



Project No. 900120

# Construction Documents

for

## Student Services Building

University of California, Merced  
Merced, California

**BID RELEASE 2**

**VOLUME 1 of 1**

**Physical Planning Design & Construction  
University of California  
5200 N. Lake Road  
Merced, California 95343**

June 8, 2011  
Revision 1  
LF:COVER-PG

March 20, 2013

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**ADVERTISEMENT FOR BIDS**

**STUDENT SERVICES BUILDING  
PROJECT NO.: 900120  
UNIVERSITY OF CALIFORNIA, MERCED**

Subject to conditions prescribed by the University of California, Merced, sealed bids for a Prime Trade contract are invited for the following work: Student Housing Phase 4 – The Summits.

**Description of Work:** The new Student Services Building (SSB) at UC Merced is a 34,583gsf facility that sits on a one-acre triangular site. The SSB complex is comprised of two structures, a one-story pavilion building (6,004gsf) fronting onto Scholars Lane, and a 3-story building (28,579gsf) that is parallel to Ansel Adams Road. The building is classified as Type II, B construction, non-rated, fully sprinklered. The one story pavilion houses two large, 120-seat general assembly spaces on level one. The three story building houses two, 90-seat student services suites on level one, offices on level two, and open floor plan student services suites on level three. Both buildings are steel construction with lateral braces, and are clad in a combination of aluminum and glass storefront, aluminum strip windows and insulated, exterior lath and plaster wall assembly. The exterior circulation corridors and associated stairways on the 3-story building are steel construction as well. Mechanical equipment for both buildings is housed on each individual roof and is shielded by a rooftop mechanical screen.

This Bid Release 2 consists of interior room identification signs; triple sided illuminated exterior building monument; and interior wall-mounted LEED display sign.

**BID RELEASE 2:**

Bid Date: April 4, 2013

Bid Time: 2:00 p.m.

Prime Trade Package Number/ Description	Budget	Required CA License(s)
01 12 00 Signage	\$39,000	C-45

Bidding Documents will be made available to bidders on **Wednesday, March 20, 2013** on the University's website <http://www.ucmerced.edu/rfp-rfq>. Bid Results will be available on our website at <http://www.ucmerced.edu/rfp-rfq> or by calling (209) 288-4479.

A MANDATORY Pre-Bid Conference will be conducted on **Wednesday, March 27, 2013**, beginning promptly at 2:00 PM. Participants shall meet at Physical Planning, Design and Construction, at 767 E. Yosemite Avenue, Merced, CA 95340. If you need accommodations related to disabilities, please call Jessica Duffy (209) 228-4479 at least 3 working days prior to Pre-Bid Conference/Project Site Visit or Bid Opening.

STUDENT SERVICES BUILDING  
UNIVERSITY OF CALIFORNIA, MERCED  
MERCED, CALIFORNIA

PROJECT NO.: 900210

Requests for clarification or interpretation of the Bidding Documents must be in writing and received by **Thursday, March 28, 2013 at 4:00 P.M.** Questions received after the above-noted deadline may be answered at the discretion of the University's Representative. Questions may be emailed or faxed to:

Jessica Duffy – University of California, Merced  
Fax: (209) 228-4468  
Email: [jduffy2@ucmerced.edu](mailto:jduffy2@ucmerced.edu)

**Revisions, additions or deletions will be made by written addenda issued by Physical Planning Design & Construction.**

Bids will be received only at:  
**(Hand & Overnight delivery only)**

UNIVERSITY OF CALIFORNIA, MERCED  
**Physical Planning Design and Construction**  
767 E Yosemite Ave., Bldg. B, Ste C  
Merced CA 95340

Or by US Mail at:

UNIVERSITY OF CALIFORNIA, MERCED  
**Physical Planning Design and Construction**  
5200 Lake Rd.  
Merced CA 95343

Bids must be received before:

**2:00PM**  
**Thursday, April 4, 2013**

There will be a bid security required for this project.

The successful Bidder and its subcontractors will be required to follow the nondiscrimination requirements set forth in the Bidding Documents and to pay prevailing wage rates at the location of the work.

The successful Bidder shall have the appropriate current licenses issued by the State of California Contractors State License Board for the work to be performed

THE UNIVERSITY OF CALIFORNIA IS AN AFFIRMATIVE ACTION/EQUAL OPPORTUNITY EMPLOYER.

THE REGENTS OF THE UNIVERSITY OF CALIFORNIA  
University of California, Merced  
March 20, 2013

**PROJECT DIRECTORY**

Project Name:	STUDENT SERVICES BUILDING
Project No:	900120
Location:	Physical Planning Design & Construction University of California Merced Campus
University:	The Regents of the University of California
University's Facility person acting on behalf of University:	Thomas E. Lollini, FAIA Associate Vice Chancellor Design & Construction
University's Representative is:	Leon Waller Physical Planning Design & Construction 5200 North Lake Road Merced CA 95343 (209) 228-4479 Fax (209) 228-4468
All inquiries shall be in writing and shall be directed only to:	Fran Telechea Physical Planning Design & Construction 5200 North Lake Road Merced CA 95343 (209) 228-4479 Fax (209) 228-4468
Design Professional Consultants:	Architect CO Architects 5055 Wilshire Blvd, 9th Floor Los Angeles, CA 90036 (323) 525-0500 Fax (323) 525-0955
Address for Stop Notices:	Marianna Eastman University of California 5200 North Lake Road Merced CA 95343 and Physical Planning Design & Construction University of California 5200 North Lake Road Merced CA 95343
Address for Demand for Arbitration:	Western Case Management Center 6795 N. Palm Avenue, 2 <sup>nd</sup> Floor Fresno CA 93704
A copy of the Demand for Arbitration must be sent to:	University of California Office of the General Counsel 1111 Franklin Street, 8 <sup>th</sup> Floor Oakland, CA 94607-5200

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## **ARTICLE 1 – DEFINITIONS**

- 1.1 Except as otherwise specifically provided, definitions set forth in the General Conditions or in other Contract Documents are applicable to all Bidding Documents.
- 1.2 The term “Addenda” means written or graphic instruments issued by University prior to the Bid Deadline which modify or interpret the Bidding Documents by additions, deletions, clarifications, or corrections.
- 1.3 The term “Alternate” means a proposed change in the Work, as described in the Bidding Documents which, if accepted, may result in a change to either the Contract Sum or the Contract Time, or both.
- 1.4 The term “Bid Deadline” means the date and time on or before which Bids must be received, as designated in the Advertisement for Bids and which may be revised by Addenda.
- 1.5 The term “Bidder” means a person or firm that submits a Bid.
- 1.6 The term “Bidding Documents” means the construction documents prepared and issued for bidding purposes including all Addenda thereto.
- 1.7 The term “Estimated Quantity” means the estimated quantity of an item of Unit Price Work.
- 1.8 As used in these Instructions to Bidders, the term “Facility” means the University's Facility office issuing the Bidding Documents.
- 1.9 The term “Lump Sum Base Bid” means the sum stated in the Bid for which Bidder offers to perform the Work described in the Bidding Documents, but not including Unit Price items or Alternates.
- 1.10 The term “Planholder” means a person or entity known by the Facility to have received a complete set of Bidding Documents and who has provided a street address for receipt of any written pre-bid communications.
- 1.11 The term “Unit Price” means an amount stated in the Bid for which Bidder offers to perform an item of Unit Price Work for a fixed price per unit of measurement.
- 1.12 As used in these Instructions to Bidders, the term “Business Day” means any day other than a Saturday, a Sunday, and the holidays specified herein, and to the extent provided herein, if the Facility or applicable office of the University is closed for the whole of any day, insofar as the business of that office is concerned, that day shall be considered as a holiday for the purposes of computing time in these Instructions to Bidders. Holidays include January 1st, the third Monday in January, the third Monday in February, the last Monday in May, July 4th, the first Monday in September, November 11th, Thanksgiving Day, December 25th, and every day designated by the University as a holiday.

## **ARTICLE 2 - BIDDER'S REPRESENTATIONS**

- 2.1 Bidder, by making a Bid, represents that:
- 2.1.1 Bidder has read, understood, and made the Bid in accordance with the provisions of the Bidding Documents.
- 2.1.2 Bidder has visited the Project site and is familiar with the conditions under which the Work is to be performed and the local conditions as related to the requirements of the Contract Documents.
- 2.1.3 The Bid is based upon the materials, equipment, and systems required by the Bidding Documents without exception.



2.1.4 At the time of submission of the Bid, Bidder and all Subcontractors, regardless of tier, have the appropriate current and active licenses issued by the State of California Contractor's State License Board for the Work to be performed and any licenses specifically required by the Bidding Documents. If Bidder is a joint venture, at the time of submission of the Bid, Bidder shall have the licenses required by the preceding sentence in the name of the joint venture itself. The State of California Business and Professions Code, Division 3, Chapter 9, known as the "Contractor's License Law," establishes licensing requirements for contractors.

2.1.5 Bidder has read and shall abide by the nondiscrimination requirements contained in the Bidding Documents.

2.1.6 Bidder has the expertise and financial capacity to perform and complete all obligations under the Bidding Documents.

2.1.7 The person executing the Bid Form is duly authorized and empowered to execute the Bid Form on behalf of Bidder.

2.1.8 Bidder is aware of and, if awarded the Contract, will comply with Applicable Code Requirements in its performance of the Work.

### **ARTICLE 3 - BIDDING DOCUMENTS**

#### **3.1 COPIES**

3.1.1 Bidders may obtain complete sets of the Bidding Documents from the issuing office designated in the Advertisement for Bids for the deposit sum stated therein, if any. If a deposit is required, it will only be refunded if Bidder returns the Bidding Documents in good condition no later than **60** days after the Bid Deadline unless otherwise provided in Supplementary Instructions to Bidders. The cost of replacement of missing or damaged documents may be deducted from the deposit. The Bidder to whom the Contract is awarded may retain the Bidding Documents and will be refunded its deposit.

3.1.2 Bidders shall use a complete set of Bidding Documents in preparing Bids.

3.1.3 University makes copies of the Bidding Documents available, on the above terms, for the sole purpose of obtaining Bids for the Work and does not confer a license or grant permission for any other use of the Bidding Documents.

#### **3.2 INTERPRETATION OR CORRECTION OF BIDDING DOCUMENTS**

3.2.1 Bidder shall, before submitting its Bid, carefully study and compare the components of the Bidding Documents and compare them with any other work being bid concurrently or presently under construction which relates to the Work for which the Bid is submitted; shall examine the Project site, the conditions under which the Work is to be performed, and the local conditions; and shall at once report to University's Representative errors, inconsistencies, or ambiguities discovered. If Bidder is awarded the Contract, Bidder waives any claim arising from any errors, inconsistencies or ambiguities, that Bidder, its subcontractors or suppliers, or any person or entity under Bidder on the Contract became aware of, or reasonably should have become aware of, prior to Bidder's submission of its Bid.

3.2.2 Requests for clarification or interpretation of the Bidding Documents shall be addressed only to the person or firm designated in the Supplementary Instructions to Bidders.

3.2.3 Clarifications, interpretations, corrections, and changes to the Bidding Documents will be made by Addenda issued as provided in Article 3.5. Clarifications, interpretations, corrections, and changes to the Bidding Documents made in any other manner shall not be binding and Bidders shall not rely upon them.

### **3.3 PRODUCT SUBSTITUTIONS**

3.3.1 No substitutions will be considered prior to award of Contract. Substitutions will only be considered after award of the Contract and as provided for in the Contract Documents.

### **3.4 SUBCONTRACTORS**

3.4.1 Each Bidder shall list in the Bid Form all first-tier Subcontractors that will perform work, labor or render such services as defined in Article 9 of the Bid Form. The Bid Form contains spaces for the following information when listing Subcontractors: (1) portion of the Work; (2) name of Subcontractor; (3) city of Subcontractor's business location. The failure to list, on the Bid Form, any one of the items set forth above will result in the University treating the Bid as if no Subcontractor was listed for that portion of the Work and Bidder will thereby represent to University that Bidder agrees that it is fully qualified to perform that portion of the Work and shall perform that portion of the Work.

3.4.2 Subcontractors listed in the Bid Form shall only be substituted after the Bid Deadline with the written consent of University and in accordance with the State of California "Subletting and Subcontracting Fair Practices Act."

### **3.5 ADDENDA**

3.5.1 Addenda will be issued only by University and only in writing. Addenda will be identified as such and will be mailed or delivered to all Planholders. At its sole discretion, the University may elect to deliver Addenda via facsimile to Planholders who have provided a facsimile number for receipt of Addenda.

3.5.2 Copies of Addenda will be made available for inspection wherever Bidding Documents are on file for inspection.

3.5.3 Addenda will be issued such that Planholders should receive them no later than 3 full business days prior to the Bid Deadline. Addenda withdrawing the request for Bids or postponing the Bid Deadline may be issued anytime prior to the Bid Deadline.

3.5.4 Each Bidder shall be responsible for ascertaining, prior to submitting a Bid, that it has received all issued Addenda.

### **3.6 BUILDER'S RISK PROPERTY INSURANCE**

3.6.1 University will provide builder's risk property insurance subject to the deductible in the policy as required by the General Conditions if the Contract Sum exceeds \$200,000 at the time of award and the requirements of the Project are not excluded by such coverage. A summary of the provisions of the policy is included as an Exhibit to the Contract. Bidder agrees that the University's provision of builder's risk property insurance containing said provisions meets the University's obligation to provide builder's risk property insurance under the Contract and, in the event of a conflict between the provisions of the policy and any summary or description of the provisions contained herein or otherwise, the provisions of the policy shall control and shall be conclusively presumed to fulfill the University's obligation to provide such insurance.

## **ARTICLE 4 - PRE-BID CONFERENCE**

4.1 Bidder shall attend the Pre-Bid Conference at which the requirements of the Bidding Documents are reviewed by University, comments and questions are received from Bidders, and a Project site visit is conducted. University requires all Pre-Bid Conference attendees to arrive for the meeting on time and to sign an attendance list, which in turn is used to determine if Bidders meet this requirement. Any Bidder not

attending the Pre-Bid Conference in its entirety will be deemed to have not complied with the requirements of the Bidding Documents and its Bid will be rejected.

