Focused Tiered Draft Environmental Impact Report

State Clearinghouse No. 2002072048

Prepared By:

OFFICE OF RESOURCE MANAGEMENT AND PLANNING

University of California
One Shields Avenue
376 Mrak Hall
Davis, California 95616

September 6, 2002

Contact: A. Sidney England, Environmental Planner
(530) 752-2432
TABLE OF CONTENTS

1. INTRODUCTION ............................................................................................................. 1-1
   Summary of Proposed Project....................................................................................... 1-1
   Scope and Purpose of Focused Tiered EIR.............................................................. 1-1
   Review and Approval Process .................................................................................. 1-3
   Tiering Process......................................................................................................... 1-4
   Report Organization................................................................................................. 1-13

2. SUMMARY ...................................................................................................................... 2-1
   Project Description .................................................................................................... 2-1
   Known Areas of Controversy .................................................................................. 2-1
   Alternatives Analysis............................................................................................... 2-1
   Impact and Mitigation Summary........................................................................... 2-1

3. PROJECT DESCRIPTION ............................................................................................. 3-1
   Regional Location .................................................................................................... 3-1
   Project Description .................................................................................................. 3-1
   Construction Schedule and Staging ........................................................................ 3-13

4. ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION MEASURES .......... 4-1
   Introduction .............................................................................................................. 4-1
   4.1 Cultural Resources............................................................................................. 4-1
   4.2 Aesthetics .......................................................................................................... 4-7

5. CEQA CONSIDERATIONS ......................................................................................... 5-1
   Growth-Inducing Impacts....................................................................................... 5-1
   Significant and Unavoidable Adverse Impacts..................................................... 5-1
   Irreversible Environmental Changes.................................................................... 5-2

6. ALTERNATIVES TO THE PROPOSED PROJECT ...................................................... 6-1
   Project Objectives.................................................................................................... 6-1
   Alternatives Analysis............................................................................................... 6-1

7. REFERENCES .............................................................................................................. 7-1

8. AGENCIES AND PERSONS CONTACTED ................................................................ 8-1

9. REPORT PREPARERS................................................................................................. 9-1
APPENDIX A. Mathematical Sciences Building Tiered Initial Study (July 2002)


APPENDIX C. Cumulative Impacts Analysis - Focus on Potential Environmental Effects Associated with Projected Student Enrollment Increases through 2014-15

LIST OF TABLES

Table 1-1. Projected Population and Academic and Administrative ASF Increases for Projects Currently Under Environmental Review ................................................................. 1-9
Table 1-2. Estimated and Projected Campus Population .............................................................................................. 1-10
Table 2-1. Summary of Impacts and Mitigation Measures ......................................................................................... 2-2

LIST OF FIGURES

Figure 3-1. Regional Location .......................................................................................................................... 3-2
Figure 3-2. Project Location .......................................................................................................................... 3-3
Figure 3-3. Proposed Project Site Plan ............................................................................................................ 3-4
Figure 3-4A. Mathematical Sciences Building Elevations .................................................................................. 3-5
Figure 3-4B. Mathematical Sciences Building Elevations .................................................................................. 3-6
Figure 3-5. Existing Conditions ...................................................................................................................... 3-7
Figure 3-6. Hog Barn Building ......................................................................................................................... 3-8
1. INTRODUCTION

SUMMARY OF PROPOSED PROJECT

The proposed project includes the construction and operation of a four-story, approximately 65,000 gross square foot (gsf) (37,704 assignable square foot [asf]) Mathematical Sciences Building. The new building would be located in the central campus, south of the Crocker Nuclear Laboratory, west of California Avenue, north of the Academic Surge Building, and east of Engineering Unit 3 (see Figure 3-2 in Chapter 3, Project Description). The Hog Barn building (a structure that meets the criteria for listing on the California Register of Historic Places) is currently located on the proposed project site. To accommodate the proposed project, the campus is considering three potential plans for the Hog Barn building, including: (1) relocation to a site in the central campus located southwest of the Silo complex, (2) relocation to a site in the west campus, and (3) demolition.

Please see Chapter 3, Project Description, for a complete description of the proposed project.

SCOPE AND PURPOSE OF FOCUSED TIERED EIR

A Tiered Initial Study that analyzed the potential impacts of the proposed project was circulated for public and agency review from July 15, 2002 to August 14, 2002 (Appendix A). This document indicated that, for the resource areas listed below, the proposed project would result in the following categories of impacts: no impact; less-than-significant impact; less-than-significant impact with the incorporation of 1994 Long Range Development Plan (LRDP) Environmental Impact Report (EIR) mitigation measures; or contribution to a significant and unavoidable impact that was adequately analyzed in the 1994 LRDP EIR for which no new mitigation measures are available and no new analysis is proposed.

- Land Use and Planning
- Agricultural Resources
- Population and Housing
- Transportation and Circulation
- Noise
- Air Quality
- Hazards and Hazardous Materials
- Biological Resources
- Geology and Soils
- Mineral Resources
- Public Services
- Recreation
- Utilities Service Systems

The Tiered Initial Study (Appendix A) concluded that a Focused Tiered EIR should be prepared to further evaluate the significance of cultural resource and aesthetics impacts and to develop project-specific mitigation measures, if necessary. Specifically, the Focused Tiered EIR evaluates the following impacts associated with the proposed project:
Cultural Resources - The proposed project would require relocation or demolition of the Hog Barn building, which is currently located on the proposed Mathematical Sciences Building site. The Hog Barn building is considered a historical resource, and demolition or relocation of the building could result in a substantial adverse change in the significance of this resource.

Aesthetics - The proposed project would require relocation or demolition of the Hog Barn building, which is currently located on the proposed Mathematical Sciences Building site. The Hog Barn building is a shingle-sided building from the founding years of the University Farm, and such buildings are considered valued elements of the central campus' visual landscape (page 32 of the 1994 LRDP). Demolition or relocation of the Hog Barn building could adversely affect this resource.

UC Davis has prepared this Focused Tiered Draft EIR (DEIR) for the following purposes:

- to satisfy the requirements of the California Environmental Quality Act (CEQA);
- to inform the general public, the local community, responsible and interested public agencies, and the University of the nature of the proposed project, the possible environmental effects, possible measures to mitigate those effects, and alternatives to the proposed project; and
- to enable The Board of Regents (The Regents) of the University of California (the University) to consider environmental consequences when considering approval of the proposed project.

As provided in the CEQA Guidelines, public agencies are charged with the duty to avoid or minimize environmental damage where feasible. In discharging this duty, the public agency has an obligation to balance a variety of public objectives, including economic, environmental, and social objectives (Section 15021 of the CEQA Guidelines). This Focused Tiered DEIR is a public information document, the purpose of which is to identify the potential significant effects of the proposed project on the environment and to indicate the manner in which those significant effects can be avoided or mitigated, to identify any unavoidable adverse impacts that cannot be mitigated, and to identify reasonable and feasible alternatives to the project that would eliminate any significant adverse environmental effects or reduce the impacts to a less-than-significant level. This Focused Tiered DEIR also discloses growth-inducing impacts, effects found not to be significant, and cumulative impacts.

The lead agency, The Regents, is required to consider the information in this EIR, along with any other relevant information, in deciding whether or not to approve the proposed project (Section 15121 of the CEQA Guidelines). Although the EIR is not the only factor involved in consideration of project approval, The Regents must consider the information in the EIR and make findings regarding each significant effect identified in the EIR.

CEQA requires that the campus prepare a DEIR that reflects the independent judgment of the University regarding: environmental impacts associated with the proposed project, the level of significance of impacts before and after mitigation, mitigation measures proposed to reduce impacts, and alternatives to the proposed project. CEQA then requires that a DEIR be circulated to responsible agencies, trustee agencies with resources affected by the project, and interested agencies and individuals. This public and agency review is intended to facilitate a sharing of expertise, ensure
disclosure of agency analyses, check for accuracy, detect omissions, discover public concerns, and solicit counterproposals. While reviewing the DEIR, reviewers should focus on the adequacy of the identification and analyses of possible impacts on the environment, and the avoidance or mitigation of the project's potentially significant environmental effects.

As described further in the "Tiering Process" subsection below, this environmental analysis is a Focused Tiered DEIR, and it is tiered from the UC Davis 1994 LRDP EIR in accordance with Sections 15152 and 15168 of the CEQA Guidelines and Public Resource Code Section 21094. The 1994 LRDP EIR is a Program EIR, prepared pursuant to Section 15168 of the CEQA Guidelines (Title 14, California Code of Regulations, Sections 15000 et seq.). The 1994 LRDP EIR analyzed full implementation of uses and physical development proposed under the 1994 LRDP through the year 2005-06, and it identified measures to mitigate the significant adverse project and cumulative impacts associated with that growth.

Chapter 6 of this Focused Tiered DEIR also evaluates alternatives to the proposed project, including a No Project-No Development Alternative, a Reduced-Size Project Alternative, and an Alternate Site Alternative.

REVIEW AND APPROVAL PROCESS

Public and Agency Review

The Notice of Preparation and Tiered Initial Study for this project were circulated for public and agency review from July 15, 2002 to August 14, 2002. No comments were received during the public and agency review period.

This Focused Tiered DEIR is being circulated for a 45-day public and agency review from September 6, 2002 to October 21, 2002. Comments on this Focused Tiered DEIR must be received by 5:00 PM on October 21, 2002 and may be emailed to environreview@ucdavis.edu or sent to:

John A. Meyer  
Vice Chancellor - Resource Management and Planning  
One Shields Avenue  
University of California  
Davis, CA 95616

Comments relating to this Focused Tiered DEIR may also be presented orally during a public hearing that will be held on October 8, 2002 at 7:00 PM at the East Conference Room in the UC Davis Memorial Union.

Availability of Documents

Copies of this Focused Tiered DEIR are available during normal operating hours at the UC Davis Office of Resource Management and Planning, 376 Mrak Hall on the UC Davis campus; at Reserves in Shields Library on the UC Davis campus; at the Yolo County Public Library, 315 E. 14th Street, Davis; at the Vacaville Public Library, 1020 Ulatis Drive, Vacaville; and online at http://www.ormp.ucdavis.edu/environreview/. Copies of the 1994 LRDP and documents used for
tiering purposes\textsuperscript{1} are also available at these locations (technical appendices are not available online).

**Project Approval**

A Focused Tiered Final EIR (FEIR) will be prepared for the proposed Mathematical Sciences Building project after the public hearing and public and agency review period for the DEIR are complete. The FEIR will include written and oral comments on the environmental effects of the proposed project and responses to these comments. The EIR (including the DEIR and FEIR) will be considered by The Regents in a public meeting and will be certified if it is determined to comply with CEQA. The Regents will consider approval of the proposed Mathematical Sciences Building project following certification of the EIR.

CEQA requires decision-makers to balance the benefits of a proposed project against any unavoidable impacts. The Regents may still approve the project if it believes that social, economic, or other benefits outweigh identified significant and unavoidable impacts. If such approval takes place, The Regents would then be required to state in writing the specific reasons for approving the project based on information in the Focused Tiered EIR and other information in the record. As indicated in Section 15093 of the CEQA Guidelines, this reasoning is called a “statement of overriding considerations.”

The campus currently anticipates that The Regents will consider certification of the project’s EIR and approval of the project in November 2002.

**CEQA Findings and Mitigation Monitoring**

When a public agency makes findings based on an EIR, CEQA requires the public agency to also adopt a reporting/monitoring program for measures that are made a condition of project approval in order to mitigate or avoid significant effects on the environment (Public Resources Code Section 21081.6). The reporting/monitoring program must be designed to ensure compliance during project implementation (Public Resources Code Section 21081.6).

The campus will prepare a Mitigation Monitoring Program (MMP) for the Mathematical Sciences Building project, and the MMP will be considered by The Regents in conjunction with its review of the proposed project.

**Tiering Process**

The CEQA concept of "tiering" refers to the coverage of general environmental matters in broad program-level EIRs, with subsequent focused environmental documents for individual projects that implement the program. This environmental document incorporates by reference the discussions in the 1994 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

\textsuperscript{1} Documents used for tiering purposes include the 1994 LRDP EIR; WWTP Replacement Project EIR; 1997-98 Major Capital Improvement Projects SEIR; Center for the Arts Tiered Initial Study and Mitigated Negative Declaration; USDA Western Human Nutrition Research Center Tiered Initial Study and Mitigated Negative Declaration; Veterinary Medicine Laboratory and Equine Athletic Performance Laboratory Facility Tiered EIR; Segundo Housing Improvement Projects Tiered Initial Study and Mitigated Negative Declaration; and the Conference Center, Hotel, and Graduate School of Management Building Focused Tiered EIR.
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 task of preparing environmental documents on later parts of the program by incorporating by reference factors 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]).

