of the CALGreen Code is to improve public health, safety and general welfare by enhancing the design and construction of buildings through the use of building concepts having a positive environmental impact and encouraging sustainable construction practices in the following categories: (1) Planning and design; (2) Energy efficiency; (3) Water efficiency and conservation; (4) Material conservation and resource efficiency; and (5) Environmental air quality (California Building Standards Commission 2009). The CALGreen Code is not intended to substitute or be identified as meeting the certification requirements of any green building program that is not established and adopted by the California Building Standards Commission (CBSC). The CBSC has released a 2010 Draft California Green Building Standards Code on its website (California Building Standards Commission 2010). It is anticipated the this update to Part 11 of the Title 24 Building Standards Code will be effective on January 1, 2011. Unless otherwise noted in the regulation, all newly constructed buildings in California are subject of the requirements of the CALGreen Code.

**Regional Programs**

In July 2007, the Yolo-Solano Air Quality Management District (YSAQMD) adopted the Handbook for Assessing and Mitigating Air Quality Impacts (CEQA Handbook). The CEQA Handbook does not provide any quantitative thresholds for assessing greenhouse gas emissions, but does state that greenhouse gas emissions are an area of concern in environmental documents. The CEQA Handbook recommends that at least a qualitative assessment is made, noting that vehicle trips represent a particular area of concern.

**Local Plans and Policies**

**UC Davis 2003 Long Range Development Plan**

The 2003 LRDP is the plan for the development of the campus. Although the 2003 LRDP does not contain policies that specifically address GHG emissions, it does contain a number of elements with respect to fuel- and energy-efficiency provisions and elements that would encourage walking and bicycling on campus and in surrounding neighborhoods, all of which would reduce GHG emissions.
UC Davis Climate Action Plan

As discussed earlier in this section, the UC Policy on Sustainable Practices – Climate Protection section targets three goals: reduction of GHG emissions back to 2000 levels by 2014, to 1990 levels by 2020, and ultimately climate neutrality. Climate neutrality is defined in the Policy as the University having a net zero impact on the Earth’s climate, which is to be achieved by minimizing GHG emissions as much as possible and using carbon offsets or other measures to mitigate the remaining GHG emissions.

UC Davis has prepared the 2009-2010 Climate Action Plan (CAP), which includes both the Davis and Sacramento campuses, as well as outlying facilities. The CAP describes and addresses policy and regulatory requirements of (1) the UC Policy on Sustainable Practices, (2) AB 32, (3) the American College and University Presidents Climate Commitment, (4) CEQA, and (4) U.S. EPA reporting requirements. The CAP provides documentation of how campus GHG emissions are calculated, a report of current (2008) emissions, estimates of past (to 1990) and future emissions (to 2020), a statement of GHG emission reduction goals, a characterization of options and methods to reduce emissions, and a blueprint for future action.

The CAP focuses on the 2014 and 2020 targets, with the understanding that climate neutrality will require fundamental shifts in global and national energy policy, energy production, and technologies currently using fossil fuels. Further, the CAP focuses on emissions related to campus operations, instead of commuting and air travel, because emissions related to commuting and air travel are less than one-quarter those of campus operations. The CAP does provide analysis of commuting and air travel reduction options, but does not quantify emissions reductions for those options.

In the CAP, GHG emissions were calculated back to 1990, using hard data whenever possible (and projected data when not), and including nearly every source of emissions. Calculated emissions for all of UC Davis, excluding commuting and air travel, for 2000 are 246,000 MTCO2e and for 1990 are 142,000 MTCO2e. In 2008, inventoried emissions (in CCAR), excluding commuting and air travel, totaled 238,000, indicating that UC Davis had already met the 2014 target. Thus, the CAP defined a new emissions target of 210,000 MTCO2e, almost 15 percent below the 2000 emissions, as the new 2014 target. The UC Davis target to reach 1990 emissions by the year 2020 is about 40 percent below the 2008 emissions.

Four years of verified inventories of emissions have shown consistently that the Davis campus contributes about 70 percent of the emissions total, the Sacramento campus contributes about 29 percent of the total, and the outlying facilities contribute about 1 percent of the total.

4.6.3 Standards of Significance

In accordance with Senate Bill (SB) 97, the Natural Resources Agency adopted amendments to the State CEQA Guidelines on December 30, 2009, which includes criteria for evaluating GHG emissions. According to the amended Appendix G of the State CEQA Guidelines, a project would have a significant effect on the environment if it would:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or
- Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

13 The adopted amendments may be viewed at the following Web site: http://ceres.ca.gov/ceqa/guidelines/.
The amended State CEQA Guidelines include a new Section 15064.4, which states that, when making a determination of the significance of GHG emissions, a lead agency shall have discretion to determine whether to (1) use a model or methodology to quantify greenhouse gas emissions resulting from a project, and which model or methodology to use; and/or (2) Rely on a qualitative analysis or performance based standards. Section 15064.4 also provides that a lead agency may consider the following factors when assessing the significance of GHG emissions on the environment: (1) The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting; (2) whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; and (3) The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions.

Under CEQA, "the determination of whether a project may have a significant effect on the environment calls for careful judgment on the part of the public agency involved, based to the extent possible on scientific and factual data." CEQA grants agencies with the general authority to adopt criteria for determining whether a given impact is "significant." When no guidance exists under CEQA, the agency may look to and assess general compliance with comparable regulatory schemes.

The first Appendix G criterion listed above may be evaluated by performing a direct calculation of the GHG emissions from the project. As of the time that this EIR was prepared, the University of California, Davis has not yet adopted project-level significance thresholds for GHG emissions relevant to the proposed project. While the project site is located in the YSAQMD, as noted above, the YSAQMD’s CEQA Handbook does not provide any quantitative thresholds for assessing greenhouse gas emissions. Several air quality management and air pollution control districts in California, including the Sacramento Metropolitan Air Quality Management District (SMAQMD), San Joaquin Valley APCD, and the Bay Area Air Quality Management District (BAAQMD), have adopted guidance documents for evaluating the significance of GHG emissions under CEQA. Other districts have published draft guidance documents that have not yet been formally adopted. The California Air Pollution Control Officers Association (CAPCOA) published a white paper in January 2008 examining approaches for local government to assess GHG emissions under CEQA. (CAPCOA 2008) Three potential thresholds that could be used to evaluate the project’s emissions include the following:

- Apply the most stringent, recommended non-zero threshold of 900 MTCO2e per year, which the CAPCOA identified in its white paper and estimated to capture at least 90% of all industrial projects.

- Apply SMAQMD-adopted guidance recommending that project achieve an approximately 30 percent reduction from "business as usual" (BAU) conditions (SMAQMD 2009).

- Apply BAAQMD-adopted thresholds for projects other than stationary sources on both a total emissions basis and a performance basis. The threshold for total emissions is 1,100 MTCO2e per year; the performance-based threshold is 4.6 MTCO2e per service population (employees plus residents) per year (BAAQMD 2010).

The analysis in this EIR utilizes the numeric threshold in the CAPCOA white paper in determining the significance of the project’s estimated emissions. The threshold has no regulatory authority unless adopted by an air district. Therefore, although this threshold is not

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14 State CEQA Guidelines Section 15064(b).
binding on the project as regulatory authority, it is intended as a reasonably conservative reference point for the analysis of project impacts in the absence of directly applicable quantitative thresholds.

The SMAQMD guidance does not provide a quantitative threshold, but recommends that the project be analyzed with respect to AB 32 goals, specifically a reduction in GHG emissions to 1990 levels by 2020, or approximately a 30% reduction from business as usual (BAU). As stated in the SMAQMD CEQA guidance, GHG emissions impacts are believed by the SMAQMD to be better analyzed and mitigated at the program level. The UC Davis CAP requires that the campus as a whole reduce its GHG emissions by 30% in 2020 compared to its 1990 baseline, which is consistent with the State's goal under AB 32. Similar to AB 32, the UC Davis CAP does not plan to require that individual projects meet a 30% reduction target, only that the campus as a whole meet the target (AB 32 requires the State as a whole to reduce emissions by 30%, not individual sectors). Since the project is included in the campus growth projections in the CAP and the CAP will allow UC Davis to meet its AB 32 requirements (i.e., 30% reduction), the project will not hinder UC Davis from meeting AB 32 goals overall.

Although the BAAQMD thresholds provide explicit numerical values, these values are based on projected increases in GHG emissions using growth data related to residential and commercial development specific to the Bay Area. Since the proposed project is outside the Bay Area, and the BAAQMD thresholds should only be seen as general guidance for assessing significance.

The second Appendix G criterion, requiring a determination of whether the project will conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases, may be evaluated by demonstrating compliance with plans, policies, or regulations adopted by local governments to curb GHG emissions. According to the Natural Resources Agency:

> Provided that such plans contain specific requirements with respect to resources that are within the agency’s jurisdiction to avoid or substantially lessen the agency’s contributions to GHG emissions, both from its own projects and from private projects it has approved or will approve, such plans may be appropriately relied on in a cumulative impacts analysis (California Natural Resources Agency 2009).

The UC Davis CAP is the relevant plan with which to review compliance. As noted above, the CAP describes and incorporates GHG emission reduction goals, a characterization of options and methods to reduce emissions, and a blueprint for future action to reduce GHG emissions to 1990 levels by 2020.

4.6.4 Methodology

The amendments to the State CEQA Guidelines that were adopted by the Natural Resources Agency recommend that lead agencies provide for a “good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project.” In addition, OPR has stated that, under CEQA, the following steps should be considered when assessing the significance of impacts from GHG emissions on the environment:

1. Identify and quantify the GHG emissions.
2. Assess the significance of the impact on climate change.

3. If significant, identify alternatives and/or mitigation measures that will reduce impacts below significance (OPR 2008).

The analysis of the project is consistent with the recommendations by the Natural Resources Agency and OPR. Sources consulted for this analysis include the U.S. EPA, the U.S. Energy Information Administration, the California Energy Commission, the California Climate Action Registry, and other GHG and global climate change data, as referenced.

To identify and quantify the GHG emissions, the CalEEMod software model was utilized. The purpose of CalEEMod is to provide a uniform platform for government agencies, land use planners, and environmental professionals to estimate potential emissions associated with both construction and operational use of land use projects. It is intended that these emission estimates are suitable for use in California Environmental Quality Act (CEQA) compliant documents for air quality and climate change impacts.

CalEEMod utilizes widely accepted models for emission estimates combined with appropriate default data that can be used if site-specific information is not available. These models and default estimates use sources such as the United States Environmental Protection Agency (USEPA) AP-42 emission factors, California Air Resources Board (ARB) vehicle emission models, studies commissioned by California agencies such as the California Energy Commission (CEC) and Calrecycle.

CalEEMod provides a simple platform to calculate both construction emissions and operational emissions from a land use project. It calculates both the daily max and annual average for criteria pollutants as well as total or annual greenhouse gas (GHG) emissions. Specifically the model aids the user in the following calculations:

Short term construction emissions associated with demolition, site preparation, grading, building, coating, and paving from the following sources

- Off-road construction equipment
- On-road mobile equipment associated with workers, vendors, and hauling
- Fugitive dust associated with grading, demolition, truck loading, and roads (Fugitive dust from wind blown sources such as storage piles are not quantified in CalEEMod which is consistent with approaches taken in other comprehensive models.)
- Volatile emissions of reactive organic gasses (ROG) from architectural coating and paving.

Operational emissions associated with the fully built out land use development

- On-road mobile vehicle traffic generated by the land uses
- Fugitive dust associated with roads
- Volatile emissions of ROG from architectural coating
- Off-road emissions from landscaping equipment
- Volatile emissions of ROG from consumer products and cleaning supplies
- Wood stoves and hearth usage
- Natural gas usage in the buildings
- Electricity usage in the buildings (GHG only)
- Water usage by the land uses (GHG only)
- Solid waste disposal by the land uses (GHG only)
One-time vegetation sequestration changes
- Permanent vegetation land use changes
- New tree plantings

Mitigation impacts to both short-term construction and operational emissions
- Several of the mitigation measures describe in CAPCOA’s Quantifying Greenhouse Gas Mitigation Measures have been incorporated into CalEEMod.

4.6.5 Project Impacts and Mitigation Measures

Project Level Impacts

Impact GHG-1: The proposed project would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment. *(Less than Significant)*

The UC Davis 2009–2010 CAP addresses implementation of the UC Policy on Sustainable Practices, which states that the University will voluntarily meet the goal of AB 32 to reduce GHG emissions to 1990 levels by 2020. The Campus is also proposing to reduce its GHG emissions to 2000 levels by 2014. The emissions reported in the CAP are separated into three groups:

- Scope 1 emissions include direct emissions from campus-owned vehicles, area and stationary combustion sources, fugitive emissions (e.g., refrigerant loses, research gases, fume hood testing, electrical switches, fire extinguishers, landfill gases, and distribution losses in natural gas lines), and agricultural emissions including animals that emit methane and soil treatments that emit CO2 and N2O;

- Scope 2 emissions include indirect emissions related to the production and consumption of electricity; and

- Scope 3 emissions include all other indirect emissions from commuting, air travel, reimbursed car miles traveled for business purposes, air travel for business purposes (such as to conferences, meetings, research sites, etc.), and student air travel related to study abroad and athletics. Construction emissions may also be included as Scope 3.

The CAP focuses on emissions from Scopes 1 and 2. The Campus does not report Scope 3 emissions in the verified inventories conducted annually since 2006, as these emissions are not requested by the greenhouse gas inventory registry that UC campuses use.

The CAP established the 1990 emissions level for the Davis campus at 120,991 MTCO2e for Scopes 1 and 2 emission sources. Scope 3 emissions from commuting associated with the Davis campus totaled 21,171 MTCO2e in 1990. Emissions from other Scope 3 sources are also captured in the CAP’s Scope 1 and 2 emissions. The CAP emissions include water consumption (emissions from the electricity used to pump groundwater, which is the campus water source), wastewater (emissions from electricity used to pump wastewater and emissions for the WWTP), and landscaping equipment (which are captured in the campus’ Fleet and mobile source combustion calculations). Solid waste generation emissions are indirectly captured in two ways: (1) through the Fleet trucks that haul garbage to the campus landfill, and (2) through the landfill gas captured in direct (Scope 1) emissions. The total 1990 emissions for all scopes are estimated at 142,162 MTCO2e, which represents the target for 2020 GHG emissions under the CAP.
In addition to establishing the 1990 emission levels, the CAP also established the 2000 emissions level for the Davis campus at 156,403 MTCO2e for Scopes 1 and 2 emission sources. Scope 3 emissions from commuting associated with the Davis Campus totaled 21,783 MTCO2e in 2000. Emissions for other Scope 3 sources are also captured in the estimates of Scope 1 and 2 emissions in the manner noted above. The total 2000 emissions are estimated at 178,186 MTCO2e, which represents the target for 2014 GHG emissions under the CAP.

**Construction and Operational Emissions**

During construction, the proposed Hotel Expansion and Old Davis Road Extension projects would directly contribute to climate change through its contribution of the GHG emissions from the exhaust of construction equipment and construction workers’ vehicles. The manufacture of construction materials used by the projects would indirectly contribute to climate change (upstream emission source). Upstream emissions are emissions that are generated during the manufacture of products used for construction (e.g., cement, steel, and transport of materials to the region). The upstream GHG emissions for these projects, which may also include perfluorocarbons and sulfur hexafluoride, are not estimated in this impact analysis because they are not within the control of the University and a lack of data precludes their quantification without speculation.

The CalEEMod model was used as a screening assessment with reliance upon default values to estimate the potential emissions from the hotel expansion and the road extension construction. Construction GHG emissions would occur only during construction activities. It is common practice to amortize construction-related GHG emissions over the project’s lifetime in order to include these emissions as part of a project’s amortized lifetime total emissions so that GHG reduction measures will address construction GHG emissions as part of the operational GHG reduction strategies. The SMAQMD’s CEQA Guide recommends using 25 years for conventional commercial buildings as a project lifetime (SMAQMD 2009). Therefore, the construction GHG emissions were amortized over a 25-year period and included in the project’s total annual emissions discussed in the next section.

**Existing GHG Emissions**

The Hyatt Place Hotel expansion will be constructed on land that is currently vacant. Therefore, the hotel expansion is considered an entirely new source of emissions for the purposes of this assessment.

**Summary of Operational Emissions**

A summary of the operational emissions at full operation of the hotel expansion is provided below in Table 4.2-5, Annual hotel expansion GHG Emissions. Detailed emission calculations are provided in Appendix C.

<table>
<thead>
<tr>
<th>Scope</th>
<th>Source</th>
<th>GHG Emissions (Metric Tons CO2e/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy</td>
<td>Purchased Electricity and Stationary</td>
<td>111.32</td>
</tr>
<tr>
<td></td>
<td>Combustion</td>
<td></td>
</tr>
<tr>
<td>Mobile</td>
<td>Mobile Combustion</td>
<td>480.84</td>
</tr>
<tr>
<td>Construction</td>
<td>Amortized Construction for Hotel</td>
<td>12.48</td>
</tr>
<tr>
<td>Construction</td>
<td>Expansion (25 years)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Amortized Construction for Old Davis Road</td>
<td>20.48</td>
</tr>
<tr>
<td></td>
<td>Extension (25 years)</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>Waste</td>
<td>12.95</td>
</tr>
</tbody>
</table>

Table 4.2-5

Annualized GHG Emissions—Hotel Addition and Old Davis Road Extension
As shown, the estimated total annual GHG emissions from operation of the projects are 641.48 MTCO2e per year. The construction emissions from the Old Davis Road Extension were calculated to be 312.17 MTCO2e using the CalEEMod. The Old Davis Road Extension was projected to have no operational emissions to GHG because no new trips would be caused by the road realignment project.

While neither the Campus nor the local air district has adopted a numeric threshold for evaluating the significance of a project’s GHG emissions, and none of the adopted numeric thresholds are applicable to the proposed project, this analysis compares the project’s estimated GHG emissions to the CAPCOA threshold of 900 MTCO2e, which is the most stringent non-zero threshold proposed and more stringent than any guidelines actually adopted or proposed to date by California air districts. The project’s emissions are well below that number. As noted earlier, this threshold is one of several options investigated by CAPCOA for possible adoption by California air districts and is not an actual adopted threshold – it is included only as a reference point in the absence of a quantitative threshold adopted by the YSAQMD or the Campus.

In addition, AB 32 is anticipated to secure emission reductions through a variety of mechanisms, such as increasing energy efficiency standards and the procurement of renewable energy. CARB has already begun to adopt strategies to reduce GHG emissions under AB 32 at the state level. Reductions in GHG emissions from these sources are expected to occur upon implementation of adopted and pending regulations for the following measures:

- SPM-2: California light-duty vehicle GHG standards (19.7 percent reduction in transportation GHG emissions);
- SPM-3: Energy efficiency standards for natural gas consumption (9.5 percent reduction in natural gas GHG emissions) and electricity consumption (15.7 percent reduction in electricity GHG emissions);
- SPM-4: Renewables Portfolio Standard (RPS) of 33 percent (21.0 percent reduction in electricity GHG emissions based on the average statewide RPS factor of 12 percent);
- SPM-5: Low carbon fuel standard (7.2 percent reduction in transportation GHG emissions);
- SPM-6: Regional transportation-related GHG targets (unknown percent reduction in transportation GHG emissions);
- SPM-7: Vehicle efficiency measures adopted for light-duty vehicles (2.8 percent reduction in transportation GHG emissions);
- SPM-9: Million solar roofs program (1.5 percent reduction in electricity GHG emissions from a statewide perspective; actual project reductions would be based on the actual amount of solar power incorporated into the project);

- SPM-10: Vehicle hybridization and energy efficiency standards adopted for medium- and heavy-duty vehicles (2.9 percent reduction in transportation GHG emissions).

Although the proposed project would be constructed and occupied before these measures take effect, some of the measures such as SPM-2, SPM-4, SPM-5, and SPM-7 would reduce future emissions from the proposed projects. Because it is difficult to accurately quantify any reductions from these measures at this time, in the interest of presenting an accurate and conservative emissions estimate, these measures have not been considered in the estimated emissions reported in Table 4.2-5.

In summary, because of the low GHG emissions that would result from the project, the project's impact would be less than significant. To entirely eliminate the project's less-than-significant impact, the Campus will implement Mitigation Measure GHG-1.

**Mitigation Measure GHG-1:** Under the Strategic Energy Partnership Program, the Campus will fund energy-efficiency improvements in existing buildings on the campus that will achieve a minimum GHG emissions reduction of 641.48 MTCO2e per year, within two years of the occupancy of Hyatt Place Hotel Expansion Project and the construction of the Old Davis Road Extension Project. The SEPP is forecasted to achieve a reduction of approximately 18,900 MTCO2e by the year 2014 (UC Davis 2010, page 27)

**Cumulative Impacts and Mitigation Measures**

**Impact GHG-2:** The proposed project would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases. *(Less than Significant)*

The project would make a cumulatively considerable contribution to global climate change impact if it were not consistent with an applicable plan, policy, or regulation concerning greenhouse gas reductions. Under Section 15064(h)(1) of the State CEQA Guidelines, a project must be assessed to determine if it would have a cumulatively considerable effect on a resource, where cumulatively considerable is defined as — the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects. Section 15064(h)(4) further states, “The mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the proposed project’s incremental effects are cumulatively considerable.” Therefore, the fact that the proposed project would result in emissions of GHGs (chiefly carbon dioxide), and that global GHGs emissions contribute to the greenhouse effect and the resultant impacts on global climate, does not

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16 Strategic Energy Partnership Program or SEPP is a program that the UC and investor-owned utilities have entered into whereby the utilities provide a certain amount of matching funds for energy efficiency and energy conservation initiatives that eligible UC campuses undertake. Actual savings in kWh and therms must be demonstrated to receive the matching funds. The Davis campus participates in the SEPP and is actively implementing SEPP projects.

17 California Code of Regulations (CCR), Title 14, Division 6, Chapter 3, California Environmental Quality Act Guidelines, Section 15064.
necessarily mean that the project would have a cumulatively considerable impact on global climate.

The UC Davis CAP is the relevant plan with which to review consistency. As noted above, the CAP describes and incorporates GHG emission reduction goals, a characterization of options and methods to reduce emissions, and a blueprint for future action to reduce GHG emissions to 1990 levels by 2020. The proposed project would not conflict with implementation of the UC Davis CAP because the implementation details of the CAP would not be precluded by the construction and operations of the Hotel Expansion or the Old Davis Road Extension. Furthermore, the Campus will implement Mitigation Measure GHG-1, which will reduce the project's contribution to net zero. Therefore, the project would have no impact due to emissions of greenhouse gases.

**Mitigation Measures:** No mitigation required.
4.6.6 References


California Environmental Protection Agency (Cal EPA), Climate Action Team. 2006. Climate Action Team Report to Governor Schwarzenegger and the Legislature.


4.7 Noise

This section of the Focused Tiered Draft EIR presents potential noise impacts of the proposed Road Extension projects. The preparation of this Focused Tiered Draft EIR was preceded by the Tiered Initial Study for the projects which determined that an EIR would be prepared to consider the potential for the Road Extension to result in significant impacts on noise due to potential effects of the expanded realigned road resulting in increased noise at the UC Davis Solano Park Housing area. The Tiered Initial Study determined that the Hotel Expansion project would have no noise effects that would be analyzed in the Tiered Draft EIR. The analysis in the Tiered Initial Study is provided in Appendix A, Section 7.12 of the Tiered Draft EIR.

This section presents the environmental setting, regulatory setting, standards of significance, methodology of the analysis, impacts of the proposed project on the environment, and proposed measures to mitigate the significant impacts. The environmental setting subsections provide an overview of the existing physical environmental conditions. Information is incorporated by reference from the 2003 LRDP EIR, from which this EIR is tiered. The environmental setting is the environmental baseline to which the proposed project is compared to determine its impacts. Standards of significance are identified and used to determine whether implementing the project would result in a significant environmental impact. A significant impact is defined under CEQA as a substantial adverse change to the environment. The analysis in this Draft EIR determined that the proposed project would result in less than significant noise impacts and that project-specific mitigation measures would not be required.

4.7.1 Environmental Setting

Section 4.3 of the 2003 LRDP EIR addresses the existing environmental setting for noise assessments for campus through the 2015-16 academic year (UCD LRDP 2003). The following discussion summarizes information presented in the ‘Environmental Setting’ subsection of Section 4.10 of the 2003 LRDP EIR, updated with current data as necessary.

4.7.2 Existing Noise Environment

Sound levels were measured in the project area on April 28-29, 2011. A combination of long-term (24 hour) measurements and short-term attended measurements were made. The noise measurement locations are shown on Figure 4.7.1. Measurement location LT-1 was selected to characterize existing ambient noise levels at the Solano Park residential area which would potentially be the most affected sensitive receptors for this project. Measurement location LT-2 was located along Arboretum Drive to establish the existing level of roadway traffic noise and is used as a reference for the traffic noise modeling. Short-term measurement location ST-1 was adjacent to Hyatt Place to characterize ambient noise levels near the hotel. The measurements were made with Larson-Davis Laboratories integrating precision sound level meters fitted with microphones and windscreens. The instrumentation was calibrated before and after the survey. During the survey, skies were clear, winds on Thursday and Friday morning were moderate.

The noise environment at the Solano Park residential area near the proposed roadway realignment results primarily from vehicular traffic on Interstate 80. The sound of intermittent trains passing on the Union Pacific Railroad tracks is also audible at the site. Local vehicular traffic along Arboretum Drive is insignificant at this location, but circulation of vehicles in and around the residential area does contribute to the overall noise environment. The results of the noise measurements survey are summarized on Figure 4.7.2. The 24-hour day/night average sound level was 59 dBA CNEL. During the daytime, typical average noise levels ranged from 55-57 dBA Leq. The range of noise levels during each measurement interval, characterized by the difference between the L01 statistical descriptor and the L90 statistical descriptor, was...
typically between about 50 dBA and 70 dBA during the daytime and about 45 dBA and 65 dBA during the nighttime. Noise measurements at location LT-2 along Arboretum Drive are summarized in Figure 4.7.3. The measured 24-hour average noise level was 60 dBA CNEL. This location was located several hundred feet further from Interstate 80 and the railroad tracks, and was adjacent to Arboretum Drive. Traffic on Arboretum Drive was the most significant noise source, but distant traffic and the sound of train horns also contributed to measured noise levels.

Measurement location ST-1 was at the site of the proposed hotel addition. Vehicular traffic on Interstate 80 and railroad trains are the most significant sources of noise at this location. Noise levels from I-80 typically range from about 51-53 dBA. The average noise level measured during the morning measurement was 53 dBA Leq. Subsequent to the short-term noise measurement, train passages were observed and monitored near the hotel. An eastbound freight train passed by at about 11:40 AM. The beginning of the train passby was not monitored. At the end of the passby, a freight engine pushing the train generated a maximum instantaneous noise level of 65 dBA. It was noted that the train did not sound its warning horn until it was well passed the hotel. An eastbound three-car Amtrak train passed by at 11:47 AM. The train horn generated a maximum instantaneous noise level of 85 dBA outside the hotel building. It was, again, noted that the train did not sound its warning horn until it was well past the hotel. Railroad cars generated typical maximum noise levels of about 65-68 dBA.
Figure 4.7.1: Noise Measurement Locations

LT = Long-Term Measurement (24 hr.)
ST = Short-Term Measurement (10 Min.)
Figure 4.7.2: Noise Levels at LT-1
Solano Park Residential Area near Solano Park Circle
April 28, 2011 to April 29, 2011

Figure 4.7.3: Noise Levels at LT-2
~ 55 feet from the Center of Arboretum Drive
April 28, 2011 to April 29, 2011
4.7.3 Standards of Significance

The 2003 LRDP EIR considers a noise impact significant if growth under the 2003 LRDP would result in the following:

- Exposure of persons to or generation of noise levels in excess of levels set forth in Table 4.10-3 of the 2003 LRDP EIR.

<table>
<thead>
<tr>
<th>Noise Source</th>
<th>Criterion Noise Level</th>
<th>Substantial Increase in Noise Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Road Traffic and Other Long-Term Sources</td>
<td>65 dBA CNEL</td>
<td>&gt;=3 dBA if CNEL w/project is &gt;= 65 dBA</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&gt;=5 dBA if CNEL w/project is 50–64 dBA</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&gt;=10 dBA if CNEL w/project is &lt; 50 dBA</td>
</tr>
<tr>
<td>Construction (temporary)</td>
<td>80 dBA $L_{eq}$ (8h) $^e$ daytime</td>
<td>Not Applicable</td>
</tr>
<tr>
<td></td>
<td>80 dBA $L_{eq}$ (8h) $^e$ evening</td>
<td></td>
</tr>
<tr>
<td></td>
<td>70 dBA $L_{eq}$ (8h) $^e$ nighttime</td>
<td></td>
</tr>
</tbody>
</table>

Source: 2003 LRDP EIR

- The 2003 LRDP would not substantially increase rail activity; therefore, a threshold of significance for rail noise is not included in this table.
- At noise-sensitive land use unless otherwise noted. Noise-sensitive land uses include residential and institutional land uses.
- $L_{eq}$ is an average measurement over a one-hour period.
- $L_{eq}$ (8h) is an average measurement over an eight-hour period.

- Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels.
- A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.
- A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.
- For a project within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, exposure of people residing or working in the project area to excessive noise levels.

4.7.4 LRDP Mitigation Measures Included in the Proposed Project

Mitigation measures in the 2003 LRDP EIR that are applicable to the proposed project are presented below. Since these previously adopted mitigation measures are already being
carried out as part of implementation of the 2003 LRDP, they are included in and are a part of
the proposed project and will not be readopted.

### 2003 LRDP EIR Mitigation Measures

#### NOISE

**4.10-1** Prior to initiation of construction, the campus shall approve a construction noise mitigation program including but not limited to the following:

- Construction equipment shall be properly outfitted and maintained with feasible noise-reduction devices to minimize construction-generated noise.
- Stationary noise sources such as generators or pumps shall be located 100 feet away from noise-sensitive land uses as feasible.
- Laydown and construction vehicle staging areas shall be located 100 feet away from noise-sensitive land uses as feasible.
- Whenever possible, academic, administrative, and residential areas that will be subject to construction noise shall be informed a week before the start of each construction project.
- Loud construction activity (i.e., construction activity such as jackhammering, concrete sawing, asphalt removal, and large-scale grading operations) within 100 feet of a residential or academic building shall not be scheduled during finals week.
- Loud construction activity as described above within 100 feet of an academic or residential use shall, to the extent feasible, be scheduled during holidays, Thanksgiving breaks, Christmas break, Spring break, or Summer break.
- Loud construction activity within 100 feet of a residential or academic building shall be restricted to occur between 7:30 AM and 7:30 PM.

**4.10-2(a)** For noise-sensitive uses adjacent to Russell Boulevard between Arlington Boulevard and Arthur Street, the existing soundwall (approximately 6.5 feet in height) could be increased slightly in height and extended to include the daycare center to the east.

For noise-sensitive uses adjacent to Russell Boulevard between Arthur Street and SR 113, and from SR 113 to La Rue/Anderson Road and from La Rue Road to Oak Street, soundwalls may be constructed for exterior residential and recreational land uses within approximately 100 feet of the centerline of Russell Boulevard, where construction of such walls would not interfere with driveway access.

The campus shall reimburse the City of Davis the campus’ fair share of the cost of a City of Davis’ noise abatement program for reducing interior noise levels in homes along Russell Boulevard that are significantly affected by noise from 2003 LRDP-related traffic growth. The campus’ contribution to the City’s noise abatement program could be used to extend sound walls as described above or for other noise abatement measures such as retrofit of homes. The campus’ fair share shall be determined based on the volume of traffic added to Russell Boulevard by the campus as a result of 2003 LRDP implementation and the percentage that 2003 LRDP-related traffic increases constitute of the average daily traffic on the roadway.

**4.10-2(b)** For components of the 2003 LRDP having future noise-sensitive land uses such as the Neighborhood and Research Park, building and area layouts shall incorporate noise control as a design feature; including increased setbacks, landscaped berms, and using building placement to shield noise-sensitive exterior areas from direct roadway views.

**4.10-4** Residential and academic uses proposed within 750 feet of the centerline of a rail line shall be evaluated using the Federal Transit Administration Noise and Vibration guidelines. Following the evaluation, as appropriate, facilities shall be designed and constructed to achieve an interior noise and vibration level within the standards recommended by the guidelines.

**4.10-5** Implement LRDP Mitigations 4.10-1 and 4.10-2.
4.7.5 Project Impacts and Mitigation Measures

Impacts Adequately Analyzed in the 2003 LRDP EIR or Not Applicable to the Project

As determined in the Tiered Initial Study for the project, potential impacts to noise were addressed in the 2003 LRDP EIR and the 2003 LRDP EIR included mitigation measures to further reduce the significance of certain impacts. The Tiered Initial Study found that LRDP Impacts 4.10-1, 4.10-2, 4.10-4, and 4.10-5 and corresponding LRDP Mitigation Measures 4.10-1, 4.10-2 (a & b), 4.10-4, and 4.10-5, which were adopted and incorporated in the LRDP EIR, are relevant to the proposed project and reduce the significance of noise impacts to the extent feasible. Pages 76 to 79 of the Tiered Initial Study (Appendix A) contain the full text of these impacts and mitigation measures and include explanations of the relevance of each impact to the proposed projects. The Tiered Initial Study further explains that analysis would be conducted in the Tiered Draft EIR for potential road-related noise issues due to the proposed road extension project.

Project Level and Cumulative Impacts

Impact NOI-1: Realignment of Old Davis road would not result in increased noise levels that exceed the UC Davis thresholds of significance. (Less than Significant)

The proposed extension of Old Davis Road would result in the realignment of the road closer to the existing UC Davis Solano Parking Housing area. To analyze the noise effects of the road realignment, a noise impact study was completed (Iltingworth and Rodkin, May 2011). The study examined the potential for the project to result in a substantial increase in the noise levels at the housing area as a result of the road realignment. The existing noise level in the area is 59-60 dBA CNEL. The significance threshold defines a substantial increase to be 5 dBA CNEL for a location where the existing noise level without the project is projected to range from 50-64 dBA CNEL.

The effect of future roadway traffic on the noise environment was calculated using the Federal Highway Administration's Traffic Noise Model (TMN). The traffic noise model is a three-dimensional model that takes into account the volume and speed of traffic on the roadway, the horizontal and vertical alignment of the roadway, and the horizontal and vertical location of the noise sensitive receptors potentially affected by roadway noise. The proposed project is a two-lane roadway with an expected average speed of 25 mph. Automobile traffic will be the predominant vehicle type. For noise modeling purposes, it was assumed that 1% of the vehicles would generate noise levels comparable to medium trucks and buses and 1% of the vehicles would generate noise levels comparable to heavy trucks, with the balance of the vehicles regular automobile traffic. A stop sign will be located near the residences. The presence or absence of a stop sign will not measurably affect future traffic noise levels in the area. When the roadway is realigned, and the hotel addition is complete, traffic noise levels generated by the roadway are calculated to cause the noise level to be about 48 dBA CNEL at the closest point of the Solano Park residential area and about 49 dBA CNEL at the Hyatt Place Hotel independent of other ambient noise sources. The significance threshold is an increase of 5 dBA CNEL or greater. When noise from traffic on the proposed roadway is added to existing ambient noise levels, the increase in noise levels would be about 0.3 dBA CNEL. The future CNEL would be in the same range as the existing level. Hence, the projected increase would be minimal, resulting in a less-than-significant noise impact.
Using the same noise modeling methodology, cumulative traffic volumes were analyzed to determine the potential for the proposed project and other future growth to result in a significant impact. With these cumulative traffic volumes through the year 2015-16, the vehicular traffic noise on the new roadway segment is calculated to cause noise levels of about 49-50 dBA Leq at the Solano Park residential area and 51 dBA Leq at the Hyatt Place Hotel. The calculated increase in the CNEL would be less than 0.5 dBA CNEL, which would be a less-than-significant impact. The proposed project would not result in a significant noise impact. No mitigation measures are required.

4.7.6 References

4.8 TRANSPORTATION AND CIRCULATION

This section of the Focused Tiered Draft EIR presents potential transportation and circulation impacts of the proposed Hyatt Place Hotel Expansion and Old Davis Road Extension. The preparation of this Focused Tiered Draft EIR was preceded by the Tiered Initial Study for the projects which determined that an EIR would be prepared to consider the potential for the proposed project to result in significant impacts on transportation and circulation. The analysis in the Tiered Initial Study is provided in Appendix A, Section 7.16 of the Tiered Draft EIR.

This section contains extensive information regarding the traffic analysis. The section is organized into the following subsections:

4.8.1 Existing Conditions and Methodology
4.8.2 Regulatory Considerations
4.8.3 Existing Plus Project Conditions
4.8.4 Cumulative Conditions
4.8.5 Standards of Significance
4.8.6 LRDP Mitigation Measures Included in the Project
4.8.7 Project and Cumulative Impacts and Mitigation Measures
4.8.8 References

Information is incorporated by reference from the 2003 LRDP EIR, from which this EIR is tiered. The environmental setting is the environmental baseline to which the proposed project is compared to determine its impacts. Standards of significance are identified and used to determine whether implementing the project would result in a significant environmental impact. A significant impact is defined under CEQA as a substantial adverse change to the environment.

This study analyzes the following scenarios:

- Existing Conditions
- Existing Plus Hyatt Place Expansion
- Existing Plus Old Davis Road Extension
- Existing Plus Hyatt Place Expansion and Old Davis Road Extension
- Cumulative No Project Conditions
- Cumulative Plus City of Davis Hotel
- Cumulative Plus Hyatt Place Expansion
- Cumulative Plus Old Davis Road Extension
- Cumulative Plus City of Davis Hotel, Hyatt Place Expansion, and Old Davis Road Extension

The following sources were used to prepare this section of the Draft EIR:
- UC Davis 2003 Long Range Development Plan (2003 LRDP) and 2003 LRDP EIR
- Transportation Mitigation Monitoring Update for the UC Davis LRDP
- Transportation Impact Study Hyatt Place Hotel Expansion and Old Davis Road Extension
4.8.1 Existing Conditions and Methodology

UC Davis is served by six main campus roadways or "gateways" that connect the campus to residential and downtown areas in the City of Davis, and two gateways that provide direct access to regional freeways (I-80 and SR 113). Circulation within the central campus is accommodated primarily by the campus "loop" roadway system, which includes Russell Boulevard, A Street, New and Old Davis Roads, California Avenue, and La Rue Road. Other roadways within the core campus area are restricted to transit and emergency vehicles, bicyclists, and pedestrians. Primary vehicular access to the west campus is provided by Hutchison Drive and County Road 98, to the south campus by Old Davis Road, and to Russell Ranch by Russell Boulevard.

Level of service (LOS) is a general measure of traffic operating conditions whereby a letter grade, from A (the best) to F (the worst), is assigned to roadway intersections. These grades represent the comfort and convenience associated with driving, from the driver's perspective. To assess the worst-case traffic conditions, LOS is measured during morning (7 to 9 AM) and afternoon (4 to 6 PM) peak commute times. The LOS of campus roadways varies. Monitoring of campus intersections during peak hours in Fall 2001 and Fall 2002 found that the Hutchison Drive/Health Sciences Drive intersection (with LOS E during the PM peak hour) was operating below the campus' operation standard (standards are identified in the following section) and a traffic signal was subsequently added to the intersection. Recent traffic monitoring in 2008 indicated that the intersection of California and Old Davis Road is approaching the threshold for an improvement and the campus plans to construct the necessary improvement (a new roundabout) in the summer of 2011.

UC Davis conducted traffic monitoring in the Fall of 2008 (Fehr and Peers, 2009) with the following actions described below. The next round of traffic monitoring will occur in the Fall of 2011.

- Peak hour traffic counts were conducted at 33 on-campus and off-campus intersections
- Daily traffic volumes were collected on 19 roadway segments
- The peak hour and daily traffic volumes collected in Fall 2008 were compared to Fall 2001 and Winter 2005 traffic volumes (as reported in the Winter 2005 LRDP Transportation Mitigation Monitoring Update)
- Traffic operations were analyzed at each study intersection during the AM and PM peak hours
- Intersections were compared to the level of service (LOS) standards adopted in the 2003 LRDP and mitigation measures were recommended to improve operations
- Daily traffic volumes, including the percentage of buses and heavy vehicles, were summarized for the six campus gateways
- The weaving section on northbound State Route 113 between Hutchison Drive and Russell Boulevard was analyzed during the PM peak hour

The key findings of the mitigation monitoring update are summarized in the next subsection.

UC Davis also performed traffic counts in 2010 and 2011, which are described under the heading Data Collection, below.
Fall 2008 Intersection Traffic Volumes

Peak hour traffic counts were conducted in October 2008 (during the Fall Quarter) at 33 study intersections. The Fall 2008 peak hour traffic volumes were compared to volumes from the previous mitigation update in Winter 2005 as well as previous counts in 2001.

Among the 26 intersections studied during both mitigation monitoring updates (seven additional intersections were included for 2008), only two intersections experienced an increase in AM peak hour traffic volume between Winter 2005 and Fall 2008: Hutchison Drive/Extension Center Drive (up eight percent) and Hutchison Drive/Health Sciences Drive (up seven percent). Similarly, during the PM peak hour, two intersections had increases in traffic volume: Hutchison/Health Sciences (15 percent) and Hutchison Drive/NB SR 113 Ramps (two percent).

Overall, peak hour intersection volumes were down 13 percent in the AM peak period and 14 percent in the PM peak period from the counts conducted during the last monitoring update in 2005.

Fall 2008 Intersection Operations

The peak hour traffic volumes were used to analyze traffic operations at the study intersections and the existing levels of service were compared to the Winter 2005 results. All of the 33 study intersections operated acceptably during the AM and PM peak hours. From the 2008 monitoring effort, UC Davis concluded that no mitigation measures were required for implementation in the near future under the currently adopted thresholds of significance identified in the 2003 LRDP.

Fall 2008 Roadway Traffic Volumes

Daily traffic volume counts were conducted for 19 roadway segments. These volumes were compared to those reported in the 2005 LRDP Transportation Mitigation Monitoring Update. Only one of the campus' roadway segments studied during both monitoring updates experienced an increase in average daily traffic volume: First Street between A Street and Richards Boulevard (one percent increase). The daily traffic volumes on the following roadway segments decreased by 20 percent or more between Winter 2005 and Fall 2008:

- Russell Boulevard – California Avenue to A Street (23 percent decrease)
- La Rue Road – South of Russell Boulevard (25 percent decrease)
- La Rue Road – Garrod Drive to Dairy Road (31 percent decrease)
- Old Davis Road – A Street to Mrak Hall Drive (34 percent decrease)
- Old Davis Road – South of I-80 (31 percent decrease)

While traffic volumes have dramatically declined since the 2005 update, the overall distribution of traffic on the central campus has remained the same. Of the six main gateways serving the Central Campus, La Rue Road south of Russell Boulevard still had the highest daily traffic volume, and the highest percentage of heavy vehicles and buses (six percent) remains on Howard Way south of Russell Boulevard.

In addition to motorized vehicles, bicycles are a major component of the transportation system at UC Davis and in the City of Davis. UC Davis has an extensive system of bicycle paths, which makes bicycles a popular form of travel on campus. The UC Davis Bicycle Plan (UC Davis 2002) estimates that 15,000 to 18,000 bicycles travel to the campus on a typical weekday during the Fall and Spring sessions when the weather is good.
Study Facilities
This study analyzes the following intersections:
1. Old Davis Road / I-80 Eastbound Ramps
2. Old Davis Road / I-80 Westbound Ramps
3. Old Davis Road / California Avenue
4. Old Davis Road / Hilgard Lane
5. Old Davis Road / Mrak Hall Drive
6. 1st Street / A Street
7. 1st Street / B Street
8. 1st Street / E Street / Richards Boulevard
9. Olive Drive / Richards Boulevard
This study also analyzes the roadway segment of Old Davis Road between the Old Davis Road / I-80 Westbound Ramps intersection and the Old Davis Road / California Avenue intersection.

Data Collection
Table 1 shows the dates on which vehicle, bicycle, and pedestrian counts were collected at study intersections. Counts were collected on different dates because some were recently available from other studies.

<table>
<thead>
<tr>
<th>Intersection</th>
<th>Count Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Old Davis Road / I-80 Eastbound</td>
<td>January 11, 2011</td>
</tr>
<tr>
<td>Old Davis Road / I-80 Westbound</td>
<td>January 11, 2011</td>
</tr>
<tr>
<td>Old Davis Road / California Avenue</td>
<td>February 25, 2010</td>
</tr>
<tr>
<td>Old Davis Road / Hilgard Lane</td>
<td>February 25, 2010</td>
</tr>
<tr>
<td>Old Davis Road / Mrak Hall Drive</td>
<td>January 11, 2011</td>
</tr>
<tr>
<td>1st Street / A Street</td>
<td>January 11, 2011</td>
</tr>
<tr>
<td>1st Street / B Street</td>
<td>April 26, 2011</td>
</tr>
<tr>
<td>1st Street / Richards Boulevard</td>
<td>April 26, 2011</td>
</tr>
<tr>
<td>Olive Drive / Richards Boulevard</td>
<td>April 26, 2011</td>
</tr>
</tbody>
</table>

Counts were taken from 7:00 AM to 9:00 AM and from 4:00 PM to 6:00 PM. The counts show that the AM and PM vehicle peak hours occur from 8:00 AM to 9:00 AM and 4:30 PM to 5:30 PM, respectively.

Traffic Forecasts and Roadway Network Assumptions
Cumulative year turning movement forecasts were developed for the study intersections and roadway segments using an updated version of the Davis Travel Demand Model. The assumed cumulative land uses for UC Davis were consistent with those assumed for the UC Davis 2003 Long Range Development Plan Final Environmental Impact Report (2003 LRDP EIR). The horizon year for the 2003 LRDP EIR is the 2015/16 academic year; however, it is unlikely that full buildout of the 2003 LRDP EIR land uses will occur by the 2015/16 academic year.
model included the most recent land use assumptions for the City of Davis based on the City of Davis General Plan. The difference method, which adds the difference between the base and future year model runs to existing counts, was used to develop the cumulative turning movement forecasts.

With the exception of the Old Davis Road / California Avenue intersection, all analysis scenarios assume that the existing lane configurations and traffic controls remain unchanged. The University is currently finalizing plans to install a roundabout at the Old Davis Road / California Avenue intersection. Because this project is fully funded, this study's cumulative analysis scenarios assume that the roundabout will be in place.

Methodology


Signalized Intersection Analysis

The HCM 2000 methodology determines the Level of Service (LOS) at signalized intersections by comparing the average control delay (i.e. delay resulting from initial deceleration, queue move-up time, time actually stopped, and final acceleration) per vehicle at the intersection to the thresholds shown in Table 2.

<table>
<thead>
<tr>
<th>Level of Service</th>
<th>Control Delay (seconds per vehicle)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>≤10.0</td>
</tr>
<tr>
<td>B</td>
<td>10.1 – 20.0</td>
</tr>
<tr>
<td>C</td>
<td>20.1 – 35.0</td>
</tr>
<tr>
<td>D</td>
<td>35.1 – 55.0</td>
</tr>
<tr>
<td>E</td>
<td>55.1 – 80.0</td>
</tr>
<tr>
<td>F</td>
<td>&gt;80.0</td>
</tr>
</tbody>
</table>


Unsignalized Intersection Analysis

The HCM 2000 methodology for unsignalized intersections reports the LOS using the control delay thresholds shown in Table 3.
As described in the *HCM 2000*, average control delay for the entire intersection defines the LOS for all-way stop controlled intersections. Conversely, for side-street stop-controlled intersections, the LOS is evaluated separately for each individual movement. However, for side-street stop-controlled intersections, previous UC Davis traffic studies based the LOS at on-campus intersections on the average control delay for the intersection as a whole. To be consistent with both the HCM and recent UC Davis studies, this report documents the LOS for side-street stop-controlled intersections in two forms:

- Intersection LOS, based on the weighted average of the control delay experienced by each movement of the intersection
- Worst-Case LOS, based on the control delay experienced by the worst movement of the intersection

**Roundabout Analysis**

The HCM 2010 methodology determines the Level of Service (LOS) at roundabouts by comparing the average control delay per vehicle and volume-to-capacity ratio to the thresholds shown in Table 4.
Roadway Segment Analysis
Roadway segment volumes were analyzed to determine if either of the proposed projects would cause volume to increase.

Existing Conditions
This section describes the existing conditions of the roadway, bicycle, and pedestrian facilities in the study area.

Intersection Existing Conditions
Figure 1 shows the existing vehicular peak hour traffic volumes and lane configurations. Most of the intersections are stop-controlled, except for the Old Davis Road / Mrak Hall Drive, 1st Street / Richards Boulevard, and Olive Drive / Richards Boulevard intersections which are signalized. Table 5 shows the existing delay and level of service at the study intersections.

As shown in Table 5, the following intersections have side street movements that operate at LOS E or LOS F:

- Old Davis Road / California Avenue – AM peak hour, worst-case movement is LOS E
- Old Davis Road / Hilgard Lane – PM peak hour, worst-case movement is LOS E
- 1st Street / A Street – AM peak hour, worst-case movement is LOS F

Although the 1st Street / Richards Boulevard and Olive Drive / Richards Boulevard intersections are reported to operate at an acceptable LOS with the peak hour traffic volumes used in this analysis, field observations indicate that these intersections often operate unacceptably during the peak hours. The HCM 2000 methodology used to analyze these intersections does not consider the effects of queuing that extends into adjacent intersections. This situation frequently occurs during the peak hours along Richards.
### TABLE 5: INTERSECTION DELAY / LEVEL OF SERVICE – EXISTING CONDITIONS

<table>
<thead>
<tr>
<th>Intersection</th>
<th>Control</th>
<th>Peak Hour</th>
<th>Existing Delay / LOS¹</th>
<th>Worst-Delayed Movement</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>UC Davis Campus Intersections</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Old Davis Road / I-80 Eastbound</td>
<td>Side Street Stop-</td>
<td>AM</td>
<td>10 / B 9 / A</td>
<td>15 / B 29 / D</td>
</tr>
<tr>
<td></td>
<td>Controlled</td>
<td>PM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Old Davis Road / I-80 Westbound</td>
<td>Side Street Stop-</td>
<td>AM</td>
<td>10 / B 2 / A</td>
<td>21 / C 13 / B</td>
</tr>
<tr>
<td></td>
<td>Controlled</td>
<td>PM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Old Davis Road / California Avenue</td>
<td>Side Street Stop-</td>
<td>AM</td>
<td>8 / A 10 / A</td>
<td>38 / E 26 / D</td>
</tr>
<tr>
<td></td>
<td>Controlled</td>
<td>PM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Old Davis Road / Hilgard Lane</td>
<td>Side Street Stop-</td>
<td>AM</td>
<td>1 / A 11 / B</td>
<td>17 / C 37 / E</td>
</tr>
<tr>
<td></td>
<td>Controlled</td>
<td>PM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Old Davis Road / Mrak Hall Drive</td>
<td>Signalized</td>
<td>AM</td>
<td>22 / C 32 / C</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PM</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>City of Davis Intersections</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1st Street / A Street</td>
<td>Side Street Stop-</td>
<td>AM</td>
<td>14 / B 13 / B</td>
<td>77 / F 18 / C</td>
</tr>
<tr>
<td></td>
<td>Controlled</td>
<td>PM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1st Street / B Street</td>
<td>All Way Stop</td>
<td>AM</td>
<td>14 / B 16 / C</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1st Street / Richards Boulevard²</td>
<td>Signalized</td>
<td>AM</td>
<td>24 / C 27 / C</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Olive Drive / Richards Boulevard²</td>
<td>Signalized</td>
<td>AM</td>
<td>24 / C 15 / B</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PM</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes: ¹ Intersection delay is reported in seconds per vehicle, and is based on the average of all approaches for all-way stop controlled intersections and signalized intersections per HCM methodology. For side-street stop controlled intersections, the delay and LOS is reported for both the average of all approaches and the worst-delayed movement.