## **ARTICLE 5 - BIDDING PROCEDURES**

### **5.1 FORM AND STYLE OF BIDS**

5.1.1 Bids shall be submitted on the Bid Form included with the Bidding Documents. Bids not submitted on the University's Bid Form shall be rejected.

5.1.2 The Bid Form shall be filled in legibly in ink or by typewriter. All portions of the Bid Form must be completed and the Bid Form must be signed before the Bid is submitted. Failure to comply with the requirements of this Article 5.1.2 will result in the Bid being rejected as nonresponsive.

5.1.3 Bidder's failure to submit a price for any Alternate or Unit Price will result in the Bid being considered as nonresponsive. If Alternates are called for and no change in the Lump Sum Base Bid is required, indicate "No Change" by marking the appropriate box.

5.1.4 Bidder shall make no stipulations on the Bid Form nor qualify the Bid in any manner.

5.1.5 The Bid Form shall be signed by a person or persons legally authorized to bind Bidder to a contract. Bidder's Representative shall sign and date the Declaration included in the Bid Form. Failure to sign and date the declaration will cause the Bid to be rejected.

### **5.2 BID SECURITY**

5.2.1 Each Bid shall be accompanied by Bid Security in the amount of 10% of the Lump Sum Base Bid as security for Bidder's obligation to enter into a Contract with University on the terms stated in the Bid Form and to furnish all items required by the Bidding Documents. Bid Security shall be a Bid Bond on the form provided by University and included herein, or a certified check made payable to "The Regents of the University of California." When a Bid Bond is used for Bid Security, failure to use University's Bid Bond form will result in the rejection of the Bid. Bidder must use the Bid Bond form provided by the University or an exact, true and correct photocopy of such form. The Bid Bond form may not be retyped, reformatted, transcribed onto another form, or altered in any manner except for the purpose of completing the form.

5.2.2 If the apparent lowest responsible Bidder fails to sign the Agreement and furnish all items required by the Bidding Documents within the time limits specified in these Instructions to Bidders, University may reject such Bidder's Bid and select the next apparent lowest responsible Bidder until all Bids have been exhausted or University may reject all Bids. The Bidder whose Bid is rejected for such failure(s) shall be liable for and forfeit to University the amount of the difference, not to exceed the amount of the Bid Security, between the amount of the Bid of the Bidder so rejected and the greater amount for which University procures the Work.

5.2.3 If a Bid Bond is submitted, the signature of the person executing the Bid Bond must be notarized. If an attorney-in-fact executes the Bid Bond on behalf of the surety, a copy of the current power of attorney bearing the notarized signature of the appropriate corporate officer shall be included with the Bid Bond. Additionally, the surety issuing the Bid Bond shall be, on the Bid Deadline, an admitted surety insurer (as defined in the California Code of Civil Procedure Section 995.120).

5.2.4 Bid Security will be returned after the contract has been awarded. Notwithstanding the preceding, if a Bidder fails or refuses, within 10 days after receipt of notice of selection, to sign the Agreement or submit to University all of the items required by the Bidding Documents, the University will retain that Bidder's Bid Security. If the Bid Security is in the form of a Bid Bond, the Bid Security will be retained until the University has been appropriately compensated; if the Bid Security is in the form of

certified check, the University will negotiate said check and after deducting its damages, return any balance to Bidder.

### **5.3 SUBMISSION OF BIDS**

5.3.1 The Bid Form, Bid Security, and all other documents required to be submitted with the Bid shall be enclosed in a sealed opaque envelope. The envelope shall be addressed to the office designated in the Supplementary Instructions to Bidders for receipt of Bids. The envelope shall be identified with the Project name, Bidder's name and address, and, if applicable, the designated portion of the Project for which the Bid is submitted. If the Bid is sent by mail, the sealed envelope shall be enclosed in a separate mailing envelope with the notation "SEALED BID ENCLOSED" on the face thereof.

5.3.2 Bids shall be deposited at the designated location on or before the Bid Deadline. A Bid received after the Bid Deadline will be returned to Bidder unopened.

5.3.3 Bidder shall assume full responsibility for timely delivery at the location designated for receipt of Bids.

5.3.4 Oral, telephonic, facsimile, or telegraphic Bids are invalid and will not be accepted.

### **5.4 MODIFICATION OR WITHDRAWAL OF BID**

5.4.1 Prior to the Bid Deadline, a submitted Bid may be modified or withdrawn by notice to the Facility receiving Bids at the location designated for receipt of Bids. Such notice shall be in writing over the signature of Bidder and, in order to be effective, must be received on or before the Bid Deadline. A modification so made shall be worded so as not to reveal the amount of the original Bid.

5.4.2 A withdrawn Bid may be resubmitted on or before the Bid Deadline, provided that it then fully complies with the Bidding Requirements.

5.4.3 Bid Security shall be in an amount sufficient for the Bid as modified or resubmitted.

5.4.4 Bids may not be modified, withdrawn, or canceled within **60** days after the Bid Deadline unless otherwise provided in Supplementary Instructions to Bidders.

## **ARTICLE 6 - CONSIDERATION OF BIDS**

### **6.1 OPENING OF BIDS**

6.1.1 Bids which have the required identification as stipulated in Article 5.3.1 and are received on or before the Bid Deadline will be opened publicly.

### **6.2 REJECTION OF BIDS**

6.2.1 University will have the right to reject all Bids.

6.2.2 University will have the right to reject any Bid not accompanied by the required Bid Security or any other item required by the Bidding Documents, or a Bid which is in any other way incomplete or irregular.

### **6.3 AWARD**

6.3.1 University will have the right, but is not required, to waive nonmaterial irregularities in a Bid. If the University awards the Contract, it will be awarded to the responsible Bidder submitting the lowest responsive Bid as determined by University and who is not rejected by University for failing or refusing, within **10** days after receipt of notice of selection, to sign the Agreement or submit to University all of the items required by the Bidding Documents.

6.3.2 University will have the right to accept Alternates in any order or combination, unless otherwise specifically provided in the Bidding Documents. The opening of Bids and evaluation of Alternates will be conducted in accordance with a procedure that, at University's option, either (i) prescribes, prior to the time of Bid opening, the order in which Alternates will be selected or (ii) prevents, before the determination of the apparent low Bidder has been made, information that would identify any of the Bidders from being revealed to the representative of the University selecting the Alternates to be used in determining the low Bidder. After determination of the apparent low Bidder has been made, University will publicly disclose the identity of each Bidder that submitted a Bid and the amount of each such Bid.

6.3.3 University will determine the low Bidder on the basis of the sum of the Lump Sum Base Bid plus all Unit Prices multiplied by their respective Estimated Quantities as stated in the Bid Form, if any, plus the daily rate for Compensable Delay multiplied by the "multiplier" as stated in the Bid Form, plus the amounts of all Alternates to be included in the Contract Sum at the time of award. The Contract Sum will be the sum of the Lump Sum Base Bid and the additive or deductive amounts for all Alternates that University has selected to be included in the Contract Sum as of the time of award.

6.3.4 The University will post the Bid results in a public place at the address where the Bids are received (unless another address is specified in the Bidding Documents).

6.3.5 University will select the apparent lowest responsive and responsible Bidder and notify such Bidder on University's form within **60** days (unless the number of days is modified in Supplementary Instructions to Bidders) after the Bid Deadline or reject all Bids. Within **10** days after receipt of notice of selection as the apparent lowest responsive and responsible Bidder, Bidder shall submit to University all of the following items:

- .1 Three originals of the Agreement signed by Bidder.
- .2 Three originals of the Payment Bond required under Article 11 of the General Conditions.
- .3 Three originals of the Performance Bond required under Article 11 of the General Conditions.
- .4 Certificates of Insurance on form provided by University required under Article 11 of the General Conditions.
- .5 Name of, qualifications of, and references for the Superintendent proposed for the Work.
- .6 Names of all Subcontractors, with their addresses, telephone number, facsimile number, contact person, portion of the Work and designation of any Subcontractor as a Small Business Enterprise (SBE), Disadvantaged Business Enterprise (DBE), Women-owned Business Enterprise (WBE) and Disabled Veteran Business Enterprise (DVBE) on Report of Subcontractor Information in the form contained in the Exhibits. Evidence, as required by University, of the reliability and responsibility of the proposed Subcontractors such as statements of experience, statements of financial condition, and references.
- .7 Preliminary Contract Schedule as required under Article 3 of the General Conditions.
- .8 If Bidder wishes to utilize securities in lieu of retention beginning with the first Application for Payment, Selection of Retention Options accompanied by a completed Escrow Agreement for Deposit of Securities in Lieu of Retention and Deposit of Retention in the form contained in the Exhibits.

.9 Cost Breakdown as required by Article 9 of the General Conditions.

6.3.6 Prior to award of the Contract, University will notify Bidder in writing, if University, after due investigation, objects to a Subcontractor or Superintendent proposed by Bidder, in which case Bidder shall propose a substitute acceptable to University. Substitution of Superintendent shall be made in accordance with Article 3 of the General Conditions. Substitution of a Subcontractor shall be made in accordance with Article 5 of the General Conditions. Failure of University to object to a proposed Superintendent or Subcontractor prior to award shall not preclude University from requiring replacement of Superintendent or any Subcontractor based upon information received subsequent to award, information which cannot be properly evaluated prior to award due to time constraints, or information relating to a failure to comply with the requirements of the Contract.

6.3.7 If Bidder submits three originals of the signed Agreement and all other items required to be submitted to University within **10** days after receipt of notice of selection as the apparent lowest responsive and responsible Bidder, and if all such items comply with the requirements of the Bidding Documents and are acceptable to University, University will award the Contract to Bidder by signing the Agreement and returning a signed copy of the Agreement to Bidder.

6.3.8 If University consents to the withdrawal of the Bid of the apparent lowest responsive and responsible Bidder, or the apparent lowest responsive and responsible Bidder fails or refuses to sign the Agreement or submit to University all of the items required by the Bidding Documents, within 10 days after receipt of notice of selection, or that Bidder is not financially or otherwise qualified to perform the Contract, University may reject such Bidder's Bid and select the next apparent lowest responsible Bidder, until all Bids are exhausted, or reject all Bids. Any Bidder whose Bid is rejected because the Bidder has failed or refused, within 10 days after receipt of notice of selection, to sign the Agreement or submit to University all of the items required by the Bidding Documents, shall be liable to the University for all resulting damages.

## **ARTICLE 7 - BID PROTEST**

### **7.1 FILING A BID PROTEST**

7.1.1 Any Bidder, person, or entity may file a Bid protest. The protest shall specify the reasons and facts upon which the protest is based and shall be filed in writing with the Facility not later than 3 business days after:

- .1 if the Bid Form does not contain any Alternate(s), the date of the Bid opening;
- .2 if the Bid Form contains any Alternate(s), the date of posting in a public place of Bid results.

7.1.2 If a Bid is rejected by the Facility, and such rejection is not in response to a Bid protest, any Bidder, person or entity may dispute that rejection by filing a Bid protest (limited to the rejection) within 3 business days of the rejected Bidder's receipt of the notice of rejection.

### **7.2 RESOLUTION OF BID CONTROVERSY**

7.2.1 Facility will investigate the basis for the Bid protest and analyze the facts. Facility will notify Bidder whose Bid is the subject of the Bid protest of evidence presented in the Bid protest and evidence found as a result of the investigation, and, if deemed appropriate, afford Bidder an opportunity to rebut such evidence, and permit Bidder to present evidence that it should be allowed to perform the Work. If deemed appropriate by Facility, an informal hearing will be held. Facility will issue a written decision within 15 days following receipt of the Bid protest, unless factors beyond Facility's reasonable control prevent such a resolution, in which event such decision will be issued as expeditiously as circumstances reasonably permit. The decision will state the reasons for the action taken by Facility. A copy of the

decision will be furnished to the protestor, the Bidder whose Bid is the subject of the Bid protest, and all Bidders affected by the decision. As used in this Article 7, a Bidder is affected by the decision on a Bid protest if a decision on the protest could have resulted in the Bidder not being the lowest responsible and responsive Bidder for the Contra

7.2.2 Notwithstanding the provisions of Article 7.2.1, at the election of Facility, a Bid protest may be referred directly to University's Construction Review Board without prior investigation and review by Facility. The Chair of the Construction Review Board will either decide the Bid protest or appoint a Hearing Officer. If a Hearing Officer is appointed, the Hearing Officer will review the Bid protest in accordance with the provisions of Article 7.2.4.

7.2.3 Bidder whose Bid is the subject of the protest, all Bidders affected by the Facility's decision on the protest, and the protestor have the right to appeal to the Construction Review Board if not satisfied with Facility's decision. The appeal must be in writing and shall specify the decision being appealed and all the facts and circumstances relied upon in support of the appeal. The appeal must be received by the Chair, Construction Review Board, by close of business not later than the 5th day following appellant's receipt of the written decision of Facility, at the following address:

Chair, Construction Review Board  
University of California  
Office of the President  
1111 Franklin Street, 6th Floor  
Oakland, CA 94607-5200  
Attention: Assistant Director, Design & Construction Policy

A copy of the appeal shall be sent to all parties involved in the Bid protest and to Facility. An appeal received after close of business is considered received as of the next business day. If the final date for receipt of an appeal falls on a Saturday, Sunday, or University holiday, the appeal will be considered timely only if received by close of business on the following business day.

7.2.4 The Chair of the Construction Review Board will review the Facility's decision and the appeal, and issue a written decision, or if appropriate, appoint a Hearing Officer to conduct a hearing and issue a written decision. If a hearing is held, the hearing shall be held not later than the 10th day following the appointment of the Hearing Officer unless the Hearing Officer for good cause determines otherwise. The written decision of the Chair or Hearing Officer will state the basis of the decision, and the decision will be final and not subject to any further appeal to University. The Chair or Hearing Officer may consult with the University's Office of the General Counsel on the decision as to legal form. The University will complete its internal Bid protest procedures before award of the Contract.

