

Office of the President
May 6, 2002

TO MEMBERS OF THE COMMITTEE ON GROUNDS AND BUILDINGS:

ITEM FOR ACTION

For Special Meeting of May 8, 2002

CERTIFICATION OF ADDENDUM TO ENVIRONMENTAL IMPACT REPORT AND APPROVAL OF DESIGN, LIBRARY AND INFORMATION TECHNOLOGY CENTER, SCIENCE AND ENGINEERING BUILDING, AND CLASSROOM AND OFFICE BUILDING, MERCED CAMPUS

The President recommends that upon review and consideration of the environmental consequences of the proposed project as indicated in the attached Addendum No. 1 to the Long Range Development Plan Environmental Impact Report certified at the January 2002 Regents' meeting, the Committee on Grounds and Buildings:

- (1) Certify [Addendum No. 1](#) to the 2002 Long Range Development Plan Environmental Impact Report.
- (2) Adopt the [attached Findings](#).
- (3) Approve the design of the Library and Information Technology Center, Science and Engineering Building, and Classroom and Office Building, Merced campus.

BACKGROUND

In November 2000, The Regents approved inclusion of the Library and Information Technology Center, the Science and Engineering Building, and Site Development and Infrastructure, Merced campus, in the 2000-05 Capital Improvement Program and the 2000-01 Budget for Capital Improvements. The total projected costs, at CCCI 4019, are as follows:

Library and Information Technology Center	\$57,463,000
Science and Engineering Building	\$77,522,000

In October 2001, The Regents also approved inclusion of the Classroom and Office Building, Merced campus, in the 2001-06 Capital Improvement Program and the 2001-02 Budget for Capital Improvements. The total projected cost, at CCCI 4019, is as follows:

Classroom and Office Building	\$28,239,000
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In October and November 2001, the following design professional firms were administratively approved within Office of the President for these projects:

- Library and Information Technology Center: Skidmore, Owings & Merrill LLP, San Francisco, with Fernau & Hartman, Inc., as design consultants,
- Science and Engineering Building: EHDD Architecture, San Francisco, and
- Classroom and Office Building: Thomas Hacker & Associates, Architects, Inc., Portland, Oregon

Project Site

The site for the proposed projects is the most northerly portion of the Phase 1 area of the Merced campus, as identified in the Long Range Development Plan approved at the January 2002 meeting. This area is currently occupied by a golf course and driving range, parking lot, and related structures. (See attached Site and Location Plans).

Project Overview/Design

The projects recommended for design approval will constitute the initial academic core of the Merced campus. The buildings will be located on the highest elevation of the Phase 1 site, visible to visitors approaching from the city of Merced, and situated to provide views of the adjacent lake and park to the west, and the Sierra Nevada range to the east. The three academic buildings—library, science and engineering, and classrooms—will border a 3-acre campus green, which will overlook the Fairfield Canal and playing fields to the south. A collaborative design development of standards ensures that the buildings will be constructed using a common color and materials palette—exposed architectural concrete, stucco, glass, metal, including roof material, and a common approach to the use of shaded arcades, roof forms, sun screens, and trellises. A sunscreen assembly composed of laminated glass components in a metal frame will be used as a campus standard. As the campus expands, the pedestrian and service streets between the first buildings will extend into the circulation grid of the campus established by the Long Range Development Plan.

Library and Information Technology Center

After crossing the Fairfield Canal, the first building encountered by a visitor approaching the campus academic core will be the Library and Information Technology Center. The main entry to the building will face the campus plaza. The library wing will face the first increment of the campus “Main Street.”

The Library and Information Technology Center will contain 120,000 asf within a total area of 176,902 gsf. It will house the library, instruction and research space for information technology, offices for student services, and campus administration offices.

The building will consist of two wings: a four-story wing to the north to hold most library functions; and a three-story wing to the west that will house student services, information technology, and campus administration. Of these functions, it is intended that the campus administration will eventually be relocated to a separate building to provide space for library expansion. At the juncture of the two wings, a large, ground-floor entry space will provide informal study areas as well as information desks. (See attached Plans).