² Unique conditions of Richards Boulevard discussed in text of this report.

**Bold** text indicates a congested condition (LOS F) at City of Davis Core Area intersections.

Source: Fehr & Peers, 2011
PEAK HOUR TRAFFIC VOLUMES AND LANE CONFIGURATIONS - EXISTING CONDITIONS

FIGURE 1
Boulevard. Therefore, the reported LOS at these intersections may not accurately explain the conditions on the ground. The City of Davis has adopted a standard for these intersections of LOS F and has stated that the Richards Boulevard tunnel will not be widened in the future.

Roadway Segments Existing Conditions

Traffic Volumes
Table 6 shows the existing peak hour and daily vehicular traffic volumes on Old Davis Road between I-80 and California Avenue.

<table>
<thead>
<tr>
<th>Location</th>
<th>Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>AM Peak Hour</td>
<td>943</td>
</tr>
<tr>
<td>Old Davis Road b/t I-80 and California Avenue</td>
<td></td>
</tr>
<tr>
<td>PM Peak Hour</td>
<td>815</td>
</tr>
<tr>
<td>Old Davis Road b/t I-80 and California Avenue</td>
<td></td>
</tr>
<tr>
<td>Daily</td>
<td>7,330</td>
</tr>
<tr>
<td>Old Davis Road b/t I-80 and California Avenue</td>
<td></td>
</tr>
</tbody>
</table>

Source: Fehr & Peers, 2011

As shown in Table 6, the AM and PM peak hour roadway traffic volumes account for 13% and 11% of the daily traffic volume, respectively.

Travel Times
PM peak period traffic congestion on eastbound I-80 regularly causes delays for motorists traveling on the freeway through Davis. This is especially true for eastbound traffic on Friday evenings, when recreational traffic traveling to destinations in the Sierra Nevada is most prevalent. To address cut-through traffic concerns through the University and downtown Davis because of I-80 traffic, Fehr & Peers conducted a travel time analysis, using a floating car technique, to compare the travel times on I-80 eastbound to the fastest route through downtown Davis. The westbound direction was not of concern because I-80 westbound traffic during the PM peak period is typically uncongested. Specifically, the travel time analysis compares the following eastbound routes:

- I-80 eastbound between Old Davis Road and Mace Boulevard
- Local streets: Old Davis Road, Mrak Hall Drive, Arboretum Drive, A Street, 1st Street, B Street, 3rd Street, L Street, 2nd Street, Mace Boulevard

Travel time runs were completed on Friday, January 14, 2011 and Friday, January 21, 2011. Friday was chosen because it represents the worst-case for PM peak period traffic on I-80 eastbound; Bay Area traffic typically uses I-80 on Friday evenings to access Lake Tahoe.

On Friday, January 14, 2011, an accident on Chiles Road east of Mace Boulevard caused significant congestion on I-80 eastbound. The I-80 travel time runs from this day are not used in the analysis. However, traffic on local streets remained at normal levels; the local street travel time runs were used in the analysis. Very few vehicles were observed using the local streets to
bypass I-80 through downtown Davis. However, several Davis residents (who did not reenter the freeway) were observed exiting I-80 at Old Davis Road; it is likely that several of these residents would exit the freeway further east (at Richard Boulevard or Mace Boulevard) when I-80 eastbound is not congested.

I-80 eastbound travel time runs were recollected on Friday, January 21, 2011. No local street travel time runs were collected on this day. Table 7 shows the results of the travel time analysis and shows that, even when I-80 eastbound is congested, it is faster to take I-80 between Old Davis Road and Mace Boulevard than to use local streets.

<table>
<thead>
<tr>
<th>Route</th>
<th>Date</th>
<th>Start Time hh:mm:ss</th>
<th>End Time hh:mm:ss</th>
<th>Travel Time hh:mm:ss</th>
<th>Average hh:mm:ss</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local Streets</td>
<td>1/14/2011</td>
<td>17:44:41</td>
<td>17:58:36</td>
<td>00:13:55</td>
<td></td>
</tr>
<tr>
<td>Local Streets</td>
<td>1/14/2011</td>
<td>18:15:29</td>
<td>18:34:45</td>
<td>00:19:16</td>
<td></td>
</tr>
<tr>
<td>Local Streets</td>
<td>1/14/2011</td>
<td>18:53:51</td>
<td>19:11:33</td>
<td>00:17:42</td>
<td></td>
</tr>
<tr>
<td>I-80 Eastbound</td>
<td>1/21/2011</td>
<td>16:56:37</td>
<td>17:09:14</td>
<td>0:12:37</td>
<td>00:16:58</td>
</tr>
<tr>
<td>I-80 Eastbound</td>
<td>1/21/2011</td>
<td>17:34:35</td>
<td>17:46:33</td>
<td>0:11:58</td>
<td></td>
</tr>
</tbody>
</table>

Source: Fehr & Peers, 2011

Note:

hh:mm:ss = time of day or travel time as represented in hours:minutes:seconds

Bicycle and Pedestrian Facilities

Class II bicycle lanes exist on Old Davis Road between California Avenue and the terminus of Old Davis Road east of Alumni Lane. A shared-use path intersects A Street south of 1st Street, continues on the south side of 1st Street between B Street and Richards Boulevard, then crosses under the Union Pacific Railroad on the west side of Richards Boulevard. Another shared-use path is located on the east side of California Avenue.

The following roadways have sidewalks:

- Old Davis Road between California Avenue and the terminus of Old Davis Road east of Alumni Lane (both sides)
- Alumni Lane (both sides)
- Mrak Hall Drive (both sides)
- A Street (both sides)
- Arboretum Drive (south side only)
- 1st Street (north side only; south side has bike path)
- B Street (both sides)
- E Street (both sides)
- Olive Drive (both sides)
Crosswalks are located at most approaches to study intersections.

4.8.2 Regulatory Considerations

The transportation policy, law, and regulation documents that relate to the UC Davis LRDP are summarized below. These documents were used to evaluate the 2003 LRDP’s consistency with policies, laws, and regulations for the impact analysis. Key documents include:

**Route Concept and Development Report**, State Route 113 (Caltrans District 3 November 1986). Route concept reports identify long-range improvements for specific state highway corridors and establish the concept or desired LOS for specific segments. Long-range improvements are identified to improve the existing facility up to the design concept expected to adequately serve 20-year traffic forecasts. The concept report for SR 113 does not propose any capacity improvements over the next 20 years within the City of Davis or adjacent to the campus. The report states that all SR 113 segments shall maintain LOS C.

**Interstate 80 Transportation Concept Report** (Caltrans District 3 January 2001). I-80 has a concept LOS E from the Solano/Yolo County line to Sacramento County. The concept report identifies this segment of I-80 as currently operating at LOS E during peak hours based on average weekday traffic volumes throughout the year, and indicates that the LOS is expected to decline to LOS F by 2020. The concept report states that the following improvements will provide a 20-year concept LOS E: (1) construct HOV lanes (one in each direction); (2) increase Yolo County bus service; (3) increase Yolobus service; (4) implement Smart Corridor Technology; and (5) implement Traffic Operation Systems such as ramp metering and changeable message signs.

**Yolo County Congestion Management Program** (Yolo County Transit Authority March 1996). The purpose of the Congestion Management Program (CMP) is to improve the planning and decision-making relationship between land use, transportation and air quality. The CMP provides routing standards for the existing public transit routes of Yolobus, Unitrans, West Sacramento and Woodland Senior and Disabled Demand Responsive, Davis Community Transit, and Davis Senior Transit. For transit, LOS standards are established based on frequency of service, reliability, and density. Unitrans has a CMP standard of LOS C for service frequency to Sycamore Lane, Drake Drive, West Davis, and Anderson Road, LOS D for service frequency in other areas, and LOS C for reliability and density.

The CMP also provides LOS standards for roadways. LOS standards are not adopted for intersections. The existing LOS and CMP LOS standards for roadways in Davis are shown in Table 4.14-12.
1999 Solano Congestion Management Program (Solano Transportation Authority October 1999). The 1999 Solano Congestion Management Program (CMP) includes LOS standards for roadways within Solano County. The CMP states that the minimum LOS standard throughout the system shall be E, except at those locations where the initial LOS measurement (calculated for the 1991 CMP) was already at F.

The CMP identifies the eastern portion of I-80 in Solano County operating at LOS E.

State of California, County of Yolo Bikeway Plan (Yolo County Transportation Advisory Committee 1993). The County of Yolo Bikeway Plan shows existing and future bikeways in Yolo County. Some of the relevant planning and implementation policies contained in the plan are listed below.

- Commuter bicycling facilities have higher priority than recreational facilities. Commute bicycling trips are any trip with a utilitarian purpose such as work, school, shopping, and appointments. Class II bikeways (bike lanes contiguous to roadways) shall be the generally preferred facility in areas of developed roadways, primarily to serve commuters. Class I bikeways (bicycle paths separated from roadways) shall be the generally preferred facility in areas without roadways, primarily to serve recreational bicyclists.

- The County will continue to require planned residential, commercial, and industrial developments to include bicycle facilities in their plans. Rights-of-way on collector streets and minor streets should be adequate for bikeways. Pathways should also be provided for bicycle and pedestrian use through cul-de-
• Bikeways shall be constructed and marked in conformance with State standards, as outlined in Chapter 1000 of the Caltrans Highway Design Manual, Bikeway Planning and Design, July 1, 1990.

Yolo County Short Range Transit Plan (Sacramento Area Council of Governments 1997).

The Yolo County Short Range Transit Plan addresses transit goals/policies between cities in Yolo County (e.g., Davis). The goals and objectives relevant to transportation systems near the campus are listed below.

• Goal 1: Improve local and regional mobility through coordination and integration of all Yolo County transit systems.
  - Objective 1A: Coordinate systems through a primary timed transfer facility in Davis.
  - Objective 1B: Coordinate Yolobus schedules with other system’s schedules (UNITRANS, Amtrak, CITYLINK), to meet at major transfer locations. Coordinate transfer/fare policies.

• Goal 2: Provide a transit system that is effective in meeting the needs of the community.
  - Objective 2A: Provide convenient transit service.
  - Objective 2B: Provide reliable transit service.
  - Objective 2C: Provide safe transit service.
  - Objective 2D: Provide attractive services, which respond to market demands for transportation.

Sacramento Council of Governments Blueprint Program (SACOG 2004) The SACOG Board of Directors adopted the Preferred Blueprint Scenario in December 2004, as a guide for regional development in the Sacramento area that promotes compact, mixed-use development and more transit choices as an alternative to low density development. The Sacramento Metropolitan Transportation Plan for 2035 seeks to implement the principles of the Blueprint Scenario. These planning efforts as well as the other planning efforts led by SACOG are directed at regional improvements and would have no specific impact on the facilities related to the proposed project.

City of Davis General Plan Update (City of Davis 1999). The City of Davis General Plan Update addresses goals and policies for roads, transit and bike/pedestrians.

The City of Davis General Plan Update sets LOS standards as listed below.

• Unless preempted by the County Congestion Management Plan, LOS E for automobiles is sufficient for arterials and collectors (both intersection and segment operations) during peak traffic hours (e.g. rush hour). LOS D for automobiles is sufficient for arterials, collectors and major intersections during non-peak traffic hours. LOS F is acceptable during peak hours in the Core Area.
• Davis streets shall have no more than four through automobile lanes, plus a single left-hand turning lane, even if this requirement reduces LOS. Additional turning lanes may be added for safety or design considerations.

The City of Davis General Plan Update recommends dedicated bicycle and pedestrian facilities to increase walking and the use of non-polluting forms of transportation, including bicycles as listed below.

• Policy: Develop a continuous trail and bikeway network for both recreation and transportation that serves the Core, neighborhoods, employment centers, schools and other institutions, minimizes conflicts between pedestrians, bicyclists, equestrians, and automobiles, and that minimizes the impact on wildlife. Greenbelts and greenstreets should serve as the backbone of much of this network.

• Standards: There shall be no removal of existing bicycle lanes to add through traffic lanes.

• Actions: Enhance the safety, accessibility and coverage of the existing bicycle network, especially in the vicinity of UC Davis, schools, and recreation areas.
  – Work with the University in improving access routes through campus to connect with the open space network.
  – Plan bicycle route connections to neighboring communities. Coordinate planning on these facilities with Yolo and Solano counties, the City of Woodland, and their bicycle plans.
  – Establish charging stations for electric vehicles in public parking lots in accordance with the future growth in the number of electric vehicles.

The City of Davis General Plan Update also recommends reducing automobile use by improving transit service and encouraging transit use as listed below.

• Policy: Facilitate the provision of convenient, frequent, dependable, and efficient scheduled transit and demand-responsive transit for Davis residents.

• Standards: The greatest concentration of transit routes should be near high-density developments.

• Actions: Implement the Davis portion of the Yolo County Transit Plan.
  – Improve transit line coverage, frequency and seasonal regularity throughout the city and to adjacent cities, with particular emphasis on service to the core, employment centers, social services and institutions.
  – Continue to provide para-transit services. Cooperate with volunteer efforts to provide these services.

4.8.3 Existing Plus Project Conditions
The traffic study for the proposed projects evaluated three existing plus project scenarios the: Existing Plus Hyatt Place Expansion; Existing Plus Old Davis Road Extension; and the Existing Plus Hyatt Place Expansion and Old Davis Road Extension.
Existing Plus Hyatt Place Expansion

To develop the Existing Plus Hyatt Place Expansion scenario, trips generated by the proposed Hyatt Place expansion were added to the existing traffic counts. The proposed Hyatt Place expansion would add an additional 52 rooms and would occur on the same site as the existing Hyatt Place hotel. Fehr & Peers conducted traffic counts on Old Davis Road east of Alumni Lane on Tuesday, January 11, 2001 and Wednesday, January 12, 2001 to determine the trip generation rate of the existing Hyatt Place hotel. The results of these counts showed that the existing Hyatt Place hotel generates trips at a rate similar to the average trip rates for hotels in Trip Generation (Institute of Transportation Engineers, 2008). Therefore, this study assumes the rate from Trip Generation at 100% hotel occupancy; these assumptions are consistent with the transportation and circulation analysis performed for the Hyatt Place hotel in December 2001. Table 8 shows the peak hour and daily trip generation of the Hyatt Place expansion.

### Table 8: Hyatt Place Expansion Trip Generation

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Quantity</th>
<th>Trip Rate</th>
<th>Trips</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Daily</td>
<td>AM Peak Hour</td>
</tr>
<tr>
<td>Hotel</td>
<td>52 rooms</td>
<td>8.92</td>
<td>0.67</td>
</tr>
</tbody>
</table>

Notes: Based on average trip rate from Trip Generation (Institute of Transportation Engineers, 2008). Source: Fehr & Peers, 2011

Hyatt Place Expansion Trip Distribution without Old Davis Road Extension

Figure 2 shows the trip distribution for Hyatt Place expansion trips without the Old Davis Road extension. This trip distribution was developed based on the existing traffic counts and knowledge of the study area. Trips to and from the Hyatt Place hotel originate from, and are bound for, downtown Davis via 1st Street, south Davis via Richards Boulevard, the UC Davis campus via California Avenue, the Bay Area via I-80 West, and Sacramento via I-80 East.

To develop the Existing Plus Hyatt Place Expansion scenario, trips generated by the proposed Hyatt Place expansion were added to the existing counts according to the trip distribution shown in Figure 2. Figure 3 shows the peak hour traffic volumes and lane configurations for the Existing Plus Hyatt Place Expansion scenario.

Existing Plus Old Davis Road Extension

Analysis using the Davis Travel Demand Model showed that closing Arboretum Drive and adding the Old Davis Road extension resulted in the following:

- Trips previously using Arboretum Drive were rerouted onto the Old Davis Road extension
- Some South Entry Parking Structure trips to/from the I-80 / Old Davis Road interchange rerouted to downtown Davis and roadway facilities south of the Olive Drive / Richards Boulevard intersection via 1st Street

To develop traffic volumes for the Existing Plus Old Davis Road Extension scenario, existing traffic volumes were manually adjusted as follows:
• Traffic from Arboretum Drive was rerouted to the Old Davis Road extension

• Some South Entry Parking Structure traffic to/from the I-80 / Old Davis Road interchange was rerouted through downtown Davis and roadway facilities south of the Olive Drive / Richards Boulevard intersection.

• Intersection turning movement counts from the 2003 Long Range Development Plan Traffic Impact Study at the Arboretum Drive / Mrak Hall Drive intersection were used to maintain appropriate levels of traffic on Mrak Hall Drive.

Figure 4 shows the peak hour traffic volumes and lane configurations for the Existing Plus Old Davis Road Extension scenario.

Existing Plus Hyatt Place Expansion and Old Davis Road Extension

To develop the Existing Plus Hyatt Place Expansion and Old Davis Road Extension scenario traffic volumes, the trips generated by the proposed Hyatt Place expansion were added to the Existing Plus Old Davis Road Extension scenario traffic volumes.

Figure 5 shows the trip distribution for Hyatt Place expansion trips with the Old Davis Road extension. This trip distribution was developed based on the existing traffic counts and knowledge of the study area and reflects increased Hyatt Place expansion trips using the Old Davis Road extension. Trips to and from the Hyatt Place hotel originate from, and are bound for, downtown Davis via 1st Street, south Davis via Richards Boulevard, the UC Davis campus via California Avenue, the Bay Area via I-80 West, and Sacramento via I-80 East. Figure 6 shows the peak hour traffic volumes and lane configurations for the Existing Plus Hyatt Place Expansion and Old Davis Road Extension scenario.
PEAK HOUR TRAFFIC VOLUMES AND LANE CONFIGURATIONS - EXISTING PLUS HYATT PLACE EXPANSION

FIGURE 3

LEGEND

- Turn Lane
- AM (PM) Peak Hour Traffic Volume
- Study Intersection
- Traffic Signal
- Stop Sign
- Hyatt Place Expansion Site

PATH: N:\2008Projects\2602H_HyattPlaceUCDavis\Graphics\Draft\GIS\MXD\fig03_phtv_exPHP_con.mxd
PEAK HOUR TRAFFIC VOLUMES AND LANE CONFIGURATIONS - EXISTING PLUS OLD DAVIS ROAD EXTENSION

FIGURE 4
HYATT PLACE EXPANSION TRIP DISTRIBUTION - WITH OLD DAVIS ROAD EXTENSION

FIGURE 5
PEAK HOUR TRAFFIC VOLUMES
AND LANE CONFIGURATIONS -
EXISTING PLUS HYATT PLACE EXPANSION
AND OLD DAVIS ROAD EXTENSION

LEGEND

- Turn Lane
AM (PM) Peak Hour Traffic Volume
- Study Intersection
- Traffic Signal
- Stop Sign

Hyatt Place Expansion Site

NOT TO SCALE
Intersections
Intersection operations were analyzed using the peak hour traffic volumes and lane configurations shown in Figures 3, 4, and 6; Table 9 shows the existing plus project delay and level of service at the study intersections.

<table>
<thead>
<tr>
<th>Intersection</th>
<th>Control</th>
<th>Peak Hour</th>
<th>Existing</th>
<th>Existing Plus Hyatt Place Expansion</th>
<th>Existing Plus Old Davis Road Extension</th>
<th>Average</th>
<th>Worst-Delayed Movement</th>
<th>Average</th>
<th>Worst-Delayed Movement</th>
<th>Average</th>
<th>Worst-Delayed Movement</th>
</tr>
</thead>
<tbody>
<tr>
<td>UC Davis Campus Intersections</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Old Davis Road / I-80 Eastbound</td>
<td>Side Street Stop-Controlled</td>
<td>AM PM 10 / B 9 / A</td>
<td>15 / B 29 / D</td>
<td>11 / B 10 / A</td>
<td>15 / C 31 / D</td>
<td>10 / A 8 / A</td>
<td>14 / B 24 / C</td>
<td>10 / A 8 / A</td>
<td>14 / B 25 / C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Old Davis Road / I-80 Westbound</td>
<td>Side Street Stop-Controlled</td>
<td>AM PM 10 / B 2 / A</td>
<td>21 / C 13 / B</td>
<td>11 / B 2 / A</td>
<td>22 / C 13 / B</td>
<td>9 / A 2 / A</td>
<td>14 / B 13 / B</td>
<td>9 / A 2 / A</td>
<td>18 / C 13 / B</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Old Davis Road / California Avenue</td>
<td>Side Street Stop-Controlled</td>
<td>AM PM 8 / A 10 / A</td>
<td>38 / E 26 / D</td>
<td>8 / A 10 / B</td>
<td>43 / E 28 / D</td>
<td>7 / A 9 / A</td>
<td>32 / D 21 / C</td>
<td>8 / A 9 / A</td>
<td>35 / D 22 / C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Old Davis Road / Hilgard Lane</td>
<td>Side Street Stop-Controlled</td>
<td>AM PM 1 / A 11 / B</td>
<td>17 / C 37 / E</td>
<td>1 / A 12 / B</td>
<td>17 / C 41 / E</td>
<td>2 / A 6 / A</td>
<td>19 / C 24 / C</td>
<td>2 / A 6 / A</td>
<td>19 / C 26 / D</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Old Davis Road / Mrak Hall Drive</td>
<td>Signalized</td>
<td>AM PM 22 / C 32 / C</td>
<td>-- 36 / D</td>
<td>-- 16 / B</td>
<td>-- 19 / B</td>
<td>-- 19 / B</td>
<td>-- 17 / B</td>
<td>-- 17 / B</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>City of Davis Intersections</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>1st Street / A Street</td>
<td>Side Street Stop-Controlled</td>
<td>AM PM 14 / B 13 / B</td>
<td>77 / F 18 / C</td>
<td>14 / B 13 / B</td>
<td>80 / F 19 / C</td>
<td>20 / C 15 / C</td>
<td>&gt;80 / F 21 / C</td>
<td>20 / C 15 / C</td>
<td>&gt;80 / F 22 / C</td>
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<td></td>
</tr>
<tr>
<td>1st Street / B Street</td>
<td>All Way Stop</td>
<td>AM PM 14 / B 16 / C</td>
<td>-- 16 / C</td>
<td>-- 16 / C</td>
<td>-- 16 / C</td>
<td>-- 16 / C</td>
<td>-- 17 / C</td>
<td>-- 17 / C</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Olive Drive / Richards Boulevard</td>
<td>Signalized</td>
<td>AM PM 24 / C 15 / B</td>
<td>-- 24 / C</td>
<td>-- 22 / C</td>
<td>-- 22 / C</td>
<td>-- 22 / C</td>
<td>-- 22 / C</td>
<td>-- 22 / C</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes: 1Intersection delay is reported in seconds per vehicle, and is based on the average of all approaches for all-way stop controlled intersections and signalized intersections per HCM methodology. For side-street stop controlled intersections, the delay and LOS is reported for both the average of all approaches and the worst-delayed movement.
2Unique conditions of Richards Boulevard discussed in Existing Conditions chapter of this report.
3Does not meet MUTCD peak hour signal warrant
Bold text indicates a congested condition (LOS F) at City of Davis Core Area intersections.
Source: Fehr & Peers, 2011

As shown in Table 9, the addition of traffic from the Old Davis Road extension and/or Hyatt Place expansion would not cause any intersections operating acceptably in the Existing Conditions scenario to operate unacceptably.
In the Existing Plus Hyatt Place Expansion scenario, delay for the worst-case movements operating at LOS E or worse increases because of the addition of project traffic at the following intersections:

- Old Davis Road / California Avenue – AM peak hour, worst-case movement is LOS E
- Old Davis Road / Hilgard Lane – PM peak hour, worst-case movement is LOS E
- 1st Street / A Street – AM peak hour, worst-case movement is LOS F

In the Existing Plus Old Davis Road Extension and Existing Plus Hyatt Place Expansion and Old Davis Road Extension scenarios, delay for the worst-case movement increases because of the addition of project traffic at the 1st Street / A Street intersection (AM peak hour, worst-case movement is LOS F).

**Roadway Segments**

Table 10 shows the existing plus project peak hour and daily vehicular traffic volumes on Old Davis Road between I-80 and California Avenue.

<table>
<thead>
<tr>
<th>Location</th>
<th>Existing Volume</th>
<th>Existing Plus Hyatt Place Expansion</th>
<th>Existing Plus Old Davis Road Extension</th>
<th>Existing Plus Hyatt Place Expansion and Old Davis Road Extension</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AM Peak Hour</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Old Davis Road b/t I-80 and California Avenue</td>
<td>943</td>
<td>965</td>
<td>875</td>
<td>895</td>
</tr>
<tr>
<td><strong>PM Peak Hour</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Old Davis Road b/t I-80 and California Avenue</td>
<td>815</td>
<td>838</td>
<td>740</td>
<td>758</td>
</tr>
<tr>
<td><strong>Daily</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Old Davis Road b/t I-80 and California Avenue</td>
<td>7,330</td>
<td>7,632</td>
<td>6,740</td>
<td>6,995</td>
</tr>
</tbody>
</table>

Source: Fehr & Peers, 2011

As shown in Table 10, the daily volume on Old Davis Road would increase as a result of the proposed Hyatt Place expansion. The daily volume on Old Davis Road between I-80 and California Avenue would decrease as a result of the proposed Old Davis Road extension. The decrease in traffic volumes west of Hilgard Lane is because some South Entry Parking Structure traffic to-from the I-80 / Old Davis Road interchange is expected to reroute through downtown Davis and to roadway facilities south of the Olive Drive / Richard Boulevard intersection with the construction of the Old Davis Road extension.

**Bicycle and Pedestrian Facilities**

The proposed Hyatt Place expansion will increase traffic on roadways. Where bicyclists share the road with vehicles, increased traffic will impact conditions for bicyclists. Added roadway traffic will impact conditions for pedestrians, especially at uncontrolled crossings. However,
because the amount of traffic added by the project is small, the impact is considered less-than-
significant.

The proposed Old Davis Road extension will decrease volumes on Old Davis Road west of the
South Entry Parking Structure; however, the extension will increase volumes on Old Davis Road
east of the South Entry Parking Structure, on 1st Street, and on Richards Boulevard. The
proposed Old Davis Road extension will improve conditions for bicyclists and pedestrians by
providing a continuous on-street bike lane and sidewalks. The extension of Old Davis Road will
also close Arboretum Drive to vehicle traffic; thereby turning it into a facility exclusively for use
by bicyclists and pedestrians. Service vehicles and emergency vehicles will also be allowed to
use the facility. The University should ensure that Arboretum Drive and the Arboretum Drive /
Mrak Hall Drive and Arboretum Drive / A Street intersections meet all California Manual on
Uniform Traffic Control Devices (MUTCD) criteria for bicyclist and pedestrian circulation.

4.8.4 Cumulative Conditions
The traffic study for the proposed projects evaluated five cumulative scenarios:

There are five cumulative scenarios:

1. Cumulative No Project
2. Cumulative Plus Davis Hotel
3. Cumulative Plus Hyatt Place Expansion
4. Cumulative Plus Old Davis Road Extension
5. Cumulative Plus Davis Hotel, Hyatt Place Expansion, and Old Davis Road Extension

Cumulative No Project

Traffic Forecasts and Roadway Network
Traffic forecasts for the Cumulative No Project scenario were prepared using the Davis Travel
Demand Model via the difference method, which adds the difference between the base and
future year model runs to existing counts. Figure 7 shows the Cumulative No Project peak hour
traffic volumes and lane configurations. With the exception of the Old Davis Road / California
Avenue intersection, all cumulative scenarios assume that the existing lane configurations and
traffic controls remain unchanged.

The University is currently finalizing plans to install a roundabout at the Old Davis Road /
California Avenue intersection. Because this project is fully funded, this study’s cumulative
analysis scenarios assume that the roundabout will be in place.

Cumulative Plus Davis Hotel
To account for all reasonably foreseeable projects, this scenario assumes the replacement of
the University Park Inn & Suites in the City of Davis (referred to in this study as the “City of
Davis hotel”). Assumptions for the City of Davis hotel were based on the best information
available during the preparation of this study; this purpose of this study is not to assess potential
impacts of the City of Davis hotel.

To develop the Cumulative Plus Davis Hotel scenario, new trips generated by the proposed City
of Davis hotel (beyond the trips already generated by the University Park Inn & Suites and Caffé
Italia) were added to the Cumulative No Project forecasts.
### PEAK HOUR TRAFFIC VOLUMES AND LANE CONFIGURATIONS - CUMULATIVE NO PROJECT

**FIGURE 7**

<table>
<thead>
<tr>
<th>1. Old Davis Rd./I-80 EB Ramps</th>
<th>2. Old Davis Rd./I-80 WB Ramps</th>
<th>3. Old Davis Rd./California Ave.</th>
<th>4. Old Davis Rd./Hilgard Ln.</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Map of Old Davis Rd./I-80 EB Ramps" /></td>
<td><img src="image2" alt="Map of Old Davis Rd./I-80 WB Ramps" /></td>
<td><img src="image3" alt="Map of Old Davis Rd./California Ave." /></td>
<td><img src="image4" alt="Map of Old Davis Rd./Hilgard Ln." /></td>
</tr>
</tbody>
</table>

#### LEGEND
- **Turn Lane**
- **AM (PM)** Peak Hour Traffic Volume
- **Study Intersection**
- **Traffic Signal**
- **Stop Sign**
- **Roundabout**

**NOT TO SCALE**

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**Path:** N:\2008Projects\2602R_HyattPlaceUCDavis\Graphics\Draft\GIS\MXD\fig07_PHTV_cuNP_con.mxd
Davis Hotel Trip Generation

The existing University Park Inn & Suites in the City of Davis has 45 hotel rooms and a 4,600 square foot restaurant. The proposed City of Davis hotel would replace the existing University Park Inn & Suites and would have 125 hotel rooms, a 17,200 square foot conference center, and a 6,800 square foot restaurant. Table 11 shows the net peak hour trip generation of the City of Davis hotel.

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Quantity</th>
<th>AM Peak Hour</th>
<th>PM Peak Hour</th>
<th>AM Peak Hour</th>
<th>PM Peak Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Existing University Park Inn &amp; Suites</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hotel</td>
<td>45 rooms¹</td>
<td>0.67 / room</td>
<td>0.70 / room</td>
<td>30</td>
<td>32</td>
</tr>
<tr>
<td>Restaurant</td>
<td>4.6 ksf²</td>
<td>11.52 / ksf</td>
<td>11.15 / ksf</td>
<td>53</td>
<td>51</td>
</tr>
<tr>
<td><strong>Existing Subtotal</strong></td>
<td></td>
<td></td>
<td></td>
<td>83</td>
<td>83</td>
</tr>
<tr>
<td><strong>Proposed City of Davis Hotel</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hotel</td>
<td>125 rooms¹</td>
<td>0.67 / room</td>
<td>0.70 / room</td>
<td>84</td>
<td>88</td>
</tr>
<tr>
<td>Conference Center³</td>
<td>17.2 ksf</td>
<td>N/A</td>
<td>N/A</td>
<td>133</td>
<td>133</td>
</tr>
<tr>
<td>Restaurant</td>
<td>6.8 ksf²</td>
<td>11.52 / ksf</td>
<td>11.15 / ksf</td>
<td>78</td>
<td>76</td>
</tr>
<tr>
<td>1/3 Internalization reduction for restaurant trips⁴</td>
<td>(-26)</td>
<td>(-25)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Proposed Subtotal</strong></td>
<td></td>
<td></td>
<td></td>
<td>269</td>
<td>272</td>
</tr>
<tr>
<td><strong>Net Trip Generation ( = Proposed Subtotal – Existing Subtotal)</strong></td>
<td></td>
<td></td>
<td></td>
<td>186</td>
<td>189</td>
</tr>
</tbody>
</table>

Notes:
1. Based on average trip rate for hotel from *Trip Generation* (Institute of Transportation Engineers, 2008).
2. Based on average trip rate for high-turnover restaurant from *Trip Generation* (Institute of Transportation Engineers, 2008).
3. The City of Davis hotel project applicant estimates that, on average, 200 conference attendees will be coming from outside the hotel; the assumed vehicle occupancy for a conference center is 1.5 persons/vehicle.
4. The City of Davis hotel project applicant estimates that 1/3 of restaurant patrons will be hotel guests.

Source: Fehr & Peers, 2011

Davis Hotel Trip Distribution

Figure 8 shows the trip distribution for the City of Davis hotel trips. This trip distribution was developed based on existing traffic counts and knowledge of the study area. Trips to and from the City of Davis hotel originate from, and are bound for, the UC Davis campus via 1st Street, downtown Davis via Richards Boulevard, I-80 via Richards Boulevard, and south Davis via Richards Boulevard.

To develop the Cumulative Plus Davis Hotel scenario, trips generated by the proposed City of Davis hotel were added to the Cumulative No Project forecasts according to the trip distribution shown in Figure 8. Figure 9 shows the peak hour traffic volumes and lane configurations for the Cumulative Plus Davis Hotel scenario.
PEAK HOUR TRAFFIC VOLUMES AND LANE CONFIGURATIONS - CUMULATIVE PLUS DAVIS HOTEL

FIGURE 9
Cumulative Plus Hyatt Place Expansion

To develop the Cumulative Plus Hyatt Place Expansion scenario, trips generated by the proposed Hyatt Place expansion were added to the Cumulative No Project traffic forecasts. The Cumulative Plus Hyatt Place Expansion scenario trip generation and distribution are consistent with those from the Existing Plus Hyatt Expansion scenario, shown in Table 8 and Figure 2, respectively. Figure 10 shows the Cumulative Plus Hyatt Place Expansion scenario traffic volumes.

Cumulative Plus Old Davis Road Extension

Analysis using the Davis Travel Demand Model showed that closing Arboretum Drive and adding the Old Davis Road extension resulted in the following:

- Trips previously using Arboretum Drive were rerouted onto the Old Davis Road extension
- Some South Entry Parking Structure trips to/from the I-80 / Old Davis Road interchange were rerouted to downtown Davis and roadway facilities south of the Olive Drive / Richards Boulevard intersection

To develop traffic forecasts for the Cumulative Plus Old Davis Road Extension scenario, Cumulative No Project traffic forecasts were manually adjusted as follows:

- Traffic from Arboretum Drive was rerouted to the Old Davis Road extension
- Some south Entry Parking Structure traffic to/from the I-80 / Old Davis Road interchange was rerouted through downtown Davis and roadway facilities south of the Olive Drive / Richards Boulevard intersection.

Intersection turning movement counts from the 2003 Long Range Development Plan Traffic Impact Study at the Arboretum Drive / Mrak Hall Drive intersection were used to establish appropriate levels of traffic on Mrak Hall Drive. Figure 11 shows the Cumulative Plus Old Davis Road Extension traffic volumes.

Cumulative Plus Davis Hotel, Hyatt Place Expansion, and Old Davis Road Extension

To develop the Cumulative Plus Davis Hotel, Hyatt Place Expansion, and Old Davis Road Extension scenario traffic forecasts, the trips generated by the proposed City of Davis hotel and Hyatt Place expansion were added to the Cumulative Plus Old Davis Road Extension scenario traffic forecasts.

The trip distribution for the City of Davis hotel and Hyatt Place expansion are consistent with those shown in Figure 8 and Figure 5, respectively. Figure 12 shows the peak hour traffic volumes and lane configurations for the Cumulative Plus Davis Hotel, Hyatt Place Expansion, and Old Davis Road Extension scenario.

Intersections

Figures 7 and 9 through 12 show the peak hour traffic volumes and lane configurations for each cumulative scenario. Intersection operations were analyzed using these traffic volumes and lane configurations; Table 12 shows the cumulative delay and level of service at the study intersections. The Cumulative Plus Davis Hotel scenario includes all reasonably foreseeable projects. Therefore, it is the scenario against which the Cumulative Plus Davis Hotel, Hyatt Place Expansion, and Old Davis Road Extension scenario is compared to assess the impacts of the Hyatt Place expansion and the Old Davis Road extension.
PEAK HOUR TRAFFIC VOLUMES AND LANE CONFIGURATIONS - CUMULATIVE PLUS OLD DAVIS ROAD EXTENSION

FIGURE 11

1. Old Davis Rd./I-80 EB Ramps
   - 210 (75)
   - 210 (45)
   - 425 (160)
   - 115 (30)
   - 75 (48)
   - 24 (85)
   - 210 (345)
   - 210 (70)
   - Old Davis Rd.

2. Old Davis Rd./I-80 WB Ramps
   - 560 (220)
   - 5 (5)
   - 115 (30)
   - 160 WB Off-Ramp
   - 210 (345)
   - 210 (70)
   - Old Davis Rd.

3. Old Davis Rd./California Ave.
   - 325 (220)
   - 385 (145)
   - 160 (175)
   - 85 (335)
   - Old Davis Rd.

4. Old Davis Rd./Hilgard Ln.
   - 330 (290)
   - 180 (40)
   - 210 (168)
   - 60 (205)

5. Old Davis Rd./Mrak Hall Rd.
   - 20 (25)
   - 385 (315)
   - Old Davis Rd.

6. 1st St./A St.
   - 65 (70)
   - 15 (5)
   - 675 (310)
   - 1st St.

7. 1st St./B St.
   - 90 (308)
   - 145 (287)
   - 487 (265)
   - 1st St.

8. 1st St./Richards Blvd.
   - 10 (110)
   - 85 (90)
   - 150 (215)
   - 65 (70)
   - 60 (205)

9. Olive Dr./Richards Blvd.
   - 25 (25)
   - 335 (825)
   - 240 (235)
   - 15 (20)
   - 95 (100)
   - Olive Dr.
   - 15 (20)
   - 6 (5)
   - 30 (60)
   - Olive Dr.
   - 30 (25)
   - 70 (865)
   - 30 (60)

LEGEND

- Turn Lane
- AM (PM) Peak Hour Traffic Volume
- Study Intersection
- Traffic Signal
- Stop Sign
- Roundabout

NOT TO SCALE
PEAK HOUR TRAFFIC VOLUMES AND LANE CONFIGURATIONS - CUMULATIVE PLUS DAVIS HOTEL, HYATT PLACE EXPANSION AND OLD DAVIS ROAD EXTENSION

**FIGURE 12**

- **Legend:**
  - Turn Lane
  - AM (PM) Peak Hour Traffic Volume
  - Study Intersection
  - Traffic Signal
  - Stop Sign
  - Hyatt Place Expansion Site
  - City of Davis Hotel Site
  - Roundabout

**NOT TO SCALE**

<table>
<thead>
<tr>
<th>Location</th>
<th>Traffic Volumes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Old Davis Rd./I-80 EB Ramps</td>
<td>220 (75), 215 (45), 430 (164), 5 (5), 115 (30), 75 (45), 25 (85)</td>
</tr>
<tr>
<td>2. Old Davis Rd./I-80 WB Ramps</td>
<td>59 (160), 359 (450), 566 (225), 5 (5), 115 (30), 325 (220), 396 (154), 163 (183), 94 (345), 10 (110), 135 (236), 5 (5)</td>
</tr>
<tr>
<td>3. Old Davis Rd./California Ave.</td>
<td>59 (220), 455 (179), 320 (311), 157 (292), 163 (183), 94 (345), 325 (220), 396 (154), 163 (183), 94 (345)</td>
</tr>
<tr>
<td>4. Old Davis Rd./Hilgard Ln.</td>
<td>163 (183), 94 (345), 65 (72), 683 (326), 257 (306), 492 (280)</td>
</tr>
<tr>
<td>5. Old Davis Rd./Mrak Hall Rd.</td>
<td>37 (40), 25 (28), 90 (52), 324 (457)</td>
</tr>
<tr>
<td>6. 1st St./A St.</td>
<td>20 (25), 396 (328), 46 (150), 65 (72), 15 (15), 683 (326)</td>
</tr>
<tr>
<td>7. 1st St./B St.</td>
<td>664 (414), 96 (345), 212 (371), 5 (5), 45 (45), 432 (599)</td>
</tr>
<tr>
<td>8. 1st St./Richards Blvd.</td>
<td>664 (414), 96 (345), 212 (371), 5 (5), 45 (45), 432 (599)</td>
</tr>
<tr>
<td>9. Olive Dr./Richards Blvd.</td>
<td>33 (27), 570 (900), 25 (45), 240 (235), 15 (20), 98 (101), 55 (29), 715 (901), 31 (83)</td>
</tr>
<tr>
<td>Intersection</td>
<td>Control</td>
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<td>------------------------------------------</td>
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<td></td>
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</tr>
<tr>
<td>UC Davis Campus Intersections</td>
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</tr>
<tr>
<td>Old Davis Road / I-80 Eastbound</td>
<td>Side Street Stop-Controlled AM PM</td>
</tr>
<tr>
<td>Old Davis Road / I-80 Westbound</td>
<td>Side Street Stop-Controlled AM PM</td>
</tr>
<tr>
<td></td>
<td>Roundabout 2 AM PM</td>
</tr>
<tr>
<td>Old Davis Road / California Avenue</td>
<td>Side Street Stop-Controlled AM PM</td>
</tr>
<tr>
<td></td>
<td>Signalized AM</td>
</tr>
<tr>
<td>City of Davis Intersections</td>
<td></td>
</tr>
<tr>
<td>1st Street / A Street</td>
<td>Side Street Stop-Controlled AM PM</td>
</tr>
<tr>
<td>1st Street / B Street</td>
<td>All Way Stop AM PM</td>
</tr>
<tr>
<td>1st Street / Richards Boulevard 3</td>
<td>Signalized AM</td>
</tr>
<tr>
<td>Olive Drive / Richards Boulevard 3</td>
<td>Signalized AM</td>
</tr>
</tbody>
</table>

Notes: 1Intersection delay is reported in seconds per vehicle, and is based on the average of all approaches for all-way stop controlled intersections and signalized intersections per HCM methodology. For side-street stop controlled intersections, the delay and LOS is reported for both the average of all approaches and the most delayed movement.

2This analysis assumes the construction of the Old Davis Road / California Avenue roundabout.

3Unique conditions of Richards Boulevard discussed in Existing Conditions chapter of this report.

Purple text indicates unacceptable operations (intersection average LOS of E or F) at UC Davis Campus intersections.

Bold text indicates a congested condition (LOS F) at City of Davis Core Area intersections.

Source: Fehr & Peers, 2011
As shown in Table 12, five of the study intersections have overall intersection conditions or worst-delayed movements of LOS E or F in the Cumulative Plus Davis Hotel scenario.

- Old Davis Road / I-80 Eastbound – AM and PM peak hours, average delay for all approaches is LOS F and worst-delayed movement is LOS F
- Old Davis Road / I-80 Westbound – AM and PM peak hours, worst-delayed movement is LOS E
- Old Davis Road / Hilgard Lane – PM peak hour, worst-delayed movement is LOS F
- 1st Street / A Street – AM and PM peak hours, worst-delayed movement is LOS F
- 1st Street / Richards Boulevard – PM peak hour, average delay for all approaches is LOS F

The addition of traffic from the Hyatt Place expansion and Old Davis Road extension (the Cumulative Plus Davis Hotel, Hyatt Place Expansion, and Old Davis Road Extension scenario) would deteriorate the level of service at the following intersections:

- Old Davis Road / Hilgard Lane – AM peak hour, LOS for worst-delayed movement changes from LOS C to LOS D
- 1st Street / B Street – AM peak hour, average delay for all approaches increases from 29 seconds to 40 seconds; LOS for all approaches changes from LOS D to LOS E

**Roadway Segments**

Table 13 shows the cumulative peak hour and daily vehicular traffic volumes on Old Davis Road between I-80 and California Avenue.

<table>
<thead>
<tr>
<th>Location</th>
<th>Cumulative No Project</th>
<th>Cumulative Plus Davis Hotel, Hyatt Place Expansion, and Old Davis Road Extension</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AM Peak Hour</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Old Davis Road b/t I-80 and California Avenue</td>
<td>1,475</td>
<td>1,390</td>
</tr>
<tr>
<td><strong>PM Peak Hour</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Old Davis Road b/t I-80 and California Avenue</td>
<td>1,410</td>
<td>1,314</td>
</tr>
<tr>
<td><strong>Daily</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Old Davis Road b/t I-80 and California Avenue</td>
<td>16,300</td>
<td>15,280</td>
</tr>
</tbody>
</table>

Source: Fehr & Peers, 2011

As shown in Table 13, the daily volume on Old Davis Road between I-80 and California Avenue would decrease as a result of the proposed Old Davis Road extension; some South Entry Parking Structure traffic to-from the I-80 / Old Davis Road interchange reroutes through downtown Davis and to roadway facilities south of the Olive Drive / Richard Boulevard intersection with the construction of the Old Davis Road extension.
Bicycle and Pedestrian Facilities

The proposed Hyatt Place expansion will increase traffic on roadways. Where bicyclists share the road with vehicles, increased traffic will impact conditions for bicyclists. Added roadway traffic will impact conditions for pedestrians, especially at uncontrolled crossings. However, because the amount of traffic added by the project is small, the impact is considered less-than-significant.

The proposed Old Davis Road extension will decrease volumes on Old Davis Road west of the South Entry Parking Structure; however, the extension will increase volumes on Old Davis Road east of the South Entry Parking Structure, on 1st Street, and on Richards Boulevard. The proposed Old Davis Road extension will improve conditions for bicyclists and pedestrians by providing a continuous on-street bike lane and sidewalks. The extension of Old Davis Road will also close Arboretum Drive to vehicle traffic; thereby turning it into a facility exclusively for use by bicyclists and pedestrians. Service vehicles and emergency vehicles will also be allowed to use the facility. The University should ensure that Arboretum Drive and the Arboretum Drive / Mrak Hall Drive and Arboretum Drive / A Street intersections meet all California Manual on Uniform Traffic Control Devices (MUTCD) criteria for bicyclist and pedestrian circulation.

Freeway Diversion Assessment

The Old Davis Road extension is not expected to attract traffic from I-80 eastbound. The travel time analysis showed that it is faster to take I-80 between Old Davis Road and Mace Boulevard than to use local streets. Additionally, the number and type of traffic controls encountered is similar with the Old Davis Road extension: a traffic signal at the Old Davis Road / Mrak Hall Drive intersection, an all-way stop at the Old Davis Road / Alumni Lane intersection (versus the Mrak Hall Drive / Arboreum Drive intersection), and an all-way stop at the Arboretum Drive / A Street intersection. Because the travel distance and traffic controls for the proposed Old Davis Road extension are similar to the existing travel distance and traffic controls via Arboretum Drive, the proposed Old Davis Road extension is not expected to induce freeway traffic through campus.

4.8.5 Standards of Significance

The following significance criteria were used to identify significant transportation and circulation impacts. For the purpose of this analysis, potentially significant traffic impacts are defined when the project causes any of the following:

- A conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.

  For intersections at UC Davis; pursuant to the 2003 LRDP EIR, LOS D is the minimum acceptable LOS.

- For signalized intersections, deteriorated peak hour intersection operations from an acceptable level (LOS D) to an unacceptable level (LOS E or worse).
- For unsignalized intersections, deterioration of the average of all movements from an acceptable level (LOS D) to an unacceptable level and meet the California Manual on Uniform Traffic Control Devices (MUTCD) peak hour signal warrant.
• For signalized and unsignalized intersections that operate unacceptably without the project, the addition of 10 or more vehicles to the intersection’s volume.

For intersections in the City of Davis, pursuant to the City of Davis General Plan, LOS E is the minimum acceptable LOS for the City of Davis, LOS F is acceptable for the City for the Davis Core Area (LOS F is acceptable and considered a “congested condition” for Core Area intersections); all City of Davis intersections except for Olive Drive and Richards Boulevard analyzed in this study are Core Area intersections.

• For signalized intersections, exacerbated unacceptable (LOS F in the weekday AM or PM peak hour; LOS E or F in the Saturday peak hour) operations by increasing an intersection’s average delay by five seconds or more.
• For Core Area intersections that operate at congested conditions (LOS F in the weekday AM or PM peak hour or the Saturday peak hour), exacerbate operations by increasing an intersection’s average delay by five seconds or more.
• For unsignalized intersections that operate unacceptably (LOS F in the weekday AM or PM peak hour; LOS E or F in the Saturday peak hour; and meet MUTCD’s peak hour signal warrant without the project), exacerbate operations by increasing the overall intersection’s volume by more than one percent.
• For unsignalized intersections that operate unacceptably but do not meet MUTCD’s peak hour signal warrant without the project, add sufficient volume to meet the peak hour signal warrant.

These significance criteria for City of Davis intersections are consistent with those applied in the Second Street Crossing (Target Store) Project Draft Environmental Impact Report (SCH# 2005062142) and the Covell Village Project Draft Program Level EIR (SCH# 2004062089).

For the Olive Drive and Richards Boulevard intersection, a significant traffic impact is defined when the addition of project traffic causes the overall intersection operations to deteriorate from an acceptable level (LOS E or better in the AM or PM peak hour) to an unacceptable level (LOS F in the AM or PM peak hour).

• A conflict with an applicable congestion management program, including, but not limited to level of service standards established by the county congestion management agency for designated roads and highways.
• A change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.
• Substantially increased hazards due to a design feature (e.g., sharp curves or dangerous intersections) incompatible uses (e.g., farm equipment).
• Inadequate emergency access.
• A conflicts with applicable adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks).