**SUPPLEMENTARY INSTRUCTIONS TO BIDDERS**

1. Contract Time will be the number of days between the date specified for the commencement of work in the Notice to Proceed and the calendar date specified in the bidding documents for the completion of the entire Project. However, the Contract Time will be no less than the number of days between the latest date specified for the commencement of the Prime Trade Contract in the Preliminary Master Schedule and the calendar date specified in the bidding documents for the completion of the entire Project and no more than the number of days between the earliest date specified for the commencement of the Prime Trade Contract in the Preliminary Master Schedule and the calendar date specified in the bidding documents for the completion of the entire Project.
2. Requests for clarification or interpretation of the Bidding Documents must be in **writing** and received by **Thursday, March 28, 2013 at 4:00 P.M.** Questions received after the above-noted deadline may be answered at the discretion of the University's Representative. **Questions may be E-Mailed only:**

Jessica Duffy – University of California, Merced  
email: [jduffy2@ucmerced.edu](mailto:jduffy2@ucmerced.edu)

Revisions, additions or deletions will be made by written addenda issued by Physical Planning Design & Construction only.

3. A **MANDATORY** Pre-Bid Conference will be conducted on **Wednesday, March 27, 2013** beginning promptly at **2:00PM**. Participants shall meet at the address below.

University of California, Merced  
767 E. Yosemite Ave, Suite C  
Merced California 95340

If you need accommodations related to disabilities, please call **Jessica Duffy** at **(209) 228-4479** at least 3 working days prior to Pre-Bid Conference or Bid Opening.

4. Bids will be received on or before the Bid Deadline and only at:

**Overnight Delivery or Hand Delivery ONLY:**

University of California, Merced  
767 E. Yosemite Ave, Suite C  
Merced, CA 95340

Or by US Mail at:

University of California, Merced  
Physical Planning, Design & Construction  
5200 N Lake Road  
Merced, CA 95343

5. Bids will be opened at:

**Thursday, April 4, 2013**  
(See advertisement for details)  
767 E Yosemite Ave, Suite C  
Merced, CA 95340



6. If Contractor fails to meet Substantial Completion milestones as described in the summary of work 01 12 00.02 (subject to time extension duly granted in the manner and for the causes specified in the General Conditions), Contractor shall be assessed liquidated damages the sum of **\$500.00** for each day the Work remains incomplete beyond the expiration date of the Contract Time. After Substantial Completion, the rate for liquidated damages shall be reduced to **\$250.00** per day. See Article 5 of the Agreement for detailed requirements.
7. There are no prequalification requirements for Bid Release 2.

**INFORMATION AVAILABLE TO BIDDERS**

The following information is made available for the convenience of bidders and is not a part of the Contract. The information is provided subject to the provisions of Article 3 of the General Conditions.

1. State of California, Department of Industrial Relations, Prevailing Wage Determinations for Statewide, Northern California, and Merced County may be found at [http://www.dir.ca.gov/DLSR/statistics\\_research.html](http://www.dir.ca.gov/DLSR/statistics_research.html)
  - A. No special determinations have been received from the Department of Industrial Relations for this project.
  - B. 1st publication date of the Advertisement for Bids.
2. List of General Contractors who are prequalified to submit bids.



121 HERON WAY, SUITE D  
MERCED, CA  
95340  
P. 209-384-7552  
F. 209-384-8218

October 31, 2011  
File No.: 122539.GEO

**University of California, Merced**  
Physical Planning, Design, and Construction  
P.O. Box 2039  
Merced, California 95344

Attention: Ms. Min Jiang

**SUBJECT: Geotechnical Investigation Report  
Proposed Student Service Building  
University of California, Merced  
5200 N. Lake Road  
Merced County, California**

Dear Ms. Jiang:

The attached report presents the results of a geotechnical investigation for the proposed Student Service Building project at the University of California campus located in Merced, California. The report describes the study, findings, conclusions and recommendations for use in project design.

Kleinfelder appreciates the opportunity to provide geotechnical engineering services to the University of California, Merced during the design phase of this project. If there are any questions concerning the information presented in this report, please contact this office at your convenience.

Respectfully submitted,  
**KLEINFELDER, INC.**

Michael R. Beltran, E.I.T.  
Staff Engineer

David L. Pearson, P.E., G.E.  
Principal Geotechnical Engineer

MRB:DLP:sj



**GEOTECHNICAL INVESTIGATION REPORT  
PROPOSED STUDENT SERVICE BUILDING  
UNIVERSITY OF CALIFORNIA, MERCED  
MERCED, CALIFORNIA**

October 31, 2011

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**ONLY THE CLIENT OR ITS DESIGNATED REPRESENTATIVES MAY USE THIS  
DOCUMENT AND ONLY FOR THE SPECIFIC PROJECT FOR WHICH THIS REPORT  
WAS PREPARED.**

A Report Prepared for:

**University of California, Merced**  
Physical Planning, Design, and Construction  
P.O. Box 2039  
Merced, California 95344

**GEOTECHNICAL INVESTIGATION REPORT  
PROPOSED STUDENT SERVICE BUILDING  
UNIVERSITY OF CALIFORNIA, MERCED  
MERCED, CALIFORNIA**

Kleinfelder Job No.: 122539.GEO

Prepared by:



Michael R. Beltran, E.I.T.  
Staff Engineer



David L. Pearson, P.E., G.E.  
Principal Geotechnical Engineer



**KLEINFELDER, INC.**  
121 Heron Way, Suite D  
Merced, California 95340  
(209) 384-7552

October 31, 2011

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# **1 INTRODUCTION**

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## **1.1 GENERAL**

This report presents the results of a geotechnical investigation for the proposed Student Service Building at the University of California campus located in Merced, California. The purpose of the investigation was to explore and evaluate the subsurface conditions at the site and develop geotechnical engineering recommendations to aid in project design. The Site Location Map, presented on Plate 1, shows the location of the project and the Plot Plan, presented on Plate 2, shows the approximate boring locations and foot print of the proposed building.

This report includes recommendations related to the geotechnical aspects of project design. Conclusions and recommendations presented in this report are based on subsurface conditions encountered at the locations of the exploration, as well as the provisions and requirements outlined in the “Additional Services” and “Limitations” Sections of this report. Recommendations presented herein should not be extrapolated to other areas or used for other projects without prior review.

## **1.2 PROPOSED CONSTRUCTION**

The proposed project will involve the design and construction of two structures. The smaller structure will be one-story and approximately 4,600 square feet. The larger structure will be three-story and with a ground floor area of approximately 8,500 square feet. Both structures could be either steel-framed or concrete masonry structures with slab-on-grade floors. Maximum wall and column loads are anticipated to be less than 5.0 kips per lineal foot and 500 kips, respectively. Appurtenant construction is anticipated to include underground utilities and landscaping.

No grading plan is available at this time. Cuts and fill of up to 3 feet are anticipated to create pad grade and positive site drainage.



### 1.3 PURPOSE AND SCOPE OF SERVICES

The purpose of this investigation was to evaluate the site subsurface conditions and develop geotechnical recommendations and opinions to assist in project design. The scope of our services was outlined in our proposal dated September 9, 2011, and included the following:

- A field exploration program consisting of drilling, sampling and logging of seven (7) exploratory borings on the site;
- Laboratory testing to evaluate relevant geotechnical engineering parameters of the subsurface soils including corrosion potential;
- Engineering analysis of the data gathered; and
- Preparation of this report, which includes:
  - ☐ A description of the proposed project, including a vicinity map showing the location of the site and a site plan showing the locations of the exploration points for this study;
  - ☐ A description of the site surface and subsurface conditions encountered during the field investigation;
  - ☐ A summary of the field exploration and laboratory testing program;
  - ☐ Comments on groundwater conditions encountered and regional groundwater;
  - ☐ Recommended 2010 California Building Code (CBC) seismic design criteria;
  - ☐ Comments on liquefaction potential and seismically induced settlement;
  - ☐ Recommendations for site preparation and earthwork grading;
  - ☐ Recommendations for conventional foundation design, including available bearing capacity of foundation soil for sustained and total combined loading and anticipated settlement;
  - ☐ Recommendations for resistance of lateral loads;
  - ☐ Recommended subgrade preparation for concrete slabs-on-grade;

- ☐ Results of preliminary soil corrosion potential screening tests and comments on the corrosion potential of on-site soils to buried metal and concrete; and,
- ☐ General comments regarding site drainage.

## **2 FIELD EXPLORATION AND LABORATORY TESTING**

---

### **2.1 FIELD EXPLORATION**

The field exploration, conducted on October 3 and 4, 2011, consisted of drilling seven (7) exploratory test borings and site reconnaissance by a staff engineer. The test borings were drilled with a CME 75 truck mounted drill rig utilizing hollow stem auger and rotary wash techniques. The borings were advanced to depths ranging from 26½ to 51½ feet below the existing ground surface. The approximate locations of the test borings are indicated on the Plot Plan, Plate 2.

The soils encountered in the borings were visually classified in the field and a continuous log for each boring was recorded. Relatively undisturbed samples were collected from the test borings at selected depths by driving a 2.5-inch I.D. split barrel sampler containing brass liners into the undisturbed soil with a 140-pound automatic hammer free falling a distance of 30 inches. In addition, a 1.4-inch I.D. standard penetrometer (SPT) was driven at selected depths in accordance with ASTM D1586 test procedures. The standard penetration sampler was used without liners. Resistance to sampler penetration was noted as the number of blows per 6 inches over 18 inches of sampler penetration on the boring logs. The blow counts listed in the boring logs have not been corrected for the effects of overburden pressure, sampler size, or hammer efficiency. Bulk samples were also obtained from auger cuttings at some of the boring locations. The borings were backfilled with auger cuttings.

### **2.2 FIELD AND LABORATORY TESTS**

Penetration rates, determined in general accordance with ASTM D1586, were used to aid in evaluating the consistency, compression, and strength characteristics of the foundation soils.

Laboratory tests were performed on selected near surface samples to evaluate certain physical characteristics. The following laboratory tests were used to develop the design geotechnical parameters:

- ☐ Unit Weight (ASTM D2937)
- ☐ Moisture Content (ASTM D2216)
- ☐ pH and Minimum Resistivity (California Test Method No. 301)
- ☐ Soluble Sulfate Content (California Test Method No. 417)
- ☐ Soluble Chloride Content (California Test Method No. 422)
- ☐ Grain-Size Distribution (ASTM D422, without hydrometer)
- ☐ Direct Shear (ASTM D3080)
- ☐ Consolidation Test (ASTM D2436)
- ☐ Plasticity Index (ASTM D4318)
- ☐ Expansion Index (ASTM D4829)
- ☐ Moisture Density Relationship (ASTM D1557)

The dry density, moisture content, expansion index, and plasticity index test results are shown on the boring logs in Appendix A. The soluble sulfate, soluble chloride, pH and minimum resistivity are discussed in the “Corrosion Potential” section (Section 6.3). The remaining test results are provided in Appendix B.

### **3 SITE AND SUBSURFACE CONDITIONS**

---

#### **3.1 SITE DESCRIPTION**

The project site is located north of the intersection of Ansel Adams Road and Scholars Lane in the UC Merced campus. It is bound by the Ansel Adams Road to the southwest, the Social Sciences and Management Building to the southeast, the Le Grand canal to the northeast, and an empty lot to the northwest. The site grade trends upward from the southeast to the northwest. The elevation difference between the low and high portions of the site is about 2 to 3 feet

At the time of the field reconnaissance, the northwestern portion of the site was occupied by storage containers and equipment used by UC Merced facilities department. The southeastern portion of the site was occupied by a vacant lot covered with some decomposed granite and gravel.

#### **3.2 EARTH MATERIALS**

The following description provides a general summary of the subsurface conditions encountered during the field exploration and further validated by the laboratory-testing program. For a more thorough description of the actual conditions encountered at specific boring locations, refer to the boring logs presented in Appendix A (Plates A-4 through A-10). All soils have been classified in general conformance to the Unified Soil Classification System (ASTM D2487).

The majority of the site is covered with a shallow, variably thick layer of fill. Natural soil appears to be exposed at the southeastern corner of the project site. The undocumented fill becomes thicker from the southeastern portion of the site to the northwestern portion of the site. This surficial undocumented fill primarily consists of sandy clay to clayey sand.

The natural soil in the general site vicinity is mapped as non-marine Plio-Pleistocene and middle and/or lower Pliocene non-marine sedimentary deposits. The natural soil encountered is comprised generally of laterally discontinuous layers of sandy clay, silt, poorly graded sand and silty sand. These soils are generally over-consolidated sediments with a relative consistency of medium dense to very dense for the granular material and medium stiff to hard for the fine-grained material. Gravel, up to 2 inches in diameter, was encountered at various depths in the borings.

### **3.3 GROUNDWATER**

Groundwater was encountered in borings B-1, B-2, and B-6 at approximately 25 feet below existing grade. This ground water is most likely perched seepage from the present high stage of the Le Grand Canal. The State of California Department of Water Resources, "Lines of Equal Elevation of Water in Wells", Spring 2006 indicates the nearest mapped groundwater contour elevation is about 1 mile south. Depth to regional ground water is about 70 feet below the existing ground surface elevation at the contour line. While it is possible that ground water conditions at the site could change at some time in the future due to variations in the stage of the Le Grand Canal or nearby creeks, rainfall, ground water withdrawal or recharge, construction activities, or other factors not apparent at the time of the test borings, it is not anticipated that the changes would be substantial. Ground water is not anticipated to effect design or anticipated construction.

## 4 GEOLOGIC CONDITIONS

### 4.1 FAULTS LOCAL TO THE PROPOSED FACILITY

The project site and its vicinity are located in an area traditionally characterized by low seismic activity. There are no known faults, which cut through the local soils in or near the site, and the site is not located in an Alquist-Priolo Earthquake Fault Zone as defined by Special Publication 42 (revised 2007) published by the California Geologic Survey (CGS). Based on the current understanding of the geologic framework and tectonic setting of the proposed project, the primary sources of seismic shaking are anticipated to be the Coast Range/Sierran Block fault and Foothill Fault System. The Foothill Fault System would likely be the most significant.