The administration wing will be constructed of poured-in-place concrete with shear walls to resist lateral seismic forces. The library wing structural system will be moment frame reinforced concrete. Columns on the east facade of the library wing will be shaped to form vertical sun shading elements that will be augmented with horizontal sunscreens above the windows. Integral sunscreens will shade the windows in the concrete walls of the other facades. The entry area and the library spaces above it will be surrounded by campus standard glass sunscreens. The top portion of this central element will be punctuated by a metal and glass “lantern” identifying this location as the symbolic arrival point for the new academic area of the campus. (See attached Illustrations).

Additional project details are provided in the attached *Project Statistics*.

Classroom and Office Building

The Classroom and Office Building will be located beyond the Library along Main Street. Its central entry will be on this main street, and aligned with the major concourse of the Science and Engineering Building.

The building will contain 60,000 asf within a total area of 92,601 gsf. It will initially house all classroom space (excluding teaching laboratories) on the campus. Spaces will vary in size from an auditorium (seating 360 persons) to small seminar rooms. The building will also contain offices for faculty in humanities, arts, and social sciences, as well as the Dean’s administrative offices of these disciplines.

The building will be three stories high and rectangular with a small wing on one side. A covered walkway and pedestrian area will run the length of the elevation facing Main Street. The first floor will contain large lecture halls and classrooms, including the 360-seat auditorium. A wide staircase will lead from the ground-floor lobby to the second floor where smaller classrooms, seminar rooms, and offices for teaching assistants will be located. This central lobby will be shaded by campus standard sunscreens. The top floor will primarily house faculty and administrative offices. (See attached Plans).

The building structure will be concrete frame. Exterior walls will be constructed of pre-cast concrete panels, which will serve as shear walls for seismic resistance. This will be supplemented by interior concrete shear walls at selected points. A hipped roof with a large overhanging cornice will be metal clad in a natural weathering alloy. Windows in the exterior walls will be recessed and have integral metal sun shades. The central entry area will be shaded by campus standard horizontal glass sunshades. (See attached Illustrations).

Additional project details are provided in the attached *Project Statistics*.

Science and Engineering Building

The building will contain 102,000 asf within a total area of 174,105 gsf, and will provide research laboratories, laboratory support space, teaching laboratories, and offices for the natural sciences and engineering divisions.

The building will consist of two three-story wings situated at right angles (an “L” shape) and forming two sides of the campus green. A partial basement beneath the intersection of the wings

will house a vivarium. Class laboratories and support spaces will be located on the ground floor. The second and third floors will contain research laboratories and support space, as well as faculty offices and administrative office space for the divisional deans. (See attached Plans).

The Science and Engineering Building will be constructed of poured-in-place concrete to minimize vibration in the building. Poured-in-place exterior and interior shear walls and floor decks will resist seismic forces. A three-story high circulation concourse, shaded by horizontal campus standard glass sun screens at the upper two levels, will run along the campus green side of each wing. The exterior walls will be faced with cement plaster. A hipped roof with a broad overhanging cornice will enclose a substantial amount of roof top equipment. This roof will be standing seam metal clad with a natural weathering alloy that will match the roof material of the Classroom and Office Building. (See attached Illustrations).

The class laboratories at ground level will be accessed directly from both the street and the shaded concourse. The second- and third-story research floors will be accessed from interior corridors reached through elevators or by the main stairs located at the junction of the wings. The second and third floors will be connected by three additional sets of stairs along the wings. These stairs will wrap around small, informal gathering spaces intended to foster interdisciplinary exchanges and provide students with a place to meet colleagues and faculty. A two-story gallery space at the juncture of the two wings will link the upper two floors, provide space for informal gatherings and displays, and serve as an entry point into the divisional offices. (See attached Plan and Illustrations).

Faculty offices, conference rooms, scholarly activity space, academic administrative offices, and most non-laboratory space on these floors will face the campus green and be shaded from the sun by metal sun screens on the concourse. Laboratories will be grouped along the opposite side of the wings, wet laboratories in the longer wing and dry laboratories in the shorter wing. The laboratory design will be flexible and modular and will be subdivided into discrete suites by the structural shear walls in the building.

Additional project details are provided in the attached *Project Statistics*.

The design of the Merced campus buildings has been reviewed and coordinated among the members of the consultant team. Design also has been reviewed by an independent panel of peers during the extended design development phase. Independent structural review and independent cost estimating has been conducted at each stage of project development, and currently at conclusion of design development.

The Merced campus Physical Planning Department will manage the project. Outside specialty consultants and testing agencies will be utilized as necessary.