Impacts related to air traffic patterns were addressed in the Tiered Initial Study (see Appendix A, page 94) and were determined to be affected by the proposed project.

NOTE: Underlined text on this page was added to the EIR as part of completing the FEIR. See Section 1.7 of the FEIR for additional detail on this revision.
• For signalized and unsignalized intersections that operate unacceptably without the project, the addition of 10 or more vehicles to the intersection's volume.

For intersections in the City of Davis, pursuant to the City of Davis General Plan, LOS E is the minimum acceptable LOS for the City of Davis, LOS F is acceptable for the City for the Davis Core Area (LOS F is acceptable and considered a "congested condition" for Core Area intersections); all City of Davis intersections analyzed in this study are Core Area intersections.

• For signalized intersections, exacerbated unacceptable (LOS F in the weekday AM or PM peak hour; LOS E or F in the Saturday peak hour) operations by increasing an intersection's average delay by five seconds or more.

• For Core Area intersections that operate at congested conditions (LOS F in the weekday AM or PM peak hour or the Saturday peak hour), exacerbate operations by increasing an intersection's average delay by five seconds or more.

• For unsignalized intersections that operate unacceptably (LOS F in the weekday AM or PM peak hour; LOS E or F in the Saturday peak hour; and meet MUTCD's peak hour signal warrant without the project), exacerbate operations by increasing the overall intersection's volume by more than one percent.

• For unsignalized intersections that operate unacceptably but do not meet MUTCD's peak hour signal warrant without the project, add sufficient volume to meet the peak hour signal warrant.

These significance criteria for City of Davis intersections are consistent with those applied in the Second Street Crossing (Target Store) Project Draft Environmental Impact Report (SCH# 2005062142) and the Covell Village Project Draft Program Level EIR (SCH# 2004062089).

• A conflict with an applicable congestion management program, including, but not limited to level of service standards established by the county congestion management agency for designated roads and highways.

• A change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.

• Substantially increased hazards due to a design feature (e.g., sharp curves or dangerous intersections) incompatible uses (e.g., farm equipment).

• Inadequate emergency access.

• A conflicts with applicable adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks).

Impacts related to air traffic patterns were addressed in the Tiered Initial Study (see Appendix A, page 94) and were determined to be affected by the proposed project.

Note: This is the page 132 as it originally appeared in the Draft EIR. This page is replaced by the preceding page.
4.8.6 LRDP Mitigation Measures Included in the Proposed Project

Mitigation measures in the 2003 LRDP EIR that are applicable to the proposed project are presented below. Since these previously adopted mitigation measures are already being carried out as part of implementation of the 2003 LRDP, they are included in and are a part of the proposed project and will not be readopted.

<table>
<thead>
<tr>
<th>2003 LRDP EIR Mitigation Measures</th>
<th>TRANSPORTATION, CIRCULATION, &amp; PARKING</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.14-1(a) UC Davis shall continue to actively pursue Transportation Demand Management strategies to reduce vehicle-trips to and from campus.</td>
<td></td>
</tr>
<tr>
<td>4.14-1(b) UC Davis shall continue to monitor AM and PM peak hour traffic operations at critical intersections and roadways on campus.</td>
<td></td>
</tr>
<tr>
<td>4.14-1(c) UC Davis shall review individual projects proposed under the 2003 LRDP as they advance through the environmental clearance phase of development to determine if intersection or roadway improvements are needed with the additional traffic generated by the proposed project. If intersection operations are found to degrade to unacceptable levels, UC Davis shall construct physical improvements such as adding traffic signals or roundabouts at affected study intersections.</td>
<td></td>
</tr>
<tr>
<td>4.14-2(a) UC Davis shall continue to actively pursue Transportation Demand Management strategies to reduce vehicle-trips to and from campus.</td>
<td></td>
</tr>
<tr>
<td>4.14-2(b) UC Davis shall continue to monitor AM and PM peak hour traffic operations at critical intersections and roadways in the campus vicinity at least every three years to identify locations operating below UC Davis, City of Davis, Yolo County, Solano County, or Caltrans LOS thresholds and to identify improvements to restore operations to an acceptable level.</td>
<td></td>
</tr>
<tr>
<td>4.14-2(c) UC Davis shall review individual projects proposed under the 2003 LRDP as they advance through the environmental clearance phase of development to determine if intersection or roadway improvements are needed with the additional traffic generated by the proposed project. If intersection operations are found to degrade to unacceptable levels, UC Davis shall contribute its fair share towards roadway improvements at affected study intersections.</td>
<td></td>
</tr>
<tr>
<td>4.14-4 UC Davis shall monitor transit ridership to identify routes operating over capacity with increased campus growth. UC Davis shall work with transit providers to identify additional service required with campus growth or new transit routes needed to serve future development areas.</td>
<td></td>
</tr>
<tr>
<td>4.14-5 UC Davis shall monitor core area pedestrian and bike activity and accidents. UC Davis shall improve bike and pedestrian facilities or alter transit operations to avoid increased bicycle accident rates or safety problems.</td>
<td></td>
</tr>
</tbody>
</table>

4.8.7 Project and Cumulative Impacts and Mitigation Measures

Impacts Adequately Analyzed in the 2003 LRDP EIR or Not Applicable to the Project

As determined in the Tiered Initial Study for the project, potential impacts to transportation and circulation were addressed in the 2003 LRDP EIR and the 2003 LRDP EIR included mitigation measures to reduce the significance of certain impacts. The Tiered Initial Study found that LRDP Impacts 4.14-1, 4.14-2, 4.14-4 and 4.14-5 and corresponding LRDP Mitigation Measures 4.14-1 (a-c), 4.14-2 (a-c), 4.14-4, and 4.14-5 which were adopted and incorporated in the LRDP EIR, are relevant to the proposed project and reduce the significance of transportation and
circulation impacts to the extent feasible. Pages 92 and 93 of the Tiered Initial Study (Appendix A) contain the full text of these impacts and mitigation measures and include explanations of the relevance of each impact to the proposed projects. The Tiered Initial Study further explains that analysis would be conducted in this EIR to confirm the conclusions in the LRDP EIR and to quantify the potential impacts from the proposed projects.

Project-Level Impacts

Impact TRA-1: For on-campus intersections, the proposed project would not conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the affected circulation system. (Less than Significant)

The traffic study for the proposed projects evaluated three existing plus project scenarios the: Existing Plus Hyatt Place Expansion; Existing Plus Old Davis Road Extension; and the Existing Plus Hyatt Place Expansion and Old Davis Road Extension. For on-campus intersections, the traffic study compared the expected traffic generation from the hotel expansion and the road extension and then computed the peak-hour traffic impacts at affected intersections. Based on the outcome of these computations, the traffic study then compared the project-related impacts to the on-campus standards of significance shown below (Fehr and Peers 2011).

For intersections at UC Davis; pursuant to the 2003 LRDP EIR, LOS D is the minimum acceptable LOS.

- For signalized intersections, deteriorated peak hour intersection operations from an acceptable level (LOS D) to an unacceptable level (LOS E or worse).
- For unsignalized intersections, deterioration of the average of all movements from an acceptable level (LOS D) to an unacceptable level and meet the California Manual on Uniform Traffic Control Devices (MUTCD) peak hour signal warrant.
- For signalized and unsignalized intersections that operate unacceptably without the project, the addition of 10 or more vehicles to the intersection's volume.

As shown in Table 14, the average delay and level of service of all movements is acceptable at all of the on-campus study intersections with the addition of project trips. Accordingly, the project-specific impacts of the Hyatt Place Hotel Expansion and Old Davis Road Extension to on-campus intersections would be less-than-significant.
### TABLE 14:
INTERSECTION DELAY / LEVEL OF SERVICE – EXISTING PLUS PROJECT CONDITIONS

<table>
<thead>
<tr>
<th>Intersection</th>
<th>Control</th>
<th>Peak Hour</th>
<th>Existing</th>
<th>Existing Plus Hyatt Place Expansion</th>
<th>Existing Plus Old Davis Road Extension</th>
<th>Existing Plus Hyatt Place Expansion and Old Davis Road Extension</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Average</td>
<td>Worst-Delayed Movement Average</td>
<td>Worst-Delayed Movement Average</td>
<td>Worst-Delayed Movement Average</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Old Davis Road / I-80 Eastbound</td>
<td>Side Street Stop-</td>
<td>AM</td>
<td>10 / B</td>
<td>11 / B</td>
<td>10 / A</td>
<td>10 / A</td>
</tr>
<tr>
<td></td>
<td>Controlled</td>
<td>PM</td>
<td>9 / A</td>
<td>29 / D</td>
<td>31 / D</td>
<td>24 / C</td>
</tr>
<tr>
<td>Old Davis Road / I-80 Westbound</td>
<td>Side Street Stop-</td>
<td>AM</td>
<td>10 / B</td>
<td>11 / B</td>
<td>9 / A</td>
<td>9 / A</td>
</tr>
<tr>
<td></td>
<td>Controlled</td>
<td>PM</td>
<td>2 / A</td>
<td>13 / B</td>
<td>13 / B</td>
<td>2 / A</td>
</tr>
<tr>
<td>Old Davis Road / California Avenue</td>
<td>Side Street Stop-</td>
<td>AM</td>
<td>8 / A</td>
<td>8 / A</td>
<td>7 / A</td>
<td>8 / A</td>
</tr>
<tr>
<td></td>
<td>Controlled</td>
<td>PM</td>
<td>10 / A</td>
<td>26 / D</td>
<td>28 / D</td>
<td>21 / C</td>
</tr>
<tr>
<td>Old Davis Road / Hilgard Lane</td>
<td>Side Street Stop-</td>
<td>AM</td>
<td>1 / A</td>
<td>1 / A</td>
<td>2 / A</td>
<td>2 / A</td>
</tr>
<tr>
<td></td>
<td>Controlled</td>
<td>PM</td>
<td>11 / B</td>
<td>37 / E</td>
<td>41 / E</td>
<td>24 / C</td>
</tr>
<tr>
<td>Old Davis Road / Mrak Hall Drive</td>
<td>Signalized</td>
<td>AM</td>
<td>22 / C</td>
<td>--</td>
<td>19 / B</td>
<td>19 / B</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PM</td>
<td>32 / C</td>
<td>--</td>
<td>16 / B</td>
<td></td>
</tr>
</tbody>
</table>

**Notes:**

1. Intersection delay is reported in seconds per vehicle, and is based on the average of all approaches for all-way stop controlled intersections and signalized intersections per HCM methodology. For side-street stop controlled intersections, the delay and LOS is reported for both the average of all approaches and the worst-delayed movement.

2. Unique conditions of Richards Boulevard discussed in Existing Conditions chapter of this report.

3. Does not meet MUTCD peak hour signal warrant

**Bold** text indicates a congested condition (LOS F) at City of Davis Core Area intersections.

Source: Fehr & Peers, 2011

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**Additional Considerations for On-Campus Intersections**

In some scenarios, the addition of project trips at study intersections increases delay for worst-case movements operating at LOS E or worse. For these intersections, a significant traffic impact is defined when the addition of project traffic causes the average of all movements to deteriorate from an acceptable level (LOS D) to an unacceptable level.

Although unacceptable operations for the worst-case movement at unsignalized intersections are not considered significant project impacts, the improvements identified below would assist UC Davis in future planning efforts and could aid in improving operations for the worst-case movement at specific intersections. Traffic operations for the worst-case movement could be improved by implementing the measures discussed below.

- **Old Davis Road / California Avenue** – The 2003 LRDP EIR identified the following mitigation measures for impacts to this intersection:

  *Install a traffic signal at the Old Davis Road / California Avenue intersection or construct the new roadway proposed in the 2003 LRDP between Old Davis Road and La Rue Road.*
Since the completion of the 2003 LRDP EIR, the University has elected to construct a roundabout at the Old Davis Road / California Avenue intersection instead of a traffic signal.

- **Old Davis Road / Hilgard Lane** – The installation of a roundabout or traffic signal would improve operations for the worst-case movement and operations for the overall intersection would remain acceptable. This intersection does not meet the Caltrans' Peak Hour Traffic Signal Warrant in the Existing Plus Hyatt Place Expansion and Old Davis Road Extension scenario.

**Mitigation Measures:** No mitigation required

**Impact TRA-2:** For off-campus intersections, the proposed project would not conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the affected circulation system. *(Less than Significant)*

The traffic study for the proposed projects evaluated three existing plus project scenarios the: *Existing Plus Hyatt Place Expansion; Existing Plus Old Davis Road Extension;* and the *Existing Plus Hyatt Place Expansion and Old Davis Road Extension*. For off-campus intersections, the traffic study compared the expected traffic generation from the hotel expansion and the road extension and then computed the peak-hour traffic impacts at affected intersections. Based on the outcome of these computations, the traffic study then compared the project-related impacts to the City of Davis standards of significance shown below (Fehr and Peers 2011).

For intersections in the City of Davis, pursuant to the City of Davis General Plan, LOS E is the minimum acceptable LOS for the City of Davis, LOS F is acceptable for the City for the Davis Core Area (LOS F is acceptable and considered a “congested condition” for Core Area intersections); all City of Davis intersections analyzed in this study are Core Area intersections.

- For signalized intersections, exacerbated unacceptable (LOS F in the weekday AM or PM peak hour; LOS E or F in the Saturday peak hour) operations by increasing an intersection’s average delay by five seconds or more.
- For Core Area intersections that operate at congested conditions (LOS F in the weekday AM or PM peak hour or the Saturday peak hour), exacerbate operations by increasing an intersection’s average delay by five seconds or more.
- For unsignalized intersections that operate unacceptably (LOS F in the weekday AM or PM peak hour; LOS E or F in the Saturday peak hour; and meet MUTCD’s peak hour signal warrant without the project), exacerbate operations by increasing the overall intersection’s volume by more than one percent.
- For unsignalized intersections that operate unacceptably but do not meet MUTCD’s peak hour signal warrant without the project, add sufficient volume to meet the peak hour signal warrant.

These significance criteria for City of Davis intersections are consistent with those applied in the Second Street Crossing (Target Store) Project Draft Environmental Impact Report (SCH# 2005062142) and the Covell Village Project Draft Program Level EIR (SCH# 2004062089).
As shown in Table 15, the average delay and level of service of all movements is acceptable at all of the off-campus study intersections with the addition of project trips. Accordingly, the project-specific impacts of the Hyatt Place Hotel Expansion and Old Davis Road Extension to off-campus intersections would be less-than-significant.

### TABLE 15:
INTERSECTION DELAY / LEVEL OF SERVICE – EXISTING PLUS PROJECT CONDITIONS

<table>
<thead>
<tr>
<th>Intersection</th>
<th>Control</th>
<th>Peak Hour</th>
<th>Existing</th>
<th>Existing Plus Hyatt Place Expansion</th>
<th>Existing Plus Old Davis Road Extension</th>
<th>Existing Plus Hyatt Place Expansion and Old Davis Road Extension</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Average</td>
<td>Worst-Delayed Movement</td>
<td>Average</td>
<td>Worst-Delayed Movement</td>
</tr>
<tr>
<td>1st Street / A Street</td>
<td>Side Street Stop-Controlled AM</td>
<td>14 / B</td>
<td>77 / F³</td>
<td>14 / B</td>
<td>80 / F³</td>
<td>20 / C</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PM</td>
<td></td>
<td>13 / B</td>
<td>19 / C</td>
<td>&gt;80 / F³</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>20 / C</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>&gt;80 / F³</td>
</tr>
<tr>
<td>1st Street / B Street</td>
<td>All Way Stop</td>
<td>AM</td>
<td>14 / B</td>
<td>16 / C</td>
<td>14 / B</td>
<td>16 / C</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PM</td>
<td></td>
<td></td>
<td>16 / C</td>
<td>17 / C</td>
</tr>
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<td></td>
<td>16 / C</td>
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<td></td>
<td></td>
<td>&gt;80 / F³</td>
</tr>
<tr>
<td>1st Street / Richards Boulevard</td>
<td>Signalized AM</td>
<td>24 / C</td>
<td></td>
<td></td>
<td>24 / C</td>
<td>25 / C</td>
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<tr>
<td></td>
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<td>PM</td>
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<td>27 / C</td>
<td>27 / C</td>
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<td></td>
<td>&gt;80 / F³</td>
</tr>
<tr>
<td>Olive Drive / Richards Boulevard</td>
<td>Signalized AM</td>
<td>24 / C</td>
<td></td>
<td></td>
<td>24 / C</td>
<td>22 / C</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PM</td>
<td></td>
<td></td>
<td>15 / B</td>
<td>15 / B</td>
</tr>
<tr>
<td>Notes: 1Intersection delay is reported in seconds per vehicle, and is based on the average of all approaches for all-way stop controlled intersections and signalized intersections per HCM methodology. For side-street stop controlled intersections, the delay and LOS is reported for both the average of all approaches and the worst-delayed movement. 2Unique conditions of Richards Boulevard discussed in Existing Conditions chapter of this report. 3Does not meet MUTCD peak hour signal warrant</td>
<td>Bold text indicates a congested condition (LOS F) at City of Davis Core Area intersections.</td>
<td>Source: Fehr &amp; Peers, 2011</td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

### Additional Considerations for Off-Campus Intersections

The addition of project trips exacerbates the congested condition (LOS F) of the 1st Street / A Street intersection. For this intersection, a significant traffic impact is defined when the addition of project traffic exacerbates a congested condition (LOS F in the Core Area and meeting the MUTCD peak hour signal warrant without the project) by increasing the overall intersection volume by more than one percent. Further analysis of the intersection showed that although the project increases overall intersection volume by more than one percent, the peak hour signal warrants are not met at the 1st Street / A Street intersection in any of the Existing Plus Project scenarios; therefore the impact to this intersection is less-than-significant. The 2003 LRDP EIR identified the following mitigation measures for impacts to the study intersections of this study:

1st Street / A Street: Construct a roundabout or install a traffic signal at the 1st Street / A Street intersection

This mitigation measure would be triggered when the intersection meets the MUTCD peak hour signal warrant without the project. This information is provided to assist UC Davis and the City of Davis in intersection planning and forecasting future potential intersection improvements even though the identified improvements would not be triggered by the proposed project.
Mitigation Measures: No mitigation required

Impact TRA-3: The proposed project would not conflict with an applicable congestion management program, including, but not limited to level of service standards, and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways. (Significant and Unavoidable)

The proposed project is a portion of the growth evaluated in the 2003 LRDP EIR and is consistent with the 2003 LRDP. The 2003 LRDP considered traffic impacts significant if the overall LRDP growth caused conflicts with applicable congestion management programs. Impact 4.14-2 in the 2003 LRDP EIR found that the 2003 LRDP growth could result in significant impacts to facilities covered in the Yolo County and Solano County Congestion Management Plans. Previously adopted LRDP Mitigation 4.14-2(a) for UC Davis to reduce trip generation, LRDP Mitigation 4.14-2(b) for UC Davis to monitor traffic operations, and LRDP Mitigation 4.14-2(c) for UC Davis to contribute a fair share percentage to improve roadway operations at affected locations are included in the proposed project.

Pages 4.14-72 through 4.14-77 of the 2003 LRDP EIR contain a detailed evaluation of the impacts and specific improvements that are part of the LRDP growth and mitigation program. The 2003 LRDP EIR concluded that the feasibility and/or implementation of LRDP Mitigation Measure 4.14-2(c) cannot be guaranteed by UC Davis because implementation of mitigation measures at these off-campus facilities is within the responsibility and jurisdiction of other agencies that may elect to not implement the recommended mitigation measures. Mitigation measures were included in the LRDP EIR to reduce the magnitude of LRDP project-level impact 4.14-2 to a less-than-significant level, but this impact is identified as significant and unavoidable because mitigation falls within the responsibility of other jurisdictions to enforce and monitor and therefore cannot be guaranteed by the University of California.

Mitigation Measures: No additional mitigation within the responsibility and jurisdiction of the University is feasible.

Impact TRA-4: Implementation of the proposed project would not increase hazards due to a design feature or incompatible uses. (No Impact)

The proposed Hyatt Place Hotel Expansion project would not involve any design changes to the pedestrian, bicycle, or motorized vehicle circulation system. The proposed Old Davis Road extension project would create a new section of roadway and modifications to the existing roadway, which would be designed in conformance with all applicable roadway design standards including all California Manual on Uniform Traffic Control Devices (MUTCD) criteria for bicyclist and pedestrian circulation. The new section of roadway would connect an existing route for motorized vehicles in a more direct and intuitive alignment. Signage and wayfinding for drivers would be simpler with the proposed road extension. The conversion of the existing Old Davis Road to a bike, pedestrian, and service vehicle path would limit the potential for
motorized vehicle conflicts with bikes and pedestrians. In addition, the road conversion would provide a new bike and pedestrian facility to help complete the non-automobile circulation system. Along the south edge of the proposed Old Davis Road Extension, a new fence would be included to separate users of the adjacent Solano Park Community Gardens from the road area and to ensure that children within the gardening area do not have direct access to the roadway. Accordingly, the proposed new road extension and closing the existing Old Davis Road to bikes, pedestrians, and service vehicles would not result in hazardous design features or incompatible use. No impact would occur.

Mitigation Measures: No mitigation required.

Impact TRA-5: Implementation of the proposed project would not result in inadequate emergency access. (No Impact)

The proposed project would construct a new route for emergency vehicles (the extension of Old Davis Road) and would allow continued access for emergency vehicles on the existing Old Davis Road. These changes would allow emergency service providers to have increased options for emergency vehicle routing during emergencies and would improve emergency access. Accordingly, the project would not result in inadequate emergency access. No impact would occur.

Mitigation Measures: No mitigation required.

Impact TRA-6: Implementation of the proposed project would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities. (No Impact)

The proposed project would not result in any conflicts with transit, bike, or pedestrian planning efforts. The hotel expansion and the road extension are consistent with the plans contained in the 2003 LRDP and the UC Davis Bikeway and Transit Network Study completed in 2008. Expanding the pedestrian and bicycle network as part of the Old Davis Road extension project would assist in implementing the campus plan for bikes and pedestrians. These documents are the governing plans for transportation planning at UC Davis. The hotel expansion and the road extension are not in an area that currently receives transit service and no transit service is planned for these areas. The road extension project would not preclude, and would facilitate routing options for future transit service to the South Entry District. Accordingly, the proposed project would not conflict with adopted plans, policies or programs regarding public transit, bicycle, or pedestrian facilities, and would not decrease the performance or safety of such facilities. No impact would occur.

Mitigation Measures: No mitigation required.
Cumulative Impacts

Impact TRA-7: For cumulative conditions at on-campus intersections, the proposed project and other planned growth would not conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the affected circulation system. (*Less than Significant*)

The traffic study for the proposed projects evaluated the following five cumulative project scenarios:

1. Cumulative No Project
2. Cumulative Plus City of Davis Hotel
3. Cumulative Plus Hyatt Place Expansion
4. Cumulative Plus Old Davis Road Extension
5. Cumulative Plus Davis Hotel, Hyatt Place Expansion, and Old Davis Road Extension

The cumulative conditions analysis matched the implementation period of the 2003 LRDP through 2015-16 and the growth levels expected for the UC Davis 2003 LRDP which is the guiding planning and development forecast for UC Davis. The UC Davis 2003 LRDP EIR provided a cumulative conditions traffic analysis through the year 2015-16 and included full implementation of the 2003 LRDP plus growth in the surrounding City of Davis and Sacramento region. The traffic study for the proposed project included the same levels of growth that were modeled in the 2003 LRDP EIR for cumulative conditions and also included the proposed expansion of the City of Davis Hotel (a planned expansion of the University Park Inn including a new conference center). For on-campus intersections, the traffic study compared the expected traffic generation from the hotel expansion and the road extension and then computed the peak-hour traffic impacts at affected intersections in the year academic year 2015-16. Based on the outcome of these computations, the traffic study then compared the project-related impacts combined with cumulative conditions to the on-campus standards of significance shown below (Fehr and Peers 2011).

For intersections at UC Davis; pursuant to the 2003 LRDP EIR, LOS D is the minimum acceptable LOS.

- For signalized intersections, deteriorated peak hour intersection operations from an acceptable level (LOS D) to an unacceptable level (LOS E or worse).
- For unsignalized intersections, deterioration of the average of all movements from an acceptable level (LOS D) to an unacceptable level and meet the California Manual on Uniform Traffic Control Devices (MUTCD) peak hour signal warrant.
- For signalized and unsignalized intersections that operate unacceptably without the project, the addition of 10 or more vehicles to the intersection’s volume.

As shown in Table 12, the average delay and level of service for on-campus intersections in the cumulative conditions would be acceptable at the Old Davis Road/I-80 Westbound, Old Davis Road/California Avenue, Old Davis Road/Hilgard Lane, and the Old Davis Road/Mrak Hall Drive intersections. Conditions for the Old Davis Road/I-80 Eastbound intersection in the cumulative condition are described below under the heading Additional Considerations On-Campus Intersections.
The 2003 LRDP EIR found that implementation of the 2003 LRDP, including the proposed project, would cause unacceptable intersection operations at on-campus intersections (LRDP Impact 4.14-1). Previously adopted, LRDP Mitigation 4.14-1(a-c), included in the proposed project, requires that the campus continue to pursue Transportation Demand Management strategies to reduce vehicle-trips, monitor peak hour traffic operations at critical locations, review individual projects to determine if intersection operations will degrade to unacceptable levels, and implement physical improvements when intersection operations degrade.

As described above, the traffic impact assessment for the proposed project found that vehicle trips by the proposed project are expected to contribute additional traffic to campus intersections. Routine traffic monitoring was conducted in 2008 and determined that all campus intersections were operating acceptably. At the time of the 2008 traffic monitoring, many campus locations had experienced decreased traffic since 2005, and intersection levels of service were similarly improved at some locations. The project would contribute to LRDP Impact 4.14-1, and the campus continues to implement LRDP Mitigation 4.14-1(a-c) to minimize impacts to area roadways with on-going infrastructure improvements that will be triggered when future monitoring shows that campus growth has started to affect particular intersections. The 2003 LRDP EIR concluded that these mitigation measures would reduce the impacts to a less-than-significant level at on-campus intersections such as California Avenue and Old Davis Road because the University would construct necessary improvements. The traffic study for the Hyatt Place Expansion and Old Davis Road Extension found that the proposed projects would result in on-campus traffic and circulation impacts in the cumulative conditions that are within the traffic and circulation impacts previously identified in the 2003 LRDP EIR. No additional mitigation measures would be needed and with the continued implementation of LRDP Mitigation 4.14-1(a-c), the cumulative impact to on-campus intersections would remain less-than-significant.

Additional Considerations for On-Campus Intersections

At the Old Davis Road / I-80 Eastbound intersection, the level of service for the average of all movements is LOS F in the Cumulative No Project scenario. At this intersection, a significant impact is defined when the project adds 10 or more vehicle’s to the intersection’s volume. The Hyatt Place hotel expansion would add 11 vehicles to this intersection in both the AM and PM peak hours. However, the traffic volume at this intersection would decrease as a result of the proposed Old Davis Road extension by 35 and 50 vehicles in the AM and PM peak hours, respectively because an increased amount of vehicles is expected to drive east toward downtown Davis once the road extension is completed. The combined effect of both projects is a net decrease in volume at the Old Davis Road/I-80 Eastbound intersection. Therefore, there is not a significant impact in the Cumulative Plus Davis Hotel, Hyatt Place Expansion, and Old Davis Road Extension scenario. If the Hyatt Place hotel expansion project moves forward without the Old Davis Road extension, this impact would be potentially significant and mitigated to less-than-significant through the on-going implementation of LRDP Mitigation 4.14-1 (a-c).

The 2003 LRDP EIR identified the following mitigation measures for impacts to this intersection:

*Install a traffic signal at the EB I-80 Ramps / Old Davis Road intersection.*

This intersection does not meet the Caltrans’ Peak Hour Traffic Signal Warrant in the Cumulative Plus Davis Hotel, Hyatt Place Expansion, and Old Davis Road Extension scenario. This intersection is part of the University's Long Range Development Plan Traffic and Circulation Mitigation Monitoring Program; improvements to this intersection would be triggered.
when the Traffic and Circulation Mitigation Monitoring Program identifies unacceptable intersection operations.

In some scenarios, the addition of project trips at study intersections increases delay for worst-case movements operating at LOS E or worse. For these intersections, a significant traffic impact is defined when the addition of project traffic causes the average of all movements to deteriorate from an acceptable level (LOS D) to an unacceptable level. At these intersections, the average delay and level of service of all movements is acceptable with the addition of project trips.

Although unacceptable operations for the worst-case movement at unsignalized intersections are not significant project impacts, improvements are identified to improve operations for the worst-delayed movement for use by UC Davis in future planning. Traffic operations for the worst-case movement could be improved by implementing the measures discussed below.

- **Old Davis Road / I-80 Westbound** – The 2003 LRDP EIR identified the following mitigation measures for impacts to this intersection:

  *Install a traffic signal at the WB I-80 Ramps / Old Davis Road intersection.*

  This intersection meets the Caltrans’ Peak Hour Traffic Signal Warrant in the Cumulative Plus Davis Hotel, Hyatt Place Expansion, and Old Davis Road Extension scenario.

  This intersection is part of the University’s Long Range Development Plan Traffic and Circulation Mitigation Monitoring Program; improvements to this intersection would be triggered when the Traffic and Circulation Mitigation Monitoring Program identifies unacceptable intersection operations.

- **Old Davis Road / Hilgard Lane** - The installation of a roundabout or traffic signal would improve operations for the worst-case movement and operations for the overall intersection would remain acceptable. This intersection does not meet the Caltrans’ Peak Hour Traffic Signal Warrant in the Existing Plus Hyatt Expansion scenario.

  This intersection is part of the University’s Long Range Development Plan Traffic and Circulation Mitigation Monitoring Program; improvements to this intersection would be triggered when the Traffic and Circulation Mitigation Monitoring Program identifies unacceptable intersection operations.

**Impact TRA-8:** For cumulative conditions at off-campus intersections, the proposed project and other planned growth would not conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the effected circulation system. *(Significant and Unavoidable)*

The traffic study for the proposed projects evaluated the following five cumulative project scenarios:

1. Cumulative No Project
2. Cumulative Plus City of Davis Hotel
3. Cumulative Plus Hyatt Place Expansion
4. Cumulative Plus Old Davis Road Extension
5. Cumulative Plus Davis Hotel, Hyatt Place Expansion, and Old Davis Road Extension

The cumulative conditions analysis matched the implementation period of the 2003 LRDP through 2015-16 and the growth levels expected for the UC Davis 2003 LRDP which is the guiding planning and development forecast for UC Davis. The UC Davis 2003 LRDP EIR provided a cumulative conditions traffic analysis through the year 2015-16 and included full implementation of the 2003 LRDP plus growth in the surrounding City of Davis and Sacramento region. The traffic study for the proposed project included the same levels of growth that were modeled in the 2003 LRDP EIR for cumulative conditions and also included the proposed expansion of the City of Davis Hotel (a planned expansion of the University Park Inn including a new conference center). For off-campus intersections, the traffic study compared the expected traffic generation from the hotel expansion and the road extension and then computed the peak-hour traffic impacts at affected intersections in the year academic year 2015-16. Based on the outcome of these computations, the traffic study then compared the project-related impacts combined with cumulative conditions to the off-campus standards of significance shown below (Fehr and Peers 2011).

For intersections in the City of Davis, pursuant to the City of Davis General Plan, LOS E is the minimum acceptable LOS for the City of Davis, LOS F is acceptable for the City for the Davis Core Area (LOS F is acceptable and considered a "congested condition" for Core Area intersections); all City of Davis intersections analyzed in this study are Core Area intersections.

- For signalized intersections, exacerbated unacceptable (LOS F in the weekday AM or PM peak hour; LOS E or F in the Saturday peak hour) operations by increasing an intersection’s average delay by five seconds or more.
- For Core Area intersections that operate at congested conditions (LOS F in the weekday AM or PM peak hour or the Saturday peak hour), exacerbate operations by increasing an intersection’s average delay by five seconds or more.
- For unsignalized intersections that operate unacceptably (LOS F in the weekday AM or PM peak hour; LOS E or F in the Saturday peak hour; and meet MUTCD’s peak hour signal warrant without the project), exacerbate operations by increasing the overall intersection’s volume by more than one percent.
- For unsignalized intersections that operate unacceptably but do not meet MUTCD’s peak hour signal warrant without the project, add sufficient volume to meet the peak hour signal warrant.

These significance criteria for City of Davis intersections are consistent with those applied in the Second Street Crossing (Target Store) Project Draft Environmental Impact Report (SCH# 2005062142) and the Covell Village Project Draft Program Level EIR (SCH# 2004062089).

As shown in Table 12, the average delay and level of service of all movements is acceptable at all of the off-campus study intersections with the addition of project trips. Accordingly, the project-specific impacts of the Hyatt Place Hotel Expansion and Old Davis Road Extension to off-campus intersections would be less-than-significant.

Implementation of the proposed project would exacerbate congested conditions at the 1st Street / A Street intersection. For the 1st Street / A Street intersection, a significant traffic impact is
defined when the addition of project traffic exacerbates a congested condition (LOS F in the Core Area and meets the MUTCD peak hour signal warrant without the project) by increasing the overall intersection’s volume by more than one percent. The 1st Street / A Street intersection meets the MUTCD peak hour signal warrant in the Cumulative Plus Davis Hotel scenario; the addition of traffic from the Hyatt Place expansion and Old Davis Road extension increases the overall intersection’s AM and PM peak hour volume by 10% and 11%, respectively. Therefore, the cumulative impact to the 1st Street / A Street intersection would be significant as was previously identified in the 2003 LRDP EIR.

The 2003 LRDP EIR identified the following mitigation measure for impacts to the 1st Street / A Street intersection: Construct a roundabout or install a traffic signal at the 1st Street / A Street intersection which was adopted and is part of the proposed project. This impact was previously identified as a significant and unavoidable impact in the certification of the 2003 LRDP EIR. UC Davis adopted LRDP Mitigation Measure 4.14-2(a-c) to assist the City of Davis in mitigating the identified impact. UC Davis continues to implement the LRDP Mitigation Measure 4.14-2(a-c) but cannot guarantee implementation of the off-campus intersection improvements that are the responsibility of the City of Davis. While the identified impact remains significant and unavoidable because UC Davis cannot guarantee implementation of improvements, with a traffic signal or roundabout in place at this intersection, the intersection would operate at LOS C and LOS B in the AM and PM peak hours, respectively.

Additional Considerations for Off-Campus Intersections

At the 1st Street / B Street intersection in the City of Davis, the average delay for all approaches would increase from 29 seconds to 40 seconds and the LOS for all approaches would change from LOS D to LOS E. For this intersection, a significant traffic impact is defined when the addition of project traffic exacerbates a congested condition (LOS F) and meets the MUTCD peak hour signal warrant without the project). Because this intersection operates better than LOS F, this change to LOS would be a less-than-significant impact.

For the 1st Street / Richards Boulevard intersection, a significant traffic impact is defined when the addition of project traffic exacerbates a congested condition (LOS F in the Core Area) by increasing the intersection’s average delay by five seconds or more. The intersection’s average delay is 94 seconds both with and without the added trips from the Hyatt Place expansion and the Old Davis Road extension and the intersection’s average delay would not be increased by five seconds or more. Therefore, the impact to the 1st Street / Richards Boulevard intersection would be a less-than-significant impact.

This information is provided to assist UC Davis and the City of Davis in intersection planning and forecasting future potential intersection improvements even though the identified improvements would not be triggered by the proposed project.

4.5.7 References


5 OTHER CEQA REQUIRED SECTIONS

5.1 GROWTH-INDUCING IMPACTS

As required by CEQA, an EIR must discuss the ways in which the proposed project could directly or indirectly foster economic or population growth or the construction of additional housing and how that growth could, in turn, affect the environment (CEQA Guidelines Section 15126[g]). Growth can be induced in a number of ways, including by eliminating obstacles to growth and stimulating economic activity outside of the project. The Old Davis Road Extension would not create additional trips. The proposed Hotel Addition project is intended to generate additional economic growth through increased utilization of the existing UC Davis Conference Center. The increased activity would result in increased vehicular trips with associated air quality, noise, and traffic impacts as well as increased resource consumption (energy and water use) at both the expanded hotel and the existing Conference Center. Under CEQA, induced growth is not necessarily considered beneficial or detrimental. Induced growth is considered a significant impact only if it has a significant effect on the environment. The full utilization of the UC Davis Conference Center was previously evaluated in the Conference Center, Hotel and Graduate School of Management Final EIR (State Clearinghouse No. 2001082067) (UC Davis 2002) The increase in activity levels associated with the proposed project are within within the utilization levels planned for the Conference Center and analyzed in the Conference Center EIR. This EIR also evaluates the increased activity (traffic levels, noise, and air quality) due to the proposed Hotel Expansion as well as the increased resource consumption (water and energy use) of the Hotel Expansion. Although the project would induce growth, the expected impacts have been identified as less-than-significant. Accordingly, the growth inducement from the proposed project would be less-than-significant.

5.2 SIGNIFICANT AND UNAVOIDABLE IMPACTS

CEQA requires that an EIR identify any significant impacts that cannot be reduced to a less than-significant level through mitigation (CEQA Guidelines Section 15126.2[b] and Public Resources Code Section 21000[b]). The proposed project would not cause any project-level significant and unavoidable environmental impacts, but would contribute to significant and unavoidable cumulative impacts.

As described in Section 7.18 of the Tiered Initial Study (Appendix A, p.98), the proposed project would not contribute to a significant unavoidable cumulative impacts identified in the 2003 LRDP EIR related to: aesthetics, agriculture resources, biological resources, population and housing, public services, recreation, and utilities and service systems. It would incrementally contribute to, but would not exceed, significant and unavoidable impacts related to: air quality, cultural resources, hydrology and water quality, noise, population and housing, public services, recreation, and transportation/circulation. These impacts were adequately analyzed in the 2003 LRDP EIR and fully addressed in the Findings and Statement of Overriding Considerations adopted by The Regents in connection with its approval of the 2003 LRDP. No conditions have changed and no new information has become available since certification of the 2003 LRDP EIR that would alter this previous analysis.

5.3 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

The CEQA Guidelines (Section 15126.2[c]) require that an EIR discuss the extent to which a project, during its initial or continued phases (i.e., construction and operations), would result in commitment of
nonrenewable resources that future generations would be unable to reverse. An impact would fall into this category if:

- The project would involve a large commitment of nonrenewable resources;
- The primary and secondary impacts of a project would generally commit future generations to similar uses (e.g., a highway provides access to a previously remote area);
- The project involves uses in which irreversible damage could result from any potential environmental accidents associated with the project; or
- The phasing of the proposed consumption of resources is not justified (e.g., the project involves the wasteful use of energy).

The proposed project would be constructed at the site of the existing hotel and would slightly modify the existing campus circulation system by shifting the route of the existing road and converting the existing road to a bicycle and pedestrian path. The proposed project would not require the conversion of any land beyond what was previously committed for the existing UC Davis South Entry District, as analyzed in the 2003 LRDP EIR.

Implementation of the proposed project would result in an irreversible commitment of energy resources, primarily in the form of fossil fuels, including fuel oil, natural gas, and gasoline for construction equipment and operations. The consumption or destruction of other nonrenewable and slowly renewable resources would also result during construction and operation of the proposed project. These resources include, but are not limited to, lumber, sand, gravel, asphalt, metals, and water. The irretrievable commitment of the above-listed resources is considered justified to achieve the overall goals and objectives of the proposed project.
6 ALTERNATIVES

6.1 ALTERNATIVES DESCRIPTION

Section 15126.6 of the CEQA Guidelines require an evaluation of "a range of reasonable alternatives to the project, or the location of the project, which would feasibly attain most of the basic project objectives but would avoid or substantially lessen any of the significant effects, and evaluate the comparative merits of the alternatives." The purpose of the alternatives analysis is to determine whether a variation of the proposed project would reduce or eliminate significant project impacts in the basic framework of the project's objectives. The alternatives analysis must compare the alternatives to the proposed project. The focus and definition of the alternatives evaluated in this Draft EIR is governed by the "rule of reason" in accordance with Section 15126.6(f) of the CEQA Guidelines requiring evaluation of only those alternatives "necessary to permit a reasoned choice." Further, an EIR "need not consider an alternative whose effect cannot be reasonably ascertained and whose implementation is remote and speculative."

Following are the objectives of the proposed projects.

Hotel Expansion:
The Hotel Expansion will provide needed capacity for overnight accommodations in close proximity to the UC Davis conference center. The expanded capacity is expected to improve the ability of UC Davis to host academic conferences in furtherance of the teaching, research, and public service mission of the University. The project objectives are to:

- Provide opportunities to attract larger and more frequent conferences including academic and University-sponsored conferences to the UC Davis Conference Center to promote professional collaboration and academic synergies by providing additional hotel rooms in close proximity to the UC Davis Conference Center.
- Create additional hotel rooms at the UC Davis Hyatt Place Hotel to minimize the site development costs and environmental effects of providing additional hotel rooms in close proximity to the UC Davis Conference Center.
- Minimize traffic impacts and associated contributions to global warming by enabling conference participants to minimize automobile travel between off-site hotel locations and the existing conference center.

Old Davis Road Extension:
The Old Davis Road Extension will implement a long-planned change to circulation at UC Davis. The project objectives are to:

- Simplify the routing and experience for new visitors to the UC Davis campus by making route-finding simpler and more intuitive so that new visitors better understand the concept of the campus loop road and the traffic flow along the loop road.
- Improve the connection between the UC Davis Mondavi Center for the Performing Arts, the UC Davis Conference Center, and the Hyatt Place Hotel, and the City of Davis downtown area.

- Convert the existing road alignment to a bike and pedestrian facility to facilitate these modes of travel, to expand the campus bicycle network and to enhance the exposure for arboretum uses by shifting motorized vehicles south, away from the arboretum.

- Identify a corridor for utility expansions or extensions that may be needed for future projects along the road extension that are consistent with the 2003 LRDP and the 2003 LRDP EIR.

A two-step process was used to conduct the alternatives analysis in this Draft EIR. First, potential alternatives were examined for their feasibility and ability to meet most of the basic project objectives. Those that clearly were found to be infeasible were rejected without further environmental review. Alternatives that may be feasible and that would attain most of the basic project objectives were carried forward and analyzed with regard to whether they would reduce or avoid significant impacts of the project. The alternatives considered but rejected are discussed in Section 6.2. The alternatives carried forward for analysis are discussed in Section 6.3. The CEQA Guidelines also requires that the “environmentally superior alternative” be identified in the EIR. Section 6.4 identifies the environmentally superior alternative. The following table summarizes the alternatives that were rejected and the alternatives that were carried forward for analysis.

### Table 6.1: Alternatives Summary

<table>
<thead>
<tr>
<th>Applicable to Hotel Expansion or Road Extension?</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td><strong>Alternatives Considered But Rejected</strong></td>
<td>Under this alternative, hotel expansion would not take place and the campus would promote teleconferencing as the preferred method for professional collaboration and would discourage (through incentives or disincentives) participation in conferences. In doing so, the need for additional hotel rooms adjacent to the existing conference center could potentially be reduced and perhaps the expansion of the hotel would not be needed.</td>
</tr>
<tr>
<td>Hotel Expansion--Teleconference Promotion/ Minimize Campus Conference Promotion</td>
<td>Hotel Expansion</td>
</tr>
<tr>
<td>Hotel Expansion--Construction at Non-UC Davis Location</td>
<td>This alternative would involve purchasing land and constructing the proposed facilities at a non-UC Davis location or requesting a third-party developer to expand hotel offerings at an off-campus location near the UC Davis conference center. The alternative would be similar to the proposed project except that: 1) the facility would not be constructed adjacent to the existing hotel; and 2) the project would be not be as close to the proposed location as the proposed project because there are no other accessible off-campus locations in close proximity to the existing conference center.</td>
</tr>
<tr>
<td>Road Extension—Construction of Alternative Route</td>
<td>This alternative would involve routing the proposed road extension toward the south and east. Rather than the proposed S-curve that is preferred in the proposed project, the road would extend along the north side of the railroad tracks and then curve gently north to connect with A Street. This alternative would require removal of approximately seven buildings within the Solano Park student housing area and would</td>
</tr>
<tr>
<td>Alternatives Evaluated in Detail</td>
<td>Description</td>
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<tr>
<td>Hotel Expansion—No Project — No Build</td>
<td>The No Project—No Build alternative would not construct the proposed hotel addition. This alternative would not meet the basic project objectives of adding additional hotel rooms in close proximity to the UC Davis Conference Center. To maximize the use of the existing conference facilities, additional hotel rooms in close proximity to the existing hotel are needed. Under this alternative, the desired on-going use of the conference center would result in decreased potential events and the missed opportunity of attracting larger conferences to the existing facility.</td>
</tr>
<tr>
<td>Hotel Expansion—Construction at Alternative UC Davis Locations</td>
<td>This alternative would construct a new 52-room hotel structure somewhere else at UC Davis. The exact location for this alternative is not considered here, it could conceivably be selected to prominently identify and promote some portion of the UC Davis campus such as the Aggie Stadium, the College of Veterinary Medicine, West Village, the Arboretum, or the Mondavi Center for the Performing Arts. For some options such as the Arboretum or the Mondavi Center for the Performing Arts, the physical location would be close enough to the existing UC Davis Conference Center so that the hotel rooms would be attractive to conference participants. Under this alternative, additional efforts would be needed to book guests for one of the two hotels (the existing and the proposed) into the location most desired by the guests. In addition, the operators of the hotels would need to carefully explain the existence of two hotel locations and provide clear directions to each of the facilities.</td>
</tr>
<tr>
<td>Hotel Expansion—Construction of Reduced Facilities</td>
<td>This alternative would involve construction of a smaller building than the proposed project. The key elements of this alternative would be to construct a single building of only 15,000 square feet instead of the proposed 28,000 square feet and to provide approximately 26 new hotel rooms rather than the 52 rooms that are proposed for the Hyatt Place hotel expansion.</td>
</tr>
<tr>
<td>Road Extension—No Project — No Build</td>
<td>Under the No Project Alternative for the road extension, no roadway modifications would occur. The new road extension would not be constructed and the existing route of Old Davis Road would not be converted to a bicycle and pedestrian path. The No Project—No Build alternative would not meet the basic project objectives. The road improvements to produce enhanced wayfinding on the campus loop road and conversion of the existing Old Davis Road to a bike and pedestrian facility would not occur.</td>
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<tr>
<td>Road Extension—Construction of Reduced Facilities (no bike)</td>
<td>This alternative would involve construction of a similar road with landscaping and sidewalk as contemplated under the proposed project. Rather than including bike lanes within the proposed roadway, the road extension would be built narrower with the elimination of 6 feet of pavement width in each direction. The amount of paved surface would require removal of the entire Solano Park community garden area. The alternative would be similar to the proposed project in terms of traffic and circulation effects but would be very disruptive to the Solano Park housing complex.</td>
</tr>
</tbody>
</table>
Applicable to Hotel Expansion or Road Extension?

<table>
<thead>
<tr>
<th>Description</th>
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<tr>
<td>decrease and the construction activities would also decrease. Rather than directing bicycle traffic to the road extension, cyclists would instead be directed to use the converted Old Davis Road section immediately south of the Arboretum as the preferred cycling route.</td>
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</table>

6.2 **ALTERNATIVES CONSIDERED BUT REJECTED**

This section presents an analysis of alternatives that were considered for the Hyatt Place Hotel Expansion and Old Davis Road Extension project but were rejected because they would not meet basic project objectives, and/or were determined to be infeasible for technological, environmental, legal, social, or other reasons.

6.2.1 **Hotel Teleconference Promotion/Minimize Campus Conference Promotion**

Under this alternative, hotel expansion would not take place and the campus would promote teleconferencing as the preferred method for professional collaboration and would discourage (through incentives or disincentives) participation in conferences. In doing so, the need for additional hotel rooms adjacent to the existing conference center could potentially be reduced and perhaps the expansion of the hotel would not be needed.

This alternative is infeasible and was rejected because employees would continue to use in-person conference sessions to collaborate and share work ideas; research opportunities and academic synergies and collaboration would be impaired if in-person conferences were not allowed. In doing so, the overall academic mission of the University would be hindered. Attempting to artificially discourage the practice of participating in professional conferences would result in conferences taking place at off-site locations with or without the participation of UC Davis employees. In addition, the alternative of reducing conference participation at UC Davis would not achieve the objective of utilizing the existing campus conference center efficiently through the provision of adjacent hotel rooms that could be booked for larger conference events.

6.2.2 **Hotel Construction at Non-UC Davis Location**

This alternative would involve purchasing land and constructing the proposed facilities at a non-UC Davis location or requesting a third-party developer to expand hotel offerings at an off-campus location near the UC Davis conference center. The alternative would be similar to the proposed project except that: 1) the facility would not be constructed adjacent to the existing hotel; and 2) the project would be not be as close to the proposed location as the proposed project because there are no other accessible off-campus locations in close proximity to the existing conference center.

This alternative was rejected as infeasible because would not be in close proximity to the UC Davis conference center and would not facilitate drawing additional and larger conferences. In addition, a non-UC Davis location could require additional automobile parking facilities, additional land area, and additional utility connections all of which are available and appropriately sized for the proposed building addition at the site of the existing Hyatt Place Hotel. The increased distance between a potential off-site location and the existing conference center would not achieve the objective of providing a close option for
conference attendees that would allow attendees to minimize automobile travel between the conference location and the hotel accommodation.

6.2.3 Road Construction of Alternative Route

This alternative would involve routing the proposed road extension toward the south and east. Rather than the proposed S-curve that is preferred in the proposed project, the road would extend along the north side of the railroad tracks and then curve gently north to connect with A Street. This alternative would require removal of approximately seven buildings within the Solano Park student housing area and would require removal of the entire Solano Park community garden area. The alternative would be similar to the proposed project in terms of traffic and circulation effects but would be very disruptive to the Solano Park housing complex.

This alternative was rejected as infeasible because, at this time, removal of student housing capacity at this location would conflict with the operational needs of the student housing program.

6.3 Alternatives Evaluated in Detail

6.3.1 Hotel: No Project – No Build

CEQA Guidelines Section 15126.6 states that an EIR’s “no project” analysis should discuss what would reasonably be expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and public services. Under the No Project—No Build alternative, UC Davis would continue to use existing hotel and conference facilities at UC Davis. The campus would not allow construction of the proposed building addition or extend the existing roadway. The No Project alternative would not enable the campus to attract additional and larger conferences, would not allow the campus to improve management and operational efficiencies at the existing hotel, and would not allow conference attendees to minimize automobile travel—all of which are project objectives.