### 4.2 SEISMIC DESIGN CRITERIA

For a code-based (2010 CBC) design, the estimated Maximum Considered Earthquake (MCE) mapped spectral accelerations for 0.2 second and 1 second periods ( $S_S$  and  $S_1$ ) and associated soil amplification factors ( $F_a$  and  $F_v$ ) are presented in Table 4.2-1. Corresponding site modified ( $S_{MS}$  and  $S_{M1}$ ) and design ( $S_{DS}$  and  $S_{D1}$ ) spectral accelerations are also presented in Table 4.2-1. The Site Class is D. The Seismic Design Category is estimated to be D.

**TABLE 4.2-1  
2010 CBC SEISMIC DESIGN PARAMETERS**

Parameter	Value	2010 CBC Reference
$S_S$	0.507g	Section 1613.5.1
$S_1$	0.223g	Section 1613.5.1
Site Class	D	Table 1613.5.2
Seismic Design Category	D	Table 1613.5.6(2)
$F_a$	1.394	Table 1613.5.3(1)
$F_v$	1.955	Table 1613.5.3(2)
$S_{MS}$	0.707g	Section 1613.5.3
$S_{M1}$	0.435g	Section 1613.5.3
$S_{DS}$	0.471g	Section 1613.5.4
$S_{D1}$	0.290g	Section 1613.5.4

The peak horizontal ground accelerations (PHGA) associated with the maximum considered earthquake and design earthquake are 0.28g and 0.19g, respectively.

### **4.3 LIQUEFACTION**

In order for liquefaction, and possible associated effects, of soils due to ground shaking to occur, it is generally accepted that four conditions will exist:

- The subsurface soils are in a relatively loose state,
- The soils are saturated,
- The soils are non-plastic, and
- Ground shaking is of sufficient intensity to act as a triggering mechanism.

Geologic age also influences the potential for liquefaction. Sediments deposited within the past few thousand years are generally much more susceptible to liquefaction than older Holocene sediments; Pleistocene sediments are even more resistant; and pre-Pleistocene sediments are generally immune to liquefaction (Youd, 2001).

Based on the ground shaking which may be expected at this site, the relative density, soil type, design groundwater at 25 feet and geologic age of the sediments, analysis utilizing Youd (2001) indicates liquefaction, and associated seismically induced settlement, is considered unlikely.



## **5 EARTHWORK**

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### **5.1 GENERAL**

Based on the results of the various field and laboratory testing, and the geotechnical analysis conducted by Kleinfelder, it is geotechnically feasible to develop the site using conventional grading and foundation construction techniques.

The investigation has indicated moderate to high expansion potential (Plasticity Index (PI) of 13 to 26 and Expansion Index (EI) to 194) for the near surface clayey soils. Expansive soils are susceptible to volume changes associated with changes in soil moisture content. The potential for future differential movement resulting from these soils can be reduced to normally tolerable levels by following the recommendations presented in this report. The intent of the recommendations is to result in a degree of saturation of about 80% to 85% at the time of construction. Moisture conditioning and compaction mitigation implemented during grading should be consistent with the soil expansiveness. Careful attention must be paid to future maintenance, including site drainage and irrigation practices.

Recommendations regarding site grading are presented in subsequent sections of this report. All reference to relative compaction, maximum density, and optimum moisture is based on ASTM Test Method D1557.

### **5.2 SITE PREPARATION**

#### **5.2.1 Stripping**

Any existing annual grasses and weeds or other vegetation which may exist at the time of grading, should be stripped and removed. Based on conditions observed at the time of field exploration, stripping of organics may involve the upper 3 to 4 inches of the site surface.

### **5.2.2 Disturbed Soil, Undocumented Fill and Subsurface Obstructions**

The gravel surfacing and existing undocumented surface fill should be removed, if not excavated by planned cuts. Initial site grading should include a reasonable search to locate soil disturbed by previous activity, undocumented fill soils and any abandoned underground structures, irrigation systems, or utilities that may exist within the area of construction. Any obstructions or deleterious material should be removed from the project area. Any disturbed or loose soils, or undocumented fill, which are encountered, should be excavated to expose firm native material.

The encountered fill or disturbed soil can be reused in fills, provided they are free of deleterious material.

### **5.2.3 Over-excavation**

The site undisturbed soil is adequate for structure support. Consequently, other than undocumented fill or otherwise unsuitable soils, no general site over-excavation is anticipated.

### **5.2.4 Scarification and Compaction**

Following site stripping and any necessary removal, all areas to receive engineered fill or areas of shallow cut (exposes clayey soils) should be properly prepared. The exposed surface should be scarified to a depth of 8 inches and moisture conditioned to a minimum 4% over optimum, and compacted to at least 88%, but not more than 92%, relative compaction, as determined by ASTM D1557.

## **5.3 ENGINEERED FILL**

### **5.3.1 Materials**

All engineered fill soils should be nearly free of organic or other deleterious debris and less than 3 inches in maximum dimension. The native soil materials, exclusive of

debris, may be used as engineered fill provided they contain less than 3 percent organics by weight (ASTM D2974).

Recommended requirements for any imported soil to be used as engineered fill, as well as applicable test procedures to verify material suitability, are provided on Table 5.3-1.

**TABLE 5.3-1  
CRITERIA FOR IMPORTED FILL**

<u>Gradation</u>		<u>Test Procedures</u>	
<u>Sieve Size</u>	<u>Percent Passing</u>	<u>ASTM<sup>1</sup></u>	<u>Caltrans<sup>2</sup></u>
76 mm (3 inch)	100	C136	202
19 mm (¾ inch)	80 – 100	C136	202
No. 4	60 - 100	C136	202
No. 200	20 – 70	C136	202
<u>Plasticity</u>			
Expansion Index			
< 80		D4318	204
<u>Soluble Sulfates</u>			
< 2000 ppm		-	417
<u>Soluble Chloride</u>			
< 300 ppm		-	422
<u>Resistivity</u>			
> 2000 ohm-cm		-	532
Notes: <sup>1</sup> American Society for Testing and Materials Standards (latest edition) <sup>2</sup> State of California, Department of Transportation, Standard Test Methods (latest edition)			

Any imported materials to be used for engineered fill should be sampled and tested by a representative of the project Geotechnical Engineer prior to being transported to the site.

### **5.3.2 Compaction Criteria**

On-site soil used for engineered fill, which has an EI greater than 40, should be uniformly moisture-conditioned to at least 4% above optimum, placed in horizontal lifts less than 8 inches in loose thickness, and compacted to at least 88 percent, but not more than 92 percent, as determined by ASTM D1557. The general intent is to bring the expansive material to about 80% to 85% saturation at the time of construction. Moisture and compaction may be adjusted, as necessary, to achieve this intent. Disking and/or blending may be required to uniformly moisture-condition soils used for engineered fill.

### **5.3.3 Construction Considerations**

Should site grading be performed during or subsequent to wet weather, near-surface site soils may be significantly above optimum moisture content. These conditions could hamper equipment maneuverability and efforts to compact site soils to the recommended compaction criteria. Disking to aerate, chemical treatment, replacement with drier material, stabilization with a geotextile fabric or grid, or other methods may be required to reduce excessive soil moisture and facilitate earthwork operations. Any consideration of chemical treatment (e.g. lime) to facilitate construction would require additional soil chemistry evaluation and could affect landscape areas or some building materials.

If construction is performed during dry, hot or windy weather, it may be necessary to periodically apply surface watering to counter evaporative loss or re-establish moisture prior to constructing slabs (see Section 6.2.1).

## **5.4 TEMPORARY EXCAVATIONS**

### **5.4.1 General**

All excavations must comply with applicable local, State, and Federal safety regulations including the current OSHA Excavation and Trench Safety Standards. Construction site safety is generally the responsibility of the contractor, who shall also be responsible for the means, methods, and sequencing of construction operations. Information is provided as a service to the client. Under no circumstances should the information provided be interpreted to mean that Kleinfelder is assuming responsibility for construction site safety or the contractor's activities; such responsibility is not being implied and should not be inferred.

### **5.4.2 Excavations and Slopes**

The contractor should be aware that slope height, slope inclination, or excavation depths (including utility trench excavations) should in no case exceed those specified in local, State, and/or Federal safety regulations (e.g., OSHA Health and Safety Standards for Excavations, 29 CFR Part 1926, or successor regulations). Such regulations are strictly enforced and, if they are not followed, the owner, contractor, and/or earthwork and utility subcontractors could be liable for substantial penalties.

All excavations should be constructed and maintained in conformance with current OSHA requirements (29 CFR Part 1926). Site soil is most closely associated with OSHA Type B soil.

### **5.4.3 Construction Considerations**

Heavy construction equipment, building materials, excavated soil, and vehicular traffic should be kept sufficiently away from the top of any excavation to prevent any unanticipated surcharging. If it is necessary to encroach upon the top of an excavation, Kleinfelder can provide comments on slope gradients or loads on shoring to address surcharging, if provided with the geometry. Shoring, bracing, or underpinning required

for the project (if any), should be designed by a professional engineer registered in the State of California.

During wet weather, earthen berms or other methods should be used to prevent runoff water from entering all excavations. All runoff should be collected and disposed of outside the construction limits.

## **5.5 TRENCH BACKFILL**

### **5.5.1 Materials**

Pipe zone backfill (bedding, haunching and initial backfill (per ASTM D2321)) should consist of soil compatible with design requirements for the specific types of pipes. Consideration should be given to use of Class III or better material. It is recommended the project designer or pipe supplier develop the material specifications based on planned pipe types, bedding conditions, tolerable deflection and other factors beyond the scope of this study. Randomly excavated on-site soil will likely be Class IV material per ASTM D2321.

Trench zone backfill (i.e., material placed between the pipe zone backfill and finished subgrade) may consist of on-site soil, which meets the requirements for engineered fill. It should be noted that the clay soil compaction will be relatively labor intensive in narrow trenches. If a granular trench zone backfill is used in trenches within the upper 5 feet below finish grade, a lean concrete or on-site clay soil “dike” should be placed where trenches cross the perimeter of structures to minimize lateral moisture migration beneath the structure.

### **5.5.2 Compaction Criteria**

All trench backfill should be placed and compacted in accordance with recommendations provided above for engineered fill. Reduced compaction (85% minimum) could be specified for trench zone backfill in non-structural areas. Mechanical compaction is recommended; ponding or jetting should not be used.

Table 5.5-1 provides estimated geotechnical parameters for designers to consider in evaluating pipe zone backfill criteria that is compatible with pipe types and deformation tolerances.

**TABLE 5.5-1  
PIPE ZONE BACKFILL PARAMETERS**

Soil Stiffness Modulus (psi)			Backfill Density (pcf)	
E' <sub>n</sub> (Trench Sidewall)	E' <sub>b</sub> (Backfill)		85% Compaction	90% Compaction
	85% Compaction	90% Compaction		
Class IVA				
4000	700	1000	115	122
Class III				
4000	1000	1350	115	122

E'<sub>n</sub> represents the modulus for the undisturbed natural soil and is based on relative density and data by Howard (1996). E'<sub>b</sub> is the modulus for backfill soil and is based on data by Hartley and Duncan (1982) and Watkins and Anderson (2000). The design E' will be dependent upon the pipe diameter and trench width, which dictates the relative influence of E'<sub>n</sub> and E'<sub>b</sub>. Methods by Howard (1996) are suggested for evaluating the design E'. Kleinfelder can furnish a recommended design E', if provided with pipe diameter and specifications for trench construction.

In evaluating the maximum load (W<sub>c</sub>) on pipes, a K x u' (K=0.61 and u'=0.25) of 0.15 can be used in determining the load coefficient factor C<sub>d</sub>.

## **6 DESIGN RECOMMENDATIONS**

---

### **6.1 SPREAD FOUNDATIONS**

#### **6.1.1 General**

The proposed structures may be supported by conventional shallow footings supported on approved undisturbed native soil or properly engineered fill. The following recommendations are based on the assumption that the recommendations in Section 5, “Earthwork”, have been implemented. Recommendations regarding the geotechnical aspects of building design are presented below.

The foundation soil is anticipated to have a high expansion potential. Therefore, foundation embedment for interior and exterior footings should be at least 18 and 24 inches, respectively, below lowest final adjacent grade and it is recommended a continuous perimeter footing be used to reduce the potential for cyclic moisture variations in the clay soils below the floor slab.

Based on geotechnical considerations (e.g. expansive soils), conventional continuous footings should be reinforced with a minimum of two (2) #4 reinforcement bars near the top and two (2) #4 reinforcement bars near the bottom of the footing (four bars total). These recommendations are based on engineering judgment and experience associated with expansive soil and is not based on any structural analysis. All footings should also satisfy any reinforcement required by structural consideration.

#### **6.1.2 Allowable Vertical Bearing Pressures and Settlements**

Generally two geotechnical issues determine the design bearing pressure for conventional spread footing or mat foundations: (1) available soil bearing capacity based on the strength of the soil and/or (2) tolerable settlement.



The bearing capacity, based on the total shear strength ( angle of internal friction and cohesion) of the soil, will be somewhat dependent upon the footing geometry. Presented in Table 6.1-1 are the expressions for the allowable available bearing capacity (shear strength considerations only) for static loading (D.L + sustained L.L) and total combined loading (D.L. + L.L. + transient loading, such as wind or seismic).

**TABLE 6.1-1  
AVAILABLE ALLOWABLE BEARING**

<b>Loading Condition</b>	<b>Square Footing Available Allowable Bearing (psf)</b>
Static Loading	$4550 + 20B + 165D$
Total Combined Loading	$6825 + 30B + 250D$

In these expressions, D is the foundation depth and B is the width, in feet. The design bearing pressures are net values so the weight of embedded concrete does not need to be included in the foundation loading.

Based on engineering evaluation, Table 6.1-2 presents settlements for square and continuous foundations. Analyses assumes the sustained loading is 80% of the dead plus live load.