Environmental Impact Summary

The potential environmental effects of the proposed Library and Information Technology Center, Science and Engineering Building, and Classroom and Office Building (collectively referred to herein as “the Project”), were analyzed in the EIR for the UC Merced Long Range Development Plan, which was certified by The Regents in January 2002 (State Clearinghouse Number

2001021065), concurrent with the approval of design for the UC Merced Site Development and Infrastructure with Central Plant Facility. Volume 1 of the EIR assessed the potential environmental effects of implementation of the LRDP, identified means to eliminate or reduce potential adverse impacts, and evaluated a reasonable range of alternatives to the LRDP. Volume 2 of the Draft EIR analyzed the project-level environmental impacts associated with the first phase of development on the UC Merced campus (2004-05 through 2007-08 academic year), referred to as the Phase 1 Campus, which included the Library and Information Technology Center, Science and Engineering Building, and Classroom and Office Building.

On August 13, 2001, the campus released the Draft LRDP EIR for public review, establishing a forty-five day public review period. Copies of the Draft EIR were made available at several libraries, information repositories, and the UC Merced project office in the Merced area; a copy was posted on a web site jointly hosted by UC Merced and Merced County; and hard copies as well as CDs of the document were mailed to all people who requested one. A public hearing on the Draft EIR was held on September 13, 2001, during which comments on the Draft EIR were received. In response to public requests, the campus extended the public comment period an additional seven days, providing a total of fifty-two days for public review and comment. Written comments from interested public agencies and individuals were received throughout the public review period. The campus evaluated the oral testimony received at the public hearing as well as the written comments received during the comment period and prepared written responses. The responses are contained in the Final EIR.

Pursuant to state law and University procedures for implementation of the California Environmental Quality Act, the campus prepared Addendum No. 1 to the LRDP EIR to consider design approval of the proposed Library and Information Technology Center, Science and Engineering Building, and Classroom and Office Building.

The LRDP EIR evaluated the potential effects of the three proposed buildings as part of the Phase 1 Campus impact analysis, which evaluated project-level impacts resulting from development of the first phase of the UC Merced campus (2004-05 through 2007-08). Potential impacts for the Phase 1 Campus were evaluated in ten environmental issue areas: aesthetics, air quality, biology resources, cultural resources, geology, seismicity, and soils, hazards and hazardous materials, hydrology and water quality, noise, recreation, and traffic, circulation, and parking.

The LRDP EIR indicated that the Phase 1 Campus, including the Library and Information Technology Center, Science and Engineering Building, and Classroom and Office Building, would result in significant or potentially significant impacts, prior to mitigation, in the following areas: aesthetics, air quality, cultural resources, geology, soils and seismicity, noise, and traffic, circulation, and parking.

With implementation of the proposed mitigation measures, the effects of Phase 1 Campus lighting on nearby Lake Yosemite Regional Park and other sensitive areas, increased levels of carbon monoxide, ozone precursor, and PM₁₀ emissions, and increased ambient noise levels attributable to traffic increases would remain significant and unavoidable. However, these impacts are considered acceptable for the reasons specified in the Findings and Overriding

Considerations adopted by The Regents in connection with its approval of the 2002 LRDP EIR. All other impacts would be mitigated below a level of significance.

As components of the Phase 1 Campus, the LRDP EIR analyzed the potential environmental effects of constructing approximately 120,000 assignable square feet (180,000 gross square feet) for the Library and Information Technology Center, 101,730 asf (170,000 gsf) for the Science and Engineering Building, and 60,000 asf (95,000 gsf) for the Classroom and Office Building. The current design of the Library and Information Technology Center envisions developing an approximately 176,902 gsf building, a minor decrease of 3,098 gsf (the asf remains unchanged) in comparison to the Library and Information Technology Center described in the LRDP Final EIR. The current design of the Science and Engineering Building envisions developing an approximately 102,000 asf and 174,105 gsf building, a minor increase of 270 asf and 4,105 gsf in comparison to the Science and Engineering Building described in the LRDP Final EIR. Lastly, the current design of the Classroom and Office Building envisions developing an approximately 92,601 gsf building, a minor decrease of 2,399 gsf (the asf remains unchanged) in comparison to the Classroom and Office Building described in the LRDP Final EIR. The three buildings would be developed on the same sites as previously analyzed in the LRDP Final EIR, and their heights, massing, and footprints would remain essentially unchanged.