The No Project—No Build alternative would not construct the proposed hotel addition. This alternative would not meet the basic project objectives of adding additional hotel rooms in close proximity to the UC Davis Conference Center. To maximize the use of the existing conference facilities, additional hotel rooms in close proximity to the existing hotel are needed. Under this alternative, the desired on-going use of the conference center would result in decreased potential events and the missed opportunity of attracting larger conferences to the existing facility.

Compared to the proposed project, the No Project-No Build alternative would have reduced environmental impacts because no construction would take place and the construction related impacts identified in the Tiered Initial Study and the Draft EIR (such as impacts to air quality from construction vehicle emissions) would not occur.

This alternative is infeasible because it would not meet the project objectives, would result in insufficient hotel rooms to serve the existing conference facility and would not allow for expanded overnight accommodations at UC Davis.
6.3.2 Hotel: Construction at Alternative UC Davis Locations

This alternative would construct a new 52-room hotel structure somewhere else at UC Davis. The exact location for this alternative is not considered here, it could conceivably be selected to prominently identify and promote some portion of the UC Davis campus such as the Aggie Stadium, the College of Veterinary Medicine, West Village, the Arboretum, or the Mondavi Center for the Performing Arts. For some options such as the Arboretum or the Mondavi Center for the Performing Arts, the physical location would be close enough to the existing UC Davis Conference Center so that the hotel rooms would be attractive to conference participants. Under this alternative, additional efforts would be needed to book guests for one of the two hotels (the existing and the proposed) into the location most desired by the guests. In addition, the operators of the hotels would need to carefully explain the existence of two hotel locations and provide clear directions to each of the facilities.

This alternative would not lessen any environmental effects compared to the proposed project. For some environmental resources topics such as utilities, geology and soils, and hydrology, the impacts would be higher because, rather than constructing a building addition on a previously prepared site with existing utility connections and available parking, this alternative would develop a new project site. In addition, to achieve 52 new hotel rooms, the construction at an Alternative UC Davis Location alternative would also need to construct a larger building to accommodate a hotel lobby, management offices, kitchen space, and utility space. The new project site would require adequate space for the building, landscaping, parking, and driveway access. Accordingly, the soil disturbing impacts would be greater than the impact from the proposed project, and utility connections may not be available at an alternative location which would necessitate additional construction to extend utility lines to the alternative site. Consequently, this alternative would be expected to have increased environmental impacts compared to the proposed project.

This alternative is considered infeasible because while it would meet most of the project objectives it would have environmental impacts that would be higher than the proposed project and would have higher financial costs. This alternative would not meet the project objective of providing additional hotel rooms at the Hyatt Place Hotel to minimize the site development costs and environmental effects of providing additional hotel rooms in close proximity to the UC Davis Conference Center.

6.3.3 Hotel: Construction of Reduced Facilities

This alternative would involve construction of a smaller building than the proposed project. The key elements of this alternative would be to construct a single building of only 15,000 square feet instead of the proposed 28,000 square feet and to provide approximately 26 new hotel rooms rather than the 52 rooms that are proposed for the Hyatt Place hotel expansion.

This alternative would have similar environmental effects to the proposed project but at a lower intensity because of the reduced construction impacts, a smaller increase in employee population, and a reduction in operational impacts. The overall reduction in operational impacts would extend to the air quality, greenhouse gas emissions, and utilities impacts evaluated in this EIR. Overall, the construction of Reduced Facilities Alternative would result in the same types of impacts as the proposed project, but at reduced intensities. The project would create the same type of site operational impacts such as trip generation and air quality emissions as the proposed project, but at a reduced level, and would not create any new environmental effects.

This alternative is considered infeasible because it would not fully meet the project objectives of providing additional hotel rooms to support large conferences.
6.3.4 **Road Extension: No Project-No Build**

Under the No Project Alternative for the road extension, no roadway modifications would occur. The new road extension would not be constructed and the existing route of Old Davis Road would not be converted to a bicycle and pedestrian path. The No Project—No Build alternative would not meet the basic project objectives. The road improvements to produce enhanced wayfinding on the campus loop road and conversion of the existing Old Davis Road to a bike and pedestrian facility would not occur.

Compared to the proposed project, the No Project-No Build alternative would have reduced environmental impacts because no construction would take place and the construction related impacts identified in the Tiered Initial Study and the Draft EIR (such as impacts to air quality and greenhouse gas emissions from construction vehicle emissions) would not occur.

This alternative is infeasible because it would not meet the project objectives and would not allow for improved circulation at UC Davis. This alternative is contrary to the planned improvements identified in the 2003 LRDP and would conflict with implementing the bicycle circulation plans approved in the 2008 UC Davis Bikeway and Transit Network Study.

6.3.5 **Road Extension: Construction of Reduced Facilities—No Bike Lanes**

This alternative would involve construction of a similar road with landscaping and sidewalk as contemplated under the proposed project. Rather than including bike lanes within the proposed roadway, the road extension would be built narrower with the elimination of 6 feet of pavement width in each direction. The amount of paved surface would decrease and the construction activities would also decrease. Rather than directing bicycle traffic to the road extension, cyclists would instead be directed to use the converted Old Davis Road section immediately south of the Arboretum as the preferred cycling route.

This alternative would have similar environmental effects to the proposed project but at a lower intensity because of the reduced construction impacts and decreased impervious surface. The reduction in construction impacts would extend to the air quality, cultural resources, and greenhouse gas emissions, and impacts evaluated in this EIR. Overall, the construction of the Reduced Facilities Alternative—No Bike Lanes would result in the same types of impacts as the proposed project, but at reduced intensities. This alternative is considered infeasible because it would not meet the project objectives of providing a street with bike lanes in accordance with campus plans for completing the bike network and providing comfortable cycling facilities along roadways.

6.4 **Environmentally Superior Alternative**

CEQA requires identification of an environmentally superior alternative; that is, the alternative that has the least significant impacts on the environment. For the proposed projects (Hotel Expansion and Road Extension), the No Project-No Build Alternatives would avoid all contributions to environmental impacts that were identified in the Tiered Initial Study and the Focused Tiered Draft EIR; however, they do not allow for the attainment of basic project objectives.

CEQA requires that the build or action alternative with the fewest significant impacts be identified in the event that the No Project Alternative is the environmentally superior alternative. Accordingly, the Construction of Reduced Facilities for both the Hotel Expansion and Road Extension are considered the environmentally superior alternatives. As stated above, these alternatives would have similar
environmental effects to the proposed project but at lower intensities because less construction would take place due to the reduction in the proposed building square footage from 28,000 square feet to 15,000 square feet. For the Road Extension, the Reduced Construction Alternative would have decreased construction impacts. The hotel alternative would result in a reduced number of hotel rooms, a smaller increase in the employee population, and a reduction in operational impacts. Overall, the Construction of Reduced Facilities Alternatives would result in decreased impacts compared to the proposed project and compared to the other action alternatives.
7 REFERENCES AND ACRONYMS/ABBREVIATIONS

References


California Environmental Protection Agency (Cal EPA), Climate Action Team. 2006. Climate Action Team Report to Governor Schwarzenegger and the Legislature.


U.S. Department of Health and Human Services. 1999. Biosafety in Microbiological and Biomedical Laboratories. 4th Ed. Centers for Disease Control and Prevention and


**Acronyms/Abbreviations**

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tr>
<td>asf</td>
<td>assignable square feet</td>
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<tr>
<td>CAPCOA</td>
<td>California Air Pollution Control Officers Association</td>
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<tr>
<td>CEQA</td>
<td>California Environmental Quality Act</td>
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<tr>
<td>EIR</td>
<td>Environmental Impact Report</td>
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<tr>
<td>gsf</td>
<td>gross square feet</td>
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<tr>
<td>IS</td>
<td>Initial Study</td>
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<tr>
<td>NOP</td>
<td>Notice of Preparation</td>
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<tr>
<td>The Regents</td>
<td>The Board of Regents of the University of California</td>
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<td>UC Davis</td>
<td>University of California, Davis</td>
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<td>University</td>
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8 AGENCIES & PERSONS CONSULTED

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Katherine Hess, City of Davis
Ken Hiatt, City of Davis
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Appendix A: UC Davis Hotel Expansion and Old Davis Road Extension Tiered Initial Study
HYATT PLACE HOTEL EXPANSION AND OLD DAVIS ROAD EXTENSION

Tiered Initial Study

The following Initial Study has been prepared in compliance with CEQA.

Prepared By:
ENVIRONMENTAL STEWARDSHIP AND SUSTAINABILITY
University of California
One Shields Avenue
436 Mrak Hall
Davis, California 95616

March 2011

Contact: A. Sidney England, Assistant Vice Chancellor for Environmental Stewardship and Sustainability
530-752-2432
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1 PROJECT INFORMATION

Project title:

Hyatt Place Hotel Expansion and Old Davis Road Extension

Project location:

University of California, Davis
Yolo County

Lead agency’s name and address:

The Regents of the University of California
1111 Franklin Street
Oakland, CA 94607

Contact person:

A. Sidney England, Assistant Vice Chancellor for Environmental Stewardship and Sustainability, 530-752-2432

Project sponsor’s name and address:

Environmental Stewardship and Sustainability
University of California
One Shields Avenue
436 Mrak Hall
Davis, CA 95616-8678

Location of administrative record:

See project sponsor.

Identification of previous documents relied upon for tiering purposes:

This environmental analysis is tiered from the Environmental Impact Report (EIR) for the UC Davis 2003 Long Range Development Plan (2003 LRDP) (State Clearinghouse No. 2002102092). The 2003 LRDP is a comprehensive land use plan that guides physical development on campus to accommodate projected enrollment increases and expanded and new program initiatives through the 2015-16 academic year. Section 2.2 provides additional information about the tiering process. The 2003 LRDP and its EIR are available for review at the following locations:

- UC Davis Office of Environmental Stewardship and Sustainability, 436 Mrak Hall on the UC Davis campus
- Reserves at Shields Library on the UC Davis campus
- Yolo County Public Library at 315 East 14th Street in Davis
2 INTRODUCTION

2.1 INITIAL STUDY

Pursuant to Section 15063 of the California Environmental Quality Act (CEQA) Guidelines (Title 14, California Code of Regulations, Sections 15000 et seq.), an Initial Study is a preliminary environmental analysis that is used by the lead agency as a basis for determining whether an EIR, a Mitigated Negative Declaration, or a Negative Declaration is required for a project. The CEQA Guidelines require that an Initial Study contain a project description, description of environmental setting, identification of environmental effects by checklist or other similar form, explanation of environmental effects, discussion of mitigation for significant environmental effects, evaluation of the project's consistency with existing, applicable land use controls, and the name of persons who prepared the study.

2.2 TIERING PROCESS

The CEQA concept of "tiering" refers to the evaluation of general environmental matters in a broad program-level EIR, with subsequent focused environmental documents for individual projects that implement the program. This environmental document incorporates by reference the discussions in the 2003 LRDP EIR (the Program EIR) and concentrates on project-specific issues. CEQA and the CEQA Guidelines encourage the use of tiered environmental documents to reduce delays and excessive paperwork in the environmental review process. This is accomplished in tiered documents by eliminating repetitive analyses of issues that were adequately addressed in the Program EIR and by incorporating those analyses by reference.

Section 15168(d) of the State CEQA Guidelines provides for simplifying the preparation of environmental documents on individual parts of the program by incorporating by reference analyses and discussions that apply to the program as a whole. Where an EIR has been prepared or certified for a program or plan, the environmental review for a later activity consistent with the program or plan should be limited to effects that were not analyzed as significant in the prior EIR or that are susceptible to substantial reduction or avoidance (CEQA Guidelines Section 15152[d]).

This Initial Study is tiered from the UC Davis 2003 LRDP EIR in accordance with Sections 15152 and 15168 of the CEQA Guidelines and Public Resources Code Section 21094. The 2003 LRDP EIR is a Program EIR that was prepared pursuant to Section 15168 of the CEQA Guidelines. The 2003 LRDP is a comprehensive land use plan that guides physical development on campus to accommodate projected enrollment increases and expanded and new program initiatives through the 2015-16 academic year. The 2003 LRDP EIR analyzes full implementation of uses and physical development proposed under the 2003 LRDP, and it identifies measures to mitigate the significant adverse program-level and cumulative impacts associated with that growth. The proposed project is an element of the growth that was anticipated in the 2003 LRDP and evaluated in the 2003 LRDP EIR.

By tiering from the 2003 LRDP EIR, this Tiered Initial Study will rely on the 2003 LRDP EIR for the following:

- a discussion of general background and setting information for environmental topic areas;
- overall growth-related issues;
- issues that were evaluated in sufficient detail in the 2003 LRDP EIR for which there is no significant new information or change in circumstances that would require further analysis; and
- assessment of cumulative impacts.
This Initial Study will evaluate the potential environmental impacts of the proposed project with respect to the 2003 LRDP EIR to determine what level of additional environmental review, if any, is appropriate. As shown in the Determination in Section 6 of this document, and based on the analysis contained in this Initial Study, it has been determined that the proposed project may have potentially significant effects on the environment that were not previously addressed or adequately addressed in the 2003 LRDP EIR, or may have environmental effects that are less-than-significant but have been selected for further analysis and disclosure. Therefore, an EIR will be prepared.

This Initial Study concludes that that many potentially significant project impacts are addressed by the measures that have been adopted as part of the approval of the 2003 LRDP. Therefore, those 2003 LRDP EIR mitigation measures that are related to, and may reduce the impacts of, this project will be identified in this Initial Study. Since these mitigation measures are already being carried out as part of implementation of the 2003 LRDP, they will not be readopted, but rather are incorporated as part of the project and the impact analysis assumes implementation for purposes of determining the significance of any project impact. The benefits of these mitigation measures will be achieved independently of considering them as specific mitigation measures of this project. Nothing in this Initial Study in any way alters the obligations of the campus to implement the LRDP mitigation measures.

2.3 **PUBLIC AND AGENCY REVIEW**

This Initial Study will be circulated for public and agency review from March 23, 2011 to April 21, 2011. Copies of this document, the 2003 LRDP, and the 2003 LRDP EIR are available for review at the following locations:

- UC Davis Office of Environmental Stewardship and Sustainability in 436 Mrak Hall on the UC Davis campus
- Reserves at Shields Library on the UC Davis campus
- Yolo County Public Library at 315 East 14th Street in Davis

Comments on this Initial Study must be received by 5:00 PM on April 21, 2011 and can be e-mailed to medulcich@ucdavis.edu or sent to:

A. Sidney England  
Assistant Vice Chancellor – Environmental Stewardship and Sustainability  
University of California  
One Shields Avenue  
436 Mrak Hall  
Davis, CA 95616

Comments received on this Initial Study will be considered during the preparation of the upcoming EIR for the proposed project. In addition, the Draft EIR will include a copy of all the public and agency comments.
2.4 PROJECT APPROVALS

As a public agency principally responsible for approving or carrying out the proposed project, the University of California is the Lead Agency under CEQA and is responsible for reviewing and certifying the adequacy of the environmental document and approving the proposed project. It is anticipated that the Committee on Grounds and Building for the Board of Regents of the University of California (The Regents) may consider approval of the proposed Hyatt Place Hotel Expansion project in July 2011 and the campus also may consider approval of the road expansion as early as July 2011.

2.5 ORGANIZATION OF THE INITIAL STUDY

This Initial Study is organized into the following sections:

Section 1 – Project Information: provides summary background information about the proposed project, including project location, lead agency, and contact information.

Section 2 – Introduction: summarizes the Initial Study's relationship to the 2003 LRDP EIR, the scope of the document, the project's review and approval processes, and the document's organization.

Section 3 – Project Description: includes a description of the proposed project, including the need for the project, the project's objectives, and the elements included in the project.

Section 4 – Consistency with the 2003 LRDP: describes the consistency of the proposed project with the 2003 LRDP and 2003 LRDP EIR.

Section 5 – Environmental Factors Potentially Affected: identifies which environmental factors, if any, involve at least one significant or potentially significant impact that has not been previously addressed in the 2003 LRDP EIR and cannot be reduced to a less-than-significant level.

Section 6 – Determination: indicates whether impacts associated with the proposed project are significant, and what, if any, additional environmental documentation is required.

Section 7 – Evaluation of Environmental Impacts: contains the Environmental Checklist form for each resource area. The checklist is used to assist in evaluating the potential environmental impacts of the proposed project with respect to the 2003 LRDP EIR. This section also presents a background summary for each resource area, the standards of significance, relevant impacts and mitigation measures from the 2003 LRDP EIR, and an explanation of all checklist answers.

Section 8 – Fish and Game Determination: indicates if the project has a potential to impact wildlife or habitat and if an associated Fish and Game filing fee would be paid.

Section 9 – References: lists references used in the preparation of this document.

Section 10 – Agencies and Persons Consulted: provides the names of individuals contacted in preparation of this document.

Section 11 – Report Preparers: lists the names of individuals involved in the preparation of this document.
3 PROJECT DESCRIPTION

3.1 REGIONAL LOCATION

The approximately 5,300 acre UC Davis campus is located in Yolo and Solano Counties approximately 72 miles northeast of San Francisco, 15 miles west of the City of Sacramento, and adjacent to the City of Davis (see Figure 3.1). The campus is comprised of four campus units: the central campus, the south campus, the west campus, and Russell Ranch. Most academic and extracurricular activities occur within the central campus. The central campus is bounded generally by Russell Boulevard to the north, State Route 113 (SR 113) to the west, Interstate 80 (I-80) and the Union Pacific Railroad tracks to the south, and A Street to the east. The south campus is located south of I-80 and north of the South Fork of Putah Creek. The west campus is bounded by SR 113 to the east, Putah Creek to the south, Russell Boulevard to the north, and extends approximately one-half mile west of County Road 98. The south and west campus units are contiguous with the central campus, and are used primarily for field teaching and research. The approximately 1,600 acre Russell Ranch portion of the campus lies to the west, separated from the west campus by approximately one and one-half miles of privately owned agricultural land. Russell Ranch was purchased in 1990 for campus uses including large-scale agricultural and environmental research, study of sustainable agricultural practices, and habitat mitigation. Russell Ranch is bordered roughly by County Road 96 on the east, Putah Creek on the south, Covell Boulevard on the north, and Russell Boulevard and privately owned agricultural land on the west and northwest.

3.2 PROJECT OVERVIEW

UC Davis proposes two projects on the south portion of the central campus. The first project would expand the existing campus hotel by adding 52 rooms to the existing 75 rooms which would result in a total hotel capacity of 127 rooms. The existing Hyatt Place hotel at UC Davis was completed in 2010 and is built and operated by a third-party developer. The hotel expansion would take place on a landscaped area within the developed parcel of the hotel to the north and east of the existing building. The existing parking lot for the hotel has sufficient capacity to accommodate the proposed expansion and would not need to be expanded. The expanded hotel building would result in an additional 30,000 square feet of building area and, like the existing facility, would be four stories tall. The design of the hotel expansion would match the architecture and height of the existing building.

The second project proposed for the south portion of UC Davis is the extension of Old Davis Road from its existing terminus east of the existing hotel to the southern terminus of A Street. The proposed extension of Old Davis Road has been previously identified as a component of the long-term UC Davis roadway plans and the road was partially extended by 800 feet in 2009 with the conference center and hotel projects. The proposed extension would construct approximately 1,100 feet of new roadway and would connect to the south side of Parking Lot 5 allowing through access on the connected roadway. Once connected, the road extension would provide an alternate route to the existing Old Davis Road alignment. UC Davis eventually would convert the existing Old Davis Road along the south side of the UC Davis Arboretum to a bike and pedestrian path with emergency vehicle and service vehicle access.

The road extension would include two-lanes for motorized traffic (one lane in each direction) and a bike lane adjacent to the road curb. The project would include a sidewalk on the north side of the road and landscaping along the road. A 15 foot-wide corridor south of the road would be designated as a future planning corridor for underground utilities. The extended road would replace the existing road connection located between Mrak Hall Drive and A Street.
Figure 2
Project Locations
Aerial photo shows existing hotel development with expansion area at east side of building.
Architectural renderings show existing building with completed addition.
3.3 PROJECT SITE

Hotel Expansion:
The hotel expansion site is approximately 8,000 square feet immediately adjacent to the east side of the existing hotel building. The project site was used for construction staging during construction of the existing four-story hotel building and was landscaped with turf and shrubs upon completion of the hotel building. The proposed construction would take place entirely within the previously developed area at the hotel site. The site planning for the original hotel included arrangement of the hotel driveway, parking area and visitor circulation to accommodate the potential future expansion of the hotel.

The hotel expansion site is in the southern portion of the central campus at UC Davis in Yolo County where UC Davis has built new buildings and infrastructure during the last 10 years. Previous projects in this area include the Mondavi Institute for Wine and Food Science, the South Entry Parking Structure, Parking Lots 1 and 2, the Mondavi Center for the Performing Arts, Vanderhoef Quad, Gallagher Hall for the Graduate School of Management, the Conference Center Building, and the existing hotel which was completed in 2010. Additional new infrastructure in this portion of campus includes the road and utilities that have been completed to serve these new buildings.

In total the site of the existing hotel is approximately three acres including the hotel, parking lot, driveways, and landscaping. The proposed expansion would take place within this three acre area in an area of approximately 8,000 square feet.

To the north of the hotel site is the environmental horticulture teaching and research area consisting of small one-story buildings and greenhouses and surrounding garden space for horticultural teaching and research. To the east of the hotel site is an undeveloped field and further east is the community garden for the Solano Park housing area. To the south of the site is Old Davis Road and further south are the Union Pacific Railroad tracks (approximately 250 feet from the hotel building) and Interstate 80 (approximately 1,000 feet from the hotel building). To the west of the hotel site is the Conference Center building and Gallagher Hall.

The UC Davis 2003 LRDP designates the project site and these surrounding areas as areas intended for Academic and Administrative land uses, a designation that intended for uses that fulfill the teaching, research, and public service mission of university and business/service activities that support the University mission.

Old Davis Road Extension:
The Old Davis Road Extension would take place from the current roadway terminus south of the existing hotel in a north and east direction for approximately 1,100 feet. The road extension would occupy land that is predominantly a field kept in turf. A portion of the roadway and utility corridor also would extend through a portion of an area used as residential garden space by students living in the UC Davis Solano Park Housing complex. A portion of the area for the road extension is covered with mowed lawn and the project would also displace an outdoor basketball court. Land uses to the north of the road extension include a lawn area between the Environmental Horticulture buildings and the Nelson Hall Art Gallery (formerly the University Club). No off-campus land uses would be directly affected by the proposed road extension.

The 2003 LRDP documented the planned extension of Old Davis Road in the proposed alignment. The proposed project is consistent with the 2003 LRDP and helps to implement the circulation patterns that were anticipated in the 2003 LRDP. The 2003 LRDP designated the land area north of the road extension for Academic and Administrative land uses. The 2003 LRDP designated the land area south of the road extension for Community Gardens and PE/ICA/Recreation uses.
3.4 PROJECT NEED AND OBJECTIVES

The proposed project will provide needed improvements to UC Davis facilities and infrastructure. The specific need and objectives for each project component is provided below.

Hotel Expansion:
The Hotel Expansion will provide needed capacity for overnight accommodations in close proximity to the UC Davis conference center. The expanded capacity is expected to improve the ability of UC Davis to host academic conferences in furtherance of the teaching, research, and public service mission of the University. Project objectives include:

- Expanded overnight accommodations in close proximity to the UC Davis conference center.
- Opportunities to attract larger conferences to the UC Davis Conference Center and the Davis area through the provision of additional hotel rooms in the Davis area.
- Additional hotel rooms under the same management and operational control of the existing campus hotel to minimize the management costs and site development costs of hotel operations.
- Minimize traffic impacts and associated contributions to global warming by enabling conference participants to minimize automobile travel between off-site hotel locations and the existing conference center.

Old Davis Road Extension:
The Old Davis Road Extension will implement a long-planned change to circulation at UC Davis. The project objectives are to:

- Simplify the routing and experience for new visitors to the UC Davis campus. The proposed project will make route-finding simpler and more intuitive so that new visitors better understand the concept of the campus loop road and the traffic flow along the loop road.
- Improve the connection between the UC Davis Mondavi Center for the Performing Arts and the UC Davis Conference Center and the City of Davis downtown area. The proposed project will improve the roadway connection so that visitors can easily connect a visit to the performing arts center with shopping or dining opportunities in downtown Davis.
- Allow future conversion of the existing road alignment to a bike and pedestrian facility to facilitate these modes of travel, to expand the campus bicycle network and to enhance the exposure for arboretum uses by shifting motorized vehicles south, away from the arboretum.

3.5 PROJECT ELEMENTS

3.5.1 Building Addition

The addition to the existing hotel would consist of approximately 30,000 square feet of new building space. The addition would consist of four floors to match the height of the existing building and each floor would provide approximately 6,900 square feet of space and 14 hotel rooms for a total addition of 52 new hotel rooms.
The architecture of the building addition would match the style, colors, and height of the existing building and is designed to ensure that the completed addition would appear as an integrally designed portion of the existing building.

3.5.2 **Landscaping**

The proposed hotel addition would not include new landscaping at the project site. Upon completion of the original hotel building and parking lot, the area was landscaped with trees, shrubs, and groundcover. The road extension project will include landscaping along the sides of the road to provide street trees and groundcover.

3.5.3 **Parking and Roadways**

The proposed project includes no parking or roadway changes associated with the hotel expansion. The parking and roadway modifications associated with the road realignment include the following:

- **Road Extension.** The project includes extension of the roadway from its existing terminus east of the hotel site to A Street at Parking Lot 5. The road will include one lane in each direction, bike lanes, curb, gutter, street lighting, landscaping and a sidewalk on the north side of the road.

- **Modifications to Parking Lot 5.** Within Parking Lot 5, approximately 25 parking spaces will be removed to allow a portion of existing parking lot to function as a road corridor with bike lanes and sufficient width for motorized vehicles. The proposed design would utilize the existing curb and gutter within the parking lot driveway to function as a roadway. Additional driveway modifications may also be provided for Parking Lot 5 as part of the project completion.

- **Modifications to Nelson Hall exterior.** Nelson Hall (previously the University Club) would be accessed directly from the road extension instead of the existing Old Davis Road and modifications to the driveway drop-off and turnaround area for Nelson Hall would be provided as part of the proposed project.

- **Modifications to the existing Old Davis Road.** Upon completion of the road extension, UC Davis may also modify the existing segment of Old Davis Road between Mrak Hall Circle and A Street for improved bike and pedestrian access.

3.5.4 **Utilities and Infrastructure**

As discussed briefly below and analyzed in Section 7.16, the proposed project would require connections to campus utilities and infrastructure including domestic water, utility water, sanitary sewer, storm drainage, electricity, natural gas, and telecommunications.

- **Domestic Water:** Domestic water for the hotel building addition will be provided from the campus domestic water system and the building addition will connect to an existing water supply main within the project site. The road extension project will not affect domestic water supply.

- **Utility Water:** The hotel building addition will not utilize water from the campus utility water system. The road extension project will use utility water for roadway landscaping and will connect to an existing water supply main within the project site.
• **Sanitary Sewer:** The hotel building addition will connect to an existing sanitary sewer line within the project site. The sewer line is served by the campus wastewater treatment facility. The road extension project will not connect to the campus sanitary sewer system and will not generate demand for the sanitary sewer system.

• **Storm Drainage:** The hotel addition and the road extension will connect to the campus storm drainage system so that stormwater runoff from the project is directed to underground drains that would flow to the UC Davis arboretum waterway. For the hotel building addition, the existing drains at the project site would be utilized. For the road extension project, new project drain inlets would connect to a new underground drainage pipe that would extend from the road extension northward, past the west side of Nelson Hall and would then empty into the arboretum waterway.

• **Electricity:** The hotel addition and the road extension will connect to the campus grid at an existing connection point within each project site. The hotel addition will use electrical power for lighting and cooling. The road extension project will use electrical power for streetlights.

• **Natural Gas:** The hotel addition will connect to the Pacific Gas and Electric (PG&E) natural gas system at an existing connection point within the project site. The road extension would not utilize natural gas. No off-site trenching will be needed to utilize natural gas.

• **Chilled Water:** The hotel addition and the road extension will not utilize chilled water from the campus utility system.

• **Steam:** The hotel addition and the road extension will not utilize steam from the campus utility system.

• **Telecommunications:** The hotel addition will connect to the AT&T telecommunication infrastructure for network and telephone service. The project will utilize existing connections within the hotel building to obtain service. The road extension would not utilize telecommunications services.

### 3.5.5 Population

The project would result in additional employment from the building addition so that employment at UC Davis would increase by approximately 12 people.

### 3.6 Construction Schedule and Staging

Construction of the proposed project is anticipated to begin in Fall 2011 and end in Summer of 2012. Construction staging and contractor parking associated with the proposed project would occur on the developed portion of the existing hotel parking lot.
4 CONSISTENCY WITH THE 2003 LRDP AND 2003 LRDP EIR

In order to determine the proposed project’s consistency with the 2003 LRDP and 2003 LRDP EIR, the following questions must be answered:

- Is the proposed project included in the scope of the development projected in the 2003 LRDP?
- Is the proposed location of the project in an area designated for this type of use in the 2003 LRDP?
- Are the changes to campus population associated with the proposed project included within the scope of the 2003 LRDP’s population projections?
- Are the objectives of the proposed project consistent with the objectives adopted for the 2003 LRDP?
- Is the proposed project within the scope of the cumulative analysis in the 2003 LRDP EIR?

The following discussion describes the proposed project’s relationship to and consistency with the development projections, population projections, land use designations, objectives, and cumulative impacts analyses contained in the 2003 LRDP and the 2003 LRDP EIR.

4.1 2003 LRDP SCOPE OF DEVELOPMENT

The 2003 LRDP anticipates academic and administrative space on campus will increase to approximately 7,175,000 asf through 2015-16. In fall 2002, the campus had only approximately 4,475,000 asf of academic and administrative space. The proposed project, with 30,000 asf of academic/administrative space, in combination with other recently approved and currently proposed projects, would not increase academic and administrative building space on campus to levels that would exceed those projected for 2015-16. Therefore, the proposed project is well within the 2003 LRDP’s scope of academic and administrative development.

4.2 2003 LRDP LAND USE DESIGNATION

The UC Davis 2003 LRDP designates the project site and these surrounding areas as areas intended for Academic and Administrative land uses, a designation that intended for uses that fulfill the teaching, research, and public service mission of university and business/service activities that support the University mission. These include classrooms; research laboratories and research support areas; faculty, student and staff offices; libraries; program support facilities; student activity space; meeting rooms; space for public service, outreach and cultural activities; and business/service activities that support the University mission. While most facilities may be occupied by University programs, some may be occupied by University-related public or private partnerships. The Academic/Administrative High Density designation also includes setbacks, landscaping, paths, on-site utility services, sidewalks, small parking lots (under 100 spaces), and roads associated with facilities. Therefore, the hotel expansion is consistent with this land use designation.

The 2003 LRDP documented the planned extension of Old Davis Road in the proposed alignment. The proposed project is consistent with the 2003 LRDP and helps to implement the circulation patterns that were anticipated in the 2003 LRDP. The 2003 LRDP designated the land area north of the road extension for Academic and Administrative land uses. The 2003 LRDP designated the land area south of the road extension for Community Gardens and PE/ICA/Recreation uses.
4.3 2003 LRDP POPULATION PROJECTIONS

The 2003 LRDP projects that, through 2015-16, the on-campus population will increase to include approximately 30,000 students, 14,500 faculty and staff, and 3,240 non-UC employees\(^1\). In addition, the total number of household members associated with students and employees living in on-campus housing is expected to increase to approximately 29,803. The fall 2010 on-campus faculty and staff headcount was approximately 11,300, and the 2009-10 three-quarter average on-campus student population was approximately 28,879 (UC Davis ORMP 2003a and b). The proposed project, would not introduce new student or faculty but would increase the employment at UC Davis by approximately 12 people. This increase of 12 employees in combination with other recently approved and currently proposed campus projects would not increase the overall campus population to the projected 2015-16 in the 2003 LRDP EIR. Therefore, the proposed project is well within the 2003 LRDP’s on-campus population projections.

4.4 2003 LRDP OBJECTIVES

The primary objective of the 2003 LRDP is to plan for the Davis campus’ share of the University of California’s short- and long-term enrollment demands. In addition, the 2003 LRDP aims to:

- create a physical framework to support the teaching, research, and public service mission of the campus;
- manage campus lands and resources in a spirit of stewardship for the future; and
- provide an environment that enriches campus life and serves the greater community.

The proposed project would support these main 2003 LRDP objectives by expanding the options to host conferences at UC Davis with increased hotel rooms and by improving the campus loop road to allow more intuitive navigation around the central campus.

In addition, the 2003 LRDP includes specific objectives that are relevant to the proposed project, including the following:

**South Entry District**: Continue to develop the South Entry District as the main regional entrance to UC Davis. Add land between I-80 and Old Davis Road to enable academic activities in a location that connects the campus to the region, and offers the public a welcoming, active educational and cultural center. *LRDP Academic and Administrative Land Use Objectives, Page 59 of the 2003 LRDP.*

The proposed project relates to the South Entry District objective by improving the opportunities to offer the public a welcoming, active educational and cultural center by providing additional hotel rooms within the South Entry District.

**Perimeter Road Improvements**: Realign Old Davis Road to the south to create better pedestrian and bicycle connections to lands south of the Arboretum. Extend the perimeter road from the Mondavi Center

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\(^1\) The on-campus population includes students and employees on the UC Davis main campus and at other University owned and operated facilities in the City of Davis. The campus population is determined based on headcount, a method of counting faculty, staff, and students in which each person is counted as one unit regardless of whether he or she is employed or studying full-time or part-time. Student population figures represent student headcount averaged over the primary three academic quarters (i.e., fall, winter, spring).
for the Arts to the east to connect to A Street. *LRDP Transportation and Parking System Objectives, Page 78 of the 2003 LRDP.*

The proposed project implements the Perimeter Road Improvements objective described above by completing the identified road improvement so that the road from the Mondavi Center to A Street is directly connected.

**Old Davis Road Bike Path:** Convert Old Davis Road along the south bank of the Arboretum to a bike path as campus uses extend to the south of the existing road, and a new perimeter location for Old Davis Road is built. *LRDP Transportation and Parking System Objectives, Page 78 of the 2003 LRDP.*

The proposed project would allow the future conversion of the existing Old Davis Road on the south side of the UC Davis Arboretum to a bike and pedestrian path.

### 4.5 2003 LRDP EIR Cumulative Impacts Analyses

In addition to evaluating the environmental effects directly associated with projected campus development, the 2003 LRDP EIR evaluates the cumulative effects of campus development combined with off-campus development through 2015-16. The cumulative context considered in the 2003 LRDP EIR varies, depending on the nature of the issue being studied, to best assess each issue's geographic extent. For example, the cumulative impacts on water and air quality can be best analyzed within the boundaries of the affected resources, such as water bodies and air basins. For other cumulative impacts, such as hazard risks, traffic, and the need for new public service facilities, the cumulative impact is best analyzed within the context of the population growth and associated development that are expected to occur in the region.

As discussed in Sections 4.1 through 4.4 above, the proposed project is within the scope of campus development projected in the 2003 LRDP EIR. In addition, the campus is unaware of any changes to local growth plans or other changes in the region since certification of the 2003 LRDP EIR that would substantially change the document's conclusions regarding cumulative impacts. Therefore, the proposed project would incrementally contribute to, but would not exceed, the cumulative impacts analyses included in the 2003 LRDP EIR.
5 ENVIRONMENTAL RESOURCES POTENTIALLY AFFECTED

The following environmental resources, if checked below, would be potentially affected by this project and would involve at least one impact that is a significant or potentially significant impact that has not been previously addressed in the 2003 LRDP EIR. Therefore, an EIR will be prepared for the project. The EIR will analyze the potential impacts of the proposed project on the topics of Aesthetics, Air Quality, Cultural Resources, Greenhouse Gas Emissions, Noise, and Transportation and Circulation.

☑ Aesthetics
☐ Biological Resources
☑ Greenhouse Gas Emissions
☐ Land Use & Planning
☐ Population & Housing
☑ Transportation & Circulation
☐ Agriculture and Forestry Resources
☑ Cultural Resources
☐ Hazards & Hazardous Materials
☐ Mineral Resources
☐ Public Services
☐ Utilities/Service Systems
☐ Air Quality
☐ Geology and Soils
☐ Hydrology & Water Quality
☐ Noise
☐ Recreation
☐ Mandatory Findings of Significance
6 DETERMINATION

On the basis of this initial evaluation:

☐ The proposed project COULD NOT have a significant effect on the environment that has not been previously addressed in the 2003 LRDP EIR, and no new mitigation measures, other than those previously identified in the 2003 LRDP EIR, are required. A NEGATIVE DECLARATION will be prepared.

☐ Although the proposed project COULD have a significant effect on the environment, the project impacts were adequately addressed in an earlier document or there will not be a significant effect in this case because revisions in the project have been made that will avoid or reduce any potential significant effect to a less-than-significant level. A MITIGATED NEGATIVE DECLARATION will be prepared.

☑ The proposed project MAY have a potentially significant effect on the environment that was not previously addressed in the 2003 LRDP EIR. A TIERED ENVIRONMENTAL IMPACT REPORT will be prepared to address new impacts not previously identified in the 2003 LRDP EIR.

__________________________________________  _______________
A. Sidney England       Date
Assistant Vice Chancellor – Environmental Stewardship and Sustainability
7 EVALUATION OF ENVIRONMENTAL IMPACTS

Introduction

The University has defined the column headings in the Initial Study as follows:

- **Impact to be Analyzed in the EIR**: This column is checked when an impact that may or may not be significant will be addressed in the project EIR. The effect may be a less than significant impact that will be addressed to provide a more comprehensive analysis, an impact for which further analysis is necessary or desirable before a determination about significance can be made, an impact that is potentially significant but may be reduced to a less than significant level with the adoption of mitigation measures, or an impact that may be significant and unavoidable.

- **No Additional Analysis Required**: This column is checked when implementation of the proposed project clearly would clearly not result in an impact, or would clearly result in a less than significant impact under CEQA criteria, and may result in a significant impact but that was adequately analyzed in the 2003 LRDP EIR no additional analysis beyond that provided in the 2003 LRDP EIR or the Initial Study is necessary.
7.1  AESTHETICS

7.1.1  Background

Section 4.1 of the 2003 LRDP EIR addresses the aesthetics effects of campus growth under the 2003 LRDP. The following discussion summarizes information presented in the ‘Setting’ subsection of Section 4.1 of the 2003 LRDP EIR.

Campus

The campus is surrounded by extensive agricultural uses to the west and south, and by residential, institutional, and commercial land uses in the City of Davis to the north and east. Views within the Davis area are generally of two types: open views of agricultural land and supporting facilities with views of hills to the west, and views of developed areas within UC Davis and the City of Davis.

UC Davis consists of four general land units that have distinct visual characters. The central campus is the most developed area of campus and is characterized by varied architectural styles, large trees, and formal landscaping. The west and south campus units and Russell Ranch primarily include teaching and research fields with agricultural buildings (although the west and south campus units also include more developed areas including campus support facilities and academic and administrative facilities).

The 2003 LRDP identifies the following as valued visual elements of the central campus: the large, open lawn of the Quad at the heart of the campus; the framework of tree-lined streets, particularly around the Quad where the street tree branches arch to create a canopy overhead; the Arboretum, with its large trees and variety of landscapes along the waterway; the shingle-sided buildings from the founding years of the University Farm; buildings from the second era of campus development such as Hart Hall and Walker Hall; green open spaces that face the community along Russell Boulevard and A Street; bicycles as a distinct and valued visual emblem on campus; and the South Entry area, including the new entrance quad and the Robert and Margrit Mondavi Center for the Performing Arts.

Design review of campus development projects takes place during the project planning, design, review, and approval processes to sustain valued elements of the campus’ visual environment, to assure new projects contribute to a connected and cohesive campus environment, and to otherwise minimize adverse aesthetics effects as feasible. Formal design review by the campus Design Review Committee takes place for every major capital project. This Committee includes standing members from the Offices of Campus Planning, Design and Construction Management, Grounds, and other departments concerned with potential aesthetic effects, as well as program representatives and invited design professionals with expertise relevant to the project type. Campus design standards and plans that provide the basis for design review include the 2003 LRDP, the Campus Design Framework Plan, the Campus Standards and Design Guide manual, the campus Architectural Design Guidelines, and the Campus Core Study.

Project Site

The project sites are both in the South Entry District of the UC Davis central campus. The hotel addition project would be located east of and adjacent to the existing hotel building. The roadway extension project would be located from the existing hotel site north and east to A Street. This area of the campus is visible from Interstate 80 and is characterized as having a combination of old and new buildings with some areas of mature trees that obscure long views into the central campus.
7.1.2 2003 LRDP EIR Standards of Significance

The 2003 LRDP EIR considers an aesthetic impact significant if growth under the 2003 LRDP would:

- Have a substantial adverse effect on a scenic vista.
  
  A scenic vista is defined as a publicly accessible viewpoint that provides expansive views of a highly valued landscape. On campus, the open view across agricultural lands west to the Coast Range is considered a scenic vista. This vista is primarily viewed from public viewpoints along SR 113, Hutchison Drive, La Rue Road, and Russell Boulevard.

- Substantially degrade the existing visual character or quality of the site and its surroundings.
  
  For the campus, this standard is interpreted in terms of the effect of development under the 2003 LRDP on the valued elements of the visual landscape identified in the LRDP, or the effect associated with allowing incompatible development in or near areas with high visual quality such as Putah Creek and the Arboretum Waterway.

- Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area.

An additional standard from the CEQA Guidelines’ Environmental Checklist (— in the checklist below) was found not applicable to campus growth under the 2003 LRDP.

7.1.3 2003 LRDP EIR Impacts and Mitigation Measures

Impacts of campus growth under the 2003 LRDP through 2015-16 on aesthetics are evaluated in Section 4.1 of the 2003 LRDP EIR. The proposed project is within the scope of analysis in the 2003 LRDP EIR. Significant and potentially significant aesthetics impacts identified in the 2003 LRDP EIR that are relevant to the proposed project are presented below with their corresponding levels of significance before and after application of mitigation measures identified in the 2003 LRDP EIR.

<table>
<thead>
<tr>
<th>2003 LRDP EIR Impacts</th>
<th>Level of Significance Prior to Mitigation</th>
<th>Level of Significance After Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>AESTHETICS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.1-3 Development under the 2003 LRDP could create substantial light or glare on campus that could adversely affect daytime or nighttime views in the area.</td>
<td>PS</td>
<td>LS</td>
</tr>
<tr>
<td>4.1-6 Implementation of the 2003 LRDP together with cumulative development in the region would create new sources of light and glare that could adversely affect daytime or nighttime views in the region.</td>
<td>S</td>
<td>SU</td>
</tr>
</tbody>
</table>

Levels of Significance: LS=Less than Significant, S=Significant, PS=Potentially Significant, SU=Significant and Unavoidable

Mitigation measures in the 2003 LRDP EIR that are applicable to the proposed project are presented below. Since these mitigation measures are already being carried out as part of implementation of the 2003 LRDP, they are considered part of the project description and will not be readopted in this Initial Study or EIR. Nothing in this Initial Study in any way alters the obligations of the campus to implement 2003 LRDP EIR mitigation measures.
2003 LRDP EIR Mitigation Measures

AESTHETICS

4.1-3(a) Design for specific projects shall provide for the use of textured nonreflective exterior surfaces and nonreflective glass.

4.1-3(b) Except as provided in LRDP Mitigation 4.1-3(c), all new outdoor lighting shall utilize directional lighting methods with shielded and cutoff type light fixtures to minimize glare and upward directed lighting.

4.1-3(c) Non-cutoff, non-shielded lighting fixtures used to enhance nighttime views of walking paths, specific landscape features, or specific architectural features shall be reviewed by the Campus Design Review Committee prior to installation to ensure that: (1) the minimum amount of required lighting is proposed to achieve the desired nighttime emphasis, and (2) the proposed illumination creates no adverse effect on nighttime views.

4.1-3(d) The campus will implement the use of the specified lighting design and equipment when older lighting fixtures and designs are replaced over time.

4.1-6(a) Implement LRDP Mitigation 4.1-3(a) and (b).

4.1-6(b) The City of Davis and other surrounding jurisdictions can and should adopt (if necessary) and implement development standards and guidelines, which support the minimal use of site lighting for new developments.

7.1.4 Environmental Checklist and Discussion

<table>
<thead>
<tr>
<th>AESTHETICS</th>
<th>Impact to be Analyzed in the EIR</th>
<th>No Additional Analysis Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Would the project…</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Have a substantial adverse effect on a scenic vista?</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>c) Substantially degrade the existing visual character or quality of the site and its surroundings?</td>
<td>☑</td>
<td>☐</td>
</tr>
<tr>
<td>d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?</td>
<td>☐</td>
<td>☑</td>
</tr>
</tbody>
</table>

a) The 2003 LRDP EIR defined a scenic vista as an expansive view of a highly valued landscape from a publicly accessible viewpoint, and identified the only scenic vista on the UC Davis campus to be the view west across agricultural land to the Coast Range. On and near campus, publicly accessible viewpoints along SR 113, Hutchison Drive, La Rue Road, and Russell Boulevard provide scenic vistas to the west across agricultural land to the Coast Range. The proposed project site is not located along these roadways and would not have an effect on scenic vistas and no further analysis is required. No impact would occur.

b) The campus is not located near a state scenic highway and does not contain designated scenic resources. Therefore, the proposed project would not damage scenic resources, either within or outside of a state scenic highway, and no additional analysis is required. No impact would occur.

c) The proposed project would construct a building addition and roadway extension. The building addition would match the existing building in terms of design, height, color, materials, and lighting. The site planning for the original building included sufficient site area for a future addition and the proposed addition would fit within the area originally reserved for a potential expansion. While the site of the building addition is visible from adjacent areas including Old Davis Road and Interstate 80, the proposed structure would not block views to or from these areas and, if constructed, would appear...
as a planned and cohesively designed development. Similarly, the road extension project would not block or restrict views from the project site. Accordingly, the project components would not substantially degrade the visual character or quality of the site or its surroundings.

The proposed project would introduce additional hotel rooms to the Davis area and these additional rooms may affect occupancy rates at other hotels in the Davis area. To evaluate the potential effects of these changes, the campus will conduct an economic impact assessment to determine whether the proposed project could cause any closures, whether there are potential alternative uses for properties that could be affected, and whether the project could create physical blight in the community.

d) The 2003 LRDP EIR found that development on campus under the 2003 LRDP could create substantial light or glare that could adversely affect daytime or nighttime views in the area (LRDP Impact 4.1-3). The proposed project consists of an addition to an existing building and the new addition would include exterior lighting that could contribute to nighttime glare. In compliance with LRDP Mitigation 4.1-3(a), the project would use textured nonreflective exterior surfaces and nonreflective glass. The exterior lighting would be limited to building entrances and low-level lighting along walkways. In compliance with LRDP Mitigation 4.1-3(b-c), and to prevent light spill and light pollution per LEED requirements, new outdoor lighting associated with the project would use directional lighting methods with shielded and cutoff-type light fixtures to minimize glare and upward directed lighting. In compliance with this measure, the Campus Design Review Committee will also review the proposed project’s use of non-directional lighting design to ensure that no adverse effects on nighttime views occur. With implementation of LRDP Mitigation 4.1-3(a-c), which is included in the proposed project, the project’s impact associated with light and glare would be less than significant.
7.2 AGRICULTURAL AND FORESTRY RESOURCES

7.2.1 Background

Section 4.2 of the 2003 LRDP EIR addresses the agricultural resources effects of campus growth under the 2003 LRDP. The following discussion summarizes information presented in the ‘Setting’ subsection of Section 4.2 of the 2003 LRDP EIR.

Campus

As discussed in the 2003 LRDP EIR, of the approximately 5,300 acres of campus land, the California Department of Conservation’s Farmland Mapping and Monitoring Program (FMMP) designates approximately 3,700 acres as Prime Farmland and approximately 90 acres as Farmland of Local Importance. The FMMP designates the remaining 1,520 acres of campus land as Urban and Built-Up (approximately 1,400 acres) and Other Land (approximately 120 acres). Most of the campus’ agricultural lands are located on the west and south campuses and at Russell Ranch. The central campus includes land primarily designated as Urban and Built-Up, but small areas within the central campus that are used for teaching and research fields and community gardens are designated as Prime Farmland.

The 2003 LRDP EIR identifies that development under the 2003 LRDP through 2015-16 could result in conversion of approximately 745 acres of campus land that is considered prime farmland by the California Department of Conservation to nonagricultural uses. Approximately 330 acres of this land would be converted to habitat at Russell Ranch, which would not result in an irreversible loss of prime soil. Mitigation under the 2003 LRDP EIR requires the conservation of prime farmland at a one-to-one (1:1) ratio for prime farmland converted to developed uses and a one-third–to–one (1/3:1) ratio for prime farmland converted to habitat at Russell Ranch.

Project Site

The project site is located within the Central Campus at UC Davis and is designated as Urban and Built-Up Land in the FMMP.

7.2.2 2003 LRDP EIR Standards of Significance

The 2003 LRDP EIR considered an agricultural impact significant if growth under the 2003 LRDP would:

- Convert prime farmland, unique farmland or farmland of statewide importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency to nonagricultural use.
- Involve other changes in the existing environment which, due to their location or nature, could result in conversion of farmland considered prime, unique, or of statewide importance to nonagricultural use.
- Conflict with existing zoning for agricultural use or a Williamson Act contract.
- Result in the loss of forest land or conversion of forest land to non-forest use.
7.2.3 2003 LRDP EIR Impacts and Mitigation Measures

Impacts of campus growth under the 2003 LRDP through 2015-16 on agricultural resources are evaluated in Section 4.2 of the 2003 LRDP EIR. As discussed in Section 4 of this Initial Study, the proposed project is within the scope of analysis in the 2003 LRDP EIR. However, the significant agricultural impacts identified in the 2003 LRDP EIR are not relevant to the proposed project because the proposed project would not result in the conversion of farmland and no mitigation measures would be required.