**TABLE 6.1-1  
ANTICIPATED SETTLEMENT**

Footing	Maximum Load		Anticipated Settlement (inch)
	Load	Bearing (psf)	
Square	To 100 kips	To 5000	0.3
	300 kips	5000	0.4
	500 kips	5000	0.5
Continuous	To 5 kips/ft	To 5000	0.3

A modulus of subgrade reaction,  $K_p$  ( $B_p = 1$  foot), of 240 pci can be used for undisturbed on-site soil and engineered fill. It should be noted that the subgrade modulus reflects the response of the subgrade under primarily elastic conditions and small deflections. It is not a characteristic intended to define soil compressibility (settlement) or load bearing capacity.

### 6.1.3 Lateral Resistance

Lateral loads can be resisted by lateral bearing against the side of the foundation and adhesion along the base of the footing. The allowable and ultimate passive pressures and adhesion for the footings are presented in Table 6.1-3.

**TABLE 6.1-3  
PASSIVE PRESSURES AND FRICTIONAL COEFFICIENTS**

Item Description	Allowable		Ultimate (FS = 1)
	Static (FS = 2)	Total Combined (FS = 1.5)	
Adhesion (psf)	400	530	800
Passive Pressure (psf/ft of depth)	1300	1730	2600
Translation to Develop Passive Pressure	0.01D	0.015D	0.02D

Note: 1. D is the depth of footing

2. Adhesion should not exceed one-half of the normal contact stress

Due to the possible expansion potential of foundation soils, passive pressure should not be considered in the upper 18 inches, unless the foundation is abutted by hardscape. If the deflection resulting from the strain necessary to develop the passive pressure is within structural tolerance, the passive pressure and frictional resistance can be used in combination. Otherwise, additional passive pressure values could be provided based on tolerable deflection. The allowable values already incorporate a factor of safety and, as such, would be compared directly to the driving loads. If analytical approaches require the input of a ratio of available resisting forces and driving loads greater than unity, the ultimate values would be used.

## **6.2 CONCRETE SLABS-ON-GRADE**

### **6.2.1 Subgrade Preparation**

Building slabs-on-grade should be supported on approved engineered fill placed as described in Section 5.2 and 5.3 of this report. Clay subgrade soil should have a moisture content of at least four (4) percent above optimum, to a depth of at least 36 inches below pad grade, immediately prior to pouring the slab or placing the vapor retarding membrane.

Consideration should be given to similar moisture conditioning beneath exterior concrete flatwork. A moisture cut-off/containment system should be provided at the free edges (not adjacent to buildings) of exterior concrete slabs. This cut-off could consist of a 10-mil PVC membrane draped vertically for a depth of 36 inches.

### **6.2.2 Capillary and Moisture/Vapor Break**

Considering the depth to ground water and the soil types, a capillary break (i.e. clean sand or gravel layer) is not necessary.

If the building contains components (flooring or equipment) which might be adversely affected by moisture or moisture vapor transmission through the floor slab, it is recommended that the slab subgrade be covered by a vapor retarding membrane, such as 10-mil polyolefin. If design should incorporate a gravel subgrade layer, the membrane should have a minimum thickness of 15 mil. As an added precaution, consideration could be given to extending the vapor retarding membrane around the footings to provide a more complete vapor barrier. The subgrade surface should be smooth and care should be exercised to avoid tearing, ripping, or otherwise puncturing the vapor retarding membrane. If the vapor retarding membrane becomes torn or disturbed, it should be removed and replaced or properly patched. It is recommended consideration be given to placing concrete directly on the vapor retarding membrane. If required by designers, the vapor retarding membrane could be covered with approximately 1 to 2 inches of saturated surface dry (SSD), relatively clean sand to protect it during construction. Concrete should not be placed if sand overlying the vapor barrier has been allowed to attain a moisture content greater than about 5% (due to precipitation or excessive moistening). Excessive water beneath interior floor slabs could result in future significant vapor transmission through the slab, adversely affecting moisture-sensitive floor coverings and the indoor environment.

It should be noted that, although the slab support discussed above is currently the industry standard, this system might not be completely effective in preventing floor slab

moisture vapor transmission problems. This system will not necessarily assure that floor slab moisture transmission rates will meet floor-covering manufacturer standards and that indoor humidity levels will not inhibit mold growth. A qualified specialist(s) with knowledge of slab moisture protection systems, flooring design and other potential components that may be influenced by moisture, should address these post-construction conditions separately. The purpose of a geotechnical study is to address subgrade conditions only, and consequently, it does not evaluate future potential conditions.

### **6.2.3 Conventional Slab Design**

Due to the expansive potential of soils, the minimum reinforcement of concrete floor systems should consist of at least #3 reinforcement bars, placed at 18 inches on center in both principal directions or the structural equivalent. The reinforcement is based on engineering judgment and experience with expansive soils and is not based on any structural analysis. The reinforcement assumes a nominal slab thickness of 4 to 5 inches. Slab thickness and reinforcement must also satisfy structural considerations. Any additional reinforcement for structural considerations should be provided by a structural engineer or building designer.

A modulus of subgrade reaction,  $K_1$  ( $B_p = 1$  foot), of 240 pci may be used for elastic analysis of slabs on properly compacted native or similar soil. If slab design should use a subgrade modulus of  $k_s$  (20-inch diameter plate), the corresponding  $k_s$  would be 125 pci.

Slab concrete should have good density, a low water/cement ratio, and proper curing to promote a low porosity. It is recommended the water/cement ratio not exceed 0.45 to mitigate vapor transfer.

Consideration should be given to some form of reinforcement of exterior slabs to aid in crack control. Additionally, dowelling of exterior slabs to building foundations should be

considered at any building doorways to minimize the potential for problematic differential heave between the exterior slab and door threshold.

### **6.3 CORROSION POTENTIAL**

A soil sample obtained from the upper 5 feet of Boring B-6 was tested to evaluate pH, minimum electrical resistivity, soluble sulfate content and soluble chloride content.

The pH of the soil tested was 7.7. The minimum electrical resistivity is 198 ohm-cm. These values could be representative of an environment that is potentially very severely corrosive to buried unprotected metals. Corrosion is dependent upon a complex variety of conditions, which are beyond the geotechnical practice. Consequently, a qualified corrosion engineer should be consulted if the owner or designers need specific recommendations on material types or protective measures.

The same sample was also evaluated for soluble sulfates and chlorides. Results suggest that a relatively low level of soluble sulfates (134 ppm) and chlorides (36 ppm) are present in on-site soils. Normal cement (Type II) should be adequate in foundation concrete. Reinforcement cover need not be increased for concrete that comes in contact with the foundation soils.

### **6.4 SITE DRAINAGE**

Providing and maintaining adequate site drainage to prevent entrapment and ponding of surface water and excessive moisture migration into moisture sensitive (expansive) soil is very important. This area of mitigation is one of the most difficult to accomplish because it requires a partnering between design, construction and maintenance of the facility. The design and construction needs to provide the basis for good drainage. This includes:

- Sufficient pad height to allow for proper drainage.

- Defined drainage gradients away from the structure to points of conveyance, such as drainage swales and/or area drains and discharge pipe.
- Roof drainage connected to proper areas of discharge.

Future operation of the property must maintain the established site drainage by not blocking or obstructing gradients away from the building and swales which convey surface run-off to points of discharge without providing some alternative drainage means (e.g. area drains and subsurface pipes). Only maintenance and landscape personnel can avoid over-watering or under-watering. Ideally, the area adjacent to building would be covered with hardscape to aid in maintaining year-round uniformity of soil moisture. Where planter areas near the building are established, it is important to prevent surface run-off from entering the planter and watering practices must strive to use only sufficient water to sustain and promote plant growth. Well-maintained low-volume emitter irrigation (drip system) is best suited for planters adjacent to buildings. All landscape irrigation should strive to promote a soil moisture condition that is relatively uniform year round.

## **7 ADDITIONAL SERVICES**

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### **7.1 PLANS AND SPECIFICATIONS REVIEW**

It is recommended Kleinfelder conduct a general review of plans and specifications to evaluate that the earthwork and foundation recommendations have been properly interpreted and implemented during design. In the event Kleinfelder is not retained to perform this recommended review, no responsibility will be assumed for misinterpretation of the recommendations.

### **7.2 CONSTRUCTION OBSERVATION AND TESTING**

It is recommended that all earthwork during construction be monitored by a representative from Kleinfelder, including site preparation, placement of all engineered fill and trench backfill, construction of slab and pavement subgrades, and all foundation excavations. The purpose of these services would be to provide Kleinfelder the opportunity to observe the soil conditions encountered during construction, evaluate the applicability of the recommendations presented in this report to the soil conditions encountered, and recommend appropriate changes in design or construction procedures if conditions differ from those described herein.



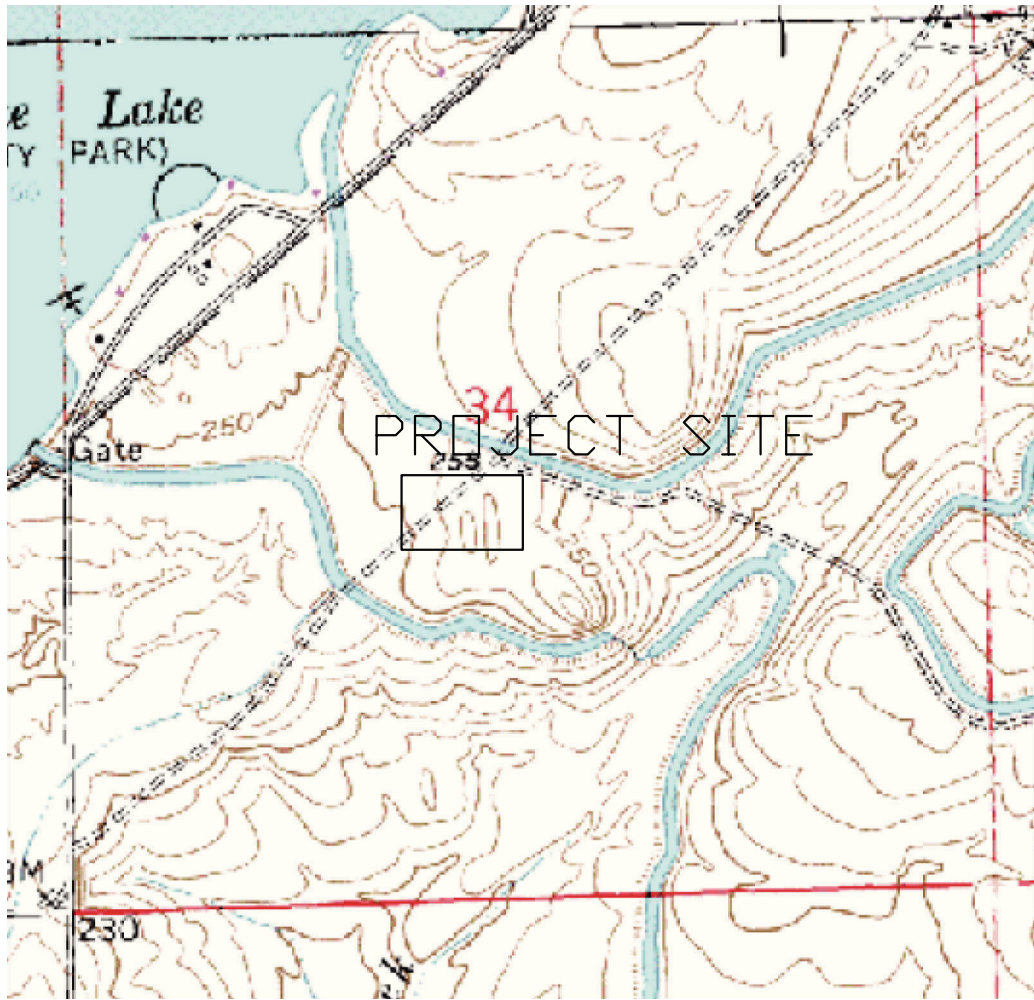
## 8 LIMITATIONS

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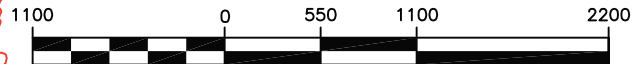
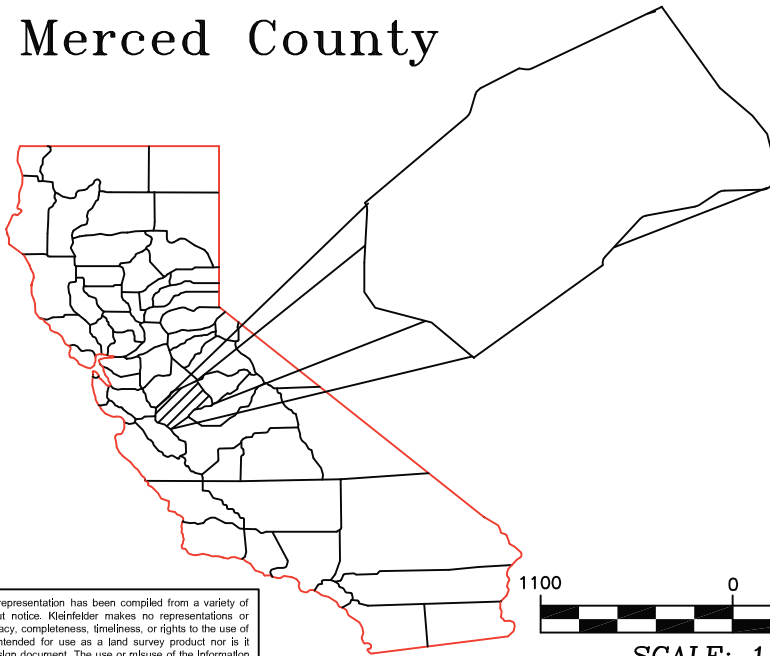
Recommendations contained in this report are based on the field observations and subsurface explorations, laboratory tests, and present knowledge of the proposed construction. It is possible that soil conditions could vary between or beyond the points explored. If soil conditions are encountered during construction that differ from those described herein, Kleinfelder should be notified immediately in order that a review may be made and any supplemental recommendations provided. If the scope of the proposed construction changes from that described in this report, the recommendations provided should also be reviewed.