Accordingly, the tiering of the environmental analysis for the proposed project allows this Focused Tiered DEIR to rely on the 1994 LRDP EIR for the following:

- a discussion of general background and setting information for environmental topic areas;
- overall growth-related issues through 2005-06;
- issues that were evaluated in sufficient detail in the 1994 LRDP EIR for which there is no significant new information or change in circumstances that would require further analysis; and
- cumulative impacts assessment.

All applicable mitigation measures identified in the 1994 LRDP EIR and previously adopted by the University are incorporated into and made part of the proposed project. These mitigation measures are discussed in the Tiered Initial Study (Appendix A) and in Chapter 4 of this document.

1994 LRDP and 1994 LRDP EIR

The Regents approved the UC Davis 1994 LRDP and LRDP EIR in September 1994. The 1994 LRDP is a comprehensive plan that identifies the general types of campus development and designates land use categories planned to support projected campus growth through 2005-06. The plan is intended to be a tool to help guide physical development at UC Davis in order to achieve the academic needs and goals of the campus.

The 1994 LRDP EIR is a Program EIR prepared pursuant to Section 15168 of the CEQA Guidelines (Title 14, California Code of Regulations, Sections 15000 et seq.). The 1994 LRDP EIR analyzed full implementation of uses and physical development proposed under the 1994 LRDP through the year 2005-06, and it identified measures to mitigate the significant adverse project and cumulative impacts associated with that growth.

The analysis provided in this DEIR reflects the 1994 LRDP, as amended, and is tiered from the 1994 LRDP EIR, as updated and revised. The following subsections summarize amendments to the 1994 LRDP and updates and revisions to the 1994 LRDP EIR, address the project's consistency with the amended 1994 LRDP, evaluate the adequacy of the 1994 LRDP EIR through 2005-06, and introduce the Cumulative Impact Analysis that addresses environmental effects associated with student enrollment increases anticipated through 2014-15.
Amendments to the 1994 LRDP and Revisions to the 1994 LRDP EIR

The Regents has amended the 1994 LRDP upon approval of subsequent projects that required land use designation changes, revisions of program objectives, or changes in the campus land inventory to maintain conformity with the 1994 LRDP. The Regents has not changed the population projections and total facility growth allowed under the 1994 LRDP. The Regents has revised the 1994 LRDP EIR upon approval of projects that required changes to impacts and/or mitigation measures. The 1994 LRDP EIR has also been updated when new analyses changed the analyses presented in the 1994 LRDP EIR. A comprehensive discussion of amendments to the 1994 LRDP and updates and revisions to the 1994 LRDP EIR is included as Appendix B of this DEIR.

The Regents amended the 1994 LRDP to accommodate the following projects: the Wastewater Treatment Plant (WWTP) Replacement Project; the 1997-98 Major Capital Improvement Projects; the Center for the Arts Performance Hall and South Entry Roadways and Parking Improvements Project; the Western Human Nutrition Research Center Project; the Segundo Housing Improvement Projects; and the Conference Center, Hotel, and Graduate School of Management Building Project. In total, approximately 105 acres have been redesignated to accommodate projects and associated mitigation areas, one plan objective has been deleted, and 150 acres of land has been added to the campus. Figure 1 in Appendix B of this DEIR provides the current campus map with updated land use designations.

The 1994 LRDP EIR was updated and revised upon approval of the projects listed above as well as the Veterinary Medicine Laboratory and Equine Athletic Performance Laboratory Facilities Project. The list below summarizes updates and revisions to the 1994 LRDP EIR.

**WWTP Replacement Project EIR (State Clearinghouse Nos. 95123027 and 96072024):**

- Updated 1994 LRDP EIR analysis to reflect changes to 1994 land use designations (Section 4.6 of the WWTP Replacement Project Draft EIR).
- Identified the loss of an additional 20 acres of prime agricultural land and ruderal/annual grassland habitat over the amount identified in the 1994 LRDP EIR analysis and increased the magnitude of land use and biological resource impacts associated with this loss (Sections 4.4 and 4.6 of the WWTP Replacement Project Draft EIR, and Appendix G of the Final EIR).
- Reevaluated cumulative 1994 LRDP EIR Hydrology and Water Quality, Hazardous Materials and Public Safety, and Air Quality impacts (Sections 4.1, 4.3, and 4.3 of the Focused Tiered Draft EIR).

**1997-98 Major Capital Improvement Projects Supplemental EIR (SEIR) (State Clearinghouse No. 97122016):**

- Updated 1994 LRDP EIR analysis to reflect changes to 1994 LRDP land use designations (Sections 5.3, 6.3, and 7.3 of the Draft SEIR).
- Identified the loss of an additional 20 acres of prime agricultural land and 31 acres of ruderal/annual grassland habitat over the amount identified in the 1994 LRDP EIR.
To mitigate this loss, identified measure to redesignate 20 acres of prime farmland and ruderal/annual grassland habitat at the Russell Ranch from land designated as Academic and Administrative Low Density to Teaching and Research Fields (Sections 5.3, 5.5, 6.3, 6.5, 7.3, and 7.5 of the Draft SEIR).

- Identified the loss of 11 acres of ruderal/annual grassland habitat over the amount identified in the 1994 LRDP EIR analysis and increased the magnitude of biological resource impacts associated with this loss (Appendix A of the Final SEIR).

- Included project-specific mitigation measure to reduce the magnitude, but not the level of significance, of the cumulative impact on burrowing owl nesting habitat (Section 2 of the Draft SEIR).

- Included updated transportation and circulation analysis to assess a new traffic survey and the decision by the City of Davis not to expand the Richards Boulevard undercrossing from two to four lanes. Revised 1994 LRDP EIR transportation Mitigation Measure 4.3-1 (b) to account for the new traffic information (Section 8 of the Draft SEIR).

- Reevaluated cumulative air quality and noise impacts (Section 8 of the Draft SEIR).

Center for the Arts Performance Hall and South Entry Roadway and Parking Improvements Tiered Initial Study and Mitigated Negative Declaration (State Clearinghouse No. 98092016):

- Updated 1994 LRDP EIR analysis to reflect changes to 1994 LRDP land use designations (page 29 of the Center for the Arts Tiered Initial Study).

- Identified the loss of 8.5 acres of prime farmland and ruderal/annual grassland habitat over the amount assessed in the 1994 LRDP EIR. To mitigate this loss, identified measure to redesignate 8.5 acres of prime farmland and ruderal/annual grassland habitat designated as Support to Teaching and Research Fields (pages 29-30 and 60 of the Tiered Initial Study).

USDA Western Human Nutrition Research Complex Tiered Initial Study and Mitigated Negative Declaration (State Clearinghouse No. 99092060):

- Updated the 1994 LRDP EIR analysis to reflect changes to land use designations presented in the 1994 LRDP (pages 24-25 of the Initial Study).

- Revised a project-specific mitigation measure presented in the 1997-98 Major Capital Improvement Projects SEIR that reduced the magnitude, but not the level of significance, of the cumulative impact on burrowing owl nesting habitat (page 65 of the Initial Study).
Veterinary Medicine Laboratory and Equine Athletic Performance Laboratory Facilities Focused Tiered EIR (State Clearinghouse No. 2000022057):

- Further updated the 1994 LRDP EIR cumulative transportation and circulation impact analysis to account for more accurate estimates of campus population growth in the Health Sciences District. The updated analysis identified that the intersection of Hutchison Drive and Health Sciences Drive would exceed level of service standards. Included a mitigation measure to reduce the impact at this intersection to a less-than-significant level (Section 3 of the Final EIR).

Segundo Housing Improvements Projects Tiered Initial Study and Mitigated Negative Declaration (State Clearinghouse No. 2001092063):

- Updated the 1994 LRDP EIR analysis to reflect changes to the land use designations presented in the 1994 LRDP (pages 33-35 of the Tiered Initial Study).

Conference Center, Hotel, and Graduate School of Management Building Focused Tiered EIR (State Clearinghouse No. 2001082067):

- Updated the 1994 LRDP EIR analysis to reflect changes to the land use designations presented in the 1994 LRDP (Appendix A of the Final EIR).

Environmental documents that identify amendments to the 1994 LRDP and updates and revisions to the 1994 LRDP EIR are available for review during normal operating hours at the UC Davis Office of Resource Management and Planning, 376 Mrak Hall on the UC Davis Campus; at Reserves in Shields Library on the UC Davis campus; at the Yolo County Public Library, 315 E. 14th Street, Davis; at the Vacaville Public Library, 120 Ulatis Drive, Vacaville; and online at http://www.ormp.ucdavis.edu/environreview/ (technical appendices are not available online).

Consistency with the 1994 LRDP

1994 LRDP Scope of Development

The 1994 LRDP approved development of approximately 1.75 million asf of building space through 2005-06 for academic and administrative uses, including space for instruction and research, libraries, student services, administrative/support, and public service/non-University agencies. The 1994 LRDP EIR assumed total campus academic and administrative development through 2005-06 would be 6,495,740 asf. From 1993 to 2000, approximately 504,768 asf of space has been approved, constructed, or occupied, for a total of approximately 5,250,508 asf. Additional project approvals as of August 2002 have increased this total space to approximately 5,882,349 asf (Table 1). The proposed project would construct approximately 37,704 asf of academic and administrative space. This additional space would not exceed planned development.

If approved, the proposed project and other projects currently under consideration, including the Veterinary Medicine Instructional Facility and the Watershed Science Research Center would cumulatively add approximately 84,950 academic and administrative asf to the campus (increasing the academic and administrative space on campus to 5,967,299 asf). This space would not exceed
the 6,495,750 asf of development approved under the 1994 LRDP, as presented in Table 1. Therefore, the proposed project would be consistent with the development approved under the 1994 LRDP.

**TABLE 1-1. PROJECTED POPULATION AND ACADEMIC AND ADMINISTRATIVE ASF INCREASES FOR PROJECTS CURRENTLY UNDER ENVIRONMENTAL REVIEW**

<table>
<thead>
<tr>
<th>Program</th>
<th>Assignable Square Feet</th>
<th>Student Population</th>
<th>Faculty &amp; Staff Population</th>
<th>Total On-Campus Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Built or Approved as of August 2002</td>
<td>5,882,349</td>
<td>23,605</td>
<td>11,238</td>
<td>34,843</td>
</tr>
<tr>
<td>Mathematical Sciences Building</td>
<td>37,704</td>
<td>0</td>
<td>120</td>
<td>120</td>
</tr>
<tr>
<td>Watershed Science Research Center</td>
<td>9,800</td>
<td>0</td>
<td>36</td>
<td>36</td>
</tr>
<tr>
<td>Veterinary Medicine Instructional Facility</td>
<td>37,690</td>
<td>568</td>
<td>5</td>
<td>573</td>
</tr>
<tr>
<td>Total Proposed</td>
<td>85,194</td>
<td>568</td>
<td>161</td>
<td>729</td>
</tr>
<tr>
<td>Existing, Approved and Proposed Projects</td>
<td>5,967,543</td>
<td>24,173</td>
<td>11,399</td>
<td>35,572</td>
</tr>
<tr>
<td>Projections for 2005-06 (LRDP)</td>
<td>6,495,750</td>
<td>26,000</td>
<td>12,630</td>
<td>38,630</td>
</tr>
</tbody>
</table>

1994 LRDP Population Projections

The on-campus population anticipated under the 1994 LRDP for 2005-06 is 38,630 (26,000 full time equivalent students and 12,630 faculty and staff) (see Table 2). The 1999-00 on-campus population estimate was 32,775 (22,887 students and 9,888 faculty and staff). Recently built and approved projects would bring this total to approximately 34,843 (23,605 students and 11,238 employees). The proposed project would contribute approximately 120 new campus employees, but it would not contribute new students. Population growth associated with the proposed project would not exceed population projections assumed in the 1994 LRDP EIR. The proposed project and other projects currently under consideration (the Watershed Science Research Center and the Veterinary Medicine Instructional Facility) would add approximately 161 new campus employees and 568 new students to this total (Table 1). This would also not exceed the on-campus population anticipated under the 1994 LRDP.
TABLE 1-2. ESTIMATED AND PROJECTED CAMPUS POPULATION

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Students¹</td>
<td>21,060</td>
<td>22,887</td>
<td>+3,113</td>
<td>26,000</td>
</tr>
<tr>
<td>Faculty and Staff²</td>
<td>9,550</td>
<td>9,888</td>
<td>+2,742</td>
<td>12,630</td>
</tr>
<tr>
<td>Total Population</td>
<td>30,610</td>
<td>32,775</td>
<td>+5,855</td>
<td>38,630</td>
</tr>
</tbody>
</table>

¹ Off-campus student population not counted in this total. In 2005-06, approximately 570 students would be located at the UC Davis Medical Complex, Sacramento Campus, and an additional 280 students would be enrolled elsewhere at other UC Davis affiliated facilities. Therefore, accounting for the off-campus student population, total UC Davis enrollment in 2005-06 will be 26,850.