7.2.4 Environmental Checklist and Discussion

<table>
<thead>
<tr>
<th>AGRICULTURAL RESOURCES</th>
<th>Impact to be Analyzed in the EIR</th>
<th>No Additional Analysis Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Would the project…</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>d) Result in the loss of forest land or conversion of forest land to non-forest use?</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest uses?</td>
<td>☐</td>
<td>☑</td>
</tr>
</tbody>
</table>

a) The FMMP designates the project site as Urban and Built-Up Land. The proposed project would not convert Farmland to non-agricultural use. No further analysis is required. No impact would occur.

b) Campus lands are state lands and are not eligible for Williamson Act agreements, nor are they subject to local zoning controls. The project site is designated as Urban and Built-Up Land by FMMP and Academic/Administrative High Density by the 2003 LRDP EIR. Therefore, the proposed project would not conflict with existing zoning for agricultural use or a Williamson Act contract, and no impact would occur.

c) None of the campus lands are zoned as forest land or timberland. The proposed project would not conflict with existing zoning or result in rezoning of forest or timberlands. No impact would occur.

d) There are no forest lands on or adjacent to the project site. Therefore, the proposed project would not result in the loss of forest land or the conversion of forest land to non-forest use. No impact would occur.

e) The project site is not adjacent to agricultural, or forest land or timberland. Therefore, the proposed project would not involve any changes that could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use. No impact would occur.
7.3 AIR QUALITY

7.3.1 Background

Section 4.3 of the 2003 LRDP EIR addresses the air quality effects of campus growth under the 2003 LRDP on air quality. The following discussion summarizes information presented in the ‘Setting’ subsection of Section 4.3 of the 2003 LRDP EIR, updated with current data as necessary.

Campus

The campus is subject to air quality regulation programs under both the federal Clean Air Act (CAA) and the California Clean Air Act (CCAA). Both the federal and state statutes provide for ambient air quality standards to protect public health, timetables for progressing toward achieving and maintaining ambient standards, and the development of plans to guide the air quality improvement efforts of state and local agencies. Within the campus vicinity, air quality is monitored, evaluated, and controlled by the U.S. Environmental Protection Agency (EPA), the California Air Resources Board (CARB), and the Yolo-Solano Air Quality Management District (YSAQMD). The YSAQMD is one of five air districts located in the Sacramento Valley Air Basin (SVAB) and has jurisdiction over air quality in the Yolo County and the northeastern portion of Solano County.

Historically, air quality laws and regulations have divided air pollutants into two broad categories: —criteria pollutants” and —toxic air contaminants.” Federal and state air quality standards have been established for the following ambient air pollutants, the criteria pollutants: ozone (O₃), carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), particulate matter less than 10 microns in diameter (PM₁₀), lead (Pb), and particulate matter less than 2.5 microns in diameter (PM₂.₅). Ozone is evaluated by assessing emissions of its precursors: reactive organic gases (ROG) and NOₓ.

Toxic air contaminants (TACs) are airborne pollutants for which there are no air quality standards but which are known to have adverse human health effects. TACs are regulated under federal and state statutes, primarily with control technology requirements for stationary and mobile sources and mitigation established following human health risk assessments. TAC’s are generated by a number of sources, including stationary sources such as dry cleaners, gas stations, combustion sources, and laboratories; mobile sources such as automobiles and construction vehicles; and area sources such as farms, landfills, construction sites, and residential areas.

Air quality on campus on any given day is influenced by both meteorological conditions and pollutant emissions. In general, meteorological conditions vary more than pollutant emissions from day to day, and tend to have a greater influence on changes in measured ambient pollutant concentrations. Ambient concentrations of CO and PM₁₀, however are particularly influenced by local emission sources. The EPA has classified the entire SVAB, which includes the campus, as a nonattainment area for O₃. Districts in the SVAB have requested a voluntary bump-up designation to —severe,” which would result in an attainment deadline of 2018. [The EPA approval of the voluntary bump-up is still pending]. The CARB has also designated the area as being in nonattainment under the state ambient air quality standards for O₃ and PM₁₀. The designation of an area as attainment or nonattainment is based on monitored data throughout the SVAB.
Project Site

The project site is approximately 1,000 feet from the UC Davis Solano Park family housing complex which provides housing for UC Davis students and their children. For purposes of this analysis, the housing complex (with children) can be regarded as a sensitive receptor.

7.3.2 2003 LRDP EIR Standards of Significance

The 2003 LRDP EIR considers an air quality impact significant if growth under the 2003 LRDP would:

Criteria Pollutants

- Conflict with or obstruct implementation of the applicable air quality plan.
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation. (According to the YSAQMD, emissions of NO, and ROG in excess of 10 tons per year, PM emissions of 80 pounds a day, or CO emissions violating a state ambient air standard for CO would be considered significant.)
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).
- Expose sensitive receptors to substantial pollutant concentrations.
- Create objectionable odors affecting a substantial number of people.

Toxic Air Contaminants

- Contribute to the probability of contracting cancer for the Maximally Exposed Individual (MEI) exceeding the AB 2588 and Proposition 65 threshold of 10 in one million.
- Result in a noncarcinogenic (chronic and acute) health hazard index greater than the AB 2588 threshold of 1.0.

7.3.3 2003 LRDP EIR Impacts and Mitigation Measures

Air quality impacts of campus growth under the 2003 LRDP through 2015-16 on air quality are evaluated in Section 4.3 of the 2003 LRDP EIR. As analyzed in Section 4 of this Initial Study, the proposed project is within the scope of analysis in the 2003 LRDP EIR. Significant and potentially significant air quality impacts identified in the 2003 LRDP EIR that are relevant to the proposed project are presented below with their corresponding levels of significance before and after application of mitigation measures identified in the 2003 LRDP EIR.

<table>
<thead>
<tr>
<th>2003 LRDP EIR Impacts</th>
<th>Level of Significance Prior to Mitigation</th>
<th>Level of Significance After Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIR QUALITY</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.3-1</td>
<td>Implementation of the 2003 LRDP would result in daily operational emissions above the YSAQMD thresholds that may contribute substantially to a violation of air quality standards or hinder attainment of the regional air quality plan.</td>
<td>S</td>
</tr>
<tr>
<td>4.3-3</td>
<td>Emissions from construction activities associated with the 2003 LRDP would</td>
<td>S</td>
</tr>
</tbody>
</table>
### 2003 LRDP EIR Impacts

<table>
<thead>
<tr>
<th>Air Quality</th>
<th>Level of Significance Prior to Mitigation</th>
<th>Level of Significance After Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.3-6</td>
<td>S</td>
<td>SU</td>
</tr>
<tr>
<td>4.3-8</td>
<td>PS</td>
<td>LS</td>
</tr>
</tbody>
</table>

Levels of Significance: LS=Less than Significant, S=Significant, PS=Potentially Significant, SU=Significant and Unavoidable

Mitigation measures in the 2003 LRDP EIR that are applicable to the proposed project are presented below. Because these previously adopted mitigation measures are already being carried out as part of implementation of the 2003 LRDP, they are considered part of the project description and will not be readopted, and are assumed as part of the project-level impact analysis. Nothing in this Initial Study in any way alters the obligations of the campus to implement 2003 LRDP EIR mitigation measures.

### 2003 LRDP EIR Mitigation Measures

<table>
<thead>
<tr>
<th>Air Quality</th>
<th>4.3-1(a) Vehicular Sources. The following measures will be implemented to reduce emissions from vehicles, as feasible.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• The campus shall continue to actively pursue Transportation Demand Management to reduce reliance on private automobiles for travel to and from the campus.</td>
</tr>
<tr>
<td></td>
<td>• Provide pedestrian-enhancing infrastructure to encourage pedestrian activity and discourage vehicle use.</td>
</tr>
<tr>
<td></td>
<td>• Provide bicycle facilities to encourage bicycle use instead of driving.</td>
</tr>
<tr>
<td></td>
<td>• Provide transit-enhancing infrastructure to promote the use of public transportation.</td>
</tr>
<tr>
<td></td>
<td>• Provide facilities to accommodate alternative-fuel vehicles such as electric cars and CNG vehicles.</td>
</tr>
<tr>
<td></td>
<td>• Improve traffic flows and congestion by timing of traffic signals to facilitate uninterrupted travel.</td>
</tr>
<tr>
<td></td>
<td>• When the campus purchases new vehicles, the campus will evaluate the practicality and feasibility of acquiring low-pollution vehicles that are appropriate for the task and will purchase these types of vehicles when practical and feasible. When replacing diesel engines in existing equipment, the campus will install up-to-date technology.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>4.3-1(b) Area Sources. The following measures will be implemented to reduce emissions from area sources, as feasible.</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Use solar or low-emission water heaters in new or renovated buildings.</td>
</tr>
<tr>
<td>• Orient buildings to take advantage of solar heating and natural cooling and use passive solar designs.</td>
</tr>
<tr>
<td>• Increase wall and attic insulation in new or renovated buildings.</td>
</tr>
<tr>
<td>• For fireplaces or wood-burning appliances, require low-emitting EPA certified wood-burning appliances, or residential natural-gas fireplaces.</td>
</tr>
<tr>
<td>• Provide electric equipment for landscape maintenance.</td>
</tr>
</tbody>
</table>

| 4.3-1(c) The campus will work with the YSAQMD to ensure that emissions directly and indirectly associated with the campus are adequately accounted for and mitigated in applicable air quality planning efforts. The YSAQMD can and should adopt adequate measures consistent with applicable law to ensure that air quality standard violations are avoided. |
4.3-(a) The campus shall include in all construction contracts the measures specified below to reduce fugitive dust impacts, including but not limited to the following:

- All disturbed areas, including storage piles, which are not being actively utilized for construction purpose, shall be effectively stabilized of dust emissions using water, chemical stabilizer/suppressant, or vegetative ground cover.
- All on-site unpaved roads and off-site unpaved access roads shall be effectively stabilized of dust emissions using water or chemical stabilizer/suppressant.
- All land clearing, grubbing, scraping, excavation, land leveling, grading, cut and fill, and demolition activities shall be effectively controlled of fugitive dust emissions utilizing application of water or by presoaking.
- When demolishing buildings up to six stories in height, all exterior surfaces of the building shall be wetted during demolition.
- When materials are transported off-site, all material shall be covered, effectively wetted to limit visible dust emissions, or at least two feet of freeboard space from the top of the container shall be maintained.
- All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at least once every 24 hours when operations are occurring. The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit the visible dust emissions. Use of blower devices also is expressly forbidden.
- Following the addition of materials to, or the removal of materials from, the surface of outdoor storage piles, said piles shall be effectively stabilized of fugitive dust emissions by utilizing sufficient water or chemical stabilizer/ suppressant.

4.3-(b) The campus shall include in construction contracts for large construction projects near receptors, the following control measures:

- Limit traffic speeds on unpaved roads to 15 mph.
- Install sandbags or other erosion control measures to prevent silt runoff to public roadways from sites with a slope greater than one percent.
- To the extent feasible, limit area subject to excavation, grading, and other construction activity at any one time.
- Limit the area subject to excavation, grading, and other construction activity at any one time.

4.3-(c) The campus shall implement the following control measures to reduce emissions of ozone precursors from construction equipment exhaust:

- To the extent that equipment is available and cost effective, the campus shall encourage contractors to use alternate fuels and retrofit existing engines in construction equipment.
- Minimize idling time to a maximum of 5 minutes when construction equipment is not in use.
- To the extent practicable, manage operation of heavy-duty equipment to reduce emissions.
- To the extent practicable, employ construction management techniques such as timing construction to occur outside the ozone season of May through October, or scheduling equipment use to limit unnecessary concurrent operation.

4.3-6 Implement LRDP Mitigation 4.3-1(a-c).

4.3-8 EPA and CARB are expected to continue the development and implement programs to reduce air toxics, and UC Davis will continue its efforts in this area.
7.3.4 Environmental Checklist and Discussion

<table>
<thead>
<tr>
<th>AIR QUALITY</th>
<th>Impact to be Analyzed in the EIR</th>
<th>No Additional Analysis Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Would the project…</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Conflict with or obstruct implementation of the applicable air quality plan?</td>
<td>☑️</td>
<td>☐</td>
</tr>
<tr>
<td>b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?</td>
<td>☑️</td>
<td>☐</td>
</tr>
<tr>
<td>c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?</td>
<td>☑️</td>
<td>☐</td>
</tr>
<tr>
<td>d) Expose sensitive receptors to substantial pollutant concentrations?</td>
<td>☑️</td>
<td>☐</td>
</tr>
<tr>
<td>e) Create objectionable odors affecting a substantial number of people?</td>
<td>☐</td>
<td>☑️</td>
</tr>
</tbody>
</table>

**a,b,c,d) Construction**

The 2003 LRDP EIR found that construction activities under the 2003 LRDP could exceed YSAQMD thresholds (LRDP Impact 4.3-3). The state 24-hour PM$_{10}$ standards could be violated when multiple construction projects (especially those involving ongoing grading or excavation activities) occur simultaneously in the same area. Housing or other sensitive receptors located adjacent to construction areas could be affected by high concentrations of PM$_{10}$. In addition, exhaust pollutants would be emitted during use of construction equipment.

The project site is located as close as 200 feet from the nearest sensitive receptors. Construction activities would occur for about one year and would involve on-site emissions of fugitive dust from grading and exhaust from operation of construction equipment. There would also be a limited number of off-site construction vehicle trips associated with project construction. LRDP Mitigation 4.3-3(a) (requiring campus construction contracts to include measures to reduce fugitive dust impacts), 4.3-3(b) (requiring additional specific dust control measures), and 4.4-3(c) (requiring control measures to reduce emissions of ozone precursors from construction equipment exhaust) are relevant to the proposed project. Although this impact was analyzed in the 2003 LRDP EIR, vehicular and stationary source emissions associated with the proposed project will be evaluated in the project EIR.

The 2003 LRDP EIR found that the impact of the cumulative emissions from the totality of projects under construction at any given time under the 2003 LRDP would be significant and unavoidable. The impact was adequately analyzed in the 2003 LRDP EIR and was fully addressed in the Findings and Statement of Overriding Considerations adopted by The Regents in connection with its approval of the 2003 LRDP, and no new project-level mitigation measures have been identified that would further reduce the impact.

**Operation**

**Criteria Pollutants**

The 2003 LRDP EIR found that operational emissions at full development of the campus under the 2003 LRDP could substantially contribute to violation of ambient state and federal air quality standards or hinder the attainment of the regional air quality plan (LRDP Impact 4.3-1). The project
would contribute to this impact. The campus is located in an area that is in nonattainment of \( \text{O}_3 \) and \( \text{PM}_{2.5} \) standards. The region is processing the 8 hour attainment plan for the Sacramento Valley Air Basin (SVAB), which is intended to implement regulations for ozone emissions and attainment of the federal air quality standard by 2018. LRDP Mitigation 4.3-1 (a-b), which includes measures that encourage alternative transportation and no- or low-emission building designs and operations, would help reduce daily emissions from campus vehicular and stationary sources. LRDP Mitigation 4.3-1(c) would ensure that the campus will coordinate with the YSAQMD during the update of the Clean Air Plan and other applicable air quality planning efforts. However, given the likelihood of exceedance of \( \text{O}_3 \) standards even with mitigation, it appears that the implementation of the 2003 LRDP, including the proposed project, could potentially hinder the attainment of the regional air quality plan. The impact is, therefore, considered significant and unavoidable at the LRDP program level. Although this impact was adequately analyzed in the 2003 LRDP EIR, vehicular and stationary source emissions associated with the proposed project will be evaluated in the project EIR.

**Toxic Air Contaminants**

Health Risk Assessment (HRA) calculations performed as part of the 2003 LRDP EIR predicted that the cancer risk from campus operations through academic year 2015-16 will be below 10 in one million for both the off-campus and on-campus Maximally Exposed Individual, assuming a 70-year exposure period for residential population. The non-cancer health risk was calculated in terms of a hazard index and was determined to be below 1.0. Therefore, the 2003 LRDP EIR concluded that development under the 2003 LRDP would not exceed either health risk standard, and the impact associated with TAC generation would be less than significant. Although this program level impact was adequately analyzed in the 2003 LRDP EIR, TAC emissions associated with the proposed project will be evaluated in the project EIR.

**Cumulative Development**

The 2003 LRDP EIR found that implementation of the 2003 LRDP, in conjunction with other regional development, would contribute to emissions of criteria pollutants for which the region is in non-attainment status and could hinder attainment efforts (LRDP Impact 4.3-6). The YSAQMD has accounted for a certain amount of regional growth in the existing Sacramento Regional Clean Air Plan. The LRDP EIR noted that the Regional Clean Air Plan was being updated to extend beyond the year 2005, and that campus growth under the 2003 LRDP would be incorporated into the updated plan update. LRDP Mitigation 4.3-6, included in the proposed project, requires implementation of LRDP Mitigation 4.3-1 (a-c). Regardless, because the YSAQMD remains a nonattainment area for ozone, this cumulative impact is considered significant and unavoidable. This impact was adequately analyzed in the 2003 LRDP EIR and was fully addressed in the Findings and Statement of Overriding Considerations adopted by The Regents in connection with its approval of the 2003 LRDP.

e) The proposed project would not produce unusual odors because the hotel expansion and the road extension would not use result in industrial processing or large-scale manufacturing operations such as food processing, agricultural waste processing, or storage of products with unusual odors. No impact would occur.
7.4 BIOLOGICAL RESOURCES

7.4.1 Background

Section 4.4 of the 2003 LRDP EIR addresses the effects of campus growth under the 2003 LRDP on biological resources. The following discussion summarizes information presented in the ‘Setting’ subsection of Section 4.4 of the 2003 LRDP EIR.

Campus

The 5,300-acre campus is located in a region that is composed primarily of urban areas and agricultural lands that include remnant riparian areas. Habitat types on campus can be classified as Agricultural Lands (including Cropland/Pasture, and Orchard/Vineyard), Valley Foothill Riparian Woodland, Ruderal/Annual Grassland, Open Water Ponds, Riverine, and Urban Landscaping/Developed.

The 2003 LRDP EIR considers special status species to be those taxa that are: (1) listed as threatened or endangered under either the California or Federal Endangered Species Acts; (2) candidates for either state or federal listing; (3) species afforded protection under the Fish and Game Code of California; (4) federal and California Department of Fish and Game (CDFG) —Species of Special Concern”; (5) CDFG —Species of Special Concern” highest and second priority lists; or (6) California Native Plant Society (CNPS) List 1-3 plants.

A database search identified 15 special status plant species, 8 special status invertebrates, 11 special status fish, 3 special status amphibians, 3 special status reptiles, 26 special status birds, and 7 special status mammals that have the potential to occur on or within a 10-mile radius of the campus. However, only a few of these species are known to occur on campus or have potential habitat present on campus, including: northern California black walnut, burrowing owl, Swainson’s hawk, valley elderberry longhorn beetle, California tiger salamander, chinook salmon, giant garter snake, steelhead, and northwestern pond turtle.

Project Site

The proposed project site is approximately 8,000 square feet of landscaped area within the developed portion of the existing hotel and the road and utility corridor that would be developed as the roadway extension project from the south side of the existing hotel to A Street. A survey was conducted to screen for elderberry shrubs that are potential habitat for the valley longhorn elderberry beetle. One elderberry shrub was detected north of the road extension project area along the UC Davis Arboretum more than 40 feet from the area that would be used to route the storm drain line from the road extension project.

Habitat

Urban Landscaping/Developed. Urban habitat includes landscaped areas that are vegetated with trees, shrubs, and maintained grassy areas. While the University Arboretum contains a significant collection of botanical specimens, it is included within this habitat designation because it is essentially a landscaped park with many non-native plantings, and is subject to regular maintenance as well as high frequency use by people (picnicking, jogging, walking, etc.).

Central campus landscaped areas, with their abundance of mature trees, provide wildlife habitat values (food and cover) within the developed areas of central campus. Many species of birds (including the Swainson’s hawk) are known to nest in central campus trees. Other resident and migratory hawks, owls,
songbirds, and woodpeckers are also known to use landscaped areas on the campus for nesting, food, and cover.

**Special Status Species**

Swainson’s Hawk. The Swainson’s hawk (*Buteo swainsoni*) is listed as a threatened species under the California Endangered Species Act and is also fully protected against take pursuant to Section 3503.5 of the Fish and Game Code of California. The Swainson’s hawk is a relatively large bird of prey that typically nests in large trees in riparian corridors as well as isolated trees remaining in or adjacent to agricultural fields in the Central Valley. However, in the City of Davis, and on the central campus, these hawks also nest in the large trees among buildings, roads, and dwellings.

This species forages in open grassland habitats and has adjusted to foraging in certain types of agricultural lands. The value of foraging habitat can be affected by a variety of characteristics, including density and availability of prey, proximity to disturbing features, and distance to nesting territories. Published information indicates these raptors typically forage within a 10 mile radius of nest sites but may range up to 18 miles from a nest site in search of suitable foraging habitat and available prey. Formal studies have shown that Swainson’s hawks will spend the majority of foraging time in close proximity to the nest site when high quality foraging habitat (measured by the abundance and availability of prey) is present.

The occurrence of the Swainson's hawk in and around the campus is well documented. UC Davis conducted yearly surveys for Swainson's hawk nests on the campus and within one half mile of the campus from 1991 through 1998. Project-specific surveys have been conducted annually since 1998. The results of these surveys documented approximately 20 active nests per year and a total of approximately 50 total nests within one-half mile of the campus over the decade. Most of the Swainson’s hawk nests are located in the Putah Creek riparian corridor.

**Trees**

A tree survey of the proposed site was conducted in accordance with the campus practice for identifying trees to preserve during a development or redevelopment project. The hotel addition site contains no trees. The tree survey identified seven trees that would be removed during construction of the road extension. The survey found that none of the trees were high ranking trees and none were heritage or specimen trees.

**7.4.2 2003 LRDP EIR Standards of Significance**

The 2003 LRDP EIR considers a biological resources impact significant if growth under the 2003 LRDP would:

- Result in a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game (CDFG) or U.S. Fish and Wildlife Service (USFWS).
- Result in the “take” (defined as kill, harm, or harass) of any listed threatened or endangered species or the habitat of such species.
- Result in a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFG or USFWS.
• Result in a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, or coastal wetland) through direct removal, filling, hydrological interruption, or other means.

• Interfere substantially with the movement of any native resident or migratory fish, or wildlife species or with established native, resident, or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

• Conflict with any applicable local policies protecting biological resources such as a tree protection policy or ordinance.

An additional standard from the CEQA Guidelines’ Environmental Checklist (“f” in the checklist below) was found not applicable to campus growth under the 2003 LRDP.

7.4.3 2003 LRDP EIR Impacts and Mitigation Measures

Impacts of campus growth under the 2003 LRDP through 2015-16 on biological resources are evaluated in Section 4.4 of the 2003 LRDP EIR. The proposed project is within the scope of analysis in the 2003 LRDP EIR and the significant and potentially significant biological resources impacts identified in the 2003 LRDP EIR that are relevant to the proposed project are presented below with their corresponding levels of significance before and after application of mitigation measures identified in the 2003 LRDP EIR. Mitigation measures are included to reduce the magnitude of LRDP cumulative impact 4.4-12 but this impact is identified as significant and unavoidable because the feasibility and/or implementation of mitigation falls within other jurisdictions and therefore cannot be guaranteed by the University of California.

<table>
<thead>
<tr>
<th>2003 LRDP EIR Impacts</th>
<th>2003 LRDP EIR Impacts</th>
<th>Level of Significance Prior to Mitigation</th>
<th>Level of Significance After Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOLOGICAL RESOURCES</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.4-4</td>
<td>Development allowed under the 2003 LRDP could result in the failure of nesting efforts by nesting raptors, including Swainson’s hawks or other birds of prey.</td>
<td>PS</td>
<td>LS</td>
</tr>
<tr>
<td>4.4-5</td>
<td>Development allowed under the 2003 LRDP would result in the loss of active nest sites for Swainson’s hawk.</td>
<td>PS</td>
<td>LS</td>
</tr>
<tr>
<td>4.4-7</td>
<td>Development allowed under the 2003 LRDP could result in the loss of potential habitat for the northwestern pond turtle from drainage improvement projects, bank stabilization measures and landscape maintenance activities within Riverine habitat along Putah Creek and the Arboretum Waterway.</td>
<td>PS</td>
<td>LS</td>
</tr>
<tr>
<td>4.4-11</td>
<td>Development under the 2003 LRDP could result in the removal of trees recognized to meet the campus’ standards for important trees, including: a. Heritage Trees: Healthy valley oak trees with trunk diameters of 33 inches or greater at a height of 54 inches from the ground.</td>
<td>PS</td>
<td>a. SU</td>
</tr>
<tr>
<td></td>
<td>b. Specimen Trees: Healthy trees or stands of trees that are of high value to the campus due to their size, species, extraordinary educational and research value, and/or other exceptional local importance.</td>
<td>b. LS</td>
<td></td>
</tr>
<tr>
<td>4.4-12</td>
<td>Development allowed under the 2003 LRDP would contribute 550 acres to the cumulative loss in the region of over 1,500 acres of Agricultural Land and Ruderal/Annual Grassland habitat for resident and migratory wildlife species including Swainson’s hawks and burrowing owls.</td>
<td>S</td>
<td>SU</td>
</tr>
</tbody>
</table>

Levels of Significance: LS=Less than Significant, S=Significant, PS=Potentially Significant, SU=Significant and Unavoidable
Mitigation measures in the 2003 LRDP EIR that are applicable to the proposed project are presented below. Since these mitigation measures are already being carried out as part of implementation of the 2003 LRDP, they are considered part of the project description for purposes of project-level impact analysis and will not be readopted in this Initial Study or EIR. Nothing in this Initial Study in any way alters the obligations of the campus to implement 2003 LRDP EIR mitigation measures.

2003 LRDP EIR Mitigation Measures
BIOLICAL RESOURCES

4.4-4(a) The campus shall conduct a pre-construction survey of trees on and adjacent to a project site during the raptor breeding season (approximately March 1 to August 31). Additionally, the campus shall conduct surveys within a 1/2-mile radius of the site to determine the presence or absence of any nesting Swainson’s hawks. The surveys shall be conducted by a qualified biologist during the same calendar year that the proposed activity is planned to begin to determine if any nesting birds-of-prey would be affected. If phased construction procedures are planned for the proposed activity, the results of the above survey shall be valid only for the season when it is conducted.

- If any Swainson’s hawks are nesting within a one-half-mile radius of the project site or if other raptors are nesting in, on or adjacent to the project site, a qualified biologist shall determine the potential for disturbance to nesting raptors, including Swainson’s hawks. If the biologist determines that there is a significant potential for disturbance, the campus shall implement feasible changes in the construction schedule or make other appropriate adjustments to the project in response to the specific circumstances. If feasible project changes are not readily identifiable, the campus will consult with CDFG to determine what actions should be taken to protect the nesting efforts. If, after five years, a previously recorded nest site remains unoccupied by a Swainson’s hawk, it will no longer be considered as a Swainson’s hawk nest site subject to this mitigation.

4.4-4(b) The campus shall continue to conduct annual surveys to determine the location of nesting Swainson’s hawks and other birds of prey on the campus outside the Putah Creek corridor. If nesting Swainson’s hawks are found during the survey at a previously unknown location within one-half mile of a project site and/or at a location closer to the project or more visually exposed to the project site than a nearby previously documented site, a qualified biologist shall, prior to project construction, determine the potential for disturbance to nesting Swainson’s hawks. If the biologist determines that there is a significant potential for disturbance, the campus shall implement feasible changes in the construction schedule or make other appropriate adjustments to the project in response to the specific circumstances (e.g. relocating noisy equipment or creating temporary sound barriers).

The implementation of LRDP Mitigations 4.4-4(a) and (b) shall be conducted under the supervision of a biologist whose qualifications include:

- A bachelor’s degree in biology or a related field;
- Two years of field experience related to nesting raptors; and
- Prior construction monitoring experience.

Further:

- All decisions of the qualified biologist shall be made in consultation with the California Department of Fish and Game;
- Monitoring shall be conducted for a sufficient time (minimum of 3 consecutive days following the initiation of construction) to verify that the nesting pair does not exhibit significant adverse reaction to construction activities (i.e., changes in behavioral patterns, reactions to construction noise, etc.); and
- Nest site monitoring will continue for a minimum of once a week through the nesting cycle at that nest.

4.4-5 Mitigation 4.4-4(a) and (b) will be implemented, including pre-construction survey of trees on and adjacent to a project site during the raptor breeding season (approximately March 1 to August 31). If a Swainson’s hawk nest tree is present, the tree will be removed outside the nesting season (March-May).

4.4-7 The campus shall implement avoidance and minimization measures for the northwestern pond turtle, including but not limited to:
2003 LRDP EIR Mitigation Measures

**BIODIVERSITY**

- Pre-construction surveys prior to any disturbance of the project site
- Installation of silt fencing to prevent any pond turtles from entering the construction area

If work is performed in the water, seining of the area surrounding the site to relocate any northwestern pond turtles present

4.4-11 Before a project is approved under the 2003 LRDP, the campus will perform a tree survey of the project site. Grounds, the Office of Environmental Stewardship and Sustainability, and the Office of Design and Construction Management will provide input about tree classifications and will modify project design to avoid important trees if feasible. If a project cannot avoid an important tree, the following will apply:

a. If a project would necessitate removal of a Heritage Tree, no mitigation would be available to fully mitigate the impact, and the impact would be significant and unavoidable. However, implementation of Mitigation 4.4-2 would restore Valley Foothill Riparian Woodland habitat at Russell Ranch, and plantings in this area would include valley oaks.

b. If a project would necessitate removal of a Specimen Tree, the project would relocate the tree if feasible, or would replace the tree with the same species or species of comparable value (relocation or replacement should occur within the project area if feasible). This would reduce the impact to a less-than-significant level.

4.4-12 Implementation of LRDP Mitigations 4.4-1(a), (b), and (c); 4.4-2(a) and (b); 4.4-3(a) and (b); and 4.4-7(a) in combination with the Yolo County NCCP and Solano County HCP, including compliance with the regulatory and permitting requirements imposed by the USFWS and the CDFG.

7.4.4 Environmental Checklist and Discussion

<table>
<thead>
<tr>
<th><strong>BIODIVERSITY</strong></th>
<th>Impact to be Analyzed in the EIR</th>
<th>No Additional Analysis Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Would the project...</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?</td>
<td>☐</td>
<td>☑</td>
</tr>
</tbody>
</table>
a) **Plants**

The 2003 LRDP EIR found that development under the 2003 LRDP could result in the loss of special-status plant species (LRDP Impact 4.4-1). Because the project site is heavily disturbed from past activities and is compacted and covered by lawn, asphalt, concrete, or horticultural garden, the site does not provide suitable habitat for special-status plant species, no plant survey was required under LRDP Mitigation 4.4-1(a). No effect to special-status plant species would occur and no further analysis is required.

**Wildlife**

The project site and its immediate vicinity do not contain appropriate habitat for any of the special status species that are noted in the 2003 LRDP EIR as known to occur on campus or have potential habitat present on campus, including: northern California black walnut, burrowing owl, Swainson's hawk, valley elderberry longhorn beetle, California tiger salamander, chinook salmon, giant garter snake, steelhead, and northwestern pond turtle. Although Swainson’s hawks may use the agricultural fields and open grassland areas on the campus for foraging, such habitat is not present on the project site including the areas that would be disturbed in conjunction with the road extension and the utility connections. No suitable Swainson’s hawks nesting habitat is located on or immediately adjacent to the project site. Swainson’s hawks have nested within ½ mile of the project site, but all locations are over ¼ mile away, are screened by existing trees and buildings, and are in areas with high-levels of human activity. In accordance with LRDP Mitigation 4.4-4(a), the campus shall conduct a pre-construction survey for nesting Swainson’s hawk and then implement any necessary avoidance measures (as specified in LRPD Mitigation 4.4-4 (a)) to ensure that the nesting efforts of Swainson’s hawks are not disturbed. Project development would therefore result in no impacts on special status wildlife species and no further analysis is required.

The construction of a new storm drain outfall for the road extension project into the Arboretum Waterway would result in minor disturbances in the gabion wall on the south margin of the waterway. This area is potential habitat for northwestern pond turtles. Northwestern pond turtles are known to occur along Putah Creek and the North Fork Cutoff, and could be present in the suitable habitat of the Arboretum Waterway. Storm drain construction would involve minor excavation in the Arboretum bank and possible the incidental deposition of a small quantity of silt in the water. In compliance with LRDP Mitigation 4.4-7, the campus would perform a preconstruction survey for pond turtles at the storm drain outfall site; install silt fencing to exclude pond turtles; and if work is to be performed in the water, seine the waters around the construction site to capture any turtles that may be present and relocate them outside of the impact area. Implementation of these measures would reduce the potential impact to a less-than-significant level. No further analysis is required.

b,c) There are no riparian habitat or wetland areas within the immediate vicinity of the project site. No effect to riparian habitat or wetland areas would occur and no further analysis is required.

d) The Putah Creek corridor, which is the southern boundary of the campus, is the principal corridor for the movement of native resident and migratory fish and wildlife through the UC Davis campus. It is the regional connection between the hills in western Yolo County and the Sacramento River. The project is approximately 1 mile north of the Putah Creek corridor. Therefore, the project would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. No impact would occur and no further analysis is required.
e) The campus performs a tree survey of every project site that contains trees prior to project approval, and modifies the project design to the extent feasible to avoid tree removal or provide additional mitigation if removal of heritage or specimen trees cannot be avoided. There are no trees on the hotel expansion site and therefore no survey was necessary. There are seven trees on the project site for the road extension that would be removed during construction and a survey confirmed that these trees are not heritage or specimen trees. No impacts on heritage or specimen trees would occur, and no further analysis is required.

f) The campus does not fall within the boundaries of, nor is it adjacent to, an adopted regional Habitat Conservation Plan (HCP) or Natural Community Conservation Plan (NCCP). The campus has implemented two low-effects HCPs for Valley Elderberry Longhorn Beetle at Russell Ranch. However, the project site is not located at Russell Ranch. Therefore, the proposed project would not conflict with an adopted HCP or NCCP and no further analysis is required.
7.5 CULTURAL RESOURCES

7.5.1 Background

Section 4.5 of the 2003 LRDP EIR addresses the effects of campus growth under the 2003 LRDP on cultural resources. The following discussion summarizes information presented in the ‘Setting’ subsection of Section 4.5 of the 2003 LRDP EIR.

Campus

Cultural resources on campus include prehistoric and historic resources. Prehistoric resources are those sites and artifacts associated with the indigenous, non-Euroamerican population, generally dating prior to contact with people of European descent. Historic resources include structures, features, artifacts, and sites that date from Euroamerican settlement of the region.

Archaeological Resources

The campus lies in the ethnographic territory of the Patwin. Since 1991, extensive archaeological investigations (survey, testing, monitoring, and/or excavation) have been conducted on campus in conjunction with the development of campus projects (Nadolski 2003). Patwin sites, including burials, have been identified at several locations on the central campus. Areas within 800 feet of the banks of the historic channel of Putah Creek and its tributaries and slough channels, and within 800 feet of specific known archaeological sites, have been identified as archaeologically sensitive zones on campus.

Historic Resources

The earliest direct historic contacts in the Davis area probably occurred during 1806 to 1808. Farming on a large scale began in the Davis area in the 1850s. A ‘university farm’ was established at Davis in 1906, classes began in 1909, and Davis became a general University of California campus in 1959. No properties within the campus are listed on the National Register of Historic Places. Six properties on or near the campus have been recorded with the California Inventory of Historic Resources. Historic architectural features typically must be at least 50 years of age to be considered for listing on the California Register of Historical Resources (CRHR).

Project Site

Cultural resource surveys have previously been conducted on and around the project area. The results of the prior surveys have indicated the potential for significant cultural resources in this portion of the UC Davis campus. As part of the evaluation in upcoming the project EIR, UC Davis will compile the results of the prior surveys and conduct additional surveys to evaluate all of the areas that could be disturbed by the proposed project.

7.5.2 2003 LRDP EIR Standards of Significance

In addition to the following archaeological and historical standards of significance identified in the 2003 LRDP EIR, an additional standard from the CEQA Guidelines’ Environmental Checklist (‘e’ in the checklist below) was found not applicable to campus growth under the 2003 LRDP.
Archaeological Resources

The 2003 LRDP EIR considers an impact on archaeological resources significant if growth under the 2003 LRDP would:

- Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to CEQA Guideline § 15064.5.
- Disturb any human remains, including those interred outside of formal cemeteries.

A “unique archaeological resource” is defined under CEQA through Public Resources Code Section 21083.2(g). A unique archaeological resource implies an archaeological artifact, object, or site about which it can be clearly demonstrated that there is a high probability that it meets one of the following criteria:

- The archaeological artifact, object, or site contains information needed to answer important scientific questions and there is a demonstrable public interest in that information, or
- The archaeological artifact, object, or site has a special and particular quality, such as being the oldest of its type or the best available example of its type, or
- The archaeological artifact, object, or site is directly associated with a scientifically recognized important prehistoric or historic event or person.

For a resource to qualify as a unique archaeological resource, the agency must determine that there is a high probability that the resource meets one of these criteria without merely adding to the current body of knowledge (PRC § 21083.2(g)). An archaeological artifact, object, or site that does not meet the above criteria is a nonunique archaeological resource (PRC § 21083.2(h)). An impact on a nonunique resource is not a significant environmental impact under CEQA (CEQA Guidelines § 15064.5(c)(4)). If an archaeological resource qualifies as a historical resource under CRHR or other criteria, then the resource is treated as a historical resource for the purposes of CEQA (CEQA Guidelines § 15064.5(c)(2)).

Section 15064.5 of the CEQA Guidelines assigns special importance to human remains and specifies procedures to be used when Native American remains are discovered. These procedures are detailed under PRC § 5097.98. California Health and Safety Code § 7050.5(b) prohibits disturbance of human remains uncovered by excavation until the Coroner has made a finding relative to PRC § 5097 procedures.

Historical Resources

For the purposes of this EIR, as mandated by PRC § 21083.2, impacts of the proposed project on an historical resource would be considered significant if it would:

- cause a significant adverse change in the significance of a historical resource as defined in CEQA Guidelines § 15064.5.

The standards of significance for historical resources are based on Appendix G and § 15064.5 of the CEQA Guidelines. Accordingly, historical resources include resources listed in, or determined to be eligible for listing in, the CRHR; resources included in a qualifying local register (such as the City of Davis Register of Historic Resources); and resources that the lead agency determines to meet the criteria for listing in the CRHR. These criteria may apply to any historic built environmental feature, and to
historic or prehistoric archaeological sites. Properties or sites that are eligible for inclusion in the CRHR are termed —historical resources.” Under the provisions of CEQA Guidelines § 15064.5(a)(3), generally a lead agency should find that a property is historically significant if it determines that the property meets one or more of the criteria for listing on the CRHR, which extend to any building, structure, feature or site that:

- is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage;
- is associated with lives of persons important in our past;
- embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
- has yielded, or may be likely to yield, information important in prehistory or history

With few exceptions, to qualify as a historical resource a property must be at least 50 years old and also must retain physical integrity and integrity to its period of significance. For historic structures and buildings, significantly altering the setting, remodeling, or moving the structure may diminish or destroy its integrity. However, under some conditions, a building that has been moved or altered may still retain its historic significance. Landscaping or landscape features may in some cases contribute to the significance of an historic architectural property. Such elements would be assessed as part of the evaluation of the related historic architectural property. Archaeological sites may also qualify as historical resources under CEQA Guideline Section 15064.5(a)(3). Archaeological sites most often are assessed relative to CRHR Criterion D (for potential to yield data important to history or prehistory). An archaeological deposit that has been extensively disturbed and archaeological artifacts found in isolation may not be eligible for listing on the CRHR, because the lack of stratigraphic context may reduce the potential for the resource to yield significant data. A resource that does not meet one of the criteria for eligibility to the CRHR is not a historical resource under CEQA, and impacts to such a property are not significant.

7.5.3 2003 LRDP EIR Impacts and Mitigation Measures

Cultural resources impacts of campus growth under the 2003 LRDP through 2015-16 on cultural resources are evaluated in Section 4.5 of the 2003 LRDP EIR. The proposed project will be evaluated to determine whether it is within the scope of analysis in the 2003 LRDP EIR. The following summarizes the impacts and adopted mitigation measures from the 2003 LRDP EIR. These need for and the efficacy of the 2003 LRDP EIR mitigation measures will be assessed in the EIR.

<table>
<thead>
<tr>
<th>2003 LRDP EIR Impacts</th>
<th>Level of Significance Prior to Mitigation</th>
<th>Level of Significance After Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.5-1</td>
<td>Implementation of the 2003 LRDP could damage or destroy an archaeological resource or historic building or structure as the result of grading, excavation, ground disturbance or other project development.</td>
<td>PS</td>
</tr>
<tr>
<td>4.5-2</td>
<td>Implementation of the LRDP could cause a substantial adverse change in the significance of a historical resource or unique archaeological resource, as defined in CEQA guidelines 15064.5, as the result of ground disturbance, alteration, removal or demolition associated with project development.</td>
<td>PS</td>
</tr>
<tr>
<td>4.5-3</td>
<td>Implementation of the LRDP could cause a substantial adverse change in the significance of a historical resource or unique archaeological resource, as defined</td>
<td>S</td>
</tr>
</tbody>
</table>
### 2003 LRDP EIR Impacts

#### CULTURAL RESOURCES

<table>
<thead>
<tr>
<th>Level of Significance Prior to Mitigation</th>
<th>Level of Significance After Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>in CEQA guidelines 15064.5, and the values that contribute to the significance of the resource cannot be preserved through documentation and data recovery.</td>
<td></td>
</tr>
<tr>
<td>Implementation of the 2003 LRDP could disturb human remains, including those interred outside of formal cemeteries.</td>
<td>PS LS</td>
</tr>
<tr>
<td>Development under the 2003 LRDP would contribute to cumulative damage to and loss of the resource base of unique archaeological resources and historical resources (including archaeological sites and historic buildings and structures) in Yolo and Solano counties.</td>
<td>S SU</td>
</tr>
</tbody>
</table>

Levels of Significance: LS=Less than Significant, S=Significant, PS=Potentially Significant, SU=Significant and Unavoidable

Mitigation measures from the 2003 LRDP EIR are presented below.

### 2003 LRDP EIR Mitigation Measures

#### CULTURAL RESOURCES

| 4.5-1(a) | As early as possible in the project planning process, the campus shall define the project’s area of potential effects (APE) for archaeological resources and, if structures are present on the site, for historic structures. The campus shall determine the potential for the project to result in cultural resource impacts, based on the extent of ground disturbance and site modification anticipated for the proposed project. Based on this information, the campus shall:

   (i) Prepare an inventory of all buildings and structures within the APE that will be 50 years of age or older at the time of project construction for review by a qualified architectural historian. If no structures are present on the site, there would be no impact to historic built environment resources from the project. If potentially historic structures are present, LRDP Mitigation 4.5-1(c) shall be implemented.

   (ii) Determine the level of archaeological investigation that is appropriate for the project site and activity, as follows:

   - Minimum: excavation less than 18 inches deep and in a relatively small area (e.g., a trench for lawn irrigation, tree planting, etc.). Implement LRDP Mitigation 4.5-1(b)(i).

   - Moderate: excavation below 18 inches deep and/or over a large area on any site that has not been characterized and is not suspected to be a likely location for archaeological resources. Implement LRDP Mitigation 4.5-1(b)(i) and (ii).

   - Intensive: excavation below 18 inches and/or over a large area on any site that is within 800 feet of the historic alignment of Putah Creek, or that is adjacent to a recorded archaeological site. Implement LRDP Mitigation 4.5-1(i), (ii) and (iii). |

| 4.5-1(b) | During the planning phase of the project, the campus shall implement the following steps to identify and protect archaeological resources that may be present in the APE:

   (i) For project sites at all levels of investigation, contractor crews shall be required to attend an informal training session prior to the start of earth moving, regarding how to recognize archaeological sites and artifacts. In addition, campus employees whose work routinely involves disturbing the soil shall be informed how to recognize evidence of potential archaeological sites and artifacts. Prior to disturbing the soil, contractors shall be notified that they are required to watch for potential archaeological sites and artifacts and to notify the campus if any are found. In the event of a find, the campus shall implement item (vi), below.

   (ii) For project sites requiring a moderate or intensive level of investigation, a surface survey shall be conducted by a qualified archaeologist during project planning and design and prior to soil disturbing activities. For sites requiring moderate investigation, in the event of a surface find, intensive investigation will be implemented, as per item (iii), below. Irrespective of findings, the qualified archaeologist shall, in consultation with the campus, develop an archaeological monitoring plan to be implemented during the construction phase of the project. The frequency and duration of monitoring shall be adjusted in accordance... |
2003 LRDP EIR Mitigation Measures
CULTURAL RESOURCES

with survey results, the nature of construction activities, and results during the monitoring period. In the event of a discovery, the campus shall implement item (vi), below.

(iii) For project sites requiring intensive investigation, irrespective of subsurface finds, the campus shall retain a qualified archaeologist to conduct a subsurface investigation of the project site, to ascertain whether buried archaeological materials are present and, if so, the extent of the deposit relative to the project’s area of potential effects. If an archaeological deposit is discovered, the archaeologist will prepare a site record and file it with the California Historical Resource Information System.

(iv) If it is determined through step (iii), above, that the resource extends into the project’s area of potential effects, the resource will be evaluated by a qualified archaeologist, who will determine whether it qualifies as a historical resource or a unique archaeological resource under the criteria of CEQA Guidelines § 15064.5. If the resource does not qualify, or if no resource is present within the project area of potential effects (APE), this will be noted in the environmental document and no further mitigation is required unless there is a discovery during construction (see (vi), below).

(v) If a resource within the project APE is determined to qualify as an historical resource or a unique archaeological resource (as defined by CEQA), the campus shall consult with the qualified archaeologist to consider means of avoiding or reducing ground disturbance within the site boundaries, including minor modifications of building footprint, landscape modification, the placement of protective fill, the establishment of a preservation easement, or other means that will permit avoidance or substantial preservation in place of the resource. If avoidance or substantial preservation in place is not possible, the campus shall implement LRDP Mitigation 4.5-2(a).

(vi) If a resource is discovered during construction (whether or not an archaeologist is present), all soil disturbing work within 100 feet of the find shall cease. The campus shall contact a qualified archaeologist to provide and implement a plan for survey, subsurface investigation as needed to define the deposit, and assessment of the remainder of the site within the project area to determine whether the resource is significant and would be affected by the project. LRDP Mitigation 4.5-1(b), steps (iii) through (vii) shall be implemented.

(vii) A written report of the results of investigations will be prepared by a qualified archaeologist and filed with the appropriate Information Center of the California Historical Resources Information System.

4.5-2(a) For an archaeological site that has been determined by a qualified archaeologist to qualify as an historical resource or a unique archaeological resource through the process set forth under LRDP Mitigation 4.5-1(b), and where it has been determined under LRDP Mitigation 4.5-1(b) that avoidance or preservation in place is not feasible, a qualified archaeologist, in consultation with the campus, shall:

(i) Prepare a research design and archaeological data recovery plan for the recovery that will capture those categories of data for which the site is significant, and implement the data recovery plan prior to or during development of the site.

(ii) Perform appropriate technical analyses, prepare a full written report and file it with the appropriate information center, and provide for the permanent curation of recovered materials.

(iii) If, in the opinion of the qualified archaeologist and in light of the data available, the significance of the site is such that data recovery cannot capture the values that qualify the site for inclusion on the CRHR, the campus shall reconsider project plans in light of the high value of the resource, and implement more substantial modifications to the proposed project that would allow the site to be preserved intact, such as project redesign, placement of fill, or project relocation or abandonment. If no such measures are feasible, the campus shall implement LRDP Mitigation 4.5-3.

4.5-3 If a significant historic resource or unique archaeological resource cannot be preserved intact, before the property is damaged or destroyed the campus shall ensure that the resource is appropriately documented, as follows.

(i) For a built environment feature, appropriate documentation is described under LRDP 4.5-2 (b)

(ii) For an archaeological site, a program of research-directed data recovery shall be conducted and reported, consistent with LRDP Mitigation 4.5-2(a).

4.5-4(a) Implement LRDP Mitigation 4.5-1, 4.5-2 and 4.5-3 to minimize the potential for disturbance or destruction of human remains in an archaeological context and to preserve them in place, if feasible.

4.5-4(b) Provide a representative of the local Native American community an opportunity to monitor any excavation


2003 LRDP EIR Mitigation Measures

CULTURAL RESOURCES

(including archaeological excavation) within the boundaries of a known Native American archaeological site.

4.5-4(c) In the event of a discovery on campus of human bone, suspected human bone, or a burial, all excavation in the vicinity will halt immediately and the area of the find will be protected until a qualified archaeologist determines whether the bone is human. If the qualified archaeologist determines the bone is human, or if a qualified archaeologist is not present, the campus will notify the Yolo or Solano County Coroner (depending on the county of the find) of the find before additional disturbance occurs. Consistent with California Health and Safety Code § 7050.5(b), which prohibits disturbance of human remains uncovered by excavation until the Coroner has made a finding relative to PRC 5097 procedures, the campus will ensure that the remains and vicinity of the find are protected against further disturbance. If it is determined that the find is of Native American origin, the campus will comply with the provisions of PRC § 5097.98 regarding identification and involvement of the Native American Most Likely Descendant (MLD).

4.5-4(d) If human remains cannot be left in place, the campus shall ensure that the qualified archaeologist and the MLD are provided opportunity to confer on archaeological treatment of human remains, and that appropriate studies, as identified through this consultation, are carried out prior to reinterment. The campus shall provide results of all such studies to the local Native American community, and shall provide an opportunity of local Native American involvement in any interpretative reporting. As stipulated by the provisions of the California Native American Graves Protection and Repatriation Act, the campus shall ensure that human remains and associated artifacts recovered from campus projects on state lands are repatriated to the appropriate local tribal group if requested.

7.5.4 Environmental Checklist and Discussion

<table>
<thead>
<tr>
<th>CULTURAL RESOURCES</th>
<th>Impact to be Analyzed in the EIR</th>
<th>No Additional Analysis Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Would the project…</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a)Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>b)Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?</td>
<td>☑</td>
<td>☐</td>
</tr>
<tr>
<td>c)Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>d)Disturb any human remains, including those interred outside of formal cemeteries?</td>
<td>☑</td>
<td>☐</td>
</tr>
</tbody>
</table>

a) Project activities would result in no disturbance to historic resources. The hotel expansion site is a landscaped area that was recently graded and used for construction staging. It includes no structures and no structures would be affected by construction of the hotel expansion. The road extension with utility installations and roadway modifications would take place in an area with no buildings and no structures. Accordingly, the road extension components would have no effect on historic resources. No impact would occur.

b,d) The proposed hotel expansion would take place on an area that was recently excavated and graded as part of the construction for the existing hotel. The proposed project would excavate these soils a second time to construction the foundation for the hotel expansion. The proposed excavation for the hotel would not remove previously disturbed soils in the hotel area. During construction of the hotel, archaeological monitoring during the ground disturbing activities found no presence of archaeological
resources at the hotel site. Accordingly, the hotel expansion would have no effect on archaeological resources.