This report has been prepared in substantial accordance with the generally accepted geotechnical engineering practice, as it exists in the general area at the time of the study. No warranty express or implied, is provided or intended. The recommendations provided in this report are based on the assumption that Kleinfelder will conduct an adequate program of tests and observations during the construction phase in order to evaluate compliance with the recommendations.

This report may be used only by University of California, Merced and their designated representatives and designers and governing regulatory agencies, and only for the purposes stated, within a reasonable time from its issuance, but in no event later than two years (without review) from the date of the report. Land use, site conditions or other factors may change over time, and additional work may be required with the passage of time. Any other party who wishes to use this report shall notify Kleinfelder of such intended use. Based on the intended use of the report, Kleinfelder may require that additional work be performed and that an updated report be issued. Non-compliance with any of these requirements by the client or anyone else will release Kleinfelder from any liability resulting from the use of this report by any unauthorized party.

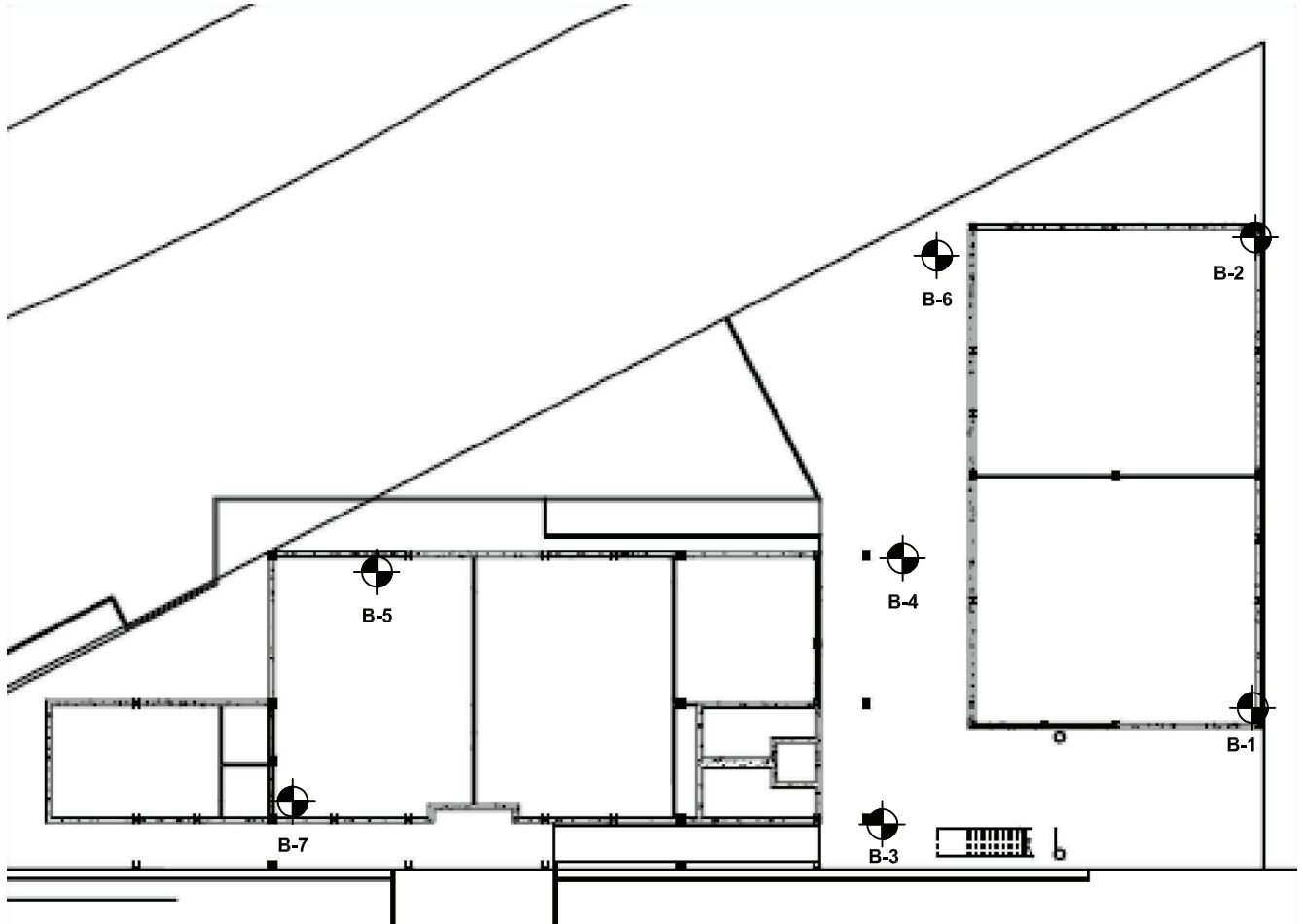


## Merced County

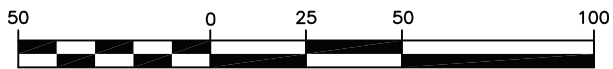


SCALE: 1 inch = 1100 ft.

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SCALE: 1 inch = 50 ft.



APPROXIMATE BORING LOCATION AND NUMBER

B-7

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PROJECT NO. 122539.GEO

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CHECKED BY: DLP

FILE NAME:

**PLOT PLAN**

UNIVERSITY OF CALIFORNIA, MERCED  
PROPOSED STUDENT SERVICE BUILDING  
MERCED, CALIFORNIA

PLATE

**2**

MERCED

# UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM 2487)

MAJOR DIVISIONS			GRAPHIC LOG		TYPICAL DESCRIPTIONS	
COARSE GRAINED SOILS  (More than half of material is larger than the #200 sieve)	GRAVELS  (More than half of coarse fraction is larger than the #4 sieve)	CLEAN GRAVELS WITH <5% FINES	Cu ≥4 and 1 ≤ Cc ≤3		GW	WELL-GRADED GRAVELS, GRAVEL-SAND MIXTURES WITH LITTLE OR NO FINES
			Cu <4 and/or 1 > Cc >3		GP	POORLY-GRADED GRAVELS, GRAVEL-SAND MIXTURES WITH LITTLE OR NO FINES
		GRAVELS WITH 5 to 12% FINES	Cu ≥4 and 1 ≤ Cc ≤3		GW-GM	WELL-GRADED GRAVELS, GRAVEL-SAND MIXTURES WITH LITTLE FINES
					GW-GC	WELL-GRADED GRAVELS, GRAVEL-SAND MIXTURES WITH LITTLE CLAY FINES
			Cu <4 and/or 1 > Cc >3		GP-GM	POORLY-GRADED GRAVELS, GRAVEL-SAND MIXTURES WITH LITTLE FINES
					GP-GC	POORLY-GRADED GRAVELS, GRAVEL-SAND MIXTURES WITH LITTLE CLAY FINES
		GRAVELS WITH >12% FINES			GM	SILTY GRAVELS, GRAVEL-SILT-SAND MIXTURES
					GC	CLAYEY GRAVELS, GRAVEL-SAND-CLAY MIXTURES
					GC-GM	CLAYEY GRAVELS, GRAVEL-SAND-CLAY-SILT MIXTURES
	SANDS  (More than half of coarse fraction is smaller than the #4 sieve)	CLEAN SANDS WITH <5% FINES	Cu ≥6 and 1 ≤ Cc ≤3		SW	WELL-GRADED SANDS, SAND-GRAVEL MIXTURES WITH LITTLE OR NO FINES
			Cu <6 and/or 1 > Cc >3		SP	POORLY-GRADED SANDS, SAND-GRAVEL MIXTURES WITH LITTLE OR NO FINES
		SANDS WITH 5 to 12% FINES	Cu ≥6 and 1 ≤ Cc ≤3		SW-SM	WELL-GRADED SANDS, SAND-GRAVEL MIXTURES WITH LITTLE FINES
					SW-SC	WELL-GRADED SANDS, SAND-GRAVEL MIXTURES WITH LITTLE CLAY FINES
			Cu <6 and/or 1 > Cc >3		SP-SM	POORLY-GRADED SANDS, SAND-GRAVEL MIXTURES WITH LITTLE FINES
					SP-SC	POORLY-GRADED SANDS, SAND-GRAVEL MIXTURES WITH LITTLE CLAY FINES
		SANDS WITH >12% FINES			SM	SILTY SANDS, SAND-GRAVEL-SILT MIXTURES
					SC	CLAYEY SANDS, SAND-GRAVEL-CLAY MIXTURES
					SC-SM	CLAYEY SANDS, SAND-SILT-CLAY MIXTURES
FINE GRAINED SOILS  (More than half of material is smaller than the #200 sieve)	SILTS AND CLAYS  (Liquid limit less than 50)			ML	INORGANIC SILTS AND VERY FINE SANDS, SILTY OR CLAYEY FINE SANDS, SILTS WITH SLIGHT PLASTICITY,	
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS	
				CL-ML	INORGANIC CLAYS-SILTS OF LOW PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS	
				OL	ORGANIC SILTS & ORGANIC SILTY CLAYS OF LOW PLASTICITY	
	SILTS AND CLAYS  (Liquid limit greater than 50)			MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILT	
				CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS	
				OH	ORGANIC CLAYS & ORGANIC SILTS OF MEDIUM-TO-HIGH PLASTICITY	



Project Number: 122539.GEO

Date: 10-05-11

Entry By: M. BELTRAN

Checked By: N. DAHLEN

File Name:

## UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D2487)

UNIVERSITY OF CALIFORNIA, MERCED  
 PROPOSED STUDENT SERVICE BUILDING  
 5200 N. LAKE ROAD  
 MERCED, CALIFORNIA

Plate

# A-1

# SOIL DESCRIPTION KEY

## MOISTURE CONTENT

DESCRIPTION	ABBR	FIELD TEST
Dry	D	Absence of moisture, dusty, dry to the touch
Moist	M	Damp but no visible water
Wet	W	Visible free water, usually soil is below water table

## CEMENTATION

DESCRIPTION	FIELD TEST
Weakly	Crumbles or breaks with handling or slight finger pressure
Moderately	Crumbles or breaks with considerable finger pressure
Strongly	Will not crumble or break with finger pressure

## PLASTICITY

DESCRIPTION	ABBR	FIELD TEST
Non-plastic	NP	A 1/8-in. (3 mm) thread cannot be rolled at any water content.
Low (L)	LP	The thread can barely be rolled and the lump or thread cannot be formed when drier than the plastic limit.
Medium (M)	MP	The thread is easy to roll and not much time is required to reach the plastic limit. The thread cannot be rerolled after reaching the plastic limit. The lump or thread crumbles when drier than the plastic limit
High (H)	HP	It takes considerable time rolling and kneading to reach the plastic limit. The thread can be rerolled several times after reaching the plastic limit. The lump or thread can be formed without crumbling when drier than the plastic limit

## STRUCTURE

DESCRIPTION	CRITERIA
Stratified	Alternating layers of varying material or color with layers at least 1/4 in. thick, note thickness
Laminated	Alternating layers of varying material or color with the layer less than 1/4 in. thick, note thickness
Fissured	Breaks along definite planes of fracture with little resistance to fracturing
Slickensided	Fracture planes appear polished or glossy, sometimes striated
Blocky	Cohesive soil that can be broken down into small angular lumps which resist further breakdown
Lensed	Inclusion of small pockets of different soils, such as small lenses of sand scattered through a mass of clay; note thickness
Homogeneous	Same color and appearance throughout

## CONSISTENCY - FINE-GRAINED SOIL

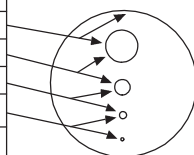
CONSISTENCY	ABBR	FIELD TEST
Very Soft	VS	Thumb will penetrate soil more than 1 in. (25 mm)
Soft	S	Thumb will penetrate soil about 1 in. (25 mm)
Firm	F	Thumb will indent soil about 1/4 in. (6 mm)
Hard	H	Thumb will not indent soil but readily indented with thumbnail
Very Hard	VH	Thumbnail will not indent soil

## GRAIN SIZE

DESCRIPTION	SIEVE SIZE	GRAIN SIZE	APPROXIMATE SIZE
Boulders	>12"	>12"	Larger than basketball-sized
Cobbles	3 - 12"	3 - 12"	Fist-sized to basketball-sized
Gravel	coarse	3/4 - 3"	Thumb-sized to fist-sized
	fine	#4 - 3/4"	Pea-sized to thumb-sized
Sand	coarse	#10 - #4	Rock salt-sized to pea-sized
	medium	#40 - #10	Sugar-sized to rock salt-sized
	fine	#200 - #10	Flour-sized to sugar-sized
Fines	Passing #200	<0.0029	Flour-sized and smaller

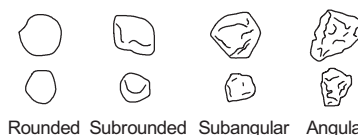
## REACTION WITH HCL

DESCRIPTION	FIELD TEST
None	No visible reaction
Weak	Some reaction, with bubbles forming slowly
Strong	Violent reaction, with bubbles forming immediately



## ANGULARITY

DESCRIPTION	ABBR	CRITERIA
Angular	A	Particles have sharp edges and relatively plane sides with unpolished surfaces
Subangular	SA	Particles are similar to angular description but have rounded edges
Subrounded	SR	Particles have nearly plane sides but have well-rounded corners and edges
Rounded	R	Particles have smoothly curved sides and no edges