The University has prepared [Addendum #1](#) to the LRDP Final EIR to address these minor design changes to the three proposed buildings. The Project would include design features to ensure that potential environmental effects resulting from construction and operation of the Project would be minimized. Addendum #1 concludes that the Project's effects will not alter the conclusions of significance of the LRDP Final EIR and that none of the conditions or circumstances that would require the preparation of a Subsequent or Supplemental EIR would exist in connection with the Library and Information Technology Center, Science and Engineering Building, or Classroom and Office Building.

The only change with respect to the circumstances under which the LRDP would be undertaken since the LRDP Final EIR was certified as complete, is progress in the environmental permitting process, consistent with the anticipated process for UC Merced campus development, but this change in circumstances does not require major revisions in the LRDP Final EIR. No additional environmental analysis or review is required to address the environmental impacts resulting from construction and operation of the proposed Project, as revised, other than as provided in EIR Addendum #1 (attached).

A Mitigation Monitoring and Reporting Program to ensure implementation of project-specific mitigation measures to reduce significant impacts is included as an Appendix in the Final EIR. Monitoring of the implementation of mitigation measures will be conducted on an annual basis in conjunction with the annual status report for the 2002 LRDP Mitigation Monitoring Program.

Findings

The [attached Findings](#) discuss the Project's impacts, mitigation measures, and conclusions regarding approval of this Project in conformance with CEQA. The Findings also set forth Overriding Considerations for approval of the Library and Information Technology Center,

Science and Engineering Building, and Classroom and Office Building Project in view of unavoidable significant environmental effects by incorporation of the Findings for the LRDP Final EIR.

(Attachments: [Addendum](#) and [Findings](#))

PROJECT STATISTICS
LIBRARY AND INFORMATION TECHNOLOGY CENTER
MERCED CAMPUS
 CCCI 4019

<u>Cost Category</u>	<u>Amount</u>	<u>% of Total</u>
Site Clearance	\$34,000	0.0%
Building	\$36,841,000	81.5%
Exterior Utilities	\$262,000	0.5%
Site Development	\$226,000	0.5%
A/E Fees ^(a)	\$3,520,000	8.0%
Campus Administration ^(b)	\$1,450,000	3.3%
Surveys, Tests, Plans	\$450,000	0.9%
Special Items ^(c)	\$550,000	1.2%
Contingency	<u>\$1,832,000</u>	<u>4.1%</u>
Total	\$45,165,000	100.0%
Group 2 & 3 Equipment	<u>\$12,298,000</u>	
Total Project ^(d)	\$57,463,000	

Statistics

Gross Square Feet (gsf) ^(e)	176,902
Assignable Square Feet (asf) ^(e)	120,000
Rentable Square Feet (rsf) ^(f)	152,650
Ratio asf/gsf (%): UC	68%
Ratio rsf/gsf (%): BOMA ^(f)	86%
Building Cost/gsf ^(e)	\$208.00
Building Cost/asf	\$307.00
Building Cost/rsf	\$241.34

Comparable University Projects at CCCI 4019

	<u>Building Cost per GSF</u>	<u>Ratio: asf/gsf</u>	<u>Budget Approval Date</u>
UCLA Law Library Addition	\$209.38	57%	10/1995
UCSC Science Library	\$197.20	72%	8/1986
UCI Science Library	\$164.66	69%	5/1987

(a) A/E fees include executive architect basic services contract of \$2,760,000, which represents 7.582% of the construction budget.

(b) Campus Administration includes project management and inspection.

(c) Special Items include design reviewers, cost estimator, environmental study, seismic review, and other special consultants.

(d) Current formal estimates verify that projected costs are within the current budget.

(e) Gross square feet (GSF) is the total area, including usable area, stairways, and space occupied by the structure itself. Assignable square feet (ASF) are the net program area.

(f) Rentable square feet (RSF) are the usable area determined in accordance with BOMA (Building Owners and Managers' Association) standards for single tenant in commercial building space.