² Includes faculty and staff located on the central, west, and south campus units, Russell Ranch, and at campus facilities in the City of Davis sphere of influence.

³ Base year for 1994 LRDP EIR analysis. Source: UC Davis 1994 LRDP EIR.


⁵ Projected 1994 LRDP growth and buildout. Source: UC Davis 1994 LRDP EIR.

1994 LRDP Land Use Designation

The proposed Mathematical Sciences Building would be located on a core campus site designated in the 1994 LRDP for 'Academic and Administrative High Density' uses (see Figure 3-2 in Chapter 3 of this document). This land use category (as described on pages 45-46 of the 1994 LRDP) provides for space that conducts the instruction and research mission of the University, including: classrooms; research laboratories and research support areas; faculty, student, and staff offices; libraries; student activity space; meeting rooms; and space for public service activities linked to UC Davis. The proposed project includes construction of a building that would provide faculty offices, office support space, seminar space, and dry research and laboratory space. The proposed Mathematical Sciences Building would be consistent with the project site's 'Academic and Administrative High Density' land use designation.

The potential central campus relocation site for the Hog Barn building is located southwest of the Silo complex (see Figure 3.2 in Chapter 3 of this document) and is designated in the 1994 LRDP for 'Academic and Administrative High Density' uses. If the Hog Barn were relocated to this site, it would be reused to provide office, student activity, and/or classroom space. As discussed above, the 'Academic and Administrative High Density' land use category provides for this type of space. Therefore, this relocation/reuse alternative would be consistent with the associated 1994 LRDP land use designation.

A potential relocation site for the Hog Barn building in the west campus would be designated for either 'Academic and Administrative Low Density' or 'Teaching and Research Fields' uses. If the Hog Barn were relocated to the west campus, it would be reused to provide field support and storage space for a field teaching and research program. As described on page 46 of the 1994 LRDP, the 'Academic and Administrative Low Density' land use category provides for the same range of activities as the
high density category (discussed above), but buildings are typically no more than one story in height. Only one section of the Hog Barn building is two stories tall, and the rest of the building is one story tall. As described on page 47 of the 1994 LRDP, the 'Teaching and Research Fields' land use category provides for agricultural lands used for teaching, research, and support of academic programs primarily in the plant and animal sciences, and may include agricultural-related buildings on sites smaller than two acres. The Hog Barn building would provide agricultural storage and support space and would occupy approximately 0.1 acre. Therefore, this relocation/reuse alternative would be consistent with the possible associated 1994 LRDP land use designations.

1994 LRDP Objectives

The purpose of the 1994 LRDP is to guide campus land use and development in response to projected population growth and the changing nature of academic programs. The 1994 LRDP responds to projected growth in the campus population by:

- providing new instructional space and classrooms required to serve the anticipated growth in student population,
- providing expanded instruction and research space projected for the biological sciences, agricultural sciences, physical sciences, and veterinary medicine, and
- providing flexibility for significant expansions in response to future academic missions.

In addition, the 1994 LRDP contains specific objectives that are relevant to the proposed project, including:

Building Space. Manage existing building space to provide sufficient and suitable space for existing and evolving campus programs. [Developed Resources Objective, page 36 of the 1994 LRDP.]

Location of Programs. Cluster related academic and administrative programs geographically when feasible, to facilitate academic interaction. [Developed Resources Objective, page 36 of the 1994 LRDP.]

Central Campus. Concentrate high density academic development on the Central Campus. [Land Use Plan Objectives, page 48 of the 1994 LRDP.]

A compact core campus. Maintain the academic core for instruction and research facilities, generally within a 10-minute walk from Shields Library. Maintain building density targets in the core campus, with an average height of four stories for new development. Use the infill of new buildings and the removal of outmoded facilities as opportunities to continue the development of common open spaces as initiated in the 1963 plan. [Academic and Administrative Land Use Objectives, page 54 of the 1994 LRDP.]

New open space accompanying new development. Develop new common open spaces and tree-lined streets as the built environment expands, reinforcing the value that the campus community places on open space. [Open Space Objectives, page 76 of the 1994 LRDP.]

Bicycle and pedestrian systems. Accompany new development, particularly in the Central Campus, with appropriate additions to the bicycle and pedestrian systems. [Transportation and Parking Objectives, page 80 of the 1994 LRDP.]
The Departments of Mathematics and Statistics would be relocated from Kerr Hall to the proposed Mathematical Sciences Building. Vacated space in Kerr Hall would provide expansion space for other programs in the College of Letters and Science, fulfilling "Building Space" Developed Resource Objective.

The proposed Mathematical Sciences Building would provide space for the Departments of Mathematics and Statistics and the new Computational Science and Engineering Program in geographic proximity to related programs, including engineering, physics, and biology. This would fulfill "Location of Programs" Developed Resources Objective.

The proposed project would construct the four-story Mathematical Sciences Building, a high density academic and administrative land use, on the core campus, fulfilling "Central Campus" Land Use Plan Objective and "A compact core campus" Academic and Administrative Land Use Objective.

The proposed project would establish open space areas adjacent to the proposed Mathematical Sciences Building to encourage outdoor gatherings and enhance building entries, fulfilling "New open space accompanying new development" Open Space Objective.

The project would establish a landscaped pedestrian walkway along the south side of the proposed Mathematical Sciences Building to enhance pedestrian access to the east and west, fulfilling "Bicycle and pedestrian systems" Transportation and Parking Objective.

Adequacy of the 1994 LRDP EIR through 2005-06

As presented in Appendix C of this document, the campus has updated projections for campus growth through 2005-06 based on information provided by the University regarding enrollment growth and based on reasonably foreseeable campus projects. As presented in Appendix C, the campus has concluded that, because development and environmental effects associated with projected increases in the campus population through 2005-06 will be within the parameters assumed in the 1994 LRDP, the cumulative impacts of growth through 2005-06 have been adequately addressed in the 1994 LRDP EIR.

Cumulative Impacts Analysis - Environmental Effects through 2014-15

The University has recently determined that enrollment throughout the University system will increase by approximately 60,000 to 70,000 students within the next 10 to 15 years. This growth in enrollment is related to projected demographic changes that are expected to increase the demand for a college education in California. UC Davis is currently considering how it should plan to accommodate the campus' share of this enrollment growth. The campus' share of this growth could bring the three-quarter average on-campus student population to approximately 29,500 by 2014-15. The 1994 LRDP already assumed 26,000 of these students. This anticipated enrollment growth and associated increases in employees and facility construction for 2014-15 would surpass the assumptions identified in the 1994 LRDP for 2005-06 and evaluated in the 1994 LRDP EIR. The campus will prepare a new LRDP to identify the changes required to accommodate anticipated growth, and the campus will prepare an EIR to assess the environmental impacts of such changes. It is anticipated that The Regents will review and consider approval of the updated LRDP and its EIR in the fall of 2003.
To the extent that growth and physical development anticipated for 2014-15 were not considered in the 1994 LRDP EIR, additional environmental effects that were not previously identified may occur. However, it would be speculative to determine or analyze these effects now because most components of the next LRDP are not currently known. Nevertheless, the campus has prepared a Cumulative Impacts Analysis, presented as Appendix C of this document, that serves to inform the public concerning all that is currently known about the campus' potential growth through 2014-15.

REPORT ORGANIZATION

This Focused Tiered DEIR is organized into the following sections.

Chapter 1 - Introduction: Provides an introduction and overview describing the intended use and scope of the Focused Tiered DEIR, its relationship to the 1994 LRDP and LRDP EIR, and the environmental review process.

Chapter 2 - Summary: Summarizes the proposed project, presents alternatives to the proposed project, addresses known areas of controversy, identifies environmental impacts that would result from implementation of the proposed project, describes proposed mitigation measures, and indicates the levels of significance of impacts before and after mitigation.

Chapter 3 - Project Description: Provides a detailed description of the proposed project, including project elements, location, background information, and objectives.

Chapter 4 - Environmental Setting, Impacts, and Mitigation Measures: Contains analyses of impacts in the resource areas identified for further analysis in the Tiered Initial Study (Appendix A). For each resource area, this section provides a description of the environmental setting, potential impacts of the proposed project, cumulative impacts of the project in conjunction with the overall growth and development included in the 1994 LRDP and in the Davis region, and associated mitigation measures.

Chapter 5 - CEQA Considerations: Provides a discussion of growth inducement, significant and unavoidable impacts, and irreversible environmental effects of the proposed project.

Chapter 6 - Alternatives to the Proposed Project: Identifies and discusses alternatives considered in the development of the proposed project and the associated environmental effects.

Chapter 7 - References: Presents materials used in the preparation of this report.

Chapter 8 - Agencies and Persons Consulted: Provides the names of individuals contacted in preparation of this document.

Chapter 9 - Report Preparers: Presents the preparers of this report.
Appendix A - Mathematical Sciences Building Tiered Initial Study: Presents the Tiered Initial Study for the project that was published in July 2002.


Appendix C - Cumulative Impacts Analysis - Focus on Potential Environmental Effects Associated with Projected Student Enrollment Increases through 2014-15: Serves to inform the public concerning all that is currently known about the campus' potential growth through 2014-15.
2. SUMMARY

PROJECT DESCRIPTION

The proposed project includes the construction and operation of a four-story, approximately 65,000 gsf (37,704 asf) Mathematical Sciences Building. The new building would be located in the core campus, south of the Crocker Nuclear Laboratory, west of California Avenue, north of the Academic Surge Building, and east of Engineering Unit 3 (see Figure 3-2 in Chapter 3, Project Description). The Hog Barn building (a structure that meets the criteria for listing on the California Register of Historic Places) is currently located on the proposed project site. To accommodate the proposed project, the campus is considering three potential plans for the Hog Barn building, including: (1) relocation to a site in the central campus located southwest of the Silo complex, (2) relocation to a site in the west campus, and (3) demolition.

Please see Chapter 3, Project Description, for a complete description of the proposed project.

KNOWN AREAS OF CONTROVERSY

Section 15123 of the CEQA Guidelines requires that an EIR identify areas of controversy known to the Lead Agency, including issues raised by agencies and the public. No issues of concern have been expressed about the project by agencies or the public.

ALTERNATIVES ANALYSIS

The following alternatives to the proposed project are described and evaluated in Chapter 6 of this DEIR:

   No Project - No Development:  The proposed Mathematical Sciences Building would not be constructed and the Hog Barn building would remain unused in its current condition on the proposed project site.

   Reduced-Size Project: The proposed Mathematical Sciences Building would be built with a reduced project area adjacent to the Hog Barn building. The Hog Barn would remain at its current site and would be renovated and reused.

   Alternate Site: The proposed Mathematical Sciences Building would be constructed on an alternate site on the core campus located south of the University Arboretum and Old Davis Road, north of I-80, and west of the south entry parking area.

As identified in Chapter 6, of the alternatives that involve construction, the Reduced-Size Project Alternative is considered the environmentally superior alternative.