## APPARENT / RELATIVE DENSITY - COARSE-GRAINED SOIL

APPARENT DENSITY	ABBR	SPT (# blows/ft)	MODIFIED CA SAMPLER (# blows/ft)	CALIFORNIA SAMPLER (# blows/ft)	RELATIVE DENSITY (%)	FIELD TEST
Very Loose	VL	<4	<4	<5	0 - 15	Easily penetrated with 1/2-inch reinforcing rod by hand
Loose	L	4 - 10	5 - 12	5 - 15	15 - 35	Difficult to penetrate with 1/2-inch reinforcing rod pushed by hand
Medium Dense	MD	10 - 30	12 - 35	15 - 40	35 - 65	Easily penetrated a foot with 1/2-inch reinforcing rod driven with 5-lb. hammer
Dense	D	30 - 50	35 - 60	40 - 70	65 - 85	Difficult to penetrate a foot with 1/2-inch reinforcing rod driven with 5-lb. hammer
Very Dense	VD	>50	>60	>70	85 - 100	Penetrated only a few inches with 1/2-inch reinforcing rod driven with 5-lb. hammer



Project Number: 122539.GEO

Date: 10-05-11

Entry By: M. BELTRAN

Checked By: N. DAHLEN

File Name:

## SOIL DESCRIPTION KEY

UNIVERSITY OF CALIFORNIA, MERCED  
PROPOSED STUDENT SERVICE BUILDING  
5200 N. LAKE ROAD  
MERCED, CALIFORNIA

Plate

**A-2**



## LOG SYMBOLS

	BULK / BAG SAMPLE	-4	PERCENT FINER THAN THE NO. 4 SIEVE (ASTM Test Method C 136)
	MODIFIED CALIFORNIA SAMPLER (2-1/2 inch outside diameter)	-200	PERCENT FINER THAN THE NO. 200 SIEVE (ASTM Test Method C 117)
	CALIFORNIA SAMPLER (3 inch outside diameter)	LL	LIQUID LIMIT (ASTM Test Method D 4318)
	STANDARD PENETRATION SPLIT SPOON SAMPLER (2 inch outside diameter)	PI	PLASTICITY INDEX (ASTM Test Method D 4318)
	NUCLEAR GAUGE	TXUU	CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION (EM 1110-1-1906)/ASTM TEST METHOD D2850
	SHELBY TUBE	EI	EXPANSION INDEX (UBC STANDARD 18-2)
	ROCK CORE	COL	COLLAPSE POTENTIAL
	WATER LEVEL (level where first encountered)	UC	UNCONFINED COMPRESSION (ASTM Test Method D 2166)
	WATER LEVEL (level after completion)		
	SEEPAGE	MC	MOISTURE CONTENT (ASTM Test Method D 2216)

## GENERAL NOTES

*Boring log data represents a data snapshot.*

*This data represents subsurface characteristics only to the extent encountered at the location of the boring.*

*The data inherently cannot accurately predict the entire subsurface conditions to be encountered at the project site relative to construction or other subsurface activities.*

*Lines between soil layers and/or rock units are approximate and may be gradual transitions.*

*The information provided should be used only for the purposes intended as described in the accompanying documents.*

*In general, Unified Soil Classification System designations presented on the logs were evaluated by visual methods.*

*Where laboratory tests were performed, the designations reflect the laboratory test results.*



Project Number: 122539.GEO

Date: 10-05-11

Entry By: M. BELTRAN

Checked By: N. DAHLEN

File Name:

### LOG KEY



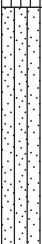
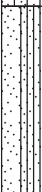
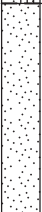
UNIVERSITY OF CALIFORNIA, MERCED  
PROPOSED STUDENT SERVICE BUILDING  
5200 N. LAKE ROAD  
MERCED, CALIFORNIA

Plate


A-3

Boring Number: B-1			Location:			Drilling Method: Hollow-stem auger		
Boring Total Depth: 26.5 ft			Coordinates (X/Y, Lat/Long): N/A° / N/A°			Drilling Equipment: CME 75		
Depth to Rock: No Rock was Encountered			Datum/Coordinate System: N/A			Drilling Company: SLAGLE DRILLING		
Date Begin/End: 10-03-11 / 10-03-11			Top of Boring Elevation:			Bit Size/Type: 8-inch		
Surface Conditions: Sand and Gravel			Coordinate Data Source: N/A			Hammer Type/Method: FREEFALL / AUTO		
WL Measurement Point: Ground Surface			Depth to Groundwater Initial/Time: 25.0 ft / hrs after			Hammer Drop/Weight: 30 in. / 140 lbs.		
Logged By: M. BELTRAN			Depth to Groundwater Final/Time: 25.0 ft / hrs after			Angle From Horizontal/Bearing: -90°		


  


Depth (ft)	Sample Type Symbol	Sample Number	Blows per 6 in.	Pocket Pen. (tsf)	Graphic Log	ASTM Symbol	Field Soil Description & Classification				Laboratory					Other Tests and Field Notes
							Description	Consistency / Apparent Density	Plasticity	Plasticity Index	Liquid Limit	Water Content (%)	Dry Unit Weight (pcf)	Passing #4 Sieve (%)	Passing #200 Sieve (%)	
12 15 24							<b>SANDY LEAN CLAY (CL)</b> - brown, moist, hard, fine grained sand					8	108			
8 24 26							<b>SANDY SILT (ML)</b> - light brown, moist, very dense, fine grained sand									
21 45 40							<b>SILTY SAND (SM)</b> - brown, moist, very dense, fine grained					14	113			
5 12 11							<b>POORLY GRADED SAND WITH SILT (SP-SM)</b> - brown, moist, medium dense, fine to medium grained									
5 15 22							<b>POORLY GRADED SAND (SP)</b> - brown, moist, dense, fine to medium grained					4	95			

	Project Number: 122539.GEO		<b>BORING LOG B-1</b>  UNIVERSITY OF CALIFORNIA, MERCED PROPOSED STUDENT SERVICE BUILDING 5200 N. LAKE ROAD MERCED, CALIFORNIA	Plate  <b>A-4</b>
	Date: 10-05-11			
	Entry By: M. BELTRAN			
	Checked By: N. DAHLEN			
	File Name:			

Boring Number: B-1		Location:		Drilling Method: Hollow-stem auger	
Boring Total Depth: 26.5 ft		Coordinates (X/Y, Lat/Long): N/A° / N/A°		Drilling Equipment: CME 75	
Depth to Rock: No Rock was Encountered		Datum/Coordinate System: N/A		Drilling Company: SLAGLE DRILLING	
Date Begin/End: 10-03-11 / 10-03-11		Top of Boring Elevation:		Bit Size/Type: 8-inch	
Surface Conditions: Sand and Gravel		Coordinate Data Source: N/A		Hammer Type/Method: FREEFALL / AUTO	
WL Measurement Point: Ground Surface		Depth to Groundwater Initial/Time: 25.0 ft / hrs after		Hammer Drop/Weight: 30 in. / 140 lbs.	
Logged By: M. BELTRAN		Depth to Groundwater Final/Time: 25.0 ft / hrs after		Angle From Horizontal/Bearing: -90°	

Depth (ft)	Sample Type Symbol	Sample Number	Blows per 6 in.	Pocket Pen. (tsf)	Graphic Log	ASTM Symbol	Field Soil Description & Classification		Laboratory						Other Tests and Field Notes	
							Description	Consistency / Apparent Density	Plasticity	Plasticity Index	Liquid Limit	Water Content (%)	Dry Unit Weight (pcf)	Passing #4 Sieve (%)		Passing #200 Sieve (%)
25			7 13 12													
							Boring completed at a depth of 26.5 ft below existing site grade.									



**KLEINFELDER**  
Bright People. Right Solutions.

Project Number: 122539.GEO	
Date: 10-05-11	
Entry By: M. BELTRAN	
Checked By: N. DAHLEN	
File Name:	


**BORING LOG B-1**  
  
 UNIVERSITY OF CALIFORNIA, MERCED  
 PROPOSED STUDENT SERVICE BUILDING  
 5200 N. LAKE ROAD  
 MERCED, CALIFORNIA

Plate  
  
**A-4**




Boring Number: B-2		Location:		Drilling Method: Hollow-stem auger	
Boring Total Depth: 31.5 ft		Coordinates (X/Y, Lat/Long): N/A° / N/A°		Drilling Equipment: CME 75	
Depth to Rock: No Rock was Encountered		Datum/Coordinate System: N/A		Drilling Company: SLAGLE DRILLING	
Date Begin/End: 10-03-11 / 10-03-11		Top of Boring Elevation:		Bit Size/Type: 8-inch	
Surface Conditions: Sand and Gravel		Coordinate Data Source: N/A		Hammer Type/Method: FREEFALL / AUTO	
WL Measurement Point: Ground Surface		Depth to Groundwater Initial/Time: 26.0 ft / hrs after		Hammer Drop/Weight: 30 in. / 140 lbs.	
Logged By: M. BELTRAN		Depth to Groundwater Final/Time: 26.0 ft / hrs after		Angle From Horizontal/Bearing: -90°	

Depth (ft)	Sample Type Symbol	Sample Number	Blows per 6 in.	Pocket Pen. (tsf)	Graphic Log	ASTM Symbol	Field Soil Description & Classification		Laboratory						Other Tests and Field Notes	
							Description	Consistency / Apparent Density	Plasticity	Plasticity Index	Liquid Limit	Water Content (%)	Dry Unit Weight (pcf)	Passing #4 Sieve (%)		Passing #200 Sieve (%)
9 12 15							SANDY LEAN CLAY (CL) - brown, moist, stiff, fine grained sand, trace gravel up to 0.5 inch diameter					16	112			
2 44 50 / 4"							SANDY SILT (ML) - light brown to grayish brown, moist, very dense, fine grained sand					16	104			
9 11 12																
8 37 35							POORLY GRADED SAND (SP) - brown, moist to wet, medium to very dense, fine to medium grained					5	98			
4 8 12																

	Project Number: 122539.GEO	<b>BORING LOG B-2</b>  UNIVERSITY OF CALIFORNIA, MERCED PROPOSED STUDENT SERVICE BUILDING 5200 N. LAKE ROAD MERCED, CALIFORNIA	Plate
	Date: 10-05-11		<b>A-5</b>
	Entry By: M. BELTRAN		
	Checked By: N. DAHLEN		
	File Name:		


Boring Number: B-2		Location:		Drilling Method: Hollow-stem auger	
Boring Total Depth: 31.5 ft		Coordinates (X/Y, Lat/Long): N/A° / N/A°		Drilling Equipment: CME 75	
Depth to Rock: No Rock was Encountered		Datum/Coordinate System: N/A		Drilling Company: SLAGLE DRILLING	
Date Begin/End: 10-03-11 / 10-03-11		Top of Boring Elevation:		Bit Size/Type: 8-inch	
Surface Conditions: Sand and Gravel		Coordinate Data Source: N/A		Hammer Type/Method: FREEFALL / AUTO	
WL Measurement Point: Ground Surface		Depth to Groundwater Initial/Time: 26.0 ft / hrs after		Hammer Drop/Weight: 30 in. / 140 lbs.	
Logged By: M. BELTRAN		Depth to Groundwater Final/Time: 26.0 ft / hrs after		Angle From Horizontal/Bearing: -90°	

Depth (ft)	Sample Type Symbol	Sample Number	Blows per 6 in.	Pocket Pen. (tsf)	Graphic Log	ASTM Symbol	Field Soil Description & Classification		Laboratory						Other Tests and Field Notes			
							Description	Consistency / Apparent Density	Plasticity	Plasticity Index	Liquid Limit	Water Content (%)	Dry Unit Weight (pcf)	Passing #4 Sieve (%)		Passing #200 Sieve (%)		
25			6 15 27															
30			4 5 8															
							Boring completed at a depth of 31.5 ft below existing site grade.											

	Project Number: 122539.GEO		<b>BORING LOG B-2</b>  UNIVERSITY OF CALIFORNIA, MERCED PROPOSED STUDENT SERVICE BUILDING 5200 N. LAKE ROAD MERCED, CALIFORNIA	Plate  <b>A-5</b>
	Date: 10-05-11			
	Entry By: M. BELTRAN			
	Checked By: N. DAHLEN			
	File Name:			


Boring Number: B-3		Location:		Drilling Method: Hollow-stem auger	
Boring Total Depth: 26.5 ft		Coordinates (X/Y, Lat/Long): N/A° / N/A°		Drilling Equipment: CME 75	
Depth to Rock: No Rock was Encountered		Datum/Coordinate System: N/A		Drilling Company: SLAGLE DRILLING	
Date Begin/End: 10-03-11 / 10-03-11		Top of Boring Elevation:		Bit Size/Type: 8-inch	
Surface Conditions: Sand and Gravel		Coordinate Data Source: N/A		Hammer Type/Method: FREEFALL / AUTO	
WL Measurement Point: Ground Surface		Depth to Groundwater Initial/Time:		Hammer Drop/Weight: 30 in. / 140 lbs.	
Logged By: M. BELTRAN		Depth to Groundwater Final/Time:		Angle From Horizontal/Bearing: -90°	

Depth (ft)	Sample Type Symbol	Sample Number	Blows per 6 in.	Pocket Pen. (tsf)	Graphic Log	ASTM Symbol	Field Soil Description & Classification				Laboratory					Other Tests and Field Notes
							Description	Consistency / Apparent Density	Plasticity	Plasticity Index	Liquid Limit	Water Content (%)	Dry Unit Weight (pcf)	Passing #4 Sieve (%)	Passing #200 Sieve (%)	
			26 20 26				SANDY LEAN CLAY (CL) - dark brown, moist, very stiff, fine grained sand									
5			7 18 27				SANDY SILT (ML) - light brown, moist, dense, fine grained sand									
10			17 50 / 5"				SILTY SAND (SM) - pale brown, moist, very dense, fine to medium grained, moderate cementation									
15			16 30 40				POORLY GRADED SAND (SP) - brown, moist, medium to very dense, fine to medium grained, trace gravel up to 1 inch diameter					6	112			
20			8 15 18													

	Project Number: 122539.GEO	<b>BORING LOG B-3</b>  UNIVERSITY OF CALIFORNIA, MERCED PROPOSED STUDENT SERVICE BUILDING 5200 N. LAKE ROAD MERCED, CALIFORNIA	Plate
	Date: 10-05-11		<b>A-6</b>
	Entry By: M. BELTRAN		
	Checked By: N. DAHLEN		
	File Name:		



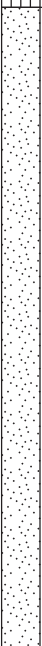
Boring Number: B-3			Location:			Drilling Method: Hollow-stem auger		
Boring Total Depth: 26.5 ft			Coordinates (X/Y, Lat/Long): N/A° / N/A°			Drilling Equipment: CME 75		
Depth to Rock: No Rock was Encountered			Datum/Coordinate System: N/A			Drilling Company: SLAGLE DRILLING		
Date Begin/End: 10-03-11 / 10-03-11			Top of Boring Elevation:			Bit Size/Type: 8-inch		
Surface Conditions: Sand and Gravel			Coordinate Data Source: N/A			Hammer Type/Method: FREEFALL / AUTO		
WL Measurement Point: Ground Surface			Depth to Groundwater Initial/Time:			Hammer Drop/Weight: 30 in. / 140 lbs.		
Logged By: M. BELTRAN			Depth to Groundwater Final/Time:			Angle From Horizontal/Bearing: -90°		

Depth (ft)	Sample Type Symbol	Sample Number	Blows per 6 in.	Pocket Pen. (tsf)	Graphic Log	ASTM Symbol	Field Soil Description & Classification			Laboratory						Other Tests and Field Notes	
							Description	Consistency / Apparent Density	Plasticity	Plasticity Index	Liquid Limit	Water Content (%)	Dry Unit Weight (pcf)	Passing #4 Sieve (%)	Passing #200 Sieve (%)		
25			21 33 50 / 5"														
							Boring completed at a depth of 26.5 ft below existing site grade.										