**PROJECT STATISTICS
SCIENCE AND ENGINEERING BUILDING
MERCED CAMPUS
CCCI 4019**

<u>Cost Category</u>	<u>Amount</u>	<u>% of Total</u>
Site Clearance	\$159,000	0.2%
Building	\$54,364,000	83.3%
Exterior Utilities	\$309,000	0.6%
Site Development	\$94,000	0.2%
A/E Fees ^(a)	\$4,600,000	7.0%
Campus Administration ^(b)	\$1,950,000	2.9%
Surveys, Tests, Plans	\$600,000	0.9%
Special Items ^(c)	\$600,000	0.9%
Contingency	<u>\$2,548,000</u>	<u>4.0%</u>
Total	\$65,224,000	100.0%
Group 2 & 3 Equipment	<u>\$12,298,000</u>	
Total Project ^(d)	\$75,522,000	

Statistics

Gross Square Feet (gsf) ^(e)	174,105
Assignable Square Feet (asf) ^(e)	102,000
Rentable Square Feet (rsf) ^(f)	139,450
Ratio asf/gsf (%): UC	59%
Ratio rsf/gsf (%): BOMA ^(f)	80%
Building Cost/gsf ^(e)	\$312.00
Building Cost/asf	\$533.00
Building Cost/rsf	\$389.00

Comparable University Projects at CCCI 4019

	<u>Building Cost/GSF</u>	<u>Ratio asf/gsf</u>	<u>Budget Approval Date</u>
UCD Sciences Laboratory Bldg.	\$297.99	58%	5/2001
UCLA Molecular Life Sciences Bldg.	\$326.89	56%	7/1993
UCI Natural Sciences Unit 1	\$315.53	60%	10/1999

(a) A/E fees include executive architect basic services contract of \$3,891,979, which represents 7.564% of the construction budget.

(b) Campus Administration includes project management and inspection.

(c) Special Items include design reviewers, cost estimator, environmental study, seismic review, and other special consultants.

(d) Current formal estimates verify that projected costs are within the current budget.

(e) Gross square feet (GSF) is the total area, including usable area, stairways, and space occupied by the structure itself. Assignable square feet (ASF) are the net program area.

(f) Rentable square feet (RSF) are the usable area determined in accordance with BOMA (Building Owners and Managers' Association) standards for single tenant in commercial building space

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PROJECT STATISTICS
CLASSROOM AND OFFICE BUILDING
MERCED CAMPUS
 CCCI 4019

<u>Cost Category</u>	<u>Amount</u>	<u>% of Total</u>
Site Clearance	\$50,000	0.2%
Building	\$21,450,000	85.0%
Exterior Utilities	\$50,000	0.2%
Site Development	\$50,000	0.2%
A/E Fees ^(a)	\$1,500,000	5.9%
Campus Administration ^(b)	\$740,000	2.9%
Surveys, Tests, Plans	\$250,000	1.0%
Special Items ^(c)	\$250,000	1.0%
Contingency	<u>\$895,000</u>	<u>3.6%</u>
Total	\$25,235,000	100.0%
Group 2 & 3 Equipment	<u>\$3,004,000</u>	
Total Project ^(d)	\$28,239,000	

Statistics

Gross Square Feet (gsf) ^(e)	92,601
Assignable Square Feet (asf) ^(e)	60,000
Rentable Square Feet (rsf) ^(f)	84,900
Ratio asf/gsf (%): UC	65%
Ratio rsf/gsf (%): BOMA ^(f)	92%
Building Cost/gsf ^(e)	\$232.00
Building Cost/asf ^(e)	\$357.00
Building Cost/rsf ^(f)	\$253.00

Comparable University Projects at CCCI 4019

	<u>Building Cost/GSF</u>	<u>Ratio: asf/gsf</u>	<u>Budget Approval Date</u>
UCSB Humanities & Social Sciences	\$201.79	58%	9/1994
UCSD Classroom Bldg. 1	\$185.62	57%	9/1993
UCB Seismic Replacement Bldg. 1	\$210.61	64%	6/2001

(a) A/E fees include executive architect basic services contract of \$1,260,000, which represents 7.10% of the construction budget.

(b) Campus Administration includes project management and inspection.

(c) Special Items include design reviewers, cost estimator, environmental study, seismic review, and other special consultants.

(d) Current formal estimates verify that projected costs are within the current budget.

(e) Gross square feet (GSF) is the total area, including usable area, stairways, and space occupied by the structure itself. Assignable square feet (ASF) are the net program area.

(f) Rentable square feet (RSF) are the usable area determined in accordance with BOMA (Building Owners and Managers' Association) standards for single tenant in commercial building space

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