IMPACT AND MITIGATION SUMMARY

Table 2-1 provides a complete summary of all impacts and mitigation measures for the topics evaluated in this Focused Tiered DEIR (cultural resources and aesthetics).
### TABLE 2-1. SUMMARY OF IMPACTS AND MITIGATION MEASURES

(SU: Significant and Unavoidable; PS: Potentially Significant; LS: Less-than-Significant)

<table>
<thead>
<tr>
<th>Impact</th>
<th>Level of Significance Prior to Mitigation</th>
<th>Mitigation Measures</th>
<th>Level of Significance Following Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>4.1 Cultural Resources</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.1-1. Construction of the proposed Mathematical Sciences Building would result in one of the following:</td>
<td>(1) PS</td>
<td>1994 LRDP EIR Mitigation Measures 4.10-2(a-c)</td>
<td>(1) LS</td>
</tr>
<tr>
<td>(1) Relocation of the Hog Barn building to a site in the central campus located southwest of the Silo complex. Relocation could damage the Hog Barn building, which is considered a historically significant structure.</td>
<td></td>
<td>Project Mitigation 4.1-1. If the Hog Barn structure is relocated, proposed renovation would be reviewed by a qualified historian to ensure that the design complies with the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving Rehabilitating, Restoring, and Reconstructing Historic Buildings.</td>
<td></td>
</tr>
<tr>
<td>Or</td>
<td></td>
<td></td>
<td>(2) LS</td>
</tr>
<tr>
<td>(2) Relocation of the Hog Barn building to a site in the west campus. Relocation could damage the Hog Barn building, which is considered a historically significant structure.</td>
<td>(2) PS</td>
<td></td>
<td>(2) LS</td>
</tr>
<tr>
<td>Or</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(3) Demolition of the Hog Barn building. Demolition would destroy the Hog Barn building, which is considered a historically significant structure.</td>
<td>(3) PS</td>
<td></td>
<td>(3) LS</td>
</tr>
<tr>
<td>4.1-2. Construction of the proposed project would result in relocation or demolition of the Hog Barn building, which is considered a historically significant structure. In addition, implementation of the project would contribute to growth in the region, which could contribute to a cumulative loss of historical resources in Yolo and Solano Counties.</td>
<td>SU</td>
<td>1994 LRDP EIR Mitigation Measures 4.10-4(a,b)</td>
<td>SU</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Project Mitigation 4.1-2. Implement Project-Specific Mitigation Measure 4.1-1.</td>
<td></td>
</tr>
<tr>
<td>Impact</td>
<td>Level of Significance Prior to Mitigation</td>
<td>Mitigation Measures</td>
<td>Level of Significance Following Mitigation</td>
</tr>
<tr>
<td>--------</td>
<td>----------------------------------------</td>
<td>---------------------</td>
<td>------------------------------------------</td>
</tr>
<tr>
<td>4.2 Aesthetics</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.2-1</td>
<td>Construction of the proposed Mathematical Sciences Building would result in one of the following:</td>
<td>1994 LRDP EIR Mitigation Measures 4.11-1 (a,b,c,d)</td>
<td>(1) LS</td>
</tr>
<tr>
<td></td>
<td>(1) Relocation of the Hog Barn building to a site in the central campus located southwest of the Silo complex. Relocation of the building could result in a substantial adverse change in a valued element of the central campus' visual landscape.</td>
<td>Project Mitigation 4.2-1. If the Hog Barn building is relocated, implement Project-Specific Mitigation Measure 4.1-1.</td>
<td>(1) LS</td>
</tr>
<tr>
<td></td>
<td>or</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(2) Relocation of the Hog Barn building to a site in the west campus. This would remove a valued element of the central campus' visual landscape from the central campus.</td>
<td>(2) SU</td>
<td></td>
</tr>
<tr>
<td></td>
<td>or</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(3) Demolition of the Hog Barn building. This would demolish a valued element of the central campus' visual landscape.</td>
<td>(3) SU</td>
<td></td>
</tr>
<tr>
<td>4.2-2</td>
<td>Construction of the proposed Mathematical Sciences Building in conjunction with campus growth under the 1994 LRDP could result in cumulative degradation of the campus' overall visual environment.</td>
<td>1994 LRDP EIR Mitigation Measures 4.11-5(a,b)</td>
<td>LS</td>
</tr>
</tbody>
</table>
3. PROJECT DESCRIPTION

REGIONAL LOCATION

The 5,300 acre UC Davis campus (the 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, in general, is comprised of four campus units: the central campus, the south campus, the west campus, and Russell Ranch (see Figure 3-2, Regional and Local Setting, on page 3-5 of the 1994 LRDP Draft EIR). The "main campus" refers to the central, south, and west campus units, excluding Russell Ranch. Most of the academic and extracurricular activities occur within the central campus. The central campus is bounded approximately 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 1,590 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 acquired by the campus in 1990 and is intended for use in large-scale agricultural and environmental research and the study of sustainable agricultural practices. 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 on the west and northwest. In addition, UC Davis owns several buildings in Research Park, located in the City of Davis south of I-80.

PROJECT DESCRIPTION

The proposed project includes the construction and operation of a four-story, approximately 65,000 gsf (37,704 asf) Mathematical Sciences Building. The new building would be located in the central campus, south of the Crocker Nuclear Laboratory, west of California Avenue, north of the Academic Surge Building, and east of Engineering Unit 3. The project location is depicted in Figure 3-2, the site plan is shown in Figure 3-3 and the building elevations are presented in Figures 3-4A and 3-4B.

As shown in Figure 3-5, the Hog Barn building (a structure that meets the criteria for listing on the California Register of Historic Places) is currently located on the proposed Mathematical Sciences Building site. Photographs of the historic building are presented in Figure 3-6. To accommodate the proposed project, the campus is considering three potential plans for the Hog Barn building, including:

(1) Relocation of the Hog Barn to a site in the central campus located southwest of the Silo complex, north of Bainer Hall, east of the Architects & Engineers barn, and south of Temporary Building 200 (see Figure 3-2). This alternative could provide office, student activity, and/or classroom space.

(2) Relocation of the Hog Barn to a currently undefined site in the west campus, most likely adjacent to existing buildings. This alternative could provide field support and storage space for a field teaching and research program.

(3) Demolition of the Hog Barn building.
Figure 3-3. Proposed Project Site Plan
Figure 3-4A. Mathematical Sciences Building Elevations

University of California, Davis

Scheme 1

MATHEMATICAL SCIENCES BUILDING

3-4A

1. Precast Concrete Panels
2. Aluminum Composite Cladding
3. Vision Glass
4. Frosted Glass
5. Painted Metal

South Elevation

East Elevation
Figure 3-4B. Mathematical Sciences Building Elevations

North Elevation

- 1. Precast Concrete Panels
- 2. Aluminum Composite Cladding
- 3. Vision Glass
- 4. Frosted Glass
- 5. Painted Metal

West Elevation

- 1. Precast Concrete Panels
- 2. Aluminum Composite Cladding
- 3. Vision Glass
- 4. Frosted Glass
- 5. Painted Metal

Academic Surge Building

Cochrane Nuclear Lab

University of California, Davis

3-4B

Scheme 1

Mathematical Sciences Building

ac martin partners, inc
Planning, Architecture, Engineering
The proposed Mathematical Sciences Building would provide space for the Departments of Mathematics and Statistics and a new campus initiative in Computational Science and Engineering. The building would include faculty and staff offices, office support space (including storage areas), conference and seminar space, and computer laboratories. The project would accommodate near-term growth projected for the Departments of Mathematics and Statistics and would allow for the development of the Computational Science and Engineering initiative. The project would also release space in Kerr Hall, thereby providing expansion space for other programs in the College of Letters and Science.

**Project Sites**

The proposed Mathematical Sciences Building would be constructed on an approximately two-acre site located in the central campus, located south of the Crocker Nuclear Laboratory, west of California Avenue, north of Academic Surge, and east of Engineering Unit 3 (see Figure 3-2). The proposed Mathematical Sciences Building site is designated in the 1994 LRDP for 'Academic and Administrative High Density' uses, a designation that is consistent with the proposed project. The site is surrounded by developed land.

The vacant Hog Barn building, which has historically been used for hog raising and animal science academic programs at UC Davis, is located within part of the site proposed for the Mathematical Sciences Building (see Figure 3-5). Animal research activities using the Hog Barn were relocated in the 1990's as part of a separate project, and the building has since been vacant and unused. The Hog Barn building (see Figure 3-6) was originally constructed in 1913 and is considered to meet criteria for listing on the California Register of Historic Resources (CRHR) because it maintains a high degree of integrity, it played an important role in the founding years of the farm that became UC Davis, and it has been identified as a good example of early twentieth century hog barn design in California (JRP 1999).

The campus is evaluating relocation of the Hog Barn building to an approximately 0.1 acre site in the central campus located southwest of the Silo complex, north of Bainer Hall, east of the Architects and Engineers barn, and south of Temporary Building 200 (see Figure 3-2). This site is designated in the 1994 LRDP for 'Academic and Administrative High Density' uses, a designation consistent with the proposed use.

The campus is also evaluating relocation of the Hog Barn building to an approximately 0.1 acre currently unnamed site in the west campus. This site would be designated for either 'Teaching and Research Fields' or 'Academic and Administrative Low Density' uses, designations consistent with the proposed use.

**Project Background and Need**

The Departments of Mathematics and Statistics currently occupy only approximately 80 percent of the space recommended for similar programs by the California Postsecondary Education Commission. In addition, the campus anticipates that the demand for education in mathematics and statistics will increase due to increasing student enrollment and an expected rise in the need for mathematical and statistical proficiency for college graduates seeking employment in a variety of fields, including finance, biology, agriculture, environmental studies, pharmaceuticals, medicine, and communication. The proposed Mathematical Sciences Building would begin to address current and
future space needs by providing near-term expansion space for the Mathematics and Statistics departments and by establishing new space for the new Computational Science and Engineering program.

To meet current and increased future demand for mathematics education, the Department of Mathematics plans to expand its undergraduate and masters programs to include majors such as Applied Mathematics, Mathematics of Computation, and Bioinformatics/Biomathematics. In addition, the Department of Mathematics plans to develop lower division curriculum to include additional discussion sections and computer laboratory components.

The Department of Statistics requires additional space to meet the increasing applicability of statistics across disciplines. For instance, statistics is increasingly applied to agriculture, social science, engineering, and medicine. The Statistical Laboratory, a consulting service component of the Department of Statistics, provides statistical consulting and associated computing and programming support to undergraduate and graduate students, faculty, members of organized research units, administrative and service unit personnel, and non-University agencies and individuals. The demand for such service is anticipated to increase in upcoming years.

As part of the academic planning process, campus faculty recently developed a new Computational Science and Engineering initiative to meet the demands of enrollment growth and to enhance and enrich existing programs. Computational Science and Engineering is concerned with the development and implementation of computational models as tools to understand complex physical, environmental, and biological processes, or as tools to represent abstract processes, such as those encountered in mathematics and computer science. Computational Science and Engineering is already crucial for many disciplines and is anticipated to play a major role in the future of scientific discovery and engineering design in areas such as physics, chemistry, mathematics, statistics, geology, engineering, neuroscience, and biology.

**Project Objectives**

The campus identified the following objectives for the proposed Mathematical Sciences Building:

- Provide sufficient space to meet existing needs and anticipated near-term expansion for the Departments of Mathematics and Statistics and the new Computational Science and Engineering program.

- Establish the building in proximity to related programs, including engineering, physics, chemistry, geology, and biology.

- Establish open space areas near the building to provide outdoor gathering places and enhance building entries, and establish a landscaped pedestrian walkway adjacent to the building to increase accessibility to parking areas to the west and the Arboretum to the east.

- Release space in Kerr Hall to provide expansion space for other programs in the College of Letters and Science.
Project Elements

The proposed 37,704 asf Mathematical Sciences Building, presented in Figure 3-3, would provide faculty and staff offices, office support space (including storage areas), conference and seminar space, and computer laboratories. The four-story building would provide approximately 22,486 asf for the Department of Mathematics, 9,296 asf for the Department of Statistics, 1,397 asf for the Statistical Laboratory, 3,115 asf for the Computational Science and Engineering initiative, and 1,410 asf of shared seminar space.

The historic Hog Barn building is currently located on the proposed Mathematical Sciences Building site. To accommodate the proposed project, the campus is considering the three following potential plans for the approximately 4,600 gsf vacant building:

(1) Relocation of the Hog Barn to a site in the central campus located southwest of the Silo complex, north of Bainer Hall, east of the Architects & Engineers barn, and south of Temporary Building 200 (see Figure 3-2). This alternative could provide office, student activity, and/or classroom space.

(2) Relocation of the Hog Barn to a currently undefined site in the west campus, most likely adjacent to existing buildings. This alternative could provide field support and storage space for a field teaching and research program.