Project activities for the road extension and would result in soil excavation in areas that could contain archaeological resources. The impacts from the proposed excavation will be evaluated in the project EIR.

c) Project activities would result in soil excavation on the UC Davis campus in soils that are alluvial deposits. These soils do not contain paleontological resources or unique geologic features. The UC Davis campus is more than 100 years old and the on-going excavation projects at UC Davis have not resulted in discoveries of paleontological resources or unique geologic features. No impact would occur.
7.6 GEOLGY, SOILS, & SEISMICITY

7.6.1 Background

Section 4.6 of the 2003 LRDP EIR addresses the geology, soils, and seismicity effects of campus growth under the 2003 LRDP. The following discussion summarizes information presented in the ‘Setting’ subsection of Section 4.6 of the 2003 LRDP EIR.

Campus

The campus is located within the Putah Creek Plain of California’s Great Valley geomorphic province. Except for the somewhat raised elevation along the levee adjacent to Putah Creek, the campus is topographically flat. Soils on campus generally contain a high amount of silt and clay, and as a result, are moderately to slowly permeable and have slow runoff rates, minimal erosion hazards, and moderate to high shrink-swell potential (the potential for soil volume to change with a loss or gain in moisture). The predominant soil constraint to construction on campus is soil shrink-swell potential.

A series of low foothills, including the Dunnigan Hills, the Capay Hills, and the English Hills, lie approximately 20 miles west of the campus at the eastern base of the Coast Range. The presence of subsurface thrust faults within these regional foothills and within 100 miles of the campus indicates the potential for seismic ground shaking in the Davis region. The Davis region is not located within an Alquist-Priolo Fault Zone as defined in the Alquist-Priolo Earthquake Fault Zoning Act, which is designed to prohibit the construction of new structures for human occupancy across active faults. According to the California Geological Survey’s Probabilistic Seismic Hazard Assessment for the State of California, the peak ground acceleration with a 10 percent probability of being exceeded in 50 years is 0.2 to 0.3g on the central campus, increasing to 0.3 to 0.4g on the western portion of Russell Ranch (CDOC 1996). By comparison, in most parts of the San Francisco Bay Area, the peak ground acceleration is 0.5g or greater. Likely effects of ground shaking during a probable maximum intensity earthquake for the area could include structural damage to stucco, masonry walls, and chimneys, which could expose people to risks associated with falling objects and potential building collapse.

Project Site

The engineering and design process for the project facilities will incorporate the findings from the geotechnical survey to ensure adequate design for compliance with the California Building Code.

7.6.2 2003 LRDP EIR Standards of Significance

The 2003 LRDP EIR considers an impact related to geology, soils, and seismicity significant if growth under the 2003 LRDP would:

- Expose people or structures to potential substantial adverse effects involving strong seismic ground shaking.
- Expose people or structures to potential substantial adverse effects involving seismic-related ground failure.
- Result in substantial soil erosion or the loss of topsoil. (Impacts associated with the effect of erosion on water quality are addressed in Section 7.9 Hydrology & Water Quality.)
- Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse.
- Be located on expansive soil, creating substantial risks to life or property.
- Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.

Additional standards from the CEQA Guidelines’ Environmental Checklist (a,i) and (a,iv) in the checklist below) were found not applicable to campus growth under the 2003 LRDP.

### 7.6.3 2003 LRDP EIR Impacts and Mitigation Measures

Geology, soils, and seismicity impacts of campus growth under the 2003 LRDP through 2015-16 related to geology, soils, and seismicity are evaluated in Section 4.6 of the 2003 LRDP EIR. As analyzed in Section 4 of this Initial Study, the proposed project is within the scope of analysis in the 2003 LRDP EIR. No significant impacts identified in the 2003 LRDP EIR related to geology, soils, and seismicity are relevant to the proposed project.

### 7.6.4 Environmental Checklist and Discussion

#### GEOLOGY, SOILS, & SEISMICITY

<table>
<thead>
<tr>
<th>Would the project…</th>
<th>Impact to be Analyzed in the EIR</th>
<th>No Additional Analysis Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.</td>
<td>❌</td>
<td>✔️</td>
</tr>
<tr>
<td>ii) Strong seismic ground shaking?</td>
<td>❌</td>
<td>✔️</td>
</tr>
<tr>
<td>iii) Seismic-related ground failure, including liquefaction?</td>
<td>❌</td>
<td>✔️</td>
</tr>
<tr>
<td>iv) Landslides?</td>
<td>❌</td>
<td>✔️</td>
</tr>
<tr>
<td>b) Result in substantial soil erosion or the loss of topsoil?</td>
<td>❌</td>
<td>✔️</td>
</tr>
<tr>
<td>c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?</td>
<td>❌</td>
<td>✔️</td>
</tr>
<tr>
<td>d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?</td>
<td>❌</td>
<td>✔️</td>
</tr>
<tr>
<td>e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?</td>
<td>❌</td>
<td>✔️</td>
</tr>
</tbody>
</table>

a,i) The UC Davis campus and the surrounding area are not located within an Alquist-Priolo Earthquake Fault Zone, and the closest known active fault rupture zones are over 30 miles away. Therefore, no impact would occur and no further analysis is required.
a,ii) The campus is located in a seismically active area that could experience ground shaking, liquefaction, and settlement. The peak ground acceleration for the main campus is estimated to be 0.2 to 0.3g, and 0.3 to 0.4g on the western portion of Russell Ranch. This intensity of seismic groundshaking has the potential to dislodge objects from shelves and to damage or destroy buildings and other structures. In the case of such a seismic event, people on campus and in the area would be exposed to these hazards. The campus minimizes hazards associated with damage or destruction to buildings and other structures by reviewing and approving all draft building plans for compliance with the California Building Code (CBC), which includes specific structural seismic safety provisions. The campus also adheres to the University of California Seismic Safety Policy, which requires anchorage for seismic resistance of nonstructural building elements such as furnishings, fixtures, material storage facilities, and utilities that could create a hazard if dislodged during an earthquake. Therefore, the project-level impact associated with risks due to seismic ground shaking would be less than significant. No further analysis is required.

In addition, it is reasonable to assume that all regional jurisdictions would enforce the seismic provisions of the CBC, and therefore the cumulative impact is also considered less than significant. No further analysis is required.

a,iii) See the discussion in item (c) below.

a,iv) The UC Davis campus and the surrounding area are characterized by flat topography and therefore would not be subject to landslides. No impact would occur and no further analysis is required.

b) The soil types that occur on the UC Davis campus generally, including the project site, contain a high amount of silt and clay, and these soil types have minimal erosion hazard associated with them (see pages 4.6-1,2 and Figure 4.6-1 of the 2003 LRDP EIR). Therefore, this impact was determined to be less than significant in the 2003 LRDP EIR (2003 LRDP EIR, page 4.6-8 and 4.8-32). The potential for soil erosion during construction is addressed in items (a) and (c) in Section 7.9 Hydrology & Water Quality. Once the proposed building, roadway, and associated utility connections are constructed, the site soils would be underneath pavement or landscaping, and there would be minimal potential for soil erosion. The impact is considered less than significant and no further analysis is required.

c) The potential for liquefaction on the campus is generally low because the depth to groundwater is relatively large (30 to 80 feet, depending on the season). Furthermore, as discussed above for (a,ii), campus policy requires compliance with the CBC and the University of California Seismic Safety Policy, which include structural and nonstructural seismic safety provisions. Complying with the provisions of the CBC requires that a geotechnical investigation be performed to provide data for the architect and/or engineer to responsibly design the project. Geotechnical investigations address the potential for liquefaction, lateral spreading, and other types of ground failure. Therefore, because the project will comply with the CBC and the University of California Seismic Safety Policy, impacts associated with seismic-related ground failure would be less than significant. No further analysis is required.

The Davis area subsided by approximately 2 inches between 1999 and 2002. Because the subsidence is regional, unlike local differential settlement, it would not affect building foundations. Subsidence can adversely affect utilities such as storm drains which rely on gradient for gravity-driven flow if the differential subsidence across the length of the pipeline causes the gradient of the pipelines to change direction. On the campus, the differential subsidence is about 0.4 inch per mile. Thus, over a period of 10 years, the gradient of a pipeline could change by as much as 4 inches per mile. Gravity-driven
pipelines typically used for wastewater and storm water are designed with gradients between 0.5 and 1 percent (27 to 53 feet drop per mile). Given these gradients, the small potential change of about 4 inches per mile over a period of 10 years would not affect the functioning of existing and proposed storm drains or other utilities. For the same reasons presented above and the short lengths of the project’s utility connections, regional subsidence would not result in adverse impacts on project facilities. No further analysis is required.

d) The soils in several areas of the campus have high shrink/swell potential and could, on a site-specific basis, have the potential to create risk to life or property. Campus policy requires compliance with the CBC, which includes provisions for construction on expansive soils such as proper fill selection, moisture control, and compaction during construction. Complying with the provisions of the CBC requires that a geotechnical investigation be performed to provide data for the architect and/or engineer to responsibly design the project. The project will comply with the CBC, which will ensure that this impact is less than significant. No further analysis is required.

e) The 2003 LRDP EIR identifies that an impact would result if soils are incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems. No septic tanks or alternative wastewater disposal systems are included in the proposed project, and there would be no impact. No further analysis is required.
7.7 GREENHOUSE GAS EMISSIONS

7.7.1 Background

Since the publication of the 2003 LRDP EIR, checklist questions related to greenhouse gas emission have been added to Appendix G of the CEQA Guidelines as new Section VII, which require an evaluation of the potential of the proposed project to generate greenhouse gases that may contribute significantly to global climate change. Global climate change refers to any significant change in climate measurements, such as temperature, precipitation, or wind, lasting for an extended period (i.e., decades or longer).

Climate change may result from:

- Natural factors, such as changes in the sun’s intensity or slow changes in the Earth’s orbit around the sun;
- Natural processes within the climate system (e.g., changes in ocean circulation, reduction in sunlight from the addition of GHG and other gases to the atmosphere from volcanic eruptions); and
- Human activities that change the atmosphere’s composition (e.g., through burning fossil fuels) and the land surface (e.g., deforestation, reforestation, urbanization, desertification).

The primary effect of global climate change has been a rise in the average global tropospheric temperature of 0.2° Celsius per decade, determined from meteorological measurements worldwide between 1990 and 2005.

Climate change modeling using 2000 emission rates shows that further warming is likely to occur, which would induce further changes in the global climate system during the current century.

The term “greenhouse gases” (GHGs) is used for human activity-generated gases that are considered as contributing to climate change. State law defines GHGs to include carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF6).

Campus

The UC Davis campus has several sources of GHG emissions, including stationary combustion sources such as a central plant, boilers, and emergency generators; mobile combustion sources (fleet vehicles and buses); purchased electricity; faculty, staff and student commute trips; agricultural operations; landscape and building maintenance; a landfill; and a wastewater treatment plant.

UC Davis has prepared the 2009-2010 Climate Action Plan (CAP) for both the Davis and Sacramento campuses, as well as outlying facilities. The CAP describes and addresses policy and regulatory requirements of: (1) the UC Policy on Sustainable Practices; (2) AB 32; (3) the American College and University Presidents Climate Commitment; (4) CEQA; and (5) US EPA reporting requirements.

The CAP provides documentation of how campus GHG emissions are calculated, a report of current (2008) emissions, estimates of past (to 1990) and future emissions (to 2020), a statement of GHG...
emission reduction goals, a characterization of options and methods to reduce emissions, and a blueprint for future action.

The CAP focuses on emissions related to campus operations, instead of commuting and air travel, because emissions related to commuting and air travel are less than one-quarter those of campus operations. The CAP provides an analysis of commuting and air travel reduction options, but does not quantify emissions reductions for those options.

Calculated emissions for all of UC Davis, excluding commuting and air travel, for 2000 are 246,000 MTCO2e and for 1990 are 142,000 MTCO2e. In 2008, inventoried emissions (in CCAR), excluding commuting and air travel, totaled 239,000, indicating that UC Davis had already met the 2014 target. Thus, the CAP defined a new emissions target of 210,000 MTCO2e, almost 15 percent below the 2000 emissions, as the new 2014 target. The 2020 target, to reach 1990 emissions, is about 40 percent below the 1990 emissions.

**Project Site**

The project site footprint portion of the hotel addition and the roadway extension are currently vacant, and do not generate any direct or indirect GHG emissions.

**7.7.2 2003 LRDP EIR Standards of Significance**

The 2003 LRDP EIR did not evaluate the impacts of campus growth on global climate as this potential impact was not considered in CEQA documents at that time.

**7.7.3 2003 LRDP EIR Impacts and Mitigation Measures**

Not applicable.

**7.7.4 Environmental Checklist and Discussion**

<table>
<thead>
<tr>
<th>Greenhouse Gas Emissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Would the project...</td>
</tr>
<tr>
<td>a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?</td>
</tr>
<tr>
<td>b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?</td>
</tr>
</tbody>
</table>

a,b) Project activities would result in greenhouse gas emissions from construction equipment and long-term operation of the project. Although the project’s emissions are anticipated to be low, the impact from these emissions will be evaluated in the project EIR.
7.8 HAZARDS & HAZARDOUS MATERIALS

7.8.1 Background

Section 4.7 of the 2003 LRDP EIR addresses the hazards and hazardous materials effects of campus growth under the 2003 LRDP. The following discussion summarizes information presented in the ‘Setting’ subsection of Section 4.7 of the 2003 LRDP EIR.

Campus

A variety of hazardous materials are used on campus during the course of daily operations. Hazardous chemicals used on campus include: chemical solvents, reagents, and aromatic hydrocarbons that are used in campus laboratories; pesticides, fungicides, and herbicides used by agricultural programs and in landscape maintenance; relatively small amounts of solvents, paints, and acids used by fine arts programs; gasoline and diesel fuels, oils and lubricants, antifreeze, cleaning solvents and corrosives, paints and paint thinners, and freon refrigerants used in vehicle and building maintenance. In addition, radioactive materials, biohazardous materials, and laboratory animals are used in teaching and research activities. The use of hazardous materials on campus generates hazardous byproducts that must eventually be handled and disposed of as hazardous wastes.

Generation, transportation, and disposal of hazardous wastes are regulated by various agencies. The lead federal regulatory agency is the Environmental Protection Agency. The State Department of Toxic Substances Control (DTSC) has primary state regulatory responsibility but can delegate enforcement authority to local jurisdictions that enter into agreements with the state agency, as it did with Yolo County Department of Environmental Health (YCDEH) under the Certified Unified Program Agency (CUPA) program.

The campus’ Office of Environmental Health and Safety (EH&S) coordinates most local, state, and federal regulatory compliance functions related to the campus’ health, safety, and environmental issues. EH&S performs safety education and training, regulatory interpretation and applicability, approval of potentially hazardous procedures, resolution of safety problems, surveillance, and monitoring. In addition, EH&S provides guidance for several campus safety programs, including: the Chemical Inventory System, which tracks inventory and use of hazardous materials on campus; the CUPA Self-Audit Program, which complies with the terms of an agreement with the YCDEH; development of laboratory-specific Chemical Hygiene Plans; the Radiation and X-Ray Safety Programs; and the Biological Safety Administrative Advisory Committee. EH&S is also a working partner in such campus administrative advisory groups as the Chemical Safety Committee, the Radiation Safety Committees, the Animal Use and Care Committee, and the Biological Safety Committee. External administrative and benchmarking reviews of the EH&S programs are conducted periodically to identify means of further improving the programs.

The proposed hotel addition will utilize cleaning and building maintenance products such as bleach, paint, grease, and hydraulic fluid that could be hazardous and would be subject to applicable handling, transportation, and disposal regulations.

Project Site

The proposed project site for the hotel addition is currently a landscaped area adjacent to the existing hotel building. The site of the hotel addition and the site for the roadway improvements will be screened for potential environmental contamination prior to project approval.
### 2003 LRDP EIR Standards of Significance

The 2003 LRDP EIR considers a hazards and hazardous materials impact significant if growth under the 2003 LRDP would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within ¼ mile of an existing or proposed school.
- Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment.
- For a project within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, result in a safety hazard for people residing or working in the project area.
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

Additional standards from the CEQA Guidelines’ Environmental Checklist (“f” and “h” in the checklist below) were found not applicable to campus growth under the 2003 LRDP.

### 2003 LRDP EIR Impacts and Mitigation Measures

Impacts of campus growth under the 2003 LRDP through 2015-16 related to hazards and hazardous materials are evaluated in Section 4.7 of the 2003 LRDP EIR. The proposed project is within the scope of analysis in the 2003 LRDP EIR and potentially significant hazards and hazardous materials impacts identified in the 2003 LRDP EIR that are relevant to the proposed project are presented below with their corresponding levels of significance before and after application of mitigation measures identified in the 2003 LRDP EIR. In addition, LRDP Impact 4.7-12, presented below, are considered less than significant prior to mitigation, but the 2003 LRDP EIR identified mitigation to further reduce the significance of these impacts. Less than significant impacts without mitigation measures are not presented here.

<table>
<thead>
<tr>
<th>2003 LRDP EIR Impacts</th>
<th>Level of Significance Prior to Mitigation</th>
<th>Level of Significance After Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.7-10 Implementation of the 2003 LRDP would increase use of hazardous materials by non-UC entities on campus, which could create hazards to the public or the environment under routine and upset conditions.</td>
<td>PS</td>
<td>LS</td>
</tr>
<tr>
<td>4.7-12 Construction activities on campus under the 2003 LRDP would not expose construction workers and campus occupants to contaminated soil or groundwater.</td>
<td>LS</td>
<td>LS</td>
</tr>
<tr>
<td>4.7-17 Campus development under the 2003 LRDP could physically interfere with the campus’ Emergency Operations Plan.</td>
<td>PS</td>
<td>LS</td>
</tr>
</tbody>
</table>

Levels of Significance: LS=Less than Significant, S=Significant, PS=Potentially Significant, SU=Significant and Unavoidable
Mitigation measures in the 2003 LRDP EIR that are applicable to the proposed project are presented below. Since these mitigation measures are already being carried out as part of implementation of the 2003 LRDP, they are considered part of the project description, and assumed as part of the impact analysis and will not be readopted in this Initial Study or EIR. Nothing in this Initial Study in any way alters the obligations of the campus to implement 2003 LRDP EIR mitigation measures.

**2003 LRDP EIR Mitigation Measures**

**HAZARDS & HAZARDOUS MATERIALS**

4.7-10 For projects proposed by non-UC entities on campus that involve laboratory space, non-UC entities shall be required, through contracts and agreements, to implement programs and controls that provide the same level of protection required of campus laboratories and departments. The following project-specific mitigation measures would be implemented for non-UCD tenants:

(i) Non-UC entities shall submit the qualifications of designated laboratory directors to UC Davis EH&S Office prior to commencing laboratory operations. Such documentation shall be in the form of educational and professional qualifications/experience.

(ii) Non-UC entities shall submit certification of compliance with NIH biosafety principles to the UC Davis EH&S Office prior to commencing on-site research or pilot plant manufacturing activities. Non-UC entities shall submit copies of completed medical waste management plans, biosafety management plans, inventories of infectious or genetically modified agents, applicable permits and updates.

(iii) If hazardous material quantities are proposed to be increased above applicable threshold quantities as defined in California Code of Regulations, Title 19, Division 2, Chapter 4.5, non-UC entities shall implement a Risk Management Plan/California Accidental Release Prevention Plan (RMP/Cal-ARP), which discusses the handling and storage of acutely hazardous materials on site. The RMP/Cal-ARP shall be approved by the CUPA and filed with the UC Davis EH&S Office prior to commencing proposed operations.

(iv) Non-UC entities shall submit certification to the UC Davis EH&S to verify that applicable requirements for handling and disposal of hazardous wastes have been met prior to commencing on-site research or pilot plant manufacturing activities. Non-UC entities shall submit copies of management plans for handling and disposal of hazardous wastes, and written verification of contracts with licensed waste disposal firms.

(v) Non-UC entities shall provide to campus EH&S copies of all required environmental reports to local, state, and federal environmental and safety regulators.

4.7-12 The campus shall perform due diligence assessments of all sites where ground-disturbing construction is proposed.

4.7-17 To the extent feasible, the campus shall maintain at least one unobstructed lane in both directions on campus roadways. At any time only a single lane is available due to construction-related road closures, the campus shall provide a temporary traffic signal, signal carriers (i.e., flagpersons), or other appropriate traffic controls to allow travel in both directions. If construction activities require the complete closure of a roadway, the campus shall provide appropriate signage indicating alternative routes. To ensure adequate access for emergency vehicles when construction projects would result in temporary lane or roadway closures, the campus shall inform emergency services, including the UC Davis Police and Fire Departments, and American Medical Response, of the closures and alternative travel routes.
7.8.4 Environmental Checklist and Discussion

<table>
<thead>
<tr>
<th>HAZARDS &amp; HAZARDOUS MATERIALS</th>
<th>Impact to be Analyzed in the EIR</th>
<th>No Additional Analysis Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Would the project…</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?</td>
<td>☐</td>
<td>☑</td>
</tr>
</tbody>
</table>

a,b) Hazardous Chemicals

The proposed hotel addition will utilize cleaning and building maintenance products such as bleach, paint, grease, and hydraulic fluid that could be hazardous and would be subject to applicable handling, transportation, and disposal regulations. The hotel will be managed by a non-UC entity and the managing entity would be responsible for complying with all applicable regulations. The road extension components of the project would involve use of hazardous materials during construction such as gasoline, diesel fuel, and other petroleum based substances by the construction contractor to operate the construction equipment. The issue of non-UC entities utilizing hazardous materials on campus was addressed in the 2003 LRDP EIR in LRDP Mitigation 4.7-10(v) requiring non-UC entities to comply with and provide copies of all required environmental reports to the campus EH&S. The proposed project would comply with this requirement to ensure that hazardous chemicals are appropriately stored, handled, and transported. With implementation of 4.7(v), the potential impact would be less than significant.

The road extension components of the project would involve use of hazardous materials during construction such as gasoline, diesel fuel, and other petroleum based substances to operate the construction equipment.
Given the campus' and local jurisdiction's existing policies and compliance with state and federal regulations, the 2003 LRDP EIR found that cumulative impacts related to the use and transport of hazardous materials and the generation of hazardous waste are less than significant.

**Biohazardous Materials**

The project would not generate or use of biohazardous materials. No impact would occur.

**Laboratory Animals**

The project would not involve laboratory animals. No impact would occur.

c) There are no existing schools within ¼ mile of the project site. Childcare centers are currently located on the central campus but none are located within ¼ mile of the proposed project site. Therefore, the impact to those attending existing or proposed schools would be less than significant.

d) The Laboratory for Energy Related Research/South Campus Disposal site is the only campus site that is listed as a hazardous materials site pursuant to Government Code Section 65962.5. The proposed project would not disturb this site.

The 2003 LRDP EIR found that construction activities under the 2003 LRDP would not expose construction workers and campus occupants to contaminated soil or groundwater (Impact 4.7-12). Campus policy requires that due diligence surveys be performed for all proposed project sites as part of the project planning process. An updated search of federal, state, and local agency databases will be obtained as part of EIR preparation. Federal and state regulations require that workers who may be exposed to contaminants during the course of their jobs know of the presence of contamination and be properly trained. In addition, these regulations require that appropriate engineering and administrative controls and protective equipment be provided to reduce exposure to safe levels. The current campus due diligence policy and Cal/OSHA regulations minimize the exposure of construction workers to contaminants. In addition, if contaminants are identified on project sites, the campus would coordinate site remediation. No contamination has been identified on the project site or adjacent sites. Therefore, the impacts would be less than significant. To ensure that due diligence surveys are performed and to further reduce this less-than-significant impact, LRDP Mitigation 4.7-12 will be implemented as part of the proposed project.

e) The project site is located more than two miles from the University airport. No impact would occur.

f) The University Airport is a public use airport, not a private airstrip. No other airport facilities are within the immediate vicinity of the campus. No impact would occur and no further analysis is required. Refer to item e) above for a discussion of potential safety hazards associated with the University airport, a local public use airport.

g) The 2003 LRDP EIR found that implementation of the 2003 LRDP could interfere with the campus' Emergency Operations Plan through construction-related road closures (LRDP Impact 4.7-17). Implementation of LRPD Mitigation 4.7-17 (requiring an open lane for emergency vehicles) will ensure that emergency vehicles are not delayed due to construction projects. No other potential impacts associated with interference of an adopted emergency response plan or emergency evacuation plan would occur. Accordingly, the potential impact would be less than significant.

h) Areas along Putah Creek are the only areas on campus that could be susceptible to wildland fires. Urbanization will not occur in close proximity to these areas under the 2003 LRDP because land
along Putah Creek is designated for Open Space and Teaching and Research Fields, and land adjacent to these open areas is designated primarily for Teaching and Research Fields and low density development. The project site is located approximately 1 mile north of Putah Creek. Therefore, no impact would occur and no further analysis is required.
7.9 HYDROLOGY & WATER QUALITY

7.9.1 Background

Section 4.8 of the 2003 LRDP EIR addresses the hydrology and water quality effects of campus growth under the 2003 LRDP. The following discussion summarizes information presented in the ‘Setting’ subsection of Section 4.8 of the 2003 LRDP EIR.

Campus

Surface Water Resources

The UC Davis campus is located in the Lower Sacramento watershed. Putah Creek, the principal waterway in the Davis area, originates from springs in the Mayacamas Mountains northwest of the campus, flows into Lake Berryessa, through Winters, along the southern boundary of Russell Ranch, along the southern boundary of UC Davis’ west and south campuses, and eventually into the Yolo Bypass, an overflow channel for the Sacramento River. The North Fork Cutoff and the Arboretum Waterway on campus follow the historic channel of Putah Creek, but currently have no natural flow. The North Fork Cutoff is a typically dry stream channel on the west campus that is currently occupied by sheep and cattle programs in the Department of Animal Science. The Arboretum Waterway serves as the storm water detention basin for the central campus.

UC Davis is a member of the Solano Project, and currently has rights to purchase 4,000 acre-feet of Putah Creek water from Lake Berryessa per year, although reductions in deliveries can occur during drought conditions. The water is delivered to the southwest corner of the campus via an underground pipeline. UC Davis also has rights to surface water from Putah and Cache Creeks. The campus has not used this water in the recent past, but the tenant farmer at Russell Ranch uses approximately 3,750 acre-feet of water per year from Putah and Cache Creeks (via Willow Canal) for irrigation of commercial crops.

The quantity and quality of flows in Putah Creek are highly variable and depend on releases from Lake Berryessa, precipitation, storm water runoff, and treated effluent discharge. The campus’ tertiary level Wastewater Treatment Plant (WWTP) is the largest discharger of treated effluent to Putah Creek. The plant is regulated under a National Pollutant Discharge Elimination System (NPDES) Waste Discharge Requirement (WDR) permit issued by the Central Valley Regional Water Quality Control Board (CVRWQCB).

Groundwater Resources

The campus is underlain by sand and gravel alluvial deposits that include deep and shallow/intermediate depth aquifers. Deep gravel and sand aquifers underlie the campus between 600 to 1,500 feet below ground surface and supply the campus domestic/fire system. Historic annual domestic water use on campus over the past three decades has ranged from less than 600 million gallons per year (mgy) during drought conditions to nearly 900 mgy (UC Davis 1997). Despite the campus’ significant growth in recent decades, the campus’ deep aquifer demands have not significantly increased since the late 1960s (Ludorff and Scalmanini 2003), a trend that reflects the success of the campus’ water conservation efforts.

Shallow/intermediate depth sand and gravel aquifers underlie the campus at depths from 150 to 800 feet below ground surface and supply the campus utility water system, main campus agricultural water needs, and campus and tenant farmer irrigation needs at Russell Ranch. Over the past ten years, an average of approximately 2,657 acre-feet per year of shallow/intermediate aquifer water was used for agricultural purposes on campus, including approximately 1,813 acre-feet on the main campus and approximately 844...
acre-feet at Russell Ranch (UC Davis Agricultural Services 2003, UC Davis ORMP 2003c). Water levels in the shallow/intermediate aquifer vary seasonally and strongly correlate to precipitation. A generally upward recharge trend over the period from 1957 to 2002 indicates that there has not been long-term overdraft of the shallow/intermediate depth aquifers (Ludorff and Scalmanini 2003).

Regional groundwater quality is generally characterized as having high mineral content. Calcium, magnesium, and sulfates have been identified as the dominant problematic constituents.

Flooding & Drainage

On campus, the South Fork of Putah Creek, the North Fork Cutoff, and the Arboretum Waterway channels are designated as FEMA 100-year floodplain areas. In addition, a portion of Russell Ranch along County Road 31 and a portion of the west campus along County Road 98 are also subject to flooding during a 100-year storm event.

The central campus drainage system intercepts and collects runoff and directs this water via underground pipes to the Arboretum Waterway. During large storm events, water rises in the Arboretum Waterway, overtops the weir at the west end of the waterway, and flows into the pump pond located north of the weir. From the pump pond, water is pumped through an underground storm drain to the South Fork of Putah Creek. The peak discharge from the Arboretum Waterway to Putah Creek since December 1999 was 65 cubic feet per second (cfs). The majority of land in the west and south campuses and at Russell Ranch is used as teaching and research fields and is not drained by a storm drainage system. Irrigation practices on campus teaching and research fields typically do not generate surface runoff. However, large storm events may result in shallow overland flows that flow to temporary shallow ponds in places such as road and field edges. In addition, developed areas on the west and south campuses include storm water conveyance systems that drain to Putah Creek.

To protect the quality of storm water on campus that ultimately drains to Putah Creek, UC Davis construction and industrial activities are subject to the NPDES storm water requirements. Routine maintenance and minor construction activities on campus are subject to the campus’ Phase II Storm Water Management Plan (SWMP).

Project Site

The site for the hotel addition currently drains to the storm drain infrastructure system that was installed with development of the hotel. This system is part of the campus storm drain system and provides adequate capacity for the existing level of development. The site experiences no ponding or flooding during storm events. The site for the road extension is a community garden, an open field, and an existing driveway through Parking Lot 5. The undeveloped parts experience occasional ponding for stormwater following storms. During periods of large storms, sheet flow of stormwater to the lower elevation spots within the open field area or at the margins of the field area are filled with standing water.

7.9.2 2003 LRDP EIR Standards of Significance

The 2003 LRDP EIR considers a hydrology and water quality impact significant if growth under the 2003 LRDP would:

- Violate any water quality standards or waste discharge requirements.
- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level.

- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on site or off site.

- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on site or off site.

- Create or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff.

- Otherwise substantially degrade water quality.

- Place within a 100-year flood hazard area structures that would impede or redirect flood flows.

- Expose people or structures to a significant risk of loss, injury, or death involving flooding.

Additional standards from the CEQA Guidelines’ Environmental Checklist (−g and “j” in the checklist below) were found not applicable to campus growth under the 2003 LRDP.

### 7.9.3 2003 LRDP EIR Impacts and Mitigation Measures

Impacts of campus growth under the 2003 LRDP through 2015-16 on hydrology and water quality are evaluated in Section 4.8 of the 2003 LRDP EIR. The proposed project is within the scope of analysis in the 2003 LRDP EIR and significant and potentially significant hydrology and water quality impacts identified in the 2003 LRDP EIR that are relevant to the proposed project are presented below with their corresponding levels of significance before and after application of mitigation measures identified in the 2003 LRDP EIR. In addition, Impact 4.8-1, presented below, is considered less than significant prior to mitigation, but mitigation measures were identified in the 2003 LRDP EIR to further reduce the significance of this impact. Other less than significant impacts that do not include mitigation measures are not presented here.

<table>
<thead>
<tr>
<th>2003 LRDP EIR Impacts</th>
<th>Level of Significance Prior to Mitigation</th>
<th>Level of Significance After Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>HYDROLOGY &amp; WATER QUALITY</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.8-1 Campus construction activities associated with implementation of the 2003 LRDP would not contribute substantial loads of sediment or other pollutants in storm water runoff that could degrade receiving water quality.</td>
<td>LS</td>
<td>LS</td>
</tr>
<tr>
<td>4.8-2 Development under the 2003 LRDP would increase impervious surface on the campus and could alter drainage patterns, thereby increasing runoff and loads of pollutants in storm water, which could affect water quality.</td>
<td>PS</td>
<td>LS</td>
</tr>
<tr>
<td>4.8-3 Implementation of the 2003 LRDP could alter drainage patterns in the project area and increase impervious surfaces, which could exceed the capacity of storm water drainage systems and result in localized flooding and contribution to offsite flooding.</td>
<td>PS</td>
<td>LS</td>
</tr>
<tr>
<td>4.8-4 Campus growth under the 2003 LRDP would increase discharge of treated effluent from the campus wastewater treatment plant into the South Fork of Putah Creek, which could exceed waste discharge requirements and degrade receiving water quality.</td>
<td>PS</td>
<td>LS</td>
</tr>
</tbody>
</table>
Mitigation measures in the 2003 LRDP EIR that are applicable to the proposed project are presented below. Since these mitigation measures are already being carried out as part of implementation of the 2003 LRDP, they are considered part of the project description and will not be readopted in this Initial Study or EIR. Nothing in this Initial Study in any way alters the obligations of the campus to implement 2003 LRDP EIR mitigation measures.

<table>
<thead>
<tr>
<th>Level of Significance Prior to Mitigation</th>
<th>Level of Significance After Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>H 4.8-5 Campus growth under the 2003 LRDP would increase the amount of water extracted from the deep aquifer and would increase impervious surfaces. This could result in a net deficit in the deep aquifer volume or a lowering of the local groundwater table but would not interfere substantially with recharge of the deep aquifer.</td>
<td>S SU</td>
</tr>
<tr>
<td>H 4.8-6 Campus growth under the 2003 LRDP could increase the amount of water extracted from the shallow/intermediate aquifer and would increase impervious surfaces. Extraction from the shallow/intermediate aquifer could deplete groundwater levels and could contribute to local subsidence, and increased impervious coverage could interfere substantially with recharge. This could result in a net deficit in the intermediate aquifer volume or a lowering of the local groundwater table.</td>
<td>SU SU</td>
</tr>
<tr>
<td>H 4.8-9 Development under the 2003 LRDP could place non-residential structures within a 100-year floodplain, which could expose people and structures to risks associated with flooding and/or impede or redirect flows, contributing to flood hazards.</td>
<td>PS LS</td>
</tr>
<tr>
<td>H 4.8-10 Development under the 2003 LRDP, in conjunction with construction activities, increased impervious surfaces, and alterations to drainage patterns associated with other development in the region that would increase impervious surface coverage in the watershed, could increase storm water runoff, and could provide substantial sources of polluted runoff, which could affect receiving water quality.</td>
<td>S SU</td>
</tr>
<tr>
<td>H 4.8-11 Implementation of the 2003 LRDP in combination with regional development could alter drainage patterns and increase the rate or amount of surface runoff, which could exceed the capacity of storm water drainage systems and result in flooding within the Putah Creek watershed.</td>
<td>PS LS</td>
</tr>
<tr>
<td>H 4.8-12 Growth under the 2003 LRDP and other development in the region would increase discharge of treated effluent to the Putah Creek watershed, which could degrade receiving water quality.</td>
<td>PS LS</td>
</tr>
<tr>
<td>H 4.8-13 Growth under the 2003 LRDP and other development in the region would increase the amount of water extracted from the deep aquifer and increase impervious surfaces. This could result in a net deficit in the deep aquifer volume or a lowering of the local groundwater table but would not interfere substantially with recharge of the deep aquifer.</td>
<td>S SU</td>
</tr>
<tr>
<td>H 4.8-14 Growth under the 2003 LRDP and other development in the region would increase the amount of water extracted from shallow/intermediate aquifers and increase impervious surfaces. This could contribute to local subsidence, substantially deplete groundwater supplies, and could interfere substantially with recharge of the shallow/intermediate depth aquifer, resulting in a net deficit in the shallow/intermediate aquifer volume or a lowering of the local groundwater table.</td>
<td>S SU</td>
</tr>
</tbody>
</table>
The campus shall continue to comply with the NPDES state-wide General Permit for Discharge of Storm Water Associated with Construction Activity by implementing control measures and BMPs required by project-specific SWPPPs and with the Phase II SWMP to eliminate or reduce non-storm and storm water discharges to receiving waters.

The campus shall comply with the measures in the Phase II SWMP to ensure that project design includes a combination of BMPs, or equally effective measures as they become available in the future, to minimize the contribution of pollutants to receiving waters.

Prior to approval of specific projects under the 2003 LRDP, the campus shall perform a drainage study to evaluate each specific development to determine whether project runoff would exceed the capacity of the existing storm drainage system, cause ponding to worsen, and/or increase the potential for property damage from flooding.

If it is determined that existing drainage capacity would be exceeded, ponding could worsen, and/or risk of property damage from flooding could increase, the campus shall design and implement necessary and feasible improvements. Such improvements could include, but would not be limited to, the following:

(i) The expansion or modification of the existing storm drainage system.

(ii) Single-project detention or retention basins incorporated into project design with features including but not limited to: small onsite detention or retention basins; rooftop ponding; temporary flooding of parking areas, streets and gutters; landscaping designed to temporarily retain water; and gravel beds designed to collect and retain runoff.

(iii) Multi-project storm water detention or retention basins.

Campus development west of County Road 98 shall incorporate single- or multi-project basins in order to reduce storm event drainage flows to the Covell Drain.

The campus shall continue to monitor and modify its pretreatment program, WWTP operation, and/or treatment processes as necessary to comply with WDRs.

The campus shall implement a monitoring program specifically targeted at the following constituents: copper, cyanide, iron and nitrate + nitrite, and make appropriate modifications as necessary to the campus pretreatment program to avoid exceedance of permit limits for these constituents.

The campus shall continue to implement water conservation strategies to reduce demand for water from the deep aquifer. Domestic water conservation strategies shall include the following or equivalent measures:

(i) Install water efficient shower heads and low-flow toilets that meet or exceed building code conservation requirements in all new campus buildings, and where feasible, retrofit existing buildings with these water efficient devices.

(ii) Continue the leak detection and repair program.

(iii) Continue converting existing single-pass cooling systems to cooling tower systems.

(iv) Use water-conservative landscaping on the west and south campuses where domestic water is used for irrigation.

(v) Replace domestic water irrigation systems on the west and south campuses with an alternate water source (shallow/intermediate or reclaimed water), where feasible.

(vi) Install water meters at the proposed neighborhood to encourage residential water conservation.

(vii) Identify and implement additional feasible water conservation strategies and programs including a water awareness program focused on water conservation.

The campus shall continue hydrogeologic monitoring and evaluation efforts to determine the long-term production and quality trends of the deep aquifer.

To the extent feasible, new water supply wells in the deep aquifer should be located on the west campus in sands and gravels that are not used by or available to the City of Davis for deep water extraction.

If continued hydrogeologic monitoring and evaluation efforts identify constraints in the deep aquifer’s ability to provide for the campus’ long-term water needs, the campus will treat shallow/intermediate aquifer and/or surface...
2003 LRDP EIR Mitigation Measures  
HYDROLOGY & WATER QUALITY

water from the Solano Project to serve domestic water demand.

4.8-6(a) The campus shall continue to implement water conservation strategies to reduce demand for water from the intermediate aquifer. Utility water conservation strategies shall include the following or equivalent measures:

(i) Landscape, where appropriate, with native, drought resistant plants and use lawns only where needed for pedestrian traffic, activity areas, and recreation.

(ii) Install efficient irrigation systems including centrally controlled automatic irrigation systems and low-flow spray systems.

(iii) Apply heavy applications of mulch to landscaped areas to reduce evaporation

(iv) Use treated wastewater for landscape irrigation where feasible.

4.8-6(b) The campus shall continue to monitor shallow/intermediate aquifer water elevations at existing campus wells to ascertain whether there is any long-term decline in water levels.

4.8-6(c) The campus shall continue to participate in regional subsidence monitoring, including by installing an extensometer, to determine the vertical location of local subsidence.

4.8-6(d) If shallow/intermediate aquifer monitoring or subsidence monitoring indicate that campus water use from the intermediate aquifer is contributing to a net deficit in aquifer volume and/or significant subsidence, the campus will reduce use of water from the aquifer by using surface water and/or treated wastewater effluent to irrigate campus recreation fields.

4.8-6(e) The campus shall incorporate the following or equally effective measures into project designs under the 2003 LRDP where feasible, to increase percolation and infiltration of precipitation into the underlying shallow/intermediate aquifers:

(i) Minimize paved surfaces.

(ii) Use grassy swales, infiltration trenches, or grass filter strips to intercept storm water runoff.

(iii) Implement LRDP Mitigation 4.8-3(b), which specifies construction of detention and infiltration facilities in those areas that do not discharge storm water to the Arboretum.

4.8-9(a) Prior to final design, the campus will review the plans for all structures to be constructed in the 100-year floodplain for compliance with the following FEMA requirements for non-residential structures:

(i) Elevate the lowest floor (including the basement) to or above the base flood level; or

(ii) Together with attendant utility and sanitary facilities, design so that below the base flood level, the structure is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy; and

(iii) Require that fully enclosed areas below the lowest floor that are subject to flooding be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for entry and exit of flood waters.

4.8-9(b) For structures placed within the 100-year floodplain, flood control devices will be designed to direct flows toward areas where flood hazards will be minimal.

4.8-10(a) Implement LRDP Mitigation 4.8-1 and 4.8-2.

4.8-10(b) Jurisdictions within the Putah Creek watershed should comply with Phase II NPDES Municipal Storm Water Permit requirements for small municipalities in order to minimize the contribution of sediment and other pollutants associated with development in the region.

4.8-10(c) Comprehensive SWPPPs and monitoring programs should be implemented by all storm water dischargers associated with specified industrial and construction activities, in compliance with the state's General Permits. Such plans shall include BMPs or equally effective measures.

4.8-11 The campus shall implement LRDP Mitigation 4.8-3(a-c) in order to prevent flooding on campus.

4.8-12 The campus shall implement LRDP Mitigation 4.8-4(a) and (b) to minimize the potential for degradation of receiving water quality.
2003 LRDP EIR Mitigation Measures
HYDROLOGY & WATER QUALITY

4.8-13(a) Implement LRDP Mitigation 4.8-5(a-d).

4.8-13(b) The City of Davis is expected to implement measures to reduce the amount of water withdrawn from the deep aquifer consistent with policies adopted in its General Plan.

- Give priority to demand reduction and conservation over additional water resource development (Policy WATER 1.1)
- Require water conserving landscaping (Policy WATER 1.2)
- Provide for the current and long-range water needs of the Davis Planning Area, and for protection of the quality and quantity of groundwater resources (Policy WATER 2.1)
- Manage groundwater resources so as to preserve both quantity and quality (Policy WATER 2.2)
- Research, monitor and participate in issues in Yolo County and the area of origin of the City’s groundwater that affect the quality and quantity of water (Policy WATER 4.1)

4.8-14(a) The campus should implement LRDP Mitigation 4.8-6(a-e) to minimize its withdrawal from the shallow/intermediate aquifer and maximize the potential for infiltration.

4.8-14(b) Consistent with current water planning policies, the City of Davis is expected to implement measures to reduce impervious surfaces and reduce the amount of water withdrawn from the shallow/intermediate aquifer, consistent with, but not limited to, the water policies listed in LRDP Mitigation 4.8-13(b).

7.9.4 Environmental Checklist and Discussion

<table>
<thead>
<tr>
<th>HYDROLOGY &amp; WATER QUALITY</th>
<th>Impact to be Analyzed in the EIR</th>
<th>No Additional Analysis Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Would the project…</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Violate any water quality standards or waste discharge requirements?</td>
<td>☐</td>
<td>✓</td>
</tr>
<tr>
<td>b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?</td>
<td>☐</td>
<td>✓</td>
</tr>
<tr>
<td>c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?</td>
<td>☐</td>
<td>✓</td>
</tr>
<tr>
<td>d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?</td>
<td>☐</td>
<td>✓</td>
</tr>
<tr>
<td>e) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?</td>
<td>☐</td>
<td>✓</td>
</tr>
<tr>
<td>f) Otherwise substantially degrade water quality?</td>
<td>☐</td>
<td>✓</td>
</tr>
<tr>
<td>g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?</td>
<td>☐</td>
<td>✓</td>
</tr>
<tr>
<td>h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?</td>
<td>☐</td>
<td>✓</td>
</tr>
<tr>
<td>i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?</td>
<td>☐</td>
<td>✓</td>
</tr>
</tbody>
</table>
a,f) **Construction**

The 2003 LRDP EIR found that construction on campus under the 2003 LRDP construction would not contribute substantial loads of sediment or other pollutants to storm water runoff (Impact 4.8-1). Construction on campus is covered under the NPDES state-wide General Permit for Discharge of Storm Water Associated with Construction Activity. As part of this permit, campus construction projects managed by outside contractors and/or disturbing over one acre (including the proposed project) must implement Storm Water Pollution Prevention Plans (SWPPPs), which specify Best Management Practices (BMPs) to reduce the contribution of sediments, spilled and leaked liquids from construction equipment, and other construction-related pollutants to storm water runoff. All routine maintenance activities and any construction projects disturbing less than one acre that are not managed by outside contractors are covered under the campus’ Phase II Municipal Storm Water Management Plan, which requires BMPs to reduce contribution of pollutants to storm water runoff. Because the UC Davis campus is required to comply with the NPDES state-wide permit and Phase II requirements, the water quality effects associated with construction activities on campus are considered to be less than significant. In addition, LRDP Mitigation 4.8-1, included as part of the project, requires the campus to implement BMPs to reduce construction-related water quality impacts. No further analysis is required.

**Operation**

The 2003 LRDP EIR found that campus growth under the 2003 LRDP would increase discharge of treated effluent from the campus WWTP into the South Fork of Putah Creek, which could exceed waste discharge requirements and degrade receiving water quality (LRDP Impact 4.8-4). With current and future discharge control programs and possible operational changes, the increased discharge from the WWTP associated with the proposed project as well as other projects under the 2003 LRDP is expected to comply with NPDES regulations, and therefore will not cause degradation of receiving water quality. The campus will continue to monitor effluent discharge in compliance with the applicable WDRs for the WWTP, and if effluent limits are exceeded, the campus will modify its pretreatment program and WWTP operation as appropriate. These practices are further confirmed in LRDP Mitigation 4.8-4(a), which is included as part of the project. In compliance with LRDP Mitigation 4.8-4(b), the campus will target monitoring and pretreatment for the contaminants specifically identified as of potential concern by the CVRWQCB. These measures would reduce the impact to a less-than-significant level.

The 2003 LRDP EIR found that growth under the 2003 LRDP and other development in the region would increase the cumulative discharge of treated effluent to the Putah Creek watershed, which could degrade receiving water quality (LRDP Impact 4.8-12). However, UC Davis is currently the largest discharger of treated effluent to Putah Creek, and no other major dischargers are expected in the future. LRDP Mitigation 4.8-12, included as part of the project, requires implementation of LRDP Mitigation 4.8-4(a-b), discussed above, which would reduce the impact of increased effluent discharge from the campus WWTP to Putah Creek to a less-than-significant level. Therefore, with implementation of LRDP Mitigation 4.8-12, which is included in the proposed project, the cumulative impact would be less than significant.

b) **Deep Aquifer**
The proposed project would increase the demand for domestic and fire water on the campus by through the addition of 52 hotel rooms. This expected amount is well within the total increase in water demand analyzed in the 2003 LRDP EIR. As noted above, domestic, fire and irrigation water for use on the west campus is obtained from on-campus wells screened in the deep aquifer. The 2003 LRDP EIR found that campus growth under the 2003 LRDP would increase the amount of water extracted from the deep aquifer and would increase impervious surfaces, which could result in a net deficit in the deep aquifer volume or a lowering of the local groundwater table but would not interfere substantially with recharge of the deep aquifer (LRDP Impact 4.8-5). The deep aquifer is confined with limited lateral and vertical recharge and is overlain by thick clay layers that are relatively impermeable. Because of these characteristics, increased impervious surfaces associated with development under the 2003 LRDP will not significantly affect the recharge capacity of the deep aquifer. The 2001 demand for water from the deep aquifer was approximately 2,671 acre-feet. The annual demand for deep aquifer water under the 2003 LRDP, including demand associated with the proposed project, is expected to increase to approximately 5,301 acre-feet through 2015-16 (UC Davis ORMP 2003c). Based on 2010 data, the campus use of deep aquifer water has decreased to approximately 2,300 acre-feet per year. With the decreased usage, the campus growth since 2003 has not impacted the deep aquifer and the proposed project would use a very small amount of water annually. In total, the existing use of approximately 2,300 acre-feet and the proposed use from the project would remain below 2001 baseline year of 2,671 acre-feet. Accordingly the project contribution of water use from the deep aquifer would be less-than-significant.

Shallow/Intermediate Aquifer

The approximately 8,000 square foot hotel addition site is covered with turf and the approximately 44,000 square feet for the road extension is covered with grass and trees. These surfaces allow water to infiltrate and potentially contribute to recharge of the shallow/intermediate aquifer. The addition of impervious surfaces associated with the proposed project (the hotel addition and the road extension) would change the conditions at the site by reducing the overall amount of groundwater recharge. In addition, the road extension project would utilize a small amount of shallow/intermediate aquifer water by drawing from the campus utility water system for irrigation of the landscaping proposed along the road edge. The 2003 LRDP EIR found that the campus' extraction from shallow/intermediate aquifers could deplete groundwater levels and could contribute to local subsidence. In addition, increased impervious coverage could interfere with recharge of the shallow/intermediate aquifers. This could result in a net deficit in the intermediate aquifer volume or a lowering of the local groundwater table (LRDP Impact 4.8-6).

The 2001 baseline annual campus demand (including irrigation demand associated with the tenant farmer at Russell Ranch) for water from the shallow/intermediate aquifers was approximately 3,827 acre-feet. Under the 2003 LRDP, due to conversion of teaching and research fields to other uses with reduced irrigation requirements, overall annual demand for water from the shallow/intermediate aquifers is anticipated to decrease to approximately 3,362 acre-feet through 2015-16 (UC Davis ORMP 2003c). However, these projections do not address the potential identified in LRDP Mitigation 4.8-5(d) for intermediate aquifer water to be used to serve the campus’ domestic water needs. If this mitigation is implemented, demand for water from the intermediate aquifer could increase. In addition, monitoring efforts indicate subsidence in the campus vicinity. Due to the short history of subsidence monitoring in the area, the extent and cause of this subsidence is currently unknown, however, extraction from the shallow/intermediate aquifer could be a contributing factor. Additionally, development under the 2003 LRDP, including the proposed project, would increase the amount of impervious surfaces on campus. Because the soils underlying the campus generally have low permeability and would provide limited recharge, however, new impervious surfaces are not
likely to significantly reduce the amount and rate of groundwater recharge. Most recharge in the area is associated with streams and waterways, which would not be affected by the project.