(3) Demolition of the Hog Barn building.

Hog Barn Relocation Feasibility

During early planning for the proposed project, the campus identified six potential relocation sites for the Hog Barn building. These sites were selected based on their association with campus academic/administrative programs that expressed an interest in potentially using the building and that could potentially fund relocation and renovation costs. A relocation and adaptive reuse study was performed by Bob McCabe Architect (2002) to analyze the physical feasibility of, and costs associated with, relocating the building to these sites and renovating it for reuse in compliance with relevant requirements. The report concluded that relocation and reuse of the Hog Barn was physically feasible, and it recommended relocation routes and approaches to relocation and renovation. Given the high costs estimated for relocation and renovation, the campus narrowed its review of potential relocation sites to the central campus site located southwest of the Silo complex and an undecided site in the west campus. The central campus relocation scenario could provide office, student activity, and/or classroom space, and the west campus relocation scenario could provide field support and storage space for a field teaching and research program. The campus is currently assessing the financial feasibility of these scenarios. If neither scenario is determined to be financially feasible, the Hog Barn building would need to be demolished to accommodate the Mathematical Sciences Building.

Population

The proposed Mathematical Sciences Building would accommodate approximately 120 full- and part-time faculty and staff. This would include new hires and faculty and staff that would relocate to the new building from Kerr Hall. Space vacated in Kerr Hall would be fully reoccupied by other
programs in the College of Letters and Science. For the purposes of this analysis, the campus assumes that the proposed project would facilitate an increase in the on-campus population by approximately 120 employees. The proposed project would not contribute to an increase in students.

**Landscaping**

Landscaped areas would be provided adjacent to the proposed Mathematical Sciences Building to provide outdoor gathering places, enhance building entries, and offer improved pedestrian walkway connections. In particular, a courtyard would be established on the southeastern side of the building near the building's main entrance. This open space area would be designed to encourage outdoor gatherings. A landscaped pedestrian walkway enhancing pedestrian access to the east and west would be established between the southern side of the Mathematical Sciences Building and the north side of Academic Surge. This walkway is an important component of the campus' conceptually planned "garden walk," which (after the campus Operations and Maintenance area is redeveloped into an academic district) would provide access from parking areas west of the Mathematical Sciences Building to the University Arboretum to the east. The campus will review the environmental effects of other components of this "garden walk" concept (including redevelopment of the Operations and Maintenance buildings) as part of separate projects.

The project's landscape design would use appropriate plantings in terms of cost, durability, and aesthetics. To encourage infiltration and reduce runoff, an effort would be made to minimize impervious surfaces. Stormwater drainage on the project site would be channeled, where possible, through swales and over other pervious surfaces to filter runoff and maximize percolation.

**Utilities**

The proposed project would require connections to campus utilities including domestic/fire water, utility water, sewer, storm drainage, chilled water, steam, electricity, and telecommunications. The proposed project would not use natural gas. The capacities of existing utility systems were analyzed in the Utilities and Service Systems section of the project's Initial Study (Appendix A).

**Domestic/Fire Water**

The proposed project would connect to the existing campus domestic/fire water system at a point located north of the proposed Mathematical Sciences Building.

**Utility Water**

For irrigation of the project's landscaped areas, the proposed project would connect to an existing utility water line at a point located northeast of the proposed Mathematical Sciences Building.

**Sewer**

The project would connect to the existing campus sanitary sewer system at a point located northeast of the proposed Mathematical Sciences Building.

**Storm Drainage**

Stormwater runoff from the proposed project site would drain to storm drain inlets located along the northern and southern sides of the proposed Mathematical Sciences Building.
Chilled Water and Steam

The campus chilled water and steam systems would cool and heat the proposed Mathematical Sciences Building. The proposed Mathematical Sciences Building would connect to the campus chilled water and steam systems at points located northwest of the proposed building.

Electricity

Electricity would be provided for the proposed project from the campus' distribution system. The Mathematical Sciences Building would connect to the campus electrical grid at a point located north of the proposed project site, between the Crocker Nuclear Laboratory and Engineering Unit 3.

Telecommunications

The Mathematical Sciences Building would connect to an existing telecommunication line at a point located north of the proposed project site.

Roadways and Parking

Vehicles would access the proposed Mathematical Sciences Building site from California Avenue, located east of the project site, and a vehicle access road off California Avenue, which traverses north of the proposed building site. The vehicle access road is currently being modified as part of the separate Engineering Unit 3 project. This access road would provide service access to the Mathematical Sciences Building, Engineering Unit 3, and the Crocker Nuclear Laboratory (see Figure 3-3). Approximately ten permit and service parking spaces currently located off this access road along the north side of the Hog Barn would be removed as part of the proposed project. The proposed project would establish limited service parking to the north of the proposed building. Bikes would access the Mathematical Sciences Building from the north and east, and bicycle parking would be provided on the north, east, and west sides of the building. A landscaped pedestrian walkway that would enhance pedestrian access to the east and west would be established between the south side of the Mathematical Sciences Building and the north side of Academic Surge.

If the campus decides to relocate the Hog Barn building to the central campus site southwest of the Silo complex, vehicle access and service parking would be provided from Parking Lot 43. Bicycle and pedestrian access would be provided from the south, east, and/or west. If the campus decides to relocate the Hog Barn building to a site in the west campus, the building would most likely be relocated near existing development. In addition, since the building would be reused for field support and storage space, the west campus relocation alternative would involve a low concentration of people. Therefore, no new vehicle access or parking would be required.

Construction Schedule and Staging

Site preparation for the proposed project is anticipated to begin in the summer of 2003. The Mathematical Sciences Building is anticipated to be ready for occupation in the winter of 2004. Construction staging and contractor parking for the proposed project would occur onsite.
4. ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION MEASURES

INTRODUCTION

This chapter of the DEIR describes the environmental and regulatory setting, standards of significance, impacts, and mitigation measures for the following environmental resource areas:

Cultural Resources - The proposed project would require relocation or demolition of the Hog Barn building, which is currently located on the proposed Mathematical Sciences Building site. The Hog Barn building is considered a historical resource, and relocation or demolition of the building could result in a substantial adverse change in the significance of this resource.

Aesthetics - The proposed project would require relocation or demolition of the Hog Barn building, which is currently located on the proposed Mathematical Sciences Building site. The Hog Barn building is a shingle-sided building from the founding years of the University Farm, and such buildings are considered valued elements of the campus' visual landscape (page 32 of the 1994 LRDP). Demolition or relocation of the Hog Barn building could substantially affect this resource.

The 'Environmental Setting' subsections in this chapter address the environmental and regulatory conditions that currently exist and provide a point of reference (or baseline) for assessing the environmental impacts of, and alternatives to, the proposed project. The 'Impacts and Mitigation Measures' subsections in this chapter address standards of significance, impacts that relate to the proposed project, significance of impacts prior to mitigation, relevant mitigation measures, and significance of impacts after mitigation.

This DEIR incorporates by reference, as appropriate, the environmental analysis of the 1994 LRDP EIR, as updated and revised. Amendments to the 1994 LRDP and revisions to the 1994 LRDP EIR (through March 2002) are discussed in Appendix B of this DEIR. Mitigation measures that apply to the proposed project and were identified in the 1994 LRDP EIR, as updated and revised, will be required to be implemented as part of the project. These mitigation measures are identified and discussed in this chapter and in the Tiered Initial Study (see Appendix A of this DEIR).

4.1 CULTURAL RESOURCES

Environmental Setting

Section 4.10 of the 1994 LRDP DEIR describes known cultural (prehistoric and historic) resources on campus. Prehistoric resources are those sites and artifacts associated with the indigenous, non-Euroamerican population, generally dating prior to contact with people of European descent. Potential impacts of the project on prehistoric resources were addressed in the project's Tiered Initial Study (Appendix A). Historic resources include structures, features, artifacts, and sites that date from Euroamerican settlement of the region. The vacant Hog Barn building, a structure that appears to meet criteria for listing on the California Register of Historic Resources (CRHR), is located on the proposed Mathematical Sciences Building site. The project's potential impacts on this historic resource are discussed in this section.
The campus does not have properties that are listed on the National Register of Historic Places. Six properties on or near the campus are listed on the CRHR, and several other properties on and near the campus are considered significant historic resources. There are more than 50 structures on campus that are over 50 years old. Many of these buildings have not been assessed for historical significance, but the campus will coordinate future assessments for buildings over 50 years old that could be damaged or destroyed.

The CRHR is a list of historical properties in California that are to be protected from substantial adverse change. A historical resource may be listed in the CRHR if it meets any of the following criteria: "(1) it is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage; (2) it is associated with the lives of persons important in California's past; (3) it 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 value; or (4) it has yielded or is likely to yield information important in prehistory or history" (CERES 2001).

Section 15064.5(b)(1) of the CEQA Guidelines defines a substantial adverse change in the significance of a historic resource as: "physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired." The CEQA Guidelines also indicates that a project that may cause a substantial adverse change in the significance of a historic resource is a project that may have a significant effect on the environment (Section 15064.5).

The vacant Hog Barn building is currently located on the project site and has historically been used for hog raising at UC Davis. The Hog Barn building was originally constructed in 1913 and includes two major components: a two-story wood frame shingle-sided element facing east (that houses office and storage space on the first floor and a hay/grain loft on the second floor); and a one-story wood frame element to its rear (housing farrowing pens). The building has been the site of the Animal Husbandry (later Animal Science) Department's swine operation from the 1910s through the 1990s. As indicated in a study by JRP Historical Consulting Services (1999), the building represents one of the few remaining structures associated with early campus development that retain a high degree of integrity (including original location, type of design and materials, and quality of workmanship). At a local level, the building played an important role in the founding years of the farm that became UC Davis, an institution that is well known for its agricultural education and contributions. Hog raising experts have also identified the building as a good example of hog barn design in California during the early twentieth century. Therefore, the building is considered to be of historic value to the campus and the region, and is considered to meet the following criteria for listing on the CRHR at both local and statewide levels of significance (JRP 1999):

Criterion 1: Resources associated with important events that have made a significant contribution to the broad patterns of our history.

Criterion 3: Resources that embody the distinctive characteristics of a type, period, or method of construction, or represents the work of a master.

The original outdoor hog pens to the west of the Hog Barn building were built soon after the Hog Barn was completed. The original pens were replaced by modern outdoor pens, which were built and remodeled in stages in the 1960s, 1980s, and 1990s. The existing pens are planned for demolition as part of the separate Engineering Unit 3 project. These pens are not considered an excellent example
of a style or type of architecture, and are not individually associated with historically significant events or persons. Therefore, the pens are considered ineligible for the CRHR because they have not achieved exceptional significance in the past fifty years (JRP 1999).

**Impacts and Mitigation Measures**

**Standards of Significance**

The relevant standard of significance from the 1994 LRDP EIR considered an impact significant if campus or regional growth would:

- result in the damage or destruction of historical structures, features, artifacts, landscaping or sites that would meet CEQA, federal, or campus criteria for significance.

**Project-Specific Impact**

**Project Impact 4.1-1.** Construction of the proposed Mathematical Sciences Building would result in one of the following:

1. Relocation of the Hog Barn building to a site in the central campus located southwest of the Silo complex. Relocation could damage the Hog Barn building, which is considered a historically significant structure. This is considered a potentially significant impact.

   or

2. Relocation of the Hog Barn building to a site in the west campus. Relocation could damage the Hog Barn building, which is considered a historically significant structure. This is considered a potentially significant impact.

   or

3. Demolition of the Hog Barn building. Demolition would destroy the Hog Barn building, which is considered a historically significant structure. This is considered a potentially significant impact.

The Hog Barn building (a structure that meets the criteria for listing on the CRHR) is currently located on the proposed project site. To accommodate the proposed project, the campus is considering three potential plans for the approximately 4,600 gsf Hog Barn building, including: (1) relocation to a site in the central campus located southwest of the Silo complex (see Figure 3-2) and reuse for office, student activity, and/or classroom space; (2) relocation to a currently undefined site in the west campus and reuse for field support and storage space; and (3) demolition of the building.

The 1994 LRDP Draft EIR identified that development allowed under the 1994 LRDP could damage or destroy historical structures during construction and/or renovation activities (1994 LRDP EIR Impact 4.10-2). The 1994 LRDP EIR determined that this impact would be reduced to a less-than-significant level with incorporation of 1994 LRDP EIR Mitigation Measures 4.10-2 (a) through (c):
LRDP EIR Mitigation Measure 4.10-2(a) - Prior to altering a structure at least 45 years of age, the Campus shall develop a process for identifying its relative historic value. In addition to CEQA and other State guidelines, the process shall consider the role of structures in the history of the University system, the Campus and the region.

LRDP EIR Mitigation Measure 4.10-2(b) - If any existing structure on a proposed construction site is over 45 years of age:

(i) the Campus shall use the process developed under Mitigation Measure 4.10-2(a) to determine whether the structure is historically significant;

(ii) if historically significant, the building shall be preserved and reused when feasible;

(iii) if historically significant, and preservation and reuse cannot occur on site, the historical building shall be moved to an area set aside by the Campus for historic buildings of the same era when physically and financially feasible; and

(iv) if a historically significant structure is to undergo major renovation, or be moved and/or destroyed the Campus shall produce a record of the building similar to National Parks Scenic standards (Historical American Building Surveys). A copy of the record shall be deposited with the University Archives, Shields Library Special Collections.

Adequate recordation would include, at a minimum, the following:

- the development of site-specific history and appropriate contextual information regarding the particular resource; in addition to archival research and comparative studies, this task could involve limited oral history collection;
- accurate mapping of the noted resources, scaled to indicate size and proportion of the structures;
- architectural descriptions of affected structures;
- photodocumentation of the designated resources, both in still and video formats; and
- recordation of measured architectural drawings, in the case of specifically designated buildings of higher architectural merit.

LRDP EIR Mitigation Measure 4.10-2(c) - Prior to major renovation, moving or destroying a historically significant structure, the Campus shall insure that historically significant artifacts within the building and the surrounding area shall be recorded and deposited with the appropriate museum.

In compliance with Mitigation Measure 4.10-2(a), the campus has an informal process of assessing the historical significance of campus buildings that are over 50 years old and could be damaged or destroyed. Historical building assessments have been performed for only a few buildings on campus, including the Hog Barn, and include analysis of a structure's significance in terms of state and national criteria, as well as in terms of the structure's value to the history of the University of California, the campus, and the region. The historic value of the Hog Barn building was evaluated and the structure was determined to meet criteria for listing on the CRHR and to be of historic value to the campus and the region (JRP 1999).

1994 LRDP EIR Mitigation Measure 4.10-2(ii) indicates that if a campus building is determined to be historically significant, it should be preserved and reused when feasible. Reuse of the Hog Barn on its current site is not feasible because it would result in an inefficient use of campus space. The Hog Barn, a small one- and two-story building, is located in an area of campus that primarily includes and is planned for large science-related academic buildings. Renovation and reuse of the building on its current site would be inconsistent with these existing and planned land uses. In addition, the Hog
Barn building occupies only a small portion of the Mathematical Sciences Building site. If the Hog Barn were reused on its current site, limited space would remain (given clearances required from adjacent buildings and roads) to construct an academic building on the site, and costs associated with constructing a tall academic building in the remaining footprint could preclude such development.

In compliance with 1994 LRDP EIR Mitigation Measure 4.10-2(iii) and as discussed further in the discussion titled 'Hog Barn Relocation Feasibility' in Chapter 3, the campus has evaluated the physical feasibility and is currently evaluating the financial feasibility of relocating the Hog Barn building to a site southwest of the Silo complex, an area that has been set aside by the campus for historic shingle-sided buildings. The campus has also evaluated the physical feasibility and is currently evaluating the financial feasibility of relocating the Hog Barn to the west campus.

In compliance with 1994 LRDP EIR Mitigation Measure 4.10-2(b)(iv), the campus will produce a record of the building similar to National Parks Scenic standards to include a site specific history, accurate mapping, architectural descriptions, still photodocumentation, video documentation, and recordation of measured architectural drawings. In compliance with 1994 LRDP EIR Mitigation Measure 4.10-2(c), prior to relocation or demolition of the Hog Barn, any historically significant artifacts within the building and the surrounding area would be recorded and deposited with an appropriate museum. These measures are incorporated into the proposed project.

Project-Specific Mitigation

Mitigation Measure 4.1-1. If the Hog Barn structure is relocated, proposed renovation would be reviewed by a qualified historian to ensure that the design complies with the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings.

Consistent with the analysis in the 1994 LRDP EIR, if the Hog Barn building is relocated or demolished, implementation of 1994 LRDP EIR Mitigation Measures 4.10-2 (a)-(c) would reduce the project's impact on the historic hog barn building to a less-than-significant level. Project-Specific Mitigation Measure 4.1-1 would further reduce the effects of relocating the Hog Barn building by ensuring that relocation and associated renovation would preserve its historical significance.

Cumulative Impact

Cumulative Impact 4.1-2. Construction of the proposed project would result in relocation or demolition of the Hog Barn building, which is considered a historically significant structure. In addition, implementation of the project would contribute to growth in the region, which could contribute to a cumulative loss of historical resources in Yolo and Solano Counties. This is considered a significant and unavoidable impact.

Construction of the Mathematical Sciences Building would require relocation or demolition of the Hog Barn building, which could result in an adverse change to a historically significant structure (although the project-specific impact associated with this change would be reduced to a less-than-significant level). In addition, the project would contribute to the cumulative growth in the region anticipated under the 1994 LRDP. Cumulative growth in the region could contribute to a cumulative loss of historical resources in Yolo and Solano Counties.
The 1994 LRDP EIR identified that development allowed under the 1994 LRDP could contribute to a cumulative loss of cultural resources in Yolo and Solano Counties (1994 LRDP EIR Impact 4.10-4). The 1994 LRDP EIR determined that implementation of 1994 LRDP EIR Mitigation Measure 4.10-4(a) (portion relevant to historical resources provided below) and 4.10-4(b), would reduce the magnitude of this impact:

**LRDP EIR Mitigation Measure 4.10-4(a)** – Implement Mitigation Measures ... 4.10-2(a) through (c)...[see measure above]

**LRDP EIR Mitigation Measure 4.10-4(b)** – The Yolo and Solano County General Plans and the City of Davis General Plan contain policies which address the preservation of cultural resources. It is within the jurisdiction of these agencies to implement the General Plan policies which encourage the protection and restoration of cultural resources.

The 1994 LRDP EIR identified that although 1994 LRDP EIR Mitigation Measures 4.10-4(a)-(b) would reduce the magnitude of this cumulative impact, implementation of 1994 LRDP EIR Mitigation Measure 4.10-4(b) cannot be guaranteed by the University because it falls within other jurisdictions to enforce and monitor. In addition, even if cultural resources are adequately recorded, destruction and/or removal from their places of origin would reduce their values as resources. For this reason, the 1994 LRDP EIR considered this impact significant and unavoidable. This cumulative impact was adequately analyzed in the 1994 LRDP EIR and fully addressed by the Findings and Overriding Considerations adopted by The Regents in connection with its approval of the 1994 LRDP and certification of the 1994 LRDP EIR.

**Cumulative Mitigation**

**Mitigation Measure 4.1-2. Implement Project-Specific Mitigation Measure 4.1-1.**

Implementation of 1994 LRDP EIR Mitigation Measure 4.10-4(a) would reduce the magnitude of the project's contribution to the cumulative loss of historical resources in the region. If the Hog Barn building is relocated, implementation of 1994 LRDP EIR Mitigation Measure 4.1-2 would further reduce the project's contribution to this cumulative impact. However, even with implementation of 1994 LRDP EIR mitigation measures, the project would contribute to the cumulative growth in the region anticipated under the 1994 LRDP. In addition, 1994 LRDP EIR Mitigation Measure 4.10-4(b) cannot be guaranteed by the University. Furthermore, even if cultural resources are adequately recorded, destruction and/or relocation from their places of origin reduces their values as resources. For these reasons, this cumulative impact is considered significant and unavoidable. This cumulative impact was adequately analyzed in the 1994 LRDP EIR and was fully addressed by the Findings and Overriding Considerations adopted by The Regents in connection with its approval of the 1994 LRDP and certification of the 1994 LRDP EIR.

**Potential Cumulative Cultural Resources Effects through 2014-15**

The Cumulative Impacts Analysis presented as Appendix C of this document serves to inform the public concerning all that is currently known about the campus' potential growth through 2014-15. As discussed in Appendix C, the campus could construct approximately 1,269,600 square feet of academic and administrative space over that assumed in the 1994 LRDP through 2014-15. In addition, student housing and support buildings would be constructed. This campus development
and development in Yolo and Solano Counties would contribute to a cumulative loss of cultural resources through 2014-15. Continued implementation of 1994 LRDP EIR Mitigation Measures 4.10-4 (a) and (b) would reduce the magnitude of this impact, but cumulative impact 4.10-4 would remain significant and unavoidable because even if cultural resources are adequately recorded, destruction and/or removal from their place of origin would reduce their values as a resource. In addition, implementation of Mitigation Measure 4.10-4(b) is not within the jurisdiction of the University to enforce and monitor. The availability of additional feasible mitigation measures will be investigated as part of the LRDP update process.

4.2 AESTHETICS

Environmental Setting

The campus is bordered to the south and west by orchards, tilled fields, and pastures that are interspersed with rural homes and agricultural structures. The City of Davis is adjacent to the eastern and northern boundaries of the campus. The City is primarily composed of one- and two- story homes and businesses. The downtown area retains the atmosphere of a small college town.

Each of the major components of the campus has a distinct visual character. The central campus is the most developed region of campus with a large number of academic and support buildings. Sproul Hall on campus is the tallest building in Yolo County at nine stories, and few campus buildings are taller than four stories. The central campus is extensively landscaped, with mature vegetation and trees masking the mass of some academic buildings and obscuring long-range views. The Quad, a large lawn between the Memorial Union and Shields Library, is a focal point of the campus. The low buildings and extensive landscaping keep night lighting from appearing particularly intrusive to individuals in nearby buildings and residences.

The 1994 LRDP identified features of the visual environment that are valued by the campus community and should be preserved. For the central campus, these features include: (1) the large, open lawn of the Quad at the heart of the campus, (2) the framework of tree-lined streets, particularly around the Quad where the street tree branches arch to create a canopy overhead, (3) the Arboretum, with its large trees and variety of landscapes along the waterway, (4) the shingle-sided buildings from the founding years of the University Farm, (5) buildings from the second era of campus development such as Hart Hall and Walker Hall, (6) the open, green lawns that face the community along Russell Boulevard and A Street, and (7) bicycles.

The proposed Mathematical Sciences Building would be located on the central campus at a site that is currently partially occupied by the vacant Hog Barn building. The project site can be viewed from three adjacent academic building sites (Engineering Unit 3, Academic Surge, and the Crocker Nuclear Laboratory), from California Avenue, and from the Operations and Maintenance buildings (located east of the project site across California Avenue). The Hog Barn building is a shingle-sided building from the founding years of the University Farm. The building was constructed at its current site in 1913 and was associated with the first set of construction at the University Farm that later became the Davis campus. The building incorporates some Craftsman Bungalow style elements into its design, including wood shingle siding, large eves with exposed rafters, wood framed windows, and door openings with wide wood trim (JRP 1999). According to JRP Historical Consulting Services, the Hog Barn building "represents one of the few remaining University Farm era structures that retains a high degree of integrity, especially in its location, design, materials, workmanship and association" (JPR 1999).
Impacts and Mitigation Measures

Standards of Significance

The relevant standard of significance from the 1994 LRDP EIR considered an impact to aesthetics significant if campus or regional growth would:

- allow incompatible development in or near areas with high visual quality, such as Putah Creek and the Arboretum Waterway, or substantially affect the valued elements of the visual landscape identified in the LRDP.

Project-Specific Impact

Project Impact 4.2-1 Construction of the proposed Mathematical Sciences Building would result in one of the following:

1. Relocation of the Hog Barn building to a site in the central campus located southwest of the Silo complex. Relocation of the building could result in a substantial adverse change in a valued element of the central campus' visual landscape. This is considered a potentially significant impact.

2. Relocation of the Hog Barn building to a site in the west campus. This would remove a valued element of the central campus' visual landscape from the central campus. This is considered a significant and unavoidable impact.

3. Demolition of the Hog Barn building. This would destroy a valued element of the central campus' visual landscape. This is considered a significant and unavoidable impact.