LRDP Mitigation 4.8-6(a-c), included as part of the proposed project, would require continued utility water conservation efforts, monitoring of the intermediate aquifer, and subsidence monitoring efforts. Furthermore, implementation of LRDP Mitigation 4.8-6(e), included in the proposed project, would encourage project designs on campus that increase percolation and infiltration to the shallow/intermediate aquifer. If the monitoring efforts required by LRDP Mitigation 4.8-6(b) or (c) identify that campus intermediate aquifer use is contributing to a net deficit in aquifer volume or significant subsidence, LRDP Mitigation 4.8-6(d) would be implemented to reduce campus utility water use by requiring use of Solano Project surface water and/or tertiary treated wastewater effluent from the campus WWTP for irrigation of campus recreation fields. Regardless of mitigation, the combination of effects from continued demand for water from the shallow/intermediate aquifer, local subsidence trends, and increased coverage could potentially result in a significant impact on intermediate aquifer groundwater levels. Therefore, LRDP Impact 4.8-6 is considered significant and unavoidable. This impact was adequately analyzed in the 2003 LRDP EIR and was fully addressed in the Findings and Statement of Overriding Considerations adopted by The Regents in connection with its approval of the 2003 LRDP. No conditions have changed and no new information has become available since certification of the 2003 LRDP EIR that would alter this previous analysis.

The 2003 LRDP EIR found that growth under the 2003 LRDP and other development in the region would cumulatively increase the amount of water extracted from shallow/intermediate aquifers and would increase impervious surfaces. This could contribute to local subsidence, substantially deplete groundwater supplies, and could interfere substantially with recharge of the shallow/intermediate depth aquifer, resulting in a net deficit in the shallow/intermediate aquifer volume or a lowering of the local groundwater table (LRDP Impact 4.8-14). Although campus extraction of water from the shallow/intermediate aquifers is anticipated to continue to decrease through 2015-16, a potential increase in extraction in the Davis area could cause well levels to decrease. In addition, extraction from these aquifers could be causing subsidence that has been observed in the area, and increases in impervious surfaces could impede the amount of groundwater recharge. Implementation of LRDP Mitigation 4.8-13(a) and (b) would reduce the campus and City extractions from the shallow/intermediate aquifers, would reduce the amount of new impervious surfaces in the area, and would continue groundwater level and subsidence monitoring efforts. Regardless of mitigation, the combination of effects from continued local demand for water from the shallow/intermediate aquifers, local subsidence trends, and increased coverage could result in a significant and unavoidable impact on the aquifers. This impact was adequately analyzed in the 2003 LRDP EIR and was fully addressed in the Findings and Statement of Overriding Considerations adopted by The Regents in connection with its approval of the 2003 LRDP. No conditions have changed and no new information has become available since certification of the 2003 LRDP EIR that would alter this previous analysis.

c) The project would increase impervious surfaces on the hotel addition site and on the road extension site. The increased runoff from the hotel addition site would be routed to the existing stormwater drainage system within the existing hotel complex. Stormwater from the road addition would be routed to drain inlets that would be constructed along the gutters of the new road. The drain inlets would connect to a new underground stormwater pipe that would extend north from the road extension to empty into the Arboretum Waterway.

The 2003 LRDP EIR found that development under the 2003 LRDP would increase impervious surfaces on the campus and could alter drainage patterns, thereby increasing runoff and loads of pollutants in storm water, which could adversely affect surface water quality (LRDP Impact 4.8-2). Discharge of storm water to the Arboretum Waterway is covered under a NPDES Phase II permit for
small municipal storm water systems, which requires BMPs to reduce pollutants in storm water discharge to the maximum extent practicable. LRDP Mitigation 4.8-2 requires the campus to comply with Phase II regulations. As described in item (a) above, both construction and operation activities are required to employ BMPs. With implementation of Phase II requirements, increases in storm water runoff and levels of contaminants in runoff associated with implementation of the 2003 LRDP, including the proposed project, would have a less than significant impact on receiving waters.

The 2003 LRDP EIR found that development under the 2003 LRDP, in conjunction with construction activities, increased impervious surfaces, and alterations to drainage patterns associated with other development in the watershed could increase storm water runoff and could provide substantial sources of polluted runoff, which could adversely affect receiving water quality (Impact 4.8-10). LRDP Mitigations 4.8-10 (a-c) require the campus and regional jurisdictions to comply with NPDES Phase II requirements and implement SWPPPs for specified industrial and construction activities. However, implementation of LRDP Mitigation 4.8-10(b) and (c) cannot be guaranteed by the University of California because it falls within other jurisdictions to enforce and monitor. Therefore, the impact is was considered significant and unavoidable. This impact was adequately analyzed in the 2003 LRDP EIR and was fully addressed in the Findings and Statement of Overriding Considerations adopted by The Regents in connection with its approval of the 2003 LRDP. No conditions have changed and no new information has become available since certification of the 2003 LRDP EIR that would alter this previous analysis. Effective July 1, 2010, all dischargers are required to obtain coverage under the Construction General Permit Order 2009-0009-DWQ adopted on September 2, 2009. The new Construction General Permit requires the development and implementation of a SWPPP. Section A of the Construction General Permit describes the elements that must be contained in a SWPPP. The SWPPP should contain a site map(s) which shows the construction site perimeter, existing and proposed buildings, lots, roadways, storm water collection and discharge points, general topography both before and after construction, and drainage patterns across the project. The SWPPP must list the BMPs the discharger will use to protect storm water runoff and the placement of those BMPs. Additionally, the SWPPP must contain a visual monitoring program, a chemical monitoring program for "non-visible" pollutants to be implemented if there is a failure of BMPs, and a sediment monitoring plan if the site runoff discharges directly to a water body listed on the 303(d) list for sediment. All new projects which are over 1 acre in size and which are not already covered by the current storm water permit will have to calculate the proper classification as either a Risk Level 1, 2 or 3 based on risk calculations. Risk Level 1 has the least stringent requirements and is not subject to either the Numeric Action Limits (NALs) or Numeric Effluent Limits (NELs) that have been established for pH and turbidity. Risk Level 2 and 3 projects will be subject to NALs or NELs. Because the new Construction General Permit is more stringent than the former Construction General Permit, compliance with the new permit will ensure that water quality impacts are minimized. However, this would not change the conclusion of the LRDP EIR with respect to the cumulative impact on water quality.

d,e) The 2003 LRDP EIR found that implementation of the 2003 LRDP would alter drainage patterns in the project area and would increase impervious surfaces, which could exceed the capacity of storm water drainage systems and result in localized flooding and contribution to offsite flooding (Impact 4.8-3). The proposed project is not located within a floodway designated by the California Department of Water Resources and is not within 10 feet of the levees along the South Fork of Putah Creek. Therefore, the project does not require an encroachment permit from the Reclamation Board. Campus runoff is not expected to significantly increase peak flows in Putah Creek under the 2003 LRDP because anticipated development represents only a minor increase in the percentage of impervious area in the watersheds. Campus discharges from the Arboretum Waterway to Putah Creek are not expected to exceed the existing pumping capacity of approximately 80 cfs (the current NPDES permit has a maximum discharge limit of 130 cfs). Pursuant to the campus Stormwater
Management Plan, the current campus standard for storm water management is a 10-year storm event (Wengler 2005). However, under existing conditions, localized flooding on some portions of the campus occurs during a 2-year storm event. In most cases, this flooding consists of temporary water ponding at storm drain inlets and along roads that does not result in property damage or other serious consequences. Without any improvements, increased runoff associated with development under the 2003 LRDP, including the proposed project, would increase the likelihood of localized flooding (West Yost & Associates 2000). In accordance with LRDP Mitigation 4.8-3(a), included in the project, a drainage evaluation has been performed for the proposed project and has determined that, with the proposed new connection from the road extension to the Arboretum Waterway, the existing storm drainage system is adequate.

The 2003 LRDP EIR also found that implementation of the 2003 LRDP in combination with regional development could alter drainage patterns and increase the rate or amount of surface runoff, which could cumulatively exceed the capacity of storm water drainage systems and result in flooding within the Putah Creek watershed (LRDP Impact 4.8-11). In most cases, this flooding consists of temporary water ponding at storm drain inlets and along roads that does not result in property damage or other serious consequences.

Storm water runoff pollution is evaluated further in items (a,f) and (c) above.

g) Under the 2003 LRDP, housing (including on-campus student housing and housing within the proposed neighborhood) would be constructed outside the 100-year flood zones on campus (see 2003 LRDP EIR, Figure 4.8-4, 100-Year Floodplain). The proposed project does not include housing. Therefore, no impact would occur and no further analysis is required.

h, i) The 2003 LRDP EIR found that development under the 2003 LRDP could place non-residential structures within a 100-year floodplain, which could expose people and structures to risks associated with flooding and/or could impede or redirect flows, contributing to flood hazards (LRDP Impact 4.8-9). However, the project site is not located within the 100-year floodplain, and no further analysis is required.

The campus is located approximately 23 miles downstream of the Monticello Dam (forming Lake Berryessa) and approximately 15 miles downstream of the Putah Diversion Dam. An inundation study prepared by the U.S. Bureau of Reclamation shows that, in the highly unlikely case of a dam breach, the campus (as well as the City of Davis) would be inundated under a maximum of 3 to 9 feet of water approximately 3.5 to 4 hours following the breach (USBR 1998). However, the probability of such a release is far less than one in one million (USBR 2000). As of June 2000, Monticello Dam was determined to be in satisfactory condition, and the dam exhibited no unusual cracks, seeps, or deformations. In addition, the State Department of Dam Safety evaluates dams regularly, which would give adequate time to respond to any deterioration in the safety of the structure. Therefore, the risk of flooding on campus as a result of a dam failure is considered to be a less-than-significant impact. No additional analysis is required.

j) The campus is not subject to inundation by seiche, tsunami, or mudflow. The campus is generally flat and is not located in close proximity to any large water bodies. Therefore, no impact would occur and no further analysis is required.
7.10 LAND USE & PLANNING

7.10.1 Background

Section 4.9 of the 2003 LRDP EIR addresses the land use and planning effects of campus growth under the 2003 LRDP. The following discussion summarizes information presented in the ‘Setting’ subsection of Section 4.9 of the 2003 LRDP EIR.

Campus

The approximately 5,300-acre UC Davis campus is located within Yolo and Solano counties. Local land use is predominantly agricultural, with small cities and towns. The campus is surrounded by extensive agricultural uses to the west and south and by residential, institutional, and commercial land uses in the City of Davis, to the north and east. The City of Davis is a university-oriented community with over 62,000 residents. The UC Davis campus consists of four general units: the central campus, the south campus, the west campus, and Russell Ranch. In addition, the University of California owns several properties in the City of Davis, including buildings in downtown Davis and buildings and vacant parcels in the South Davis Research Park, located south of I-80.

As a state entity, UC Davis is not subject to municipal policies such as the City of Davis General Plan. Nevertheless, such policies are of interest to the campus. The campus has a tradition of working cooperatively with the local communities and it is University policy to seek consistency with local plans and policies, where feasible.

The 2003 LRDP is the campus’ primary land use planning guide. It designates campus lands for the following uses through 2015-16: Academic and Administrative (High and Low Density); Teaching and Research Fields; Teaching and Research Open Space; Parking; Physical Education, Intercollegiate Athletics, and Recreation (PE/ICA/Recreation); Research Park (High and Low Density); Formal Open Space; Community Gardens; Faculty/Staff Housing; Student Housing; Mixed Use Housing; and Elementary School.

Project Site

The hotel addition and the road extension project sites are designated for Academic/Administrative High Density uses under the 2003 LRDP. The Academic/Administrative High Density category typically designates areas for large, multi-story facilities that facilitate the teaching, research, and public service mission of the University of California. These include: classrooms; research laboratories and research support areas; faculty, student and staff offices; libraries; program support facilities; student activity space; meeting rooms; space for public service, outreach and cultural activities; and business/service activities that support the University mission.

7.10.2 2003 LRDP EIR Standards of Significance

The 2003 LRDP EIR considers a land use and planning impact significant if growth under the 2003 LRDP would:

- Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect.
- Result in development of land uses that are substantially incompatible with existing adjacent land uses or with planned uses.
• Conflict with any applicable habitat conservation plan or natural community conservation plan.

An additional standard from the CEQA Guidelines‘ Environmental Checklist (—љ in the checklist below) was found not applicable to campus growth under the 2003 LRDP.

7.10.3 2003 LRDP EIR Impacts and Mitigation Measures

Land use and planning impacts of campus growth under the 2003 LRDP through 2015-16 related to land use and planning are evaluated in Section 4.9 of the 2003 LRDP EIR. As analyzed in Section 4 of this Initial Study, the proposed project is within the scope of analysis in the 2003 LRDP EIR. The 2003 LRDP EIR did not identify any potentially significant or significant land use and planning impacts. The less than significant land use and planning impacts identified in the 2003 LRDP EIR do not require mitigation.

7.10.4 Environmental Checklist and Discussion

<table>
<thead>
<tr>
<th>LAND USE &amp; PLANNING</th>
<th>Impact to be Analyzed in the EIR</th>
<th>No Additional Analysis Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Would the project…</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Physically divide an established community?</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>c) Conflict with any applicable habitat conservation plan or natural community conservation plan?</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>d) Result in development of land uses that are substantially incompatible with existing adjacent land uses or with planned uses?</td>
<td>☐</td>
<td>☑</td>
</tr>
</tbody>
</table>

a) The proposed project would have no potential to physically divide an established community. The hotel addition and the road extension would augment the existing facilities and improve the circulation options. No impact would occur and no additional analysis is required.

b) The applicable land use plan for the campus is the 2003 LRDP. The project site is designated for Academic/Administrative High Density uses under the 2003 LRDP. The proposed project would include the hotel addition which would expand the hotel use at UC Davis. This use is consistent with the Academic/Administrative High Density land use designation because it helps to provide outreach and cultural opportunities for the public to visit and learn about UC Davis teaching, research, and public service efforts. The road extension was identified as part of the long term roadway changes proposed with the 2003 LRDP. The land uses designated in the 2003 LRDP assumed future implementation of the road extension project and these designations were considered appropriate and compatible in the 2003 LRDP EIR.

The road extension project would match the road extension designed for the 2003 LRDP and helps to implement the 2003 LRDP land uses. The proposed implementation of the road extension would result in a completed roadway through traffic in close proximity to the existing Solano Park housing area. The proximity of the road would allow easy access to the roadway from the residential area. The roadway extension would result in removal of approximately one-half of the garden plots at the Solano Park community garden area. The current number of plots exceeds the demand and the demand for garden plots is anticipated to match the reduced size of the community garden area. The proposed project is not expected to disrupt the operations, internal activities or circulation within the
Solano Park housing and would not affect the on-going use of the area as a student residential development. The proposed project would be consistent with the applicable land use plan. No impact would occur. No additional analysis is required.

c) The campus does not fall within the boundaries of, nor is it adjacent to, an adopted regional HCP or NCCP. The campus has implemented two low-effects HCPs for Valley Elderberry Longhorn Beetle at Russell Ranch. The project is located more than three miles from the Russell Ranch low-effect areas. Therefore, the proposed project would not conflict with an adopted HCP or NCCP. No impact would occur and no additional analysis is required.

d) The 2003 LRDP EIR identifies that an impact could result if land uses are developed under the 2003 LRDP EIR that are substantially incompatible with existing adjacent land uses or with planned uses. The proposed project of expanding the hotel and extending the road is related to and consistent with the planned uses of the land and the existing adjacent uses in the South Entry area of the UC Davis Central Campus. As described above in item (b), the proposed road extension project implements a portion of the roadway modifications planned with the 2003 LRDP. No impact would occur and no additional analysis is required.
7.11  **MINERAL RESOURCES**

### 7.11.1  Background

Section 4.6, Geology, Soils, and Seismicity, of the 2003 LRDP EIR briefly addresses mineral resources issues. The 2003 LRDP EIR concludes that development on campus would not impede extraction or result in the loss of availability of mineral resources.

Sand and gravel are important mineral resources in the region (CDOC 2000). However, natural gas is the only known or potential mineral resource that has been identified on campus. Natural gas can be extracted at wells placed considerable distances from deposits. No other known or potential mineral resources have been identified on the UC Davis campus. Therefore, development on campus would not impede extraction or result in the loss of availability of mineral resources.

### 7.11.2  2003 LRDP EIR

Because development on campus would not impede extraction or result in the loss of availability of mineral resources, the 2003 LRDP EIR did not identify any standards of significance, impacts, or mitigation measures associated with mineral resources. As analyzed in Section 4 of this Initial Study, the proposed project is within the scope of analysis in the 2003 LRDP EIR.

### 7.11.3  Environmental Checklist and Discussion

<table>
<thead>
<tr>
<th>MINERAL RESOURCES</th>
<th>Impact to be Analyzed in the EIR</th>
<th>No Additional Analysis Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Would the project…</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?</td>
<td>☐</td>
<td>✓</td>
</tr>
<tr>
<td>b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?</td>
<td>☐</td>
<td>✓</td>
</tr>
</tbody>
</table>

a, b) Natural gas is the only known or potential mineral resource that has been identified on campus. Natural gas can be extracted at wells placed considerable distances from deposits. Therefore, development on campus would not impede extraction or result in the loss of availability of a known mineral resource. No impact would occur and no further analysis is required.
7.12 NOISE

7.12.1 Background

Section 4.10 of the 2003 LRDP EIR addresses the noise effects of campus growth under the 2003 LRDP. The following discussion summarizes information presented in the “Setting” subsection of Section 4.10 of the 2003 LRDP EIR.

Campus

The primary noise source in the vicinity of the campus is vehicular traffic using I-80, SR 113, and local roads. Other sources of noise include occasional aircraft over-flights associated with the University Airport located on the west campus and another small airport in the vicinity, agricultural activities, railroads, and landscaping activities. Land use surrounding the campus is primarily agricultural, with residential, commercial, and other uses concentrated along the northern and eastern boundaries of the main campus.

Sound is technically described in terms of amplitude (loudness) and frequency (pitch). The standard unit of sound amplitude measurement is the decibel (dB), and the decibel scale adjusted for A-weighting (dBA) is a special frequency-dependent rating scale that relates to the frequency sensitivity of the human ear. Community noise usually consists of a base of steady “ambient” noise that is the sum of many distant and indistinguishable noise sources, as well as more distinct sounds from individual local sources. A number of noise descriptors are used to analyze the effects of community noise on people, including the following:

- $L_{eq}$, the equivalent energy noise level, is the average acoustic energy content of noise, measured during a prescribed period, typically one hour.
- $L_{dn}$, the Day-Night Average Sound Level, is a 24-hour-average $L_{eq}$ with a 10 dBA “penalty” added to noise occurring during the hours of 10:00 PM to 7:00 AM to account for greater nocturnal noise sensitivity.
- CNEL, the Community Noise Equivalent Level, is a 24-hour-average $L_{eq}$ with a “penalty” of 5 dB added to evening noise occurring between 7:00 PM and 10:00 PM, and a “penalty” of 10 dB added to nighttime noise occurring between 10:00 PM and 7:00 AM.

Noise monitoring over a 24-hour period in 2003 at sites located in urban areas on and adjacent to the campus (including areas next to freeways, roads, residences, and academic buildings) reflected CNEL levels ranging from 63 to 65 dBA CNEL. Ambient noise levels measured over a short period at various urban sites on campus varied from 49 to 63 dBA $L_{eq}$.

Project Site

The project sites include the hotel addition site and the roadway extension corridor. These sites currently experience very similar levels of noise from sources that include the nearby railroad, Interstate 80, and noise from local traffic on adjacent roadways.

7.12.2 2003 LRDP EIR Standards of Significance

The 2003 LRDP EIR considers a noise impact significant if growth under the 2003 LRDP would result in the following:
• Exposure of persons to or generation of noise levels in excess of levels set forth in Table 7.11.2.

Table 7.11.2: Thresholds of Significance for Noise Evaluations

<table>
<thead>
<tr>
<th>Noise Source</th>
<th>Criterion Noise Level</th>
<th>Substantial Increase in Noise Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Road Traffic and Other Long-Term Sources</td>
<td>65 dBA CNEL</td>
<td>&gt;=3 dBA if CNEL w/project is &gt;= 65 dBA</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&gt;=5 dBA if CNEL w/project is 50–64 dBA</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&gt;=10 dBA if CNEL w/project is &lt; 50 dBA</td>
</tr>
<tr>
<td>Railroad</td>
<td>Within 750 feet of railroad line(^d)</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Construction (temporary)</td>
<td>80 dBA (L_{eq(8h)}) (^e) daytime (7:00 a–7:00 p)</td>
<td>Not Applicable</td>
</tr>
<tr>
<td></td>
<td>80 dBA (L_{eq(8h)}) evening (7:00 p–11:00 p)</td>
<td>Not Applicable</td>
</tr>
<tr>
<td></td>
<td>70 dBA (L_{eq(8h)}) nighttime (11:00 p–7:00 a)</td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>

Source: 2003 LRDP EIR
\(^a\) The 2003 LRDP would not substantially increase rail activity; therefore, a threshold of significance for rail noise is not included in this table.
\(^b\) At noise-sensitive land use unless otherwise noted. Noise-sensitive land uses include residential and institutional land uses.
\(^c\) \(L_{eq(h)}\) is an average measurement over a one-hour period.
\(^d\) Screening analysis distance criterion from FTA 1995.
\(^e\) \(L_{eq(8h)}\) is an average measurement over an eight-hour period.

• Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels.

• A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.

• A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

• For a project within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, exposure of people residing or working in the project area to excessive noise levels.

7.12.3 2003 LRDP EIR Impacts and Mitigation Measures

Impacts of campus growth under the 2003 LRDP through 2015-16 related to noise are evaluated in Section 4.10 of the 2003 LRDP EIR. The proposed project is within the scope of analysis in the 2003 LRDP EIR and significant and potentially significant noise impacts identified in the 2003 LRDP EIR that are relevant to the proposed project are presented below with their corresponding levels of significance before and after application of mitigation measures identified in the 2003 LRDP EIR.

<table>
<thead>
<tr>
<th>2003 LRDP EIR Impacts</th>
<th>Level of Significance Prior to Mitigation</th>
<th>Level of Significance After Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.10-1</td>
<td>PS</td>
<td>LS</td>
</tr>
<tr>
<td>Construction of campus facilities pursuant to the 2003 LRDP could expose nearby receptors to excessive groundborne vibration and airborne or groundborne noise.</td>
<td>PS</td>
<td>LS</td>
</tr>
<tr>
<td>4.10-2</td>
<td>S</td>
<td>SU</td>
</tr>
<tr>
<td>Implementation of the 2003 LRDP would result in increased vehicular traffic on the regional road network, which would substantially increase ambient noise levels at some locations.</td>
<td>S</td>
<td>SU</td>
</tr>
</tbody>
</table>
Mitigation measures in the 2003 LRDP EIR that are applicable to the proposed project are presented below. Since these mitigation measures are already being carried out as part of implementation of the 2003 LRDP, they are considered part of the project description, are assumed in the project-level impact analysis, and will not be readopted in this Initial Study or EIR. Nothing in this Initial Study in any way alters the obligations of the campus to implement 2003 LRDP EIR mitigation measures.

### 2003 LRDP EIR Mitigation Measures

#### NOISE

| 4.10-1 | Prior to initiation of construction, the campus shall approve a construction noise mitigation program including but not limited to the following:
| | - Construction equipment shall be properly outfitted and maintained with feasible noise-reduction devices to minimize construction-generated noise.
| | - Stationary noise sources such as generators or pumps shall be located 100 feet away from noise-sensitive land uses as feasible.
| | - Laydown and construction vehicle staging areas shall be located 100 feet away from noise-sensitive land uses as feasible.
| | - Whenever possible, academic, administrative, and residential areas that will be subject to construction noise shall be informed a week before the start of each construction project.
| | - Loud construction activity (i.e., construction activity such as jackhammering, concrete sawing, asphalt removal, and large-scale grading operations) within 100 feet of a residential or academic building shall not be scheduled during finals week.
| | - Loud construction activity as described above within 100 feet of an academic or residential use shall, to the extent feasible, be scheduled during holidays, Thanksgiving breaks, Christmas break, Spring break, or Summer break.
| | - Loud construction activity within 100 feet of a residential or academic building shall be restricted to occur between 7:30 AM and 7:30 PM.

| 4.10-2(a) | For noise-sensitive uses adjacent to Russell Boulevard between Arlington Boulevard and Arthur Street, the existing soundwall (approximately 6.5 feet in height) could be increased slightly in height and extended to include the daycare center to the east.
| | For noise-sensitive uses adjacent to Russell Boulevard between Arthur Street and SR 113, and from SR 113 to La Rue/Anderson Road and from La Rue Road to Oak Street, soundwalls may be constructed for exterior residential and recreational land uses within approximately 100 feet of the centerline of Russell Boulevard, where construction of such walls would not interfere with driveway access.
| | The campus shall reimburse the City of Davis the campus’ fair share of the cost of a City of Davis’ noise abatement program for reducing interior noise levels in homes along Russell Boulevard that are significantly affected by noise from 2003 LRDP-related traffic growth. The campus’ contribution to the City’s noise abatement program could be used to extend sound walls as described above or for other noise abatement measures such as retrofit of homes. The campus’ fair share shall be determined based on the volume of traffic added to Russell Boulevard by the campus as a result of 2003 LRDP implementation and the percentage that 2003 LRDP-related...
**2003 LRDP EIR Mitigation Measures**

**NOISE**

Traffic increases constitute of the average daily traffic on the roadway.

4.10-2(b) For components of the 2003 LRDP having future noise-sensitive land uses such as the Neighborhood and Research Park, building and area layouts shall incorporate noise control as a design feature; including increased setbacks, landscaped berms, and using building placement to shield noise-sensitive exterior areas from direct roadway views.

4.10-4 Residential and academic uses proposed within 750 feet of the centerline of a rail line shall be evaluated using the Federal Transit Administration Noise and Vibration guidelines. Following the evaluation, as appropriate, facilities shall be designed and constructed to achieve an interior noise and vibration level within the standards recommended by the guidelines.

4.10-5 Implement LRDP Mitigations 4.10-1 and 4.10-2.

### 7.12.4 Environmental Checklist and Discussion

<table>
<thead>
<tr>
<th>NOISE</th>
<th>Impact to be Analyzed in the EIR</th>
<th>No Additional Analysis Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Would the project…</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?</td>
<td>☑</td>
<td>☐</td>
</tr>
<tr>
<td>d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?</td>
<td>☐</td>
<td>☑</td>
</tr>
</tbody>
</table>

a,b,d) The project site for the road extension is located approximately 100 feet from the nearest sensitive receptors in the Solano Park Housing area. The hotel addition would be adjacent to the existing hotel and would be approximately 500 feet from the Solano Park Housing area. The proposed construction would involve standard roadway and building construction techniques. Pile driving, blasting, or other special construction techniques are not anticipated. The 2003 LRDP EIR found that construction of campus facilities pursuant to the 2003 LRDP could expose nearby receptors to excessive groundborne vibration and airborne or groundborne noise (LRDP Impact 4.10-1). Construction under the 2003 LRDP, including the proposed project, would require temporary construction activities using conventional construction techniques and equipment that would not generate substantial levels of vibration or groundborne noise. Routine noise levels from conventional construction activities (with the normal number of equipment operating on the site) range from 75 to 86 dBA Leq at a distance of 50 feet, from 69 to 80 dBA Leq at a distance of 100 feet, and from 55 to 66 dBA Leq at a distance of 500 feet, (although noise levels would likely be lower due to additional attenuation from ground effects, air absorption, and shielding from miscellaneous intervening structures). Noise levels at the nearest sensitive receptors (at a distance of approximately 100 feet from the source) would therefore...
be below the significance criteria of 80 dBA Leq daytime and evening and 70 dBA Leq nighttime. However, noise from construction would be audible and would temporarily elevate the local ambient noise level to some degree at distances greater than 100 feet from construction. LRDP Mitigation 4.10 1, included in the proposed project, would be implemented to control construction noise and the potential impact would be less than significant. No additional mitigation or analysis is required.

c) Generation of noise levels on or adjacent to the project site associated with vehicle trips and mechanical equipment would contribute to ambient noise levels. The 2003 LRDP EIR found that implementation of the 2003 LRDP would result in increased vehicular traffic on the regional road network, which would substantially increase ambient noise levels at the following locations through 2015-16: Russell Boulevard, just west of Arlington; the west campus neighborhood site adjacent to SR 113; and on Hutchison Drive west of SR 113 (LRDP Impact 4.10-2). The relatively small number of new vehicle trips generated by the proposed project and associated with approximately twelve new employees could add a small number of vehicles to these locations; however, the increase would be well within average daily fluctuations in traffic volume and would not result in a perceptible increase in road volumes. Noise from the hotel addition’s mechanical equipment would be designed to achieve low noise levels through placement on roof-tops which would minimize effects on hotel guests and would not adversely affect any nearby receptors.

The road extension project would shift the existing Old Davis Road closer to the Solano Park residential area. The new alignment, with the road as close as 200 feet from the residential buildings, could increase noise levels within the Solano Park area. The EIR will evaluate the potential increased noise levels associated with the new roadway alignment.

e) The project site is located approximately two miles from the University Airport. The 2003 LRDP, including the proposed project, does not propose changes to University Airport operations, nor does it propose occupied uses within the airport’s 65 CNEL noise contour. Therefore, the project would not expose people to excessive noise levels associated with this public use airport, and the impact is less than significant and no additional analysis is required.

f) The University Airport is a public use airport, not a private airstrip. No other private airport facilities are within the immediate vicinity of the campus. No impact would occur and no additional analysis is required. Refer to item e) above for discussion of potential noise impacts associated with the campus’ public use airports.
7.13 POPULATION & HOUSING

7.13.1 Background

Section 4.11 of the 2003 LRDP EIR addresses the population and housing effects of campus growth under the 2003 LRDP. The following discussion summarizes information presented in the ‘Setting’ subsection of Section 4.11 of the 2003 LRDP EIR.

The on-campus population at UC Davis includes students, faculty/staff, and non-UC Davis affiliates working on campus. The current and projected campus population figures are presented in Table 1 of this Tiered Initial Study. As of 2003, approximately 80 percent of the student population and 50 percent of the employee population lived in the Davis area, and approximately 94 percent of students and 90 percent of employees lived within the three-county area of Yolo, Solano, and Sacramento counties. Outside the City of Davis, the predominant residence locations of students and employees are Woodland, West Sacramento, Winters, Dixon, Vacaville, and Fairfield (UC Davis ORMP 2003d).

Vacancy rates in the City of Davis are considered low, and housing costs in the City are generally higher than those elsewhere in the region. Since 1994, the campus has been working toward the goals of maintaining a UC Davis housing supply that can accommodate 25 percent of the on-campus enrolled students and can offer housing to all eligible freshmen. The 2003 LRDP focuses on providing additional on-campus student housing that will accommodate a total of approximately 7,800 students on the core campus (or 26 percent of the peak student enrollment through 2015-16) and an additional 3,000 students in a west campus neighborhood. The campus currently offers one faculty and staff housing area (Aggie Village), which includes 21 single-family units (17 of which have cottages) and 16 duplexes. The 2003 LRDP plans to provide an additional 500 faculty and staff housing units within the west campus neighborhood through 2015-16.

Project Site

The project site is currently a landscaped area adjacent to the existing hotel.

7.13.2 2003 LRDP EIR Standards of Significance

The 2003 LRDP EIR considers an impact related to population and housing significant if growth under the 2003 LRDP would:

- Directly induce substantial population growth in the area by proposing new housing and employment.
- Create a demand for housing that could not be accommodated by local jurisdictions.
- Induce substantial population growth in an area indirectly (for example, through extension of roads or other infrastructure).

Additional standards from the CEQA Guidelines’ Environmental Checklist (—‘b’ and “c” in the checklist below) was found not applicable to campus growth under the 2003 LRDP.

7.13.3 2003 LRDP EIR Impacts and Mitigation Measures

Impacts of campus growth under the 2003 LRDP through 2015-16 related to population and housing are evaluated in Section 4.11 of the 2003 LRDP EIR. As analyzed in Section 4 of this Initial Study, the proposed project is within the scope of analysis in the 2003 LRDP EIR. A significant population and
housing impact identified in the 2003 LRDP EIR that is relevant to the proposed project is presented below with its corresponding levels of significance. No mitigation was available to reduce the magnitude of this LRDP impact, so the impact LRDP implementation was considered significant and unavoidable.

<table>
<thead>
<tr>
<th>2003 LRDP EIR Impacts</th>
<th>Level of Significance Prior to Mitigation</th>
<th>Level of Significance After Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>POPULATION &amp; HOUSING</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.11-1</td>
<td>Implementation of the 2003 LRDP would directly induce substantial population growth in the area by proposing increased enrollment and additional employment.¹</td>
<td>S</td>
</tr>
</tbody>
</table>

Levels of Significance: LS=Less than Significant, S=Significant, PS=Potentially Significant, SU=Significant and Unavoidable

¹ No mitigation is available to reduce the magnitude of this impact.

### 7.13.4 Environmental Checklist and Discussion

<table>
<thead>
<tr>
<th>POPULATION &amp; HOUSING</th>
<th>Impact to be Analyzed in the EIR</th>
<th>No Additional Analysis Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Would the project…</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>d) Create a demand for housing that cannot be accommodated by local jurisdictions?</td>
<td>☐</td>
<td>☑</td>
</tr>
</tbody>
</table>

a) The proposed project would result in an increase in the campus population of approximately twelve persons. The 2003 LRDP EIR found that implementation of the 2003 LRDP would directly induce substantial population growth in the area by proposing increased enrollment and additional employment (LRDP Impact 4.11-1). The impact analyses for all of the resource areas covered in this Initial Study address the campus population increases associated with the project. Where possible, this document mitigates associated environmental impacts to the extent feasible. In certain circumstances, impacts that are associated with campus population growth are identified as significant and unavoidable. Accordingly, the effect of direct population growth associated with the 2003 LRDP, including the proposed project, is also considered a significant and unavoidable impact. This impact was adequately analyzed in the 2003 LRDP EIR and was fully addressed in the Findings and Statement of Overriding Considerations adopted by The Regents in connection with its approval of the 2003 LRDP. No conditions have changed and no new information has become available since certification of the 2003 LRDP EIR that would alter this previous analysis.

The proposed project includes the extension of roads and other infrastructure. This project component is not expected to induce population because the road extension would augment and existing road connection and would not provide roadway capacity to an area of land that is currently undeveloped and unserved by area roads. The 2003 LRDP EIR found that implementation of the 2003 LRDP, including the proposed project, would not induce substantial population growth in the area indirectly through the extension of roads or other infrastructure because these extensions would not
be provided with excess capacity in an area where lack of infrastructure is an obstacle to growth. No additional analysis is required.

b) The proposed project would not displace any existing housing. Therefore, no impact would occur and no additional analysis is required.

c) The proposed project would not displace substantial numbers of people. Therefore, no impact would occur and no additional analysis is required.

d) The 2003 LRDP EIR found that future housing in the region is anticipated to adequately accommodate population growth associated with the 2003 LRDP, including the proposed project, as well as other population growth in the region. Therefore, the 2003 LRDP EIR found that the potential for campus growth to create a demand for housing that could not be accommodated by local jurisdictions is a less than significant impact.
7.14 PUBLIC SERVICES

7.14.1 Background

Section 4.12 of the 2003 LRDP EIR addresses the public services effects of campus growth under the 2003 LRDP. The following discussion summarizes information presented in the ‘Setting’ subsection of Section 4.13 of the 2003 LRDP EIR.

In accordance with the CEQA Guidelines, this Public Services analysis evaluates the environmental effects associated with any physical changes required to meet increases in demand for public services, including police, fire protection, schools, and libraries. Project-level public services impacts are addressed by evaluating the effects of on-campus population growth on public services that directly serve the on-campus population (primarily UC Davis services). Cumulative public services impacts are addressed by evaluating the effects of off-campus population growth on the public services in the Cities of Davis, Dixon, Winters, and Woodland.

UC Davis provides most public services needed on campus, including fire protection, police protection, and library services. The Davis Joint Unified School District serves the City of Davis and portions of Yolo and Solano counties. These services are discussed further below:

- **Fire Protection:** The UC Davis Fire Department provides primary fire response and prevention, natural disaster response, hazardous materials incident response, and emergency medical service to the main campus. The fire department’s goal is to respond to 90 percent of campus emergency calls within 6 minutes (Trauernicht 2010). As of 2010, the UC Davis Fire Department achieves its stated standard of response (Trauernicht 2010).

- **Police:** In 2009-2010, the UC Davis Police Department employed 38 sworn officers to provide 24-hour service to the Davis and Sacramento campuses and facilities owned and leased by UC Davis. 19 officers provide law enforcement services at the Davis Campus with an estimated daytime population of 40,185 (including UC and non-UC employees, students, and dependents living in on-campus housing). Although the campus does not currently rely on any level-of-service standards, the Police Department has indicated that it would like to reach and maintain 1 sworn officer per 1,000 population on the Davis Campus. The Police Department is currently staffed at a level of approximately 0.5 officers per 1,000 on the Davis Campus (Souza 2010).

- **Schools:** In 2001-02 prior to adoption of the 2003 LRDP EIR, a total of approximately 8,677 students were enrolled in the DJUSD’s nine elementary schools, two junior high schools, two high schools, one continuation high school, and one independent study program. The DJUSD estimates student enrollment based on a rate of 0.69 student per single-family residential unit and 0.44 student per multi-family residential unit in its service area. Since 2003, enrollment has decreased slightly with the 2008-09 academic year containing a total enrollment of 8,573 students.

- **Libraries:** UC Davis currently has four main libraries, distributed among the academic centers of the central campus, which serve students, faculty, staff, and the general public, including: Shields Library (the main campus library located centrally on the core campus), the Carlson Health Sciences Library, the Law Library, and the Physical Sciences and Engineering Library.

**Project Site**

The project site is within the South Entry District of the UC Davis Central Campus is currently used for landscaping adjacent to the existing hotel and as an open field and garden area along the proposed
roadway corridor. There are no existing or planned public service facilities (fire, police, schools or libraries) on or adjacent to the site.

### 7.14.2 2003 LRDP EIR Standards of Significance

The 2003 LRDP EIR considers a public services impact significant if growth under the 2003 LRDP would:

- Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services.

Effects associated with recreation services are evaluated in Section 7.15, Recreation, and effects associated with the capacity of the domestic fire water system to provide adequate fire protection are evaluated in Section 7.17, Utilities.

### 7.14.3 2003 LRDP EIR Impacts and Mitigation Measures

Impacts on public services of campus growth under the 2003 LRDP through 2015-16 on public services are evaluated in Section 4.12 of the 2003 LRDP EIR. As analyzed in Section 4 of this Initial Study, the proposed project is within the scope of analysis in the 2003 LRDP EIR. Significant public services impacts identified in the 2003 LRDP EIR associated with implementation of the 2003 LRDP—including the project, are presented below with their corresponding levels of significance before and after application of mitigation measures identified in the 2003 LRDP EIR.

<table>
<thead>
<tr>
<th>2003 LRDP EIR Impacts</th>
<th>Level of Significance Prior to Mitigation</th>
<th>Level of Significance After Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>PUBLIC SERVICES</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.12-6</td>
<td>Implementation of the 2003 LRDP, in conjunction with regional growth, could generate a cumulative demand for new or expanded police and fire service facilities in the region, the construction of which could result in significant adverse environmental impacts to prime farmland and habitat.</td>
<td>S</td>
</tr>
<tr>
<td>4.12-7</td>
<td>Implementation of the 2003 LRDP, in conjunction with regional growth, would increase the number of school-age children living in the area. This could generate a cumulative demand for new school facilities, the construction of which could result in significant environmental impacts to agricultural prime farmland and habitat.</td>
<td>S</td>
</tr>
</tbody>
</table>

Levels of Significance: LS=Less than Significant, S=Significant, PS=Potentially Significant, SU=Significant and Unavoidable

Mitigation measures in the 2003 LRDP EIR that are applicable to the proposed project are presented below. Because these previously adopted mitigation measures are already being carried out as part of implementation of the 2003 LRDP, they are considered part of the project description and will not be readopted. Nothing in this Initial Study in any way alters the obligations of the campus to implement 2003 LRDP EIR mitigation measures.

<table>
<thead>
<tr>
<th>2003 LRDP EIR Mitigation Measures</th>
<th>Public Services</th>
</tr>
</thead>
</table>

84 HOTEL EXPANSION AND ROAD EXTENSION UCDAVIS
2003 LRDP EIR Mitigation Measures
PUBLIC SERVICES

4.12-6 If documented unmitigated significant environmental impacts are caused by the construction of police or fire facilities in the Cities of Davis, Dixon, Woodland, and/or Winters that are needed in part due to implementation of the 2003 LRDP, UC Davis shall negotiate with the appropriate local jurisdiction to determine the campus’ fair share (as described in Section 4.12.2.3) of the costs to implement any feasible and required environmental mitigation measures so long as the unmitigated impacts have not been otherwise reduced to less-than-significant levels through regulatory requirements, public funding, or agreements. This mitigation measure shall not apply to any other costs associated with implementation of public service facilities.

4.12-7 If documented unmitigated significant environmental impacts are caused by the construction of school facilities in the Cities of Davis, Dixon, Woodland, and/or Winters that are needed in part due to implementation of the 2003 LRDP, UC Davis shall negotiate with the appropriate local jurisdiction to determine the campus’ fair share (as described in Section 4.12.2.3) of the costs to implement any feasible and required environmental mitigation measures so long as the unmitigated impacts have not been otherwise reduced to less-than-significant levels through regulatory requirements, public funding, or agreements. This mitigation measure shall not apply to any other costs associated with implementation of public service facilities.

7.14.4 Environmental Checklist and Discussion

PUBLIC SERVICES

Would the project…

<table>
<thead>
<tr>
<th>Impact to be Analyzed in the EIR</th>
<th>No Additional Analysis Required</th>
</tr>
</thead>
</table>

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

i) Fire protection?

ii) Police protection?

iii) Schools?

iv) Parks?

v) Other public facilities?

a, i&ii) UC Davis Fire and Police Protection

The proposed project would increase the population in the Central Campus by about twelve people. Therefore, the project would incrementally contribute to the demand for campus fire and police services that is anticipated under the 2003 LRDP. Under the 2003 LRDP, The 2003 LRDP EIR identified that full implementation of the 2003 LRDP could result in the need for additional fire and police facilities to provide adequate service. To date, the existing facilities provide adequate resources to serve the existing population and the small increase of an additional 12 people with the proposed project would not trigger the need for additional facilities. No impact would occur. No additional analysis is required.

a, iii) Schools

The proposed project would contribute about twelve people to the campus population, which would incrementally contribute to the number of school-age person living in the region. The 2003 LRDP EIR recognized that implementation of the 2003 LRDP, in conjunction with regional growth, would
increase the number of school-age children living in the area. With recent decreases in local population, the area school facilities currently have sufficient capacity to absorb the potential increase in students that would result from the proposed project. No additional new school facilities would need to be constructed in association with the proposed project. No impact would occur. No additional analysis is needed.

a, iv) Effects associated with parks are evaluated in Section 7.15, Recreation.

a, v) Libraries

The proposed project would contribute about twelve people to the campus population, which would incrementally contribute to use of local libraries. UC Davis provides extensive academic library facilities in four general libraries that serve students, faculty, staff, and the general public, as well as in specialized libraries on campus. With its extensive existing libraries and ongoing update processes, UC Davis has adequate facilities to provide sufficient library services to serve the campus and general population’s needs through 2015-16. Therefore, construction of additional library facilities on campus as the result of campus growth under the 2003 LRDP is not anticipated. Furthermore, due to the small scale and infill nature of minor library expansions and renovations that could occur in the Cities of Davis, Dixon, Woodland, and Winters to serve cumulative growth through 2015-16, significant environmental impacts are not anticipated to result. Therefore, project-level and cumulative impacts associated with library services are considered less than significant. No additional analysis is required.
7.15 RECREATION

7.15.1 Background

Section 4.13 of the 2003 LRDP EIR addresses the environmental effects associated with modifying recreational resources to meet campus growth under the 2003 LRDP. The following discussion summarizes information presented in the 'Setting' subsection of Section 4.13 of the 2003 LRDP EIR.

UC Davis contains many park-like areas and recreation facilities. Park facilities at UC Davis range in size from small picnic and landscaped areas within campus housing areas to extensively landscaped areas in the academic core of the central campus, such as the Arboretum. Areas such as the Quad, the landscaped areas along A Street and Russell Boulevard, the Putah Creek Riparian Reserve in the west campus, and many areas within the Arboretum are used regularly by members of the UC Davis campus and visitors to the campus.

Recreation facilities on the campus include structures, bike paths, and fields used for physical education, intercollegiate athletics, intramural sports, sports clubs, and general recreation. Recreation structures include Hickey Gym, Recreation Hall, the Recreation Swimming Pool, and Recreation Lodge. In addition, two major campus recreation facilities have been completed since the adoption of the 2003 LRDP: the Activities and Recreation Center and the Schaal Aquatic Center. The general public may purchase privilege cards to use some campus recreation facilities, or may join community or campus organizations that have access to some facilities.

Project Site

The project site is in the South Entry District of the UC Davis Central Campus and is currently a landscaping area adjacent to the existing hotel and is an open field and garden area along the proposed road corridor. Along the road corridor, the existing community garden area would be partially removed to accommodate the proposed project. The garden area is used by residents of the Solano Park Housing area for small-plot gardening.

7.15.2 2003 LRDP EIR Standards of Significance

The 2003 LRDP EIR considers a recreation impact significant if growth under the 2003 LRDP would:

- Increase the use of existing neighborhood and regional parks or other recreation facilities such that substantial physical deterioration of the facility would occur or be accelerated.
- Propose the construction of recreation facilities or require the expansion of recreation facilities, which might have an adverse physical effect on the environment.

7.15.3 2003 LRDP EIR Impacts and Mitigation Measures

Impacts on recreation of campus growth under the 2003 LRDP through 2015-16 associated with recreation are evaluated in Section 4.13 of the 2003 LRDP EIR. As analyzed in Section 4 of this Initial Study, the proposed project is within the scope of analysis in the 2003 LRDP EIR. A significant recreation impact identified in the 2003 LRDP EIR that is relevant to the proposed project is presented below with its corresponding levels of significance before and after application of mitigation measures identified in the 2003 LRDP EIR. Mitigation measures are included to reduce the magnitude of cumulative impact 4.13-2 but this impact is identified as significant and unavoidable because it cannot be fully mitigated.
Mitigation measures in the 2003 LRDP EIR that are applicable to the proposed project are presented below. Because these previously adopted mitigation measures are already being carried out as part of implementation of the 2003 LRDP, they are considered part of the project description and will not be readopted. Nothing in this Initial Study in any way alters the obligations of the campus to implement 2003 LRDP EIR mitigation measures.

### 2003 LRDP EIR Mitigation Measures

**RECREATION**

4.13-2 If documented unmitigated significant environmental impacts are caused by the construction of recreation facilities in the Cities of Dixon, Woodland, and/or Winters that are needed in part due to implementation of the 2003 LRDP, UC Davis shall negotiate with the appropriate local jurisdiction to determine the campus’ fair share (as described in Section 4.12.2.3) of the costs to implement any feasible and required environmental mitigation measures so long as the unmitigated impacts have not been otherwise reduced to less-than-significant levels through regulatory requirements, public funding, or agreements. This mitigation measure shall not apply to any other costs associated with implementation of recreation facilities.

### 7.15.4 Environmental Checklist and Discussion

**RECREATION**

<table>
<thead>
<tr>
<th>Would the project…</th>
<th>Impact to be Analyzed in the EIR</th>
<th>No Additional Analysis Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?</td>
<td>☐</td>
<td>☑</td>
</tr>
</tbody>
</table>

a,b) The proposed project would not include recreational facilities, but would add about twelve people to the campus population, which would incrementally contribute to demand for parks and recreation facilities on and off campus.

The 2003 LRDP EIR found that increased population at UC Davis under the 2003 LRDP, including the population growth associated with the proposed project, is expected to result in increased demand for and usage of campus recreation facilities. However, to counteract the effects of increased usage, it is campus practice to increase maintenance levels of recreation facilities in response to increases in demand. In addition, the 2003 LRDP designates approximately 18 acres of land west of SR 113 for future recreation fields. The 2003 LRDP also designates land for greenbelts to the west of SR 113, expansion of the campus Arboretum, expansion of the Putah Creek Riparian Reserve, and enhanced formal open space (garden walks and formal courtyards) within the central campus. The construction of new facilities would take place when warranted by increased demand and when financially...
feasible. The campus practice of increasing maintenance activities and the planned construction of new facilities would prevent the deterioration of existing recreation facilities, resulting in a less than significant impact.

The proposed project would contribute approximately 12 people to the regional population and this potential increase would not result in the construction of new recreational facilities.

The potential increase is part of the growth planned under the 2003 LRDP. The 2003 LRDP EIR found that implementation of the 2003 LRDP, together with other regional growth, could result in the development of parks and recreation facilities off-campus that could result in significant environmental impacts (Impact 4.13-2). Depending on the site, development of new parks and recreation facilities in the cities of Dixon, Winters, and Woodland could result in impacts such as loss of prime farmland or valuable habitat. However, environmental impacts are too speculative to determine at this time. In adopting LRDP Mitigation 4.13-2, the campus agreed to negotiate with respective jurisdictions to determine the University’s fair share of costs for feasible mitigation to reduce associated significant environmental impacts, if any. Due to the speculative nature of this cumulative impact, it was considered significant and unavoidable. This impact was adequately analyzed in the 2003 LRDP EIR and was fully addressed in the Findings and Statement of Overriding Considerations adopted by The Regents in connection with its approval of the 2003 LRDP. No conditions have changed and no new information has become available since certification of the 2003 LRDP EIR that would alter this previous analysis.
7.16 TRANSPORTATION, CIRCULATION, & PARKING

7.16.1 Background

Section 4.14 of the 2003 LRDP EIR addresses the transportation, circulation, and parking effects of campus growth under the 2003 LRDP. The following discussion summarizes information presented in the ‘Setting’ subsection of Section 4.14 of the 2003 LRDP EIR.