The 1994 LRDP identified shingle-sided buildings from the founding years of the University Farm as valued elements of the central campus' visual environment. The 1994 LRDP EIR identified that structures built on the central campus under the 1994 LRDP could affect valued elements of the central campus' visual landscape (1994 LRDP EIR Impact 4.11-1). The 1994 LRDP EIR determined that this impact would be reduced to a less-than-significant level with implementation of 1994 LRDP EIR Mitigation Measures 4.11-1(a)-(d), which are incorporated into the proposed project.

**LRDP EIR Mitigation Measure 4.11-1(a)** - New structures in the Central Campus shall be designed to be compatible with those visual elements and policies identified in the LRDP.

**LRDP EIR Mitigation Measure 4.11-1(b)** - Prior to approval of preliminary drawings, a campus Design Review Board shall determine that the designs are consistent with the LRDP and applicable district planning guidelines for the district within which the new structure will be located.

**LRDP EIR Mitigation Measure 4.11-1(c)** - Prior to siting any new structure on the Central Campus, the campus shall identify major view corridors, taking into consideration the relationship of the view to each affected neighboring district.
LRDP EIR Mitigation Measure 4.11-1(d) – The campus Design Review Board shall review building designs to ensure that structures are not within major view corridors, except for structures that are designed to protect critical views.

Consistent with 1994 LRDP EIR Mitigation Measures 4.11-1(b) through (d), incorporated as part of the proposed project, the project design would be reviewed by the campus Design Review and Advisory Work Group (formerly the campus Design Review Board). This group is composed of the Campus Architect, Campus Planner, and program representatives. The group would ensure that the proposed Mathematical Sciences Building would be designed to be compatible with view corridors and surrounding land uses, including Academic Surge to the south, Engineering Unit 3 to the east, and the Crocker Nuclear Laboratory to the north. If the Hog Barn building is relocated to the core campus site located southwest of the Silo complex, the project could also comply with 1994 LRDP EIR Mitigation Measure 4.11-1(a) by furthering compatibility with the visual elements and policies identified in the 1994 LRDP. However, if the Hog Barn is relocated to the west campus or is demolished, the proposed project would not fully comply with 1994 LRDP EIR Mitigation Measure 4.11-1(a). The Hog Barn is a shingle-sided building from the founding years of the University Farm, and such buildings are identified in the 1994 LRDP as features of the central campus' visual environment that are valued by the campus and should be preserved. Relocation of the Hog Barn building outside the core campus or demolition of the building would prevent preservation of this valued element of the central campus' visual environment.

Project-Specific Mitigation

Mitigation Measure 4.2-1. If the Hog Barn building is relocated, implement Project-Specific Mitigation Measure 4.1-1.

If the Hog Barn building is relocated within the central campus, implementation of 1994 LRDP EIR Mitigation Measures 4.11-1(a)-(d) and Project-Specific Mitigation Measure 4.2-1, above, would reduce the project's impact on a valued element of the central campus' visual landscape to a less-than-significant level. The potential central campus relocation site is located southwest of the Silo complex, which consists of a cluster of historical shingle-sided buildings that are currently used as student activity and restaurant space. The visual character of the Hog Barn building would extend the historical character of this area of campus. Project-Specific Mitigation Measure 4.2-1 would ensure that relocation and renovation of the building comply with the Secretary of the Interior's design standards and thus preserve the building's visual qualities that make it a valued element of the central campus' visual environment.

If the Hog Barn building is relocated to a west campus site or is demolished, 1994 LRDP EIR Mitigation Measure 4.11-1(a) cannot be fully implemented. If the building is relocated to the west campus, implementation of 1994 LRDP EIR Mitigation Measure 4.2-1 would reduce the magnitude of this impact. However, because relocation of the Hog Barn building outside the core campus or demolition of the building would prevent preservation of this valued element of the central campus' visual environment, this impact would be considered significant and unavoidable.

Cumulative Impact

Cumulative Impact 4.2-2 Construction of the proposed Mathematical Sciences Building in conjunction with campus growth under the 1994 LRDP could result in cumulative degradation of the campus' overall visual environment. This is considered a potentially significant impact.
To accommodate the proposed Mathematical Sciences Building, the campus is currently considering relocation of the Hog Barn building to a central campus site, relocation to the west campus, or demolition of the building. Relocation or demolition of the building could adversely affect the structure, a shingle-sided building from the founding years of the University Farm. The 1994 LRDP identified such structures, as well as several other features (see environmental setting), as valued elements of the central campus' visual landscape. Campus development under the 1994 LRDP could adversely affect these valued elements, thereby cumulatively degrading the campus' overall visual environment (Cumulative Impact 4.2-2).

The 1994 LRDP EIR identified that growth under the 1994 LRDP could affect valued elements of the central campus' visual landscape (1994 LRDP EIR Impact 4.11-1). The 1994 LRDP EIR determined that this impact would be reduced to a less-than-significant level with implementation of 1994 LRDP EIR Mitigation Measures 4.11-1(a)-(d), which are stated above in the discussion on the project-specific impact and are incorporated as part of the proposed project. At a project-specific level, if the Hog Barn building is relocated to the west campus or is demolished, 1994 LRDP EIR Mitigation Measure 4.11-1(a) would not be fully implemented and the project-specific impact would be significant and unavoidable. Although the project may affect one valued visual element on campus, the entire visual landscape of the campus would not be significantly affected. Therefore, although this adverse effect would contribute to Cumulative Impact 4.2-2, general implementation of 1994 LRDP EIR Mitigation Measures 4.11-1(a)-(d) would reduce cumulative adverse effects on the campus' overall visual environment to a less-than-significant level. 1994 LRDP EIR Mitigation Measures 4.11-1(a)-(d) require development under the 1994 LRDP be compatible with the visual elements and policies identified in the 1994 LRDP, and that the campus Design Review and Advisory Work Group review development to ensure consistency with existing and planned land uses and major view corridors.

Cumulative Mitigation

Mitigation Measure 4.2-2 No mitigation beyond 1994 LRDP EIR required.

Although the project may affect one valued visual element on campus, the entire visual landscape of the campus would not be significantly affected. Therefore, although this adverse effect would contribute to Cumulative Impact 4.2-2, general implementation of 1994 LRDP EIR Mitigation Measures 4.11-1(a)-(d) would reduce cumulative adverse effects on the campus' overall visual environment to a less-than-significant level. No further mitigation is required.

Potential Cumulative Aesthetics Effects through 2014-15

The Cumulative Impacts Analysis presented in Appendix C of this document serves to inform the public concerning all that is currently known about the campus' potential growth through 2014-15. As discussed in Appendix C, the campus could develop approximately 1,269,600 square feet of academic and administrative space over that assumed in the 1994 LRDP through 2014-15. In addition, housing and support buildings would also be constructed. The location of this future development is not currently known. However, campus growth, in conjunction with other development in the region, would contribute to a cumulative alteration of the rural characters of Yolo and Solano Counties through 2014-15. Continued implementation of 1994 LRDP EIR Mitigation Measures would reduce the magnitude of cumulative aesthetic resource impacts through 2014-15.
However, the cumulative alteration of the rural character in the region would remain a significant and unavoidable impact because the University could not guarantee implementation of regional measures that are outside the jurisdiction of the University to enforce and monitor. The availability of additional feasible mitigation measures will be investigated as part of the LRDP update process.
5. CEQA CONSIDERATIONS

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 in the vicinity of the project and how that growth will, in turn, affect the surrounding environment (CEQA Guidelines Section 15126[g]). Growth can be induced in a number of ways, including by eliminating obstacles to growth and by stimulating economic activity outside of the project. Under CEQA, induced growth is not considered necessarily detrimental or beneficial. Induced growth is considered a significant impact only if it directly or indirectly affects the ability of agencies to provide needed public services, or if it can be demonstrated that the potential growth could, in some other way, significantly affect the environment.

The proposed project includes the construction and operation of the Mathematical Sciences Building, relocation or demolition of the Hog Barn building, and associated infrastructure improvements. The proposed project would add approximately 65,000 gross square feet (47,460 assignable square feet) of academic and administrative space to the campus and approximately 120 employees to the campus population. Academic/administrative space and population growth associated with the proposed project would not exceed projections assumed in the 1994 LRDP and analyzed in the 1994 LRDP EIR (see discussion about consistency with the 1994 LRDP in Chapter 1 of this document).

As discussed in Item 16 of the project's Tiered Initial Study (Appendix A), the proposed utility infrastructure improvements needed to adequately serve the proposed project would be designed to meet the needs of only the proposed project. Therefore, no growth-inducing impacts would occur beyond those analyzed in the 1994 LRDP EIR.

Therefore, the proposed project would not induce growth beyond that which was assumed by the campus in the 1994 LRDP for 2005-06 and fully evaluated in the 1994 LRDP EIR.

Significant and Unavoidable Adverse 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 21000(b)). If the Hog Barn building is relocated to the west campus or is demolished one project-specific significant and unavoidable adverse impact (Impact 4.2-1) would result:

Project Impact 4.2-1 Construction of the proposed Mathematical Sciences Building could result in:

(2) Relocation of the Hog Barn building to a site in the west campus. This would remove a valued element of the central campus' visual landscape from the central campus.

or

(3) Demolition of the Hog Barn building. This would demolish a valued element of the central campus' visual landscape.
As discussed in Section 4.1 of this DEIR and in the project's Tiered Initial Study (Appendix A), the proposed project would contribute to, but would not exceed, cumulative impacts previously identified as significant and unavoidable in the 1994 LRDP EIR. These cumulative impacts were adequately analyzed in the 1994 LRDP EIR and fully addressed by the Findings and Overriding Considerations adopted by The Regents in connection with its approval of the 1994 LRDP and certification of the 1994 LRDP EIR. Although the 1994 LRDP EIR identified potential mitigation for many of these cumulative impacts, due to the regional nature of the impacts, the feasibility and/or implementation of these mitigation measures is outside The Regent's control because the measures fall within other jurisdictions to enforce or monitor.

The project's Tiered Initial Study (Appendix A) fully addresses the project's contribution to the following significant and unavoidable cumulative impacts that were previously addressed in the 1994 LRDP EIR: intersection level of service, increased noise sources, construction air pollutants, criteria air emissions, toxic air emissions, use and disposal of hazardous materials, development on potentially contaminated sites, demand for emergency response, loss of ruderal/annual grassland, receiving water quality, groundwater recharge, demand for water from the deep aquifer, seismic effects, loss of archaeological resources, loss of rural character, City of Davis fire protection services, City of Davis police protection services, and contribution of school-age students in the Davis Joint Unified School District.

This DEIR further evaluates the following significant and unavoidable cumulative impact associated with the proposed project:

**Cumulative Impact 4.1-2.** Construction of the proposed project would result in relocation or demolition of the Hog Barn building, which is considered a historically significant structure. In addition, implementation of the project would contribute to growth in the region, which could contribute to a cumulative loss of historical resources in Yolo and Solano Counties.

**Irreversible Environmental Changes**

The CEQA Guidelines require that an EIR address any significant irreversible environmental changes that would occur if the proposed action should be implemented (CEQA Guidelines, Section 15126.2(c)). 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).
To determine if the proposed project would result in significant irreversible effects, the project must be assessed to determine whether key resources would be degraded or destroyed with little possibility of restoration.

Construction and operation of the proposed project would result in a small irreversible commitment of energy resources, primarily in the form of fossil fuels, including fuel oil, natural gas, and gasoline for automobiles and construction equipment. Other non-renewable and slowly-renewable resources (including, but not limited to, lumber, sand and gravel, asphalt, metals, and water) would also be consumed during construction and operation of the proposed project. An increased commitment of public services (such as domestic and utility water, wastewater, storm drainage, electricity and natural gas, and telecommunication services) would also result from implementation of the proposed project. Irretrievable commitments of the above-named resources are considered justified to achieve the overall goals and objectives of the proposed project as discussed Chapter 3, Project Description.
6. ALTERNATIVES TO THE PROPOSED PROJECT

Section 15126.6(a) of the CEQA Guidelines identifies that the intent of the alternatives evaluation in an EIR is to “describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives.” Further, the CEQA Guidelines state that “the discussion of alternatives shall focus on alternatives capable of eliminating any significant adverse environmental effects or reducing them to a level of insignificance, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly.” The feasibility of an alternative may be determined based on a variety of factors including, but not limited to, site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries, and site accessibility and control (CEQA Guidelines Section 15126.6(f)(1)).