Campus

UC Davis is served by six main campus roadways or —gateway” that connect the campus to residential and downtown areas in the City of Davis, and two gateways that provide direct access to regional freeways (I-80 and SR 113). Circulation within the central campus is accommodated primarily by the campus “loop” roadway system, which includes Russell Boulevard, A Street, New and Old Davis Roads, California Avenue, and La Rue Road. Other roadways within the core campus area are restricted to transit and emergency vehicles, bicyclists, and pedestrians. Primary vehicular access to the south campus is provided by Old Davis Road, to the west campus by Hutchison Drive, and to Russell Ranch by Russell Boulevard.

Level of service (LOS) is a general measure of traffic operating conditions whereby a letter grade, from A (the best) to F (the worst), is assigned to roadway intersections. These grades represent the comfort and convenience associated with driving from the driver's perspective. To assess the worst-case traffic conditions, LOS is measured during morning (7 to 9 AM) and afternoon (4 to 6 PM) peak commute times. The LOS of campus roadways varies. Monitoring of campus intersections during peak hours in Fall 2001 and Fall 2002 found that the Hutchison Drive/Health Sciences Drive intersection (with LOS E during the PM peak hour) was the only study intersection to operate below the campus' operation standard (standards are identified in the following section). The campus is planning on installing a traffic signal at this intersection by fall 2006.

Bicycles are a major component of the transportation system at UC Davis and in the City of Davis. UC Davis has an extensive system of bicycle paths, which makes bicycles a popular form of travel on campus. The UC Davis Bicycle Plan (UC Davis 2002) estimates that 15,000 to 18,000 bicycles travel to the campus on a typical weekday during the Fall and Spring sessions when the weather is good.

Parking at UC Davis is provided by a combination of surface lots and parking structures. UC Davis Transportation and Parking Services (TAPS) oversees parking services on campus including selling parking passes, providing traffic control at special events, ticketing violators, and measuring parking utilization throughout campus on a quarterly basis. Approximately 11,500 parking spaces were provided on campus as in Fall of 2008.

Project Site

The proposed road extension component would extend the existing roadway approximately 1,100 feet to connect with the south side of Parking Lot 5 and provide a new connection between the South Entry District and A Street.

7.16.2 2003 LRDP EIR Standards of Significance

The 2003 LRDP EIR considers a transportation, circulation, and parking impact significant if growth under the 2003 LRDP would:
Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.

Conflict with an applicable congestion management program, including, but not limited to level of service standards established by the county congestion management agency for designated roads and highways.

- Cause an increase in the traffic that may be substantial in relation to the existing roadway capacity of the street system as indicated by LOS standards for congestion at intersections.

The addition of project traffic causing a LOS change from acceptable to unacceptable would have a significant impact. The following LOS thresholds apply to the study intersections.

- LOS D is the minimum acceptable LOS for UC Davis.
- LOS E is the minimum acceptable LOS for the City of Davis. LOS F is acceptable for the City of Davis Core Area.
- LOS E is the minimum acceptable LOS for I-80 and its associated interchanges.
- LOS C is the minimum acceptable LOS for SR 113 and its associated interchanges.

In addition, the project would have a significant impact if the project adds 10 or more vehicles to the volume of a study intersection that is expected to operate unacceptably without the project. For intersections that operate unacceptably without the project, even a small amount of additional traffic could increase the delay. For the 2003 LRDP EIR, future volumes were rounded to the nearest 10; therefore, 10 vehicles is the minimum amount of traffic that could be added to an intersection already operating at an unacceptable level.

Increased intersection congestion would also be a significant impact if it would exceed a LOS standard established by the county congestion management agency (or any affected agency or jurisdiction) for designated roads or highways.

- LOS E is the minimum acceptable LOS for roadways and intersections in Solano County.
- LOS E is the minimum acceptable LOS for I-80 and its associated interchanges between the Solano County limit and Olive Drive.
- LOS E is the minimum acceptable LOS for SR 113 and its associated interchanges within the Davis city limits.
- LOS E is the minimum acceptable LOS for Russell Boulevard between SR 113 and B Street.
- LOS E is the minimum acceptable LOS for Richards Boulevard between First Street and I-80.
- LOS E is the minimum acceptable LOS for First Street between B Street and Richards Boulevard.
- LOS E is the minimum acceptable LOS for B Street between First Street and 5th Street.

- Conflict with applicable adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks).

Impacts related to safety risks associated with the UC Davis airport and emergency access are discussed in Section 7.7 Hazards and Hazardous Materials. The 2003 LRDP would make only
limited changes to the roadway network and would not create or increase hazards due to design features such as dangerous intersections.

7.16.3 2003 LRDP EIR Impacts and Mitigation Measures

Impacts of campus growth under the 2003 LRDP through 2015-16 on traffic, circulation, and parking are evaluated in Section 4.14 of the 2003 LRDP EIR. The proposed project is within the scope of analysis in the 2003 LRDP EIR and significant and potentially significant traffic, circulation, and parking impacts identified in the 2003 LRDP EIR that are relevant to the proposed project are presented below with their corresponding levels of significance before and after application of mitigation measures identified in the 2003 LRDP EIR. Mitigation measures were included to reduce the magnitude of impact 4.14-2, but this LRDP impact was identified as significant and unavoidable because mitigation falls within other jurisdictions to enforce and monitor and therefore cannot be guaranteed by the University of California.

<table>
<thead>
<tr>
<th>2003 LRDP EIR Impacts</th>
<th>Level of Significance Prior to Mitigation</th>
<th>Level of Significance After Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.14-1</td>
<td>Implementation of the 2003 LRDP would cause unacceptable intersection operations at on-campus intersections.</td>
<td>S</td>
</tr>
<tr>
<td>4.14-2</td>
<td>Implementation of the 2003 LRDP would cause unacceptable intersection and freeway LOS operations at off-campus facilities, including facilities contained in the Yolo County and Solano County Congestion Management Plans.</td>
<td>S</td>
</tr>
<tr>
<td>4.14-4</td>
<td>Implementation of the 2003 LRDP would increase demand for transit services.</td>
<td>PS</td>
</tr>
<tr>
<td>4.14-5</td>
<td>Growth in population levels in the core area of the central campus would result in increased conflicts between bicyclists, pedestrians, and transit vehicles, causing increased congestion and safety problems.</td>
<td>PS</td>
</tr>
</tbody>
</table>

Levels of Significance: LS=Less than Significant, S=Significant, PS=Potentially Significant, SU=Significant and Unavoidable

Mitigation measures in the 2003 LRDP EIR that are applicable to the proposed project are presented below. Since these mitigation measures are already being carried out as part of implementation of the 2003 LRDP, they are considered part of the project description and will not be readopted in this Initial Study or EIR. Nothing in this Initial Study in any way alters the obligations of the campus to implement 2003 LRDP EIR mitigation measures.

<table>
<thead>
<tr>
<th>2003 LRDP EIR Mitigation Measures</th>
<th>Transportation, Circulation, &amp; Parking</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.14-1(a) UC Davis shall continue to actively pursue Transportation Demand Management strategies to reduce vehicle-trips to and from campus.</td>
<td></td>
</tr>
<tr>
<td>4.14-1(b) UC Davis shall continue to monitor AM and PM peak hour traffic operations at critical intersections and roadways on campus.</td>
<td></td>
</tr>
<tr>
<td>4.14-1(c) UC Davis shall review individual projects proposed under the 2003 LRDP as they advance through the environmental clearance phase of development to determine if intersection or roadway improvements are needed with the additional traffic generated by the proposed project. If intersection operations are found to degrade to unacceptable levels, UC Davis shall construct physical improvements such as adding traffic signals or roundabouts at affected study intersections.</td>
<td></td>
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</tbody>
</table>
| 4.14-2(a) UC Davis shall continue to actively pursue Transportation Demand Management strategies to reduce vehicle-trips
2003 LRDP EIR Mitigation Measures
TRANSPORTATION, CIRCULATION, & PARKING

to and from campus.

4.14-2(b) UC Davis shall continue to monitor AM and PM peak hour traffic operations at critical intersections and roadways in the campus vicinity at least every three years to identify locations operating below UC Davis, City of Davis, Yolo County, Solano County, or Caltrans LOS thresholds and to identify improvements to restore operations to an acceptable level.

4.14-2(c) UC Davis shall review individual projects proposed under the 2003 LRDP as they advance through the environmental clearance phase of development to determine if intersection or roadway improvements are needed with the additional traffic generated by the proposed project. If intersection operations are found to degrade to unacceptable levels, UC Davis shall contribute its fair share towards roadway improvements at affected study intersections.

4.14-4 UC Davis shall monitor transit ridership to identify routes operating over capacity with increased campus growth. UC Davis shall work with transit providers to identify additional service required with campus growth or new transit routes needed to serve future development areas.

4.14-5 UC Davis shall monitor core area pedestrian and bike activity and accidents. UC Davis shall improve bike and pedestrian facilities or alter transit operations to avoid increased bicycle accident rates or safety problems.

7.16.4 Environmental Checklist and Discussion

<table>
<thead>
<tr>
<th>TRANSPORTATION, CIRCULATION, &amp; PARKING</th>
<th>Impact to be Analyzed in the EIR</th>
<th>No Additional Analysis Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?</td>
<td>☑</td>
<td>☐</td>
</tr>
<tr>
<td>b) Conflict with an applicable congestion management program, including, but not limited to level of service standards established by the county congestion management agency for designated roads and highways?</td>
<td>☑</td>
<td>☐</td>
</tr>
<tr>
<td>c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?</td>
<td>☑</td>
<td>☐</td>
</tr>
<tr>
<td>e) Result in inadequate emergency access?</td>
<td>☑</td>
<td>☐</td>
</tr>
<tr>
<td>f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?</td>
<td>☑</td>
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</tbody>
</table>

Project activities would result in traffic and circulation effects from expansion of the hotel and from the proposed realignment of Old Davis Road. The impact from these effects will be evaluated in the project EIR.
c) The proposed project would result in no change to air traffic patterns. The UC Davis airport is the closest airport and the proposed project would have no effect on the number of flights or the operation of the airport. No impact would occur.
7.17 UTILITIES & SERVICE SYSTEMS

7.17.1 Background

Section 4.15 of the 2003 LRDP EIR addresses the effects of campus growth on utility systems under the 2003 LRDP. The campus provides the following utility and service systems to campus projects:

- Domestic/Fire Water
- Utility Water
- Agricultural Water
- Storm Drainage
- Wastewater
- Solid Waste
- Chilled Water
- Steam
- Electricity
- Natural Gas
- Telecommunications

Project Site

The proposed project would use campus utilities and service systems including: domestic water, utility water, sanitary sewer, storm drainage, electricity, natural gas, and telecommunications. These utilities and service systems are discussed below:

- **Domestic Water**: The campus’ domestic/fire water system obtains water from six deep aquifer wells to serve the needs of campus buildings, landscape irrigation on the west and south campuses, and heating and cooling systems at the Central Heating and Cooling Plant (CHCP). The system includes approximately 144,000 linear feet of distribution pipelines, a water tower and a ground storage tank with a combined capacity of approximately 500,000 gallons, an underground storage reservoir with a capacity of approximately 1.3 million gallons, and a booster pump station. In 2007-08, annual domestic water consumption was approximately 2,419 acre-feet and peak demand was 3,100 gpm. Domestic water for the hotel building addition will be provided from the campus domestic water system and the building addition will connect to an existing water supply main within existing hotel site. The road extension project will not affect domestic water supply.

- **Utility Water**: The campus’ utility water system obtains water from six intermediate-depth aquifer wells to provide water for landscape irrigation, greenhouse irrigation, and some laboratories. The system includes one 100,000-gallon water tower. In 2007-08, annual utility water consumption was approximately 493 acre-feet and peak demand was 1.0 mgd. The hotel building addition will not utilize water from the campus utility water system. The road extension project will use utility water for roadway landscaping and will connect to an existing water supply main within the project site.

- **Wastewater**: UC Davis operates a campus wastewater conveyance and treatment system that is independent from regional facilities. The campus Wastewater Treatment Plant (WWTP) is located in the south campus, and treated effluent from the plant discharges to Putah Creek. The peak month capacity of the campus WWTP, as regulated under the existing NPDES permit issued by the CVRWQCB, is 2.7 mgd average dry weather month. Recent upgrades have raised the capacity to 3.85 mgd average dry weather monthly. The maximum monthly inflow in 2007 was 2.4 mgd. The hotel building addition will connect to an existing sanitary sewer line within the project site. The sewer line is served by the campus wastewater treatment facility. The road extension project will not connect to the campus sanitary sewer system and will not generate demand for the sanitary sewer system.
• **Storm Drainage:** The central campus and developed parts of the west and south campuses are served by campus storm water drainage systems. The central campus drainage system involves a system of underground pipes that drain to the Arboretum Waterway (providing the only major detention storage in the system), from which storm water it is pumped to the South Fork of Putah Creek during large storm events. The hotel addition and the road extension will connect to the campus storm drainage system so that stormwater runoff from the project is directed to underground drains that would flow to the UC Davis Arboretum Waterway. For the hotel building addition, the existing drains at the project site would be utilized. For the road extension project, new project drain inlets would connect to a new underground drainage pipe that would extend from the road extension northward, past the west side of Nelson Hall and would then empty into the arboretum waterway.

• **Solid Waste:** UC Davis provides solid waste collection and recycling services for the campus. All nonrecycled and nonhazardous solid wastes collected on campus are disposed at the campus owned and operated Class III sanitary landfill located in the west campus west of County Road 98 and north of Putah Creek. In 2007, the Davis campus sent approximately 8,100 tons of solid waste to the campus landfill per year (approximately 34 tons per working day). In addition, approximately 3,700 tons of wastes from the UC Davis Medical Center in Sacramento are disposed at the landfill each year. The permitted capacity of the landfill is 500 tons per day, and the landfill unit currently being used has anticipated capacity to serve the campus needs through 2023. In 2007-08, approximately 14,300 tons of materials were diverted for recycling and reuse. The amount of materials diverted represents approximately 60 percent of the total waste generated on the Davis campus.

• **Electricity:** The main campus currently receives electricity from the Western Area Power Administration (WAPA) through PG&E transmission lines at the campus substation located south of I-80. The campus electrical system has an available capacity of 64.4 megawatts (MW). Annual electrical usage on campus in 2007-08 was approximately 235 million kilowatt-hours (KWh) per year. The hotel addition and the road extension will connect to the campus at an existing connection point within each project site. The hotel addition will use electric power for lighting and cooling. The road extension project will use electrical power for streetlights.

• **Natural Gas:** The campus purchases natural gas from outside vendors and provides it to the campus facilities through PG&E pipelines. The hotel addition will connect to the Pacific Gas and Electric (PG&E) natural gas system at an existing connection point within the project site. The road extension would not utilize natural gas. No off-site trenching will be needed to utilize natural gas.

• **Telecommunications:** The majority of all telephone, data, video, and wireless infrastructure and facilities on campus are owned by the campus and operated by the UC Davis Communications Resources Department. The main campus switching facility is located in the Communications Building. As new buildings are constructed, the Communications Resources Department coordinates with the UC Davis Office of Architects and Engineers to design and direct the installation of intra- and inter-building telecommunications facilities in accordance with established standards. The hotel addition will connect to the AT&T telecommunication infrastructure for network and telephone service. The project will utilize existing connections within the hotel building to obtain service. The road extension would not utilize telecommunications services.


7.17.2 2003 LRDP EIR Standards of Significance

The 2003 LRDP EIR considers a utilities and service systems impact significant if growth under the 2003 LRDP would:

- Exceed the Central Valley Regional Water Quality Control Board's wastewater treatment requirements.
- Require or result in the construction or expansion of water or wastewater treatment facilities, which would cause significant environmental effects.
- Require or result in the construction or expansion of storm water drainage facilities, which could cause significant environmental effects.
- Result in the need for new or expanded water supply entitlements.
- Exceed available wastewater treatment capacity.
- Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs.
- Fail to comply with applicable federal, state, and local statutes and regulations related to solid waste.
- Require or result in the construction or expansion of electrical, natural gas, chilled water, or steam facilities, which would cause significant environmental impacts.
- Require or result in the construction or expansion of telecommunication facilities, which would cause significant environmental impacts.

7.17.3 2003 LRDP EIR Impacts and Mitigation Measures

Impacts of campus growth under the 2003 LRDP through 2015-16 on utilities and service systems are evaluated in Section 4.15 of the 2003 LRDP EIR. As analyzed in Section 4 of this Initial Study, the proposed project is within the scope of analysis in the 2003 LRDP EIR. Significant and potentially significant utilities and service systems impacts identified in the 2003 LRDP EIR that are relevant to the proposed project are presented below with their corresponding levels of significance before and after application of mitigation measures identified in the 2003 LRDP EIR. In addition, impacts 4.15-1, 4.15-2, 4.15-3, 4.15-4, and 4.15-6 presented below, are considered less than significant prior to mitigation, but mitigation measures were identified in the 2003 LRDP EIR to further reduce the significance of these impacts. Less than significant impacts that do not include mitigation are not presented here. A mitigation measure is included to reduce the magnitude of LRDP cumulative impact 4.15-10, but this impact is identified as significant and unavoidable because it cannot be fully mitigated.

<table>
<thead>
<tr>
<th>2003 LRDP EIR Impacts</th>
<th>Level of Significance Prior to Mitigation</th>
<th>Level of Significance After Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>UTILITIES &amp; SERVICE SYSTEMS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.15-1</td>
<td>Implementation of the 2003 LRDP would require the expansion of campus domestic/fire water extraction and conveyance systems, which would not cause significant environmental impacts.</td>
<td>LS</td>
</tr>
<tr>
<td>4.15-2</td>
<td>Implementation of the 2003 LRDP would require the expansion of campus utility water extraction and conveyance systems, which would not cause significant environmental impacts.</td>
<td>LS</td>
</tr>
<tr>
<td>2003 LRDP EIR Impacts</td>
<td>Level of Significance Prior to Mitigation</td>
<td>Level of Significance After Mitigation</td>
</tr>
<tr>
<td>-----------------------</td>
<td>------------------------------------------</td>
<td>---------------------------------------</td>
</tr>
<tr>
<td>4.15-3</td>
<td>Implementation of the 2003 LRDP would require the expansion of wastewater treatment and conveyance facilities, the construction and operation of which would not result in significant environmental impacts.</td>
<td>LS</td>
</tr>
<tr>
<td>4.15-4</td>
<td>Implementation of the 2003 LRDP would require the expansion of campus storm drainage conveyance and detention facilities, which would not result in significant environmental impacts.</td>
<td>LS</td>
</tr>
<tr>
<td>4.15-6</td>
<td>Implementation of the 2003 LRDP would require the expansion of the campus electrical system, which would not result in significant adverse environmental impacts.</td>
<td>LS</td>
</tr>
<tr>
<td>4.15-7</td>
<td>Implementation of the 2003 LRDP would require the expansion of natural gas transmission systems, which would result in environmental impacts.</td>
<td>LS</td>
</tr>
<tr>
<td>4.15-10</td>
<td>Implementation of the 2003 LRDP together with other regional development could generate a cumulative demand for wastewater treatment facilities in the region, the construction of which could result in significant environmental impacts on habitat.</td>
<td>S</td>
</tr>
</tbody>
</table>

Levels of Significance: LS=Less than Significant, S=Significant, PS=Potentially Significant, SU=Significant and Unavoidable

Mitigation measures in the 2003 LRDP EIR that are applicable to the proposed project are presented below. Since these mitigation measures are already being carried out as part of implementation of the 2003 LRDP, they are considered part of the project description and will not be readopted in this Initial Study or EIR. Nothing in this Initial Study in any way alters the obligations of the campus to implement 2003 LRDP EIR mitigation measures.

<table>
<thead>
<tr>
<th>2003 LRDP EIR Mitigation Measures</th>
<th>Utilities &amp; Service Systems</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.15-1(a)</td>
<td>Once preliminary project design is developed, the campus shall review each project to determine if existing domestic/fire water supply is adequate at the point of connection. If domestic/fire water is determined inadequate, the campus will upgrade the system to provide adequate water flow and pressure to the project site before constructing the project.</td>
</tr>
<tr>
<td>4.15-1(b)</td>
<td>Implement domestic water conservation strategies as indicated in LRDP Mitigation 4.8-5(a) (see Section 7.8 Hydrology and Water Quality of this Tiered Initial Study).</td>
</tr>
<tr>
<td>4.15-2(a)</td>
<td>Once preliminary project design is developed, the campus shall review each project to determine whether existing utility water supply is adequate at the point of connection. If the utility water supply is determined to be inadequate, the campus will upgrade the system to provide adequate water flow to the project site prior to occupation or operation.</td>
</tr>
<tr>
<td>4.15-2(b)</td>
<td>Implement utility water conservation strategies as indicated in LRDP Mitigation 4.8-6(a) (see Section 7.8 Hydrology and Water Quality of this Tiered Initial Study).</td>
</tr>
<tr>
<td>4.15-3</td>
<td>Once preliminary project design is developed, the campus shall review each project to determine whether existing capacity of the sanitary sewer line at the point of connection is adequate. If the capacity of the sewer line is determined inadequate, the campus will upgrade the system to provide adequate service to the project site prior to occupation or operation.</td>
</tr>
<tr>
<td>4.15-4</td>
<td>Once preliminary project design is developed, the campus shall review each project to determine whether existing storm drainage system is adequate at the point of connection. If the storm drainage system is determined inadequate, the campus will upgrade the system to provide adequate storm water drainage and/or detention prior to occupation or operation.</td>
</tr>
</tbody>
</table>
2003 LRDP EIR Mitigation Measures
UTILITIES & SERVICE SYSTEMS

4.15-6(a) Once preliminary project design is developed, the campus shall review each project to determine whether the existing electrical system is adequate at the point of connection. If the electrical system is determined inadequate, the campus will upgrade the system to provide adequate service to the project prior to occupation or operation.

4.15-6(b) The campus would continue to meet or exceed Title 24 energy conservation requirements for new buildings, and it would continue to incorporate energy efficient design elements outlined in the UC Davis Campus Standards & Design Guide in new construction and retrofit projects. These energy conservation standards may be subject to modification as more stringent standards are developed.

4.15-7(a) Once preliminary project design is developed, the campus shall review each project to determine whether the existing capacity of the natural gas supply pipeline at the point of connection is adequate. If the capacity of the pipeline is determined inadequate, the system will be updated to provide adequate service to the project site prior to occupation or operation.

4.15-7(b) To minimize disturbance to archaeological resources associated with CA-Yol-118, PG&E can and should implement directional drilling or other alternative means to trenching, or should have a qualified archaeological monitor present and provide a representative of the local Native American community an opportunity to monitor during construction.

4.15-10 If documented unmitigated significant environmental impacts are caused by the construction of wastewater treatment facilities in the Cities of Davis, Dixon, Woodland, and/or Winters that are needed in part due to implementation of the 2003 LRDP, UC Davis shall negotiate with the appropriate local jurisdiction to determine the campus’ fair share (as described in Section 4.12.2.3) of the costs to implement any feasible and required environmental mitigation measures so long as the unmitigated impacts have not been otherwise reduced to less-than-significant levels through regulatory requirements, public funding, or agreements. This mitigation measure shall not apply to any other costs associated with implementation of utilities or service systems.

7.17.4 Environmental Checklist and Discussion

<table>
<thead>
<tr>
<th>UTILITIES &amp; SERVICE SYSTEMS</th>
<th>Impact to be Analyzed in the EIR</th>
<th>No Additional Analysis Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Would the project…</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project’s projected demand in addition to the providers existing commitments?</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>g) Comply with federal, state, and local statutes and regulations related to solid waste?</td>
<td>☐</td>
<td>☑</td>
</tr>
<tr>
<td>h) Require or result in the construction or expansion of electrical, natural gas, chilled water, or steam facilities, which would cause significant environmental impacts?</td>
<td>☐</td>
<td>☑</td>
</tr>
</tbody>
</table>
i) Require or result in the construction or expansion of telecommunication facilities, which would cause significant environmental impacts?

a) The proposed project would add approximately twelve people and new building space to the campus which would result in a minor increase to the total amount of wastewater generated on the campus. The proposed project includes new hotel rooms that would be similar to typical hotel rooms and would therefore not involve any atypical sources of pollutants. The permitted peak monthly average capacity of the campus WWTP is currently 2.7 mgd, and growth under the 2003 LRDP, including the proposed project, is anticipated to increase the volume of discharge to 3.85 mgd through 2015-16. Recently completed upgrades to the plant increased its capacity to 3.85 mgd. As discussed further in item —a; in Section 7.9, Hydrology and Water Quality, with continuation of current practices and implementation of 2003 LRDP EIR mitigation measures, the campus anticipates meeting the WWTP’s permit requirements. Therefore, the project is not expected to exceed wastewater treatment requirements and no further analysis is required. No impact would occur.

b) **Domestic Water Facilities**

The proposed point of connection for the project would be at the existing water main within the hotel site that was recently installed to serve the hotel project. The 2003 LRDP EIR identified that campus development under the 2003 LRDP would require the expansion of campus domestic/fire water extraction and conveyance systems, the construction of which would not cause significant environmental impacts (LRDP Impact 4.15-1). However, the domestic water line associated with the project is currently built and no domestic water utility extensions would be necessary. No additional analysis is required and no impact would occur.

**Utility Water Facilities**

The hotel expansion would not utilize utility water and would not connect to the campus utility water system. Utility water would be utilized to water the roadway landscaping that is planned for the road extension component. The road extension component would connect to an existing water main within the project site. No extensions would be necessary, and there would be no impact related to utility water facilities. No impact would occur.

**Wastewater Facilities**

The proposed hotel expansion would contribute wastewater to the campus sanitary sewer system from the addition of 52 new hotel rooms and would connect to the existing sewer main located adjacent to the building site. The road extension project would not generate wastewater. The 2003 LRDP EIR identified that implementation of the 2003 LRDP, including the proposed project, would require the expansion of campus wastewater treatment and conveyance facilities, the construction and operation of which would not result in significant environmental impacts (LRDP Impact 4.15-3). Future expansion of the existing WWTP and installation of new sanitary sewer conveyance lines would primarily occur on previously disturbed ground. In addition, the campus would survey the site before construction and perform monitoring during construction (in compliance with 2003 LRDP Mitigations 4.4-1 and 4.5-1) to avoid inadvertent biological and cultural resource impacts. Therefore, this impact would be less than significant. LRDP Mitigation 4.15-3, included in the proposed project, would further reduce the significance of this impact by ensuring the campus practice of reviewing projects to determine if there is adequate capacity to provide sanitary sewer service, and to upgrade the system as necessary.
The proposed project would add approximately twelve people to the campus, some who would potentially relocate into nearby communities such as Davis, Woodlands, Dixon and Winters, in order to be close to work. While the number of persons added by the proposed project to any community would be small, the added population would contribute to the cumulative demand for wastewater treatment facilities in the region, which the 2003 LRDP EIR recognized could result in significant environmental impacts (LRDP Impact 4.15-10). Because expansion of wastewater treatment facilities in local jurisdictions could require development on agricultural land, loss of farmland and/or habitat could result. To the extent that an increase in off-campus population associated with the 2003 LRDP, including the proposed project, could contribute to the demand for wastewater treatment, in compliance with LRDP Mitigation 4.15-10, the campus would negotiate with the affected jurisdictions to determine the University’s fair share of costs for feasible mitigation to reduce associated significant environmental impacts. The campus’ contribution to mitigation could include implementation of preservation mechanisms for on-campus prime farmland and/or habitat conservation. However, impacts associated with an irreversible loss of prime farmland and habitat could not be mitigated to less-than-significant levels. Therefore, the cumulative impacts related to wastewater treatment facility construction in the Cities of Davis, Winters, Dixon, and Woodland would be significant and unavoidable. This impact was adequately analyzed in the 2003 LRDP EIR, and was fully addressed in the Findings and Statement of Overriding Considerations adopted by The Regents in connection with its approval of the 2003 LRDP. No conditions have changed and no new information has become available since certification of the 2003 LRDP EIR that would alter this previous analysis.

c) Storm water from the hotel addition would be collected by an existing storm drain which discharges into the campus storm drain system. Stormwater from the road extension would be collected in the roadway gutter and would flow into drainage inlets. The drainage inlets would be connected to a new underground storm drain pipe that would constructed for this project. The new piping improvements would extend from the roadway area north toward the Arboretum Waterway and would discharge the collected stormwater into the Arboretum Waterway. The 2003 LRDP EIR identified that implementation of the 2003 LRDP would require the expansion of storm drainage conveyance and detention facilities, the construction and operation of which would not result in significant environmental impacts (Impact 4.15-4). In addition, the campus would survey the site before construction and perform monitoring during construction (in compliance with 2003 LRDP Mitigations 4.4-1 and 4.5-1) to avoid inadvertent biological and cultural resource impacts. LRDP Mitigation 4.15-4, included in the proposed project, would further reduce this less-than-significant impact by ensuring the campus practice of reviewing projects to determine if there is adequate capacity to provide storm water drainage service for the proposed project, and to upgrade the system as necessary. Therefore, the impact associated with storm drain improvements would be less than significant and no further analysis is required.

d) The project’s demand for domestic, fire and utility water would be served by the on-campus groundwater wells screened in the deep aquifer. Impacts associated with the project’s demand for water from the deep and shallow/intermediate aquifers are addressed in item (b) in Section 7.9, Hydrology and Water Quality. To date, campus use of water from the deep aquifer has decreased in recent years and the project contribution to deep water demand would be below the baseline level analyzed in the LRDP EIR. UC Davis would need no additional water entitlements to serve the project or the growth planned under the 2003 LRDP. The proposed project would not contribute to demand for additional entitlements. No impact would occur.

e) The campus’ WWTP would provide wastewater treatment for the proposed project. As discussed in item (b) above, LRDP Mitigation 4.15-3, included in the proposed project, would ensure the campus practice of reviewing projects to determine if there is adequate capacity to provide sanitary sewer
service, and to upgrade the system as necessary. Therefore, the impact associated with sanitary sewer system improvements would be less than significant and no additional analysis is required.

f) The waste disposal needs of the proposed project would be served by the campus landfill and would be a minor contributor of solid waste. As identified in the 2003 LRDP EIR, given the demands anticipated under the 2003 LRDP (including the proposed project), the life expectancy of the campus landfill is to 2023. Therefore, the campus landfill would have adequate capacity to serve the proposed project and the impact would be less than significant.

g) Hazardous wastes generated by the proposed project are discussed in Section 7.8, Hazards and Hazardous Materials in this Initial Study and will be evaluated in further detail in the project EIR. The non-hazardous solid waste generated by the project would be typical of a hotel building. The proposed project would comply with all applicable statutes and regulations related to solid waste. Therefore, no impact would occur.

h) The 2003 LRDP EIR identified that growth under the 2003 LRDP would require the expansion of the campus electrical system. Electrical utility extensions required by the proposed project would be constructed within a previously disturbed area. In addition, the campus would perform monitoring during construction (in compliance with 2003 LRDP Mitigation 4.5-1) to avoid inadvertent cultural resource impacts. Therefore, environmental effects associated with utility extensions would be less than significant. LRDP Mitigations 4.15-6(a,b), 4.15-7(a), and 4.15-8, included in the proposed project, would further reduce the significance of this impact by requiring the campus to continue to incorporate energy efficient design elements, meet or exceed Title 24 energy conservation requirements, and review the project to determine if the relevant utility supply is adequate at the point of connection and if any upgrades to the utility system are required. The potential impact would be less than significant.

i) The project would connect to a private provider of telecommunications facilities. The project would connect to a point within the existing hotel building and no new trenching or off-site upgrades would be necessary to serve the proposed project. No additional telecommunications facilities would be required and there would be no environmental effect related to the expansion of telecommunications infrastructure.
7.18 **MANDATORY FINDINGS OF SIGNIFICANCE**

<table>
<thead>
<tr>
<th><strong>MANDATORY FINDINGS OF SIGNIFICANCE</strong></th>
<th>Impact to be Analyzed in the EIR</th>
<th>No Additional Analysis Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Would the project…</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?</td>
<td>☑</td>
<td>☐</td>
</tr>
<tr>
<td>b) Does the project have impacts that are individually limited, but cumulatively considerable? (&quot;Cumulatively considerable&quot; means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?</td>
<td>☑</td>
<td>☐</td>
</tr>
<tr>
<td>c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?</td>
<td>☑</td>
<td>☐</td>
</tr>
</tbody>
</table>

a) The proposed project would not significantly affect fish or wildlife habitat. The issue of potential impacts to archaeological resources will be addressed in the EIR.

b,c) The cumulatively considerable project impacts will be assessed and summarized in the EIR. In addition, the potential for the project to have adverse environmental effects on human beings will be described in the EIR.
8  FISH & GAME DETERMINATION

Based on the information presented in this Tiered Initial Study, the project has a potential to adversely affect wildlife or the habitat upon which wildlife depend. Therefore, a filing fee will be paid.

___ Certificate of Fee Exemption

___X___ Pay Fee
REFERENCES


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Chandler, Mike, UC Davis Fire Chief. 2003, February 27. Personal communication with Sarah Mattern; regarding achievement of stated standard of response.


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UC Davis. 1997, October. UC Davis Water Management Plan.

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U.S. Environmental Protection Agency (U.S. EPA). n.d.(a) —High GWP Gases and Climate Change,”

U.S. Environmental Protection Agency (U.S. EPA). n.d.(b) —Methane: Sources and Emissions,”


Wengler, Kurt. 2005, March 16. Telephonic communication with Camille Kirk, UC Davis Office of
Resource Management and Planning; regarding design standards for stormwater management.


Impacts and Mitigation.
10 AGENCIES & PERSONS CONSULTED

None

11 REPORT PREPARES

Matt Dulcich, Assistant Director, Environmental Planning, UC Davis

Sid England, Assistant Vice Chancellor, Environmental Stewardship and Sustainability, UC Davis

Ardie Dehghani, Design and Construction Management, UC Davis
Appendix B: Comment Letters
April 20, 2011

Sid England
University Of California
One Shields Avenue
436 Mrak Hall
Davis, CA 95616

Re: Notice of Preparation, Draft Environmental Impact Report (DEIR)
Hyatt Place Hotel Expansion and Old Davis Road Extension
SCH# 2011032051

Dear Mr. England:

As the state agency responsible for rail safety within California, the California Public Utilities Commission (CPUC or Commission) recommends that development projects proposed near rail corridors be planned with the safety of these corridors in mind. New developments and improvements to existing facilities may increase vehicular traffic volumes, not only on streets and at intersections, but also at at-grade highway-rail crossings. In addition, projects may increase pedestrian traffic at crossings, and elsewhere along rail corridor rights-of-way. Working with CPUC staff early in project planning will help project proponents, agency staff, and other reviewers to identify potential project impacts and appropriate mitigation measures, and thereby improve the safety of motorists, pedestrians, railroad personnel, and railroad passengers.

The CPUC recommends the Transportation/Circulation section of the DEIR specifically evaluate traffic safety issues to the rail Corridor located in proximity to the proposed project site. Any increase in traffic by this project needs to be evaluated for potential impacts.

In general, the major types of impacts to consider are collisions between trains and vehicles, and between trains and pedestrians. Measures to reduce adverse impacts to rail safety need to be considered in the DEIR. General categories of such measures include:

- Installation of grade separations at crossings, i.e., physically separating roads and railroad track by constructing overpasses or underpasses
- Improvements to warning devices at existing highway-rail crossings
- Installation of additional warning devices
- Improvements to traffic signaling at intersections adjacent to crossings, e.g., traffic preemption
- Installation of median separation to prevent vehicles from driving around railroad crossing gates
• Prohibition of parking within 100 feet of crossings to improve the visibility of warning devices and approaching trains
• Installation of pedestrian-specific warning devices, channelization and sidewalks
• Construction of pull out lanes for buses and vehicles transporting hazardous materials
• Installation of vandal-resistant fencing or walls to limit the access of pedestrians onto the railroad right-of-way
• Elimination of driveways near crossings
• Increased enforcement of traffic laws at crossings
• Rail safety awareness programs to educate the public about the hazards of highway-rail grade crossings

Commission approval is required to modify an existing highway-rail crossing or to construct a new crossing.

Thank you for your consideration of these comments. If you have any questions, please contact me at (415) 713-0092 or email at ms2@cpuc.ca.gov.

Sincerely,

[Signature]

Moses Stites
Rail Corridor Safety Specialist
Consumer Protection and Safety Division
Rail Transit and Crossings Branch
180 Promenade Circle, Suite 115
Sacramento, CA 95834-2939
April 22, 2011

0311YOL0011
03-YOL-16 PM 18.780
Hyatt Place Hotel Expansion and Old Davis Road Extension
Notice of Preparation for the Focus Tiered Environmental Impact Report

Sid England
University of California, Davis
One Shields Avenue
Davis, CA 95616

Dear Mr. England,

Thank you for the opportunity to review and comment on the Notice of Preparation (NOP) for the Hyatt Place Hotel Expansion and Old Davis Road Extension draft Focus Tiered Environmental Impact Report. The University of California, Davis (UCD) is proposing two projects on the central campus in Davis. The first project would expand the existing campus hotel capacity by adding 52 rooms to an existing 75 rooms. The expanded hotel building space would result in an additional 30,000 square feet of building area. The second proposed project is the extension of the Old Davis Road from its existing terminus east of the existing hotel to the southern terminus of A Street. The proposed extension will construct approximately 1,100 feet of new roadway and would connect to the south side of Parking Lot 5—allowing through access on the connected roadway. The proposed extension of Old Davis Road has been identified as a component of the long-term UCD roadway plans. Our comments are as follows:

- Traffic Impact Analysis: We request a Traffic Impact Study (TIS) be completed with regard to the Level of Service (LOS) of signal operations at the existing Richards Boulevard/Olive Drive intersection near the terminus of the Interstate 80 (I-80) west bound off ramp to north bound Richards Boulevard. The TIS should include analysis with and without the project for existing and future conditions. A copy of the TIS preparation guide can be downloaded at the following web address:
  www.dot.ca.gov/hq/traffics/developserv/operationalssystems/reports/tisguide.pdf

Expansion of the existing hotel is expected to increase the average trip generation of the hotel (at full occupancy) from 48 weekday a.m. peak trips to 82 a.m. peak hour trips and from 55 p.m. peak trips to 94 p.m. peak trips. The added 52 rooms, at full occupancy, would increase the average Saturday peak hour trip generation from 65 trips to 111 trips. The extension of Old Davis Road will attract more traffic to the Richards Boulevard exit to access A Street and the southeastern portion of the campus, especially during events.

"Caltrans improves mobility across California"
Traffic Management Plan: We request a Traffic Management Plan (TMP) be prepared for Caltrans review to minimize traffic impacts to the State Highway System during project construction. The TMP should discuss the expected dates and duration of construction, as well as traffic mitigation measures. Caltrans may recommend that the plan route westbound and eastbound traffic to the Old Davis Road/Mondavi Center exit from I-80 to access the south part of campus, instead of Richards Boulevard—especially during events. For TMP assistance, contact John Holzhauser at (916) 859-7978.

Please provide our office with copies of any further actions regarding this development. If you have any questions regarding these comments please contact Arthur Murray at (916) 274-0616.

Sincerely,

Eric Fredericks, Chief
Office of Transportation Planning—South

"Caltrans improves mobility across California"
April 19, 2011

A. Sidney England
Assistant Vice Chancellor – Environmental Stewardship and Sustainability
University of California
One Shields Avenue
376 Mrak Hall
Davis, CA 95616

Re: Hyatt Place Hotel Expansion and Old Davis Road Extension Notice of Preparation

Dear Mr. England:

The Yolo-Solano Air Quality Management District (District) appreciates the opportunity to review the Notice of Preparation (NOP) to adopt a Focused Tiered Environmental Impact Report for the above referenced project. The project involves the expansion of the existing Hyatt Place hotel by adding 52 new rooms to the facility for a total of 127 rooms, and the extension of Old Davis Road to the southern terminus of A Street.

As a commenting agency under the California Environmental Quality Act, the District has reviewed the NOP, and offers the following comments:

Please be advised that the District has produced a CEQA guidance document, titled the Handbook for Assessing and Mitigating Air Quality Impacts, which should be consulted for any air quality analysis. The Handbook contains recommendations for evaluating impacts for both operational and construction-related impacts, and includes thresholds of significance for both phases. For construction impacts, standard construction mitigation as found in the Handbook should be implemented, at a minimum. The Handbook can be found on the District’s website: www.ysaqmd.org.

The following District Rules and Regulations may also apply to the project:

- If any renovation activities will occur as part of the proposed project, District Rule 9.9, Asbestos may apply.
- Portable diesel fueled equipment greater than 50 horsepower (HP), such as generators or pumps, must be registered with either the Air Resources Board’s (ARB’s) Portable Equipment Registration Program (PERP) (http://www.arb.ca.gov/perm/perp.htm) or with the District.
- Dust emissions must be prevented from creating a nuisance to surrounding properties as regulated under District Rule 2.5, NUISANCE.
In conclusion, the District appreciates receiving the NOP and the opportunity to provide recommendations. If you have any questions, please contact me at (530) 757-3668.

Sincerely,

Matthew R. Jones
Supervising Air Quality Planner
A. Sidney England
Assistant Vice Chancellor
Environmental Stewardship and Sustainability
University of California, Davis
One Shields Avenue
Davis, California 95616

RE: Hyatt Place Hotel Expansion and Old Davis Road Extension Tiered Initial Study

Dear Mr. England:

The City of Davis has reviewed the Tiered Initial Study for the Hyatt Place Hotel Expansion and Old Davis Road Extension. We have concerns about both the hotel expansion and the roadway extension. Visitor attraction and accommodation is a key element of the City’s economic development efforts, and Transient Occupancy Tax currently contributes an average of $1 million annually to the City’s operations. The City and the Redevelopment Agency have been working to enhance the vibrancy and attractiveness of our town to residents and visitors alike. In today’s economic climate, the proposed project has the potential to lead to traffic, economic, and blighting impacts in Davis, particularly in downtown Davis.

The University must consider the following analyses in its EIR:

Project Description
The document should explain why the hotel and roadway projects are combined as one project for CEQA purposes. The project description should explain whether the roadway project is required in order to serve the hotel expansion or mitigate the traffic impacts of the hotel, and if so why this mitigation was selected to be part of the hotel project and whether alternative mitigation would have less impact than the roadway project. Is it possible that the University could choose to do one component (i.e. the hotel or the roadway), but not the other? If so, the impacts of each must be analyzed separately.

The brief description of the hotel project mentions only guest rooms, and not a restaurant or catering operation nor does it adequately describe the conference center facilities and the occupancy load anticipated for these facilities. Should these be proposed for inclusion in the hotel project, we believe that the initial study must be revised to address these components and a new or revised notice of preparation be made available for scoping comments. The City would want to make initial comments upon receipt of this revised initial study.

In addition, the Notice of Preparation is unclear on future plans for the existing Old Davis Road. Is the closure of Old Davis Road part of this project? If so, when will it occur? If it is part of the

CITY OF DAVIS
project, its closure must be analyzed in the EIR, as it relates to traffic and air quality. If it is not part of the project, then the additional road capacity must be analyzed, including, at a minimum, both traffic and air quality impacts and growth inducing impacts.

Hotel Economic Impacts and Resultant Adverse Physical Impacts on Downtown Davis
The Hyatt Place Hotel has increased the supply of hotel rooms in the Davis area while the recession has reduced conference and tourism dollars nationwide, regionally, and locally. The combination has led to significant reductions in hotel stays, room rates, and TOT collection within the City of Davis. TOT reported to the City for 2010 was 19.38% less than the amount reported for 2008. Two of our hotels have shown signs of severe financial distress. For the two quarters immediately after the Hyatt Place opened (April – September 2010), reported TOT dropped by over nine percent from the previous year’s payments.

When the Hyatt Place Hotel and conference center project was originally proposed by the Campus, UC Davis asserted, based on economic studies prepared for the Campus, that the facility would provide economic benefit to the city. We do not believe that the campus conference facility has provided the economic benefit and increased room nights as originally anticipated. In fact, we believe that the opposite is true. The original economic analysis concluded that hotel revenues would experience a temporary three-year decline but would return to then-current levels after that period. This has not occurred.

The proposed hotel expansion will cause hotel revenues to further decline and jeopardize the ability of the hoteliers to maintain their properties, provide customer service, and pay the TOT that contributes to downtown maintenance and visitor attraction.

Further, there is no evidence that restaurant business and downtown revenues have increased by the $200,000 per year that was projected by UC Davis in its studies to come from the original hotel.

The University must provide a new full economic study that revisits and corrects the assumptions of the original analysis, reflects the current economy, and the further reductions in economic activity resulting from changes at the UC Davis campus such as layoffs and reduced training budgets. This is required to provide an adequate baseline for the analysis of the fiscal impacts of the expansion project and the resultant adverse physical impacts and potential blight that the expansion project will have on the Davis Downtown.

Adding new hotel rooms in the current weak market will reduce the demand for rooms for Davis hotels, particularly those downtown. Further diluting the demand for hotel rooms will lead to deterioration of existing hotel properties and result in urban decay and blight. This urban decay will also affect properties with businesses that rely on out-of-town visitors, including restaurants and downtown retail locations. In addition, the reduced Transient Occupancy Tax and sales tax generated by downtown hotels and businesses will jeopardize the City’s ability to maintain downtown infrastructure and public services, further exacerbating the chances of urban decay.

We would stress that blight is more than an “aesthetic” issue. Blighted properties can certainly cause aesthetic impacts, including boarded-up or abandoned buildings, graffiti, and unkempt properties. In addition, urban decay and blight can increase criminal activity, require additional public safety services, decrease values of surrounding properties, and reduce City revenues while increasing costs of services. Failed hotels will exacerbate the financial pressures being currently
faced by the City of Davis and undo the years of economic development that the City, the Redevelopment Agency and the Downtown businesses have pursued to revitalize the Downtown and the City. These concerns apply both to downtown and to South Davis, where a number of commercial buildings are currently vacant. This could further result in impacts to land use through incompatibility of adjacent uses throughout the Davis community. This should also be a major concern to the Campus as a vibrant Davis Downtown is an integral part of the draw for the Campus, assisting in the recruitment of faculty, staff and students, and the general enjoyment of family and friends to Davis.

The economic analysis must analyze the physical blight that will result from the impacts on the hotel market, and identify mitigation measures to prevent that blight. Conversion of our existing hotels to other uses is not mitigation, as it would have additional blighting impacts as well as reducing revenue that the City uses for public services. Mitigation measures should include efforts to increase hotel demand in Davis, such as capital or operating contributions to a downtown conference facility; additional conference bookings at the Downtown hotels; or increased contribution to the Yolo County Visitors Bureau and other mitigation to fully offset the adverse impacts of the expansion.

The City is taking concrete steps that may partially ameliorate the adverse impacts of the current Hyatt Place on the Downtown by moving forward to add a full-service conference facility immediately adjacent to the downtown. This hotel and conference center will make a positive contribution to both the hotel market and the commercial vitality of the Downtown. The City Council took action to identify a preferred project on March 29, 2011, and we are working toward an Owner Participation Agreement for approval this year. Our goal is to increase the community’s attractiveness for conferences to support the host hotel and other hotels in Davis. The proposed hotel conference center in the City would be an integral part of the downtown and would add economic strength; visitors would be in the Downtown and would be participants in Downtown events and customers of the Downtown restaurants and stores. This proposed location will, hopefully, mitigate the adverse impacts the Downtown hotels, restaurants and retail establishments have already experienced because of the campus’s existing hotel conference center which is physically removed from the Downtown and draws visitors away from the Downtown. Further, this proposed hotel conference center adjacent to the Downtown will pay taxes to the City, its visitors will pay TOT and sales tax to the City and this, too, will bolster the vibrancy or the Downtown by paying for the public services necessary to service the Downtown and its residents and visitors.

Traffic Analysis
The EIR must analyze the traffic and circulation effects from expansion of the hotel and from the proposed realignment of Old Davis Road. An adequate analysis will “follow the trips” into and through the City of Davis, particularly through the downtown Core Area, and identify mitigation measures for those impacts. The EIR should also identify mechanisms by which the University will fund and construct any necessary improvements to City roadways and intersections.

The through traffic on A Street is likely to increase significantly, as will the number of vehicles at the intersection of First and A streets. This intersection is already identified as a critical intersection in the LRDP EIR, and programmed for regular monitoring. The current conflicts between automobiles, buses, and bicyclists are likely to be exacerbated by this project. The traffic analysis, at a minimum, should consider both average-day trips and trips (and impacts) that will occur during the school year and include the trips from the south campus area, including the Mondavi Center, the wine facility and the other new south campus facilities and parking areas. It must also look at the traffic during events, including evening peak hour on days with events at
both the conference center and the Mondavi Center and cumulative impacts on the City’s roadway system. Special events should be considered as part of the traffic analysis. Mitigation measures should include both required physical improvements, and a traffic management plan for special events designed to eliminate operational impacts on City roadways. Mitigation should also look at transit and transportation alternatives to car travel.

Alternatives Analysis
The Initial Study does not identify the alternatives that will be considered in the EIR. The EIR should separately analyze and identify the impacts for each of the two components of the project – the hotel alone, and the roadway alone. In addition, the EIR should analyze the City’s hotel conference center at Richards Boulevard and Olive Drive as an alternative. This alternative project would expand the demand for hotel rooms, increase the area’s attractiveness to conferences, support downtown restaurants and merchants, and eliminate the blighting impacts that are anticipated from the Hyatt Place expansion.

Thank you for the opportunity to comment on the Initial Study. If you have any questions or require clarification, please contact Ken Hiatt, Director of Community Development and Sustainability, at 757-5610 or khiatt@cityofdavis.org.

Sincerely,

[Signature]

Joseph F. Krovoza
Mayor
I write on as a Garden Committee member behalf of the Solano Park Apartments Community Garden, over which part of the Old Davis Road extension will be paved.

The community garden has existed in this location, feeding many generations of students. The garden will continue to exist at least as long as the Solano Park apartments. The apartments may be retired in approximately 5 years. We request that provisions be taken to keep the remaining community garden safe and fruitful.

First, the plan, as I've seen, includes 10 feet of landscaping and 6 feet of "future sidewalk" and unsized "future utilities" on our side of the road. I request that these "future" areas can continue to be gardenable for the life of the community garden.

Second, the road represents a hazard to the young children who frequently accompany their parents in the garden. Additionally, the extra traffic will bring attention to our enticing produce. We request that a barrier be erected between the garden and the road to prevent easy access in either direction.

Thank you for the consideration. Please contact me if you have any questions.

Brian Neal
Solano Park Apartments Community Garden Committee
bpneal@ucdavis.edu
415-425-3767