This chapter includes a summary of the objectives of the proposed project, an evaluation of alternatives to the proposed project, and a discussion of the environmentally superior alternative.

PROJECT OBJECTIVES

The CEQA Guidelines indicate that the range of alternatives analyzed in an EIR should include those that would feasibly attain the basic project objectives. As stated in Chapter 3, Project Description, the objectives of the proposed Mathematical Sciences Building project include the following:

- Provide sufficient space to meet existing needs and anticipated near-term expansion for the Departments of Mathematics and Statistics and the new Computational Science and Engineering program.

- Establish the building in proximity to related programs, including engineering, physics, chemistry, geology, and biology.

- Establish open space areas near the building to provide outdoor gathering places and enhance building entries, and establish a landscaped pedestrian walkway adjacent to the building to increase accessibility to parking areas to the west and the Arboretum to the east.

- Release space in Kerr Hall to provide expansion space for other programs in the College of Letters and Science.

ALTERNATIVES ANALYSIS

This Chapter includes evaluations of the following three alternatives to the proposed project, as well as a discussion of the environmentally superior alternative:

No Project - No Development: The proposed Mathematical Sciences Building would not be constructed and the Hog Barn building would remain unused in its current condition on the proposed project site.
Reduced-Size Project: The proposed Mathematical Sciences Building would be built within a reduced project area adjacent to the Hog Barn building. The Hog Barn would remain at its current site and would be renovated and reused.

Alternate Site: The proposed Mathematical Sciences Building would be constructed on an alternate site as an addition to the Physics and Geology Building, which is located south of Roessler Hall, west of Mrak Hall and Parking Lot 3, north of the Operations and Maintenance buildings, and east of the Crocker Nuclear Laboratory.

No Project - No Development Alternative

Description

Under the No Project - No Development Alternative, the proposed Mathematical Sciences Building would not be constructed and the Hog Barn building would remain unused and in its current condition and location. The Hog Barn building is currently vacant and access to the building is restricted. Because the building is not used, maintenance and upgrades are limited. As a result, the exterior and interior of the building are deteriorating.

Impact Analysis

Cultural Resources: This alternative would avoid potential relocation or demolition of the Hog Barn building, although cultural resources impacts associated with relocation or demolition would be reduced to less-than-significant levels under the proposed project. Unlike the project scenarios that would relocate the Hog Barn, this alternative would not restore the building. As discussed above, the exterior and interior of the Hog Barn building are deteriorating because the building is not currently used. Therefore, if the Hog Barn were to remain vacant and in its current condition, preservation of this historical resource would be questionable.

Aesthetics: The Hog Barn building would not be relocated or demolished under this alternative as it would be under the proposed project. However, if the Hog Barn building were to remain vacant and in its current condition, preservation of this valued element of the central campus' visual landscape would be questionable. This alternative would avoid the significant and unavoidable project-specific aesthetics impacts associated with relocating the Hog Barn outside the central campus or demolishing the building. However, unlike the project scenario that would relocate the Hog Barn within the central campus, the alternative would not restore the building to an improved status as a valued element of the central campus' visual landscape.

Other Impacts: Because the No Project - No Development Alternative would not involve construction or population growth on campus, none of the other impacts associated with the proposed project would occur.

Relationship to Project Objectives

The No Project - No Development Alternative would not achieve any of the objectives of the proposed project.
Reduced-Size Project Alternative

Description

Under the Reduced-Size Project Alternative, the Mathematical Sciences Building would be constructed with a smaller footprint adjacent and west of the Hog Barn building, south of Engineering Unit 3, and north of Academic Surge. With the clearances required from adjacent buildings and roads, the Mathematical Sciences Building would need to be constructed on an approximately 9,000 square foot footprint. The program space under the proposed project (approximately 65,000 gross square feet) could be accommodated within this footprint in a seven-story or taller building (as opposed to the currently proposed four-story building). Due to the high costs associated with constructing a seven-story or taller building, this alternative could involve constructing a four-story reduced-size Mathematical Sciences Building that would accommodate approximately half of the program space included under the proposed project. Under this alternative, the Hog Barn building would remain at its current location and would be renovated for reuse.

Impact Analysis

Cultural Resources: Under this alternative, the Hog Barn building would remain at its current location and would be renovated for reuse. Renovation of the Hog Barn building would comply with the Secretary of the Interior’s Standards for the Treatment of Historic Properties with Guidelines for preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings, and therefore would preserve the historical significance of the building. This alternative would avoid potential relocation or demolition of the Hog Barn building, although cultural resources impacts associated with relocation or demolition would be reduced to less-than-significant levels under the proposed project. Therefore, this alternative would result in an effect on cultural resources that would be comparable, but slightly superior to, the project.

Aesthetics: Under this alternative, the Hog Barn building would remain at its current location and would be renovated for reuse. Renovation of the Hog Barn building would comply with the Secretary of the Interior’s Standards for the Treatment of Historic Properties with Guidelines for preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings, and therefore would preserve the visual qualities of the building that make it a valued element of the central campus’ landscape. This alternative would avoid the project-specific significant and unavoidable aesthetics impacts associated with relocating the Hog Barn outside the central campus or demolishing the building. With mitigation, the project scenario that would relocate the Hog Barn within the central campus would also restore the building in compliance with the Secretary of the Interior’s Standards. In addition, relocation of the Hog Barn to the central campus site located southwest of the Silo complex would extend the historical visual character of this area of campus, a benefit not associated with the Reduced-Size Project Alternative. Therefore, this alternative would result in an effect on aesthetics that would be comparable, but slightly inferior to, the proposed project scenario involving relocation of the Hog Barn to the site near the Silo complex.

Other Impacts: Because the Reduced-Size Project Alternative would result in construction and population growth comparable to the proposed project, this alternative would result in the other impacts that are associated with the proposed project. All cumulative significant and unavoidable impacts associated with the proposed project, which were previously analyzed in the 1994 LRDP EIR, would occur under this alternative.
Relationship to Project Objectives

With the clearances required from adjacent buildings and roads under the Reduced-Size Project Alternative, the Mathematical Sciences Building would need to be constructed on an approximately 9,000 square foot footprint. The program space under the proposed project (approximately 65,000 gross square feet) could be accommodated within this footprint in a seven-story or taller building (as opposed to the currently proposed four-story building). A seven-story building would significantly increase project costs, making the project financially infeasible given current project funds. If the Mathematical Sciences Building were not financially feasible and could not be constructed, this alternative would not achieve any of the objectives of the proposed project.

Due to the high costs associated with constructing a seven-story or taller building, this alternative could involve construction of a four-story reduced-size Mathematical Sciences Building that would accommodate approximately half of the program space included in the proposed project. An alternative with reduced program space could only partially meet some, and would not meet all, project objectives. This alternative would allow the reduced Mathematical Sciences Building to be constructed in proximity to related programs, but the building could not fully accommodate the existing needs, let alone the near-term expansion of the Departments of Mathematics and Statistics and the new Computational Science and Engineering program. Likewise, this alternative could release some space in Kerr Hall to provide expansion space for other programs, but this alternative would not release as much space as the proposed project. Although some landscaping could be included with this alternative, less open space would be available within the reduced project area to establish outdoor gathering places and enhance building entries.

Alternate Site Alternative

Description

Under the Alternate Site Alternative, the proposed Mathematical Sciences Building would be constructed on an alternate site on the core campus as an addition to the Physics and Geology Building, which is located south of Roessler Hall, west of Mrak Hall and Parking Lot 3, north of the campus Operations and Maintenance buildings, and east of the Crocker Nuclear Laboratory. This alternative would be constructed as a five-story wing attached to the east side of the Physics and Geology Building. The Physics and Geology site was considered during initial planning of the proposed project, but it was eliminated from consideration due to associated high costs and impacts to several large trees. The costs associated with this alternative would be high due to significant reroutes of existing utilities located under the addition's footprint and significant upgrades that would be necessary to bring the Physics and Geology Building up to code to accommodate the additional wing. Under this alternative, the Hog Barn building would remain at its current location and would be renovated for reuse.

Impact Analysis

Cultural Resources: Under this alternative, the Hog Barn building would remain at its current location and would be renovated for reuse. Renovation of the Hog Barn building would comply with the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings, and therefore would
preserve the historical significance of the building. This alternative would avoid potential relocation or demolition of the Hog Barn building, although the cultural resources impacts associated with relocation or demolition of the building would be reduced to a less-than-significant level under the proposed project. Therefore, this alternative would result in an effect on cultural resources that would be comparable, but slightly superior to, the project.

**Aesthetics:** Under this alternative, the Hog Barn building would remain at its current location and would be renovated for reuse. Renovation of the Hog Barn building would comply with the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings, and therefore would preserve the visual qualities of the building that make it a valued element of the central campus' landscape. This alternative would avoid the significant and unavoidable project-specific impacts associated with relocating the Hog Barn outside the central campus or demolishing the building. With mitigation, the project scenario that would relocate the Hog Barn within the central campus would also restore the building in compliance with the Secretary of the Interior's Standards. In addition, relocation of the Hog Barn to the central campus site located southwest of the Silo complex would extend the historical visual character of this area of campus, a benefit not associated with the Alternate Site Alternative. Therefore, this alternative would result in an effect on aesthetics that would be comparable, but slightly inferior to, the proposed project scenario involving relocation of the Hog Barn to the site near the Silo complex.

**Other Impacts:** Because the Alternate Site Alternative would result in construction and population growth comparable to the proposed project, this alternative would result in the other impacts that are associated with the proposed project. In addition, this alternative would result in impacts on existing utilities and large trees that would not occur under the proposed project.

**Relationship to Project Objectives**

Under the Alternate Site Alternative, some of the project objectives could be met. This alternative could provide sufficient space to meet the existing and anticipated near-term expansion needs for the Departments of Mathematics and Statistics and the new Computational Science and Engineering program, and it could release space in Kerr Hall to provide expansion space for other programs. In addition, the alternative could establish the space in proximity to related programs. While this alternative could establish open space to provide outdoor gathering places and enhance building entries, it would not establish the landscaped pedestrian walkway included under the proposed project.

No project objectives would be met if this alternative were not financially feasible. The Alternate Site Alternative would require significant upgrades to the Physics and Geology Building and significant utility reroutes. The costs associated with this work would make the alternative less financially feasible. In addition, under this alternative, the Hog Barn would be reused on its current site, which would result in an inefficient use of campus space. Renovation and reuse of the building on its current site would be inconsistent with this area of campus, which primarily includes and is planned for large science-related academic buildings. In addition, the Hog Barn building occupies only a small portion of the site. If the Hog Barn were reused on its current site, limited space would remain (given clearances required from adjacent buildings and roads) to construct an academic-related building on the site, and costs associated with constructing a tall academic building in the remaining footprint could preclude such development.
Environmentally Superior Alternative

While the No Project-No Development Alternative would avoid any impacts associated with the proposed project, unlike the project scenarios that would relocate the Hog Barn building, this alternative would not include preservation of the historical building. In addition, CEQA requires that an EIR identify an environmentally superior alternative other than the No Project alternative.

Of the two other alternatives, the Reduced-Size Project Alternative is environmentally superior because it avoids the new impacts in other resource areas (utilities and trees) that are associated with the Alternate Site Alternative. Compared to the proposed project, the Reduced-Size Project Alternative would have a comparable, but slightly superior, impact on cultural resources (although under the proposed project, the project-specific impact on cultural resources would be reduced to a less-than-significant level). However, the alternative would result in an effect on aesthetics that would be comparable, but slightly inferior to, the proposed project if the project relocates the Hog Barn to the central campus site near the Silo complex. All cumulative significant and unavoidable impacts associated with the proposed project, which were previously analyzed in the 1994 LRDP EIR, would occur under this alternative.

Although it is not an environmental consideration, the Reduced-Size Project Alternative could require construction of a substantially taller building, which would limit the financial feasibility of the project. If a building with reduced program space was constructed instead of the taller building, the alternative could only partially meet some, and would not meet all, project objectives.
7. REFERENCES


8. AGENCIES AND PERSONS CONTACTED

Mona Perez, UC Davis Office of Architects and Engineers.

Kathy Olsen, UC Davis Division of Mathematical and Physical Sciences
9. REPORT PREPARERS

Sarah Dickerman, Associate Environmental Planner, UC Davis Office of Resource Management and Planning

A. Sidney England, Environmental Planner, UC Davis Office of Resource Management and Planning