 <b>KLEINFELDER</b> Bright People. Right Solutions.	Project Number: 122539.GEO	<b>BORING LOG B-3</b>  UNIVERSITY OF CALIFORNIA, MERCED PROPOSED STUDENT SERVICE BUILDING 5200 N. LAKE ROAD MERCED, CALIFORNIA	Plate
	Date: 10-05-11		<b>A-6</b>
	Entry By: M. BELTRAN		
	Checked By: N. DAHLEN		
	File Name:		

Boring Number: B-4		Location:		Drilling Method: Hollow-stem auger	
Boring Total Depth: 26.5 ft		Coordinates (X/Y, Lat/Long): N/A° / N/A°		Drilling Equipment: CME 75	
Depth to Rock: No Rock was Encountered		Datum/Coordinate System: N/A		Drilling Company: SLAGLE DRILLING	
Date Begin/End: 10-03-11 / 10-03-11		Top of Boring Elevation:		Bit Size/Type: 8-inch	
Surface Conditions: Sand and Gravel		Coordinate Data Source: N/A		Hammer Type/Method: FREEFALL / AUTO	
WL Measurement Point: Ground Surface		Depth to Groundwater Initial/Time:		Hammer Drop/Weight: 30 in. / 140 lbs.	
Logged By: M. BELTRAN		Depth to Groundwater Final/Time:		Angle From Horizontal/Bearing: -90°	


Depth (ft)	Sample Type Symbol	Sample Number	Blows per 6 in.	Pocket Pen. (tsf)	Graphic Log	ASTM Symbol	Field Soil Description & Classification			Laboratory						Other Tests and Field Notes
							Description	Consistency / Apparent Density	Plasticity	Plasticity Index	Liquid Limit	Water Content (%)	Dry Unit Weight (pcf)	Passing #4 Sieve (%)	Passing #200 Sieve (%)	
8 13 14							<b>SANDY LEAN CLAY (CL)</b> - dark brown, moist, very stiff, fine grained sand									
8 13 14							<b>SANDY SILT (ML)</b> - light brown, moist, medium dense, fine grained sand									
9 22 26							<b>POORLY GRADED SAND (SP)</b> - brown, moist, medium to very dense, fine to coarse grained, trace gravel up to 1 inch diameter					5	106			
9 13 16																
17 35 41												3	114			

	Project Number: 122539.GEO		<b>BORING LOG B-4</b>  UNIVERSITY OF CALIFORNIA, MERCED PROPOSED STUDENT SERVICE BUILDING 5200 N. LAKE ROAD MERCED, CALIFORNIA	Plate  <b>A-7</b>
	Date: 10-05-11			
	Entry By: M. BELTRAN			
	Checked By: N. DAHLEN			
	File Name:			

Boring Number: B-4		Location:		Drilling Method: Hollow-stem auger	
Boring Total Depth: 26.5 ft		Coordinates (X/Y, Lat/Long): N/A° / N/A°		Drilling Equipment: CME 75	
Depth to Rock: No Rock was Encountered		Datum/Coordinate System: N/A		Drilling Company: SLAGLE DRILLING	
Date Begin/End: 10-03-11 / 10-03-11		Top of Boring Elevation:		Bit Size/Type: 8-inch	
Surface Conditions: Sand and Gravel		Coordinate Data Source: N/A		Hammer Type/Method: FREEFALL / AUTO	
WL Measurement Point: Ground Surface		Depth to Groundwater Initial/Time:		Hammer Drop/Weight: 30 in. / 140 lbs.	
Logged By: M. BELTRAN		Depth to Groundwater Final/Time:		Angle From Horizontal/Bearing: -90°	

Depth (ft)	Sample Type Symbol	Sample Number	Blows per 6 in.	Pocket Pen. (tsf)	Graphic Log	ASTM Symbol	Field Soil Description & Classification			Laboratory						Other Tests and Field Notes
							Description	Consistency / Apparent Density	Plasticity	Plasticity Index	Liquid Limit	Water Content (%)	Dry Unit Weight (pcf)	Passing #4 Sieve (%)	Passing #200 Sieve (%)	
25			20 15 15													
							Boring completed at a depth of 26.5 ft below existing site grade.									

	Project Number: 122539.GEO	<b>BORING LOG B-4</b>  UNIVERSITY OF CALIFORNIA, MERCED PROPOSED STUDENT SERVICE BUILDING 5200 N. LAKE ROAD MERCED, CALIFORNIA	Plate
	Date: 10-05-11		<b>A-7</b>
	Entry By: M. BELTRAN		
	Checked By: N. DAHLEN		
	File Name:		

Boring Number: B-5			Location:			Drilling Method: Hollow-stem auger		
Boring Total Depth: 26.5 ft			Coordinates (X/Y, Lat/Long): N/A° / N/A°			Drilling Equipment: CME 75		
Depth to Rock: No Rock was Encountered			Datum/Coordinate System: N/A			Drilling Company: SLAGLE DRILLING		
Date Begin/End: 10-03-11 / 10-03-11			Top of Boring Elevation:			Bit Size/Type: 8-inch		
Surface Conditions: Sand and Gravel			Coordinate Data Source: N/A			Hammer Type/Method: FREEFALL / AUTO		
WL Measurement Point: Ground Surface			Depth to Groundwater Initial/Time:			Hammer Drop/Weight: 30 in. / 140 lbs.		
Logged By: M. BELTRAN			Depth to Groundwater Final/Time:			Angle From Horizontal/Bearing: -90°		


Depth (ft)	Sample Type Symbol	Sample Number	Blows per 6 in.	Pocket Pen. (tsf)	Graphic Log	ASTM Symbol	Field Soil Description & Classification				Laboratory					Other Tests and Field Notes
							Description	Consistency / Apparent Density	Plasticity	Plasticity Index	Liquid Limit	Water Content (%)	Dry Unit Weight (pcf)	Passing #4 Sieve (%)	Passing #200 Sieve (%)	
			44 43 15				POORLY GRADED SAND AND GRAVEL									
5			7 10 13				SANDY LEAN CLAY (CL) - brown, moist, stiff, fine grained sand					11	113			
							SANDY SILT (ML) - light brown, moist, dense, fine grained sand									
10			15 19 26				SILTY SAND (SM) - light brown to light grayish brown, moist, dense, fine to medium grained, moderate cementation					5	111			
15			18 28 35													
20			14 23 35									5	116			

 <b>KLEINFELDER</b> <i>Bright People. Right Solutions.</i>	Project Number: 122539.GEO		<b>BORING LOG B-5</b>  UNIVERSITY OF CALIFORNIA, MERCED PROPOSED STUDENT SERVICE BUILDING 5200 N. LAKE ROAD MERCED, CALIFORNIA	Plate  <b>A-8</b>
	Date: 10-05-11			
	Entry By: M. BELTRAN			
	Checked By: N. DAHLEN			
	File Name:			

Boring Number: B-5			Location:			Drilling Method: Hollow-stem auger		
Boring Total Depth: 26.5 ft			Coordinates (X/Y, Lat/Long): N/A° / N/A°			Drilling Equipment: CME 75		
Depth to Rock: No Rock was Encountered			Datum/Coordinate System: N/A			Drilling Company: SLAGLE DRILLING		
Date Begin/End: 10-03-11 / 10-03-11			Top of Boring Elevation:			Bit Size/Type: 8-inch		
Surface Conditions: Sand and Gravel			Coordinate Data Source: N/A			Hammer Type/Method: FREEFALL / AUTO		
WL Measurement Point: Ground Surface			Depth to Groundwater Initial/Time:			Hammer Drop/Weight: 30 in. / 140 lbs.		
Logged By: M. BELTRAN			Depth to Groundwater Final/Time:			Angle From Horizontal/Bearing: -90°		

Depth (ft)	Sample Type Symbol	Sample Number	Blows per 6 in.	Pocket Pen. (tsf)	Graphic Log	ASTM Symbol	Field Soil Description & Classification			Laboratory						Other Tests and Field Notes		
							Description	Consistency / Apparent Density	Plasticity	Plasticity Index	Liquid Limit	Water Content (%)	Dry Unit Weight (pcf)	Passing #4 Sieve (%)	Passing #200 Sieve (%)			
25			10 17 34				POORLY GRADED SAND (SP) - brown, moist, dense, fine to coarse grained, trace gravel up to 1 inch diameter  Boring completed at a depth of 26.5 ft below existing site grade.											



**KLEINFELDER**  
Bright People. Right Solutions.

Project Number: 122539.GEO	
Date: 10-05-11	
Entry By: M. BELTRAN	
Checked By: N. DAHLEN	
File Name:	

**BORING LOG B-5**

UNIVERSITY OF CALIFORNIA, MERCED  
PROPOSED STUDENT SERVICE BUILDING  
5200 N. LAKE ROAD  
MERCED, CALIFORNIA

Plate

**A-8**



Boring Number: B-6		Location:		Drilling Method: Hollow-stem auger	
Boring Total Depth: 51.5 ft		Coordinates (X/Y, Lat/Long): N/A° / N/A°		Drilling Equipment: CME 75	
Depth to Rock: No Rock was Encountered		Datum/Coordinate System: N/A		Drilling Company: SLAGLE DRILLING	
Date Begin/End: 10-04-11 / 10-04-11		Top of Boring Elevation:		Bit Size/Type: 8-inch	
Surface Conditions: Sand and Gravel		Coordinate Data Source: N/A		Hammer Type/Method: FREEFALL / AUTO	
WL Measurement Point: Ground Surface		Depth to Groundwater Initial/Time: 26.0 ft / hrs after		Hammer Drop/Weight: 30 in. / 140 lbs.	
Logged By: M. BELTRAN		Depth to Groundwater Final/Time: 26.0 ft / hrs after		Angle From Horizontal/Bearing: -90°	


Depth (ft)	Sample Type Symbol	Sample Number	Blows per 6 in.	Pocket Pen. (tsf)	Graphic Log	ASTM Symbol	Field Soil Description & Classification				Laboratory					Other Tests and Field Notes	
							Description	Consistency / Apparent Density	Plasticity	Plasticity Index	Liquid Limit	Water Content (%)	Dry Unit Weight (pcf)	Passing #4 Sieve (%)	Passing #200 Sieve (%)		
																	<i>The report and log key are an integral part of these logs. All data and interpretations in this log are subject to those stated explanations and limitations.</i>
5	X		35 50 / 3"		[Hatched Box]		<b>SANDY LEAN CLAY (CL)</b> - brown, moist, hard, fine grained sand, some gravel										
	X		10 20 38		[Vertical Lines Box]		<b>SANDY SILT (ML)</b> - very light brown, moist, very dense, fine grained sand				13	29					
10	X		18 22 33		[Dotted Box]		<b>SILTY SAND (SM)</b> - brown, moist, dense, fine to medium grained						4	110			
15	X		12 15 20		[Vertical Lines Box]		<b>POORLY GRADED SAND WITH SILT (SP-SM)</b> - light brown to gray, moist to wet, medium dense to dense, fine to medium grained, trace gravel up to 1 inch diameter									6.0	
20	X		9 24 33		[Vertical Lines Box]								13	115			

<p><b>KLEINFELDER</b> <i>Bright People. Right Solutions.</i></p>	Project Number: 122539.GEO		<p><b>BORING LOG B-6</b></p> <p>UNIVERSITY OF CALIFORNIA, MERCED PROPOSED STUDENT SERVICE BUILDING 5200 N. LAKE ROAD MERCED, CALIFORNIA</p>	<p>Plate</p> <p><b>A-9</b></p>
	Date: 10-05-11			
	Entry By: M. BELTRAN			
	Checked By: N. DAHLEN			
	File Name:			

Boring Number: B-6			Location:			Drilling Method: Hollow-stem auger		
Boring Total Depth: 51.5 ft			Coordinates (X/Y, Lat/Long): N/A° / N/A°			Drilling Equipment: CME 75		
Depth to Rock: No Rock was Encountered			Datum/Coordinate System: N/A			Drilling Company: SLAGLE DRILLING		
Date Begin/End: 10-04-11 / 10-04-11			Top of Boring Elevation:			Bit Size/Type: 8-inch		
Surface Conditions: Sand and Gravel			Coordinate Data Source: N/A			Hammer Type/Method: FREEFALL / AUTO		
WL Measurement Point: Ground Surface			Depth to Groundwater Initial/Time: 26.0 ft / hrs after			Hammer Drop/Weight: 30 in. / 140 lbs.		
Logged By: M. BELTRAN			Depth to Groundwater Final/Time: 26.0 ft / hrs after			Angle From Horizontal/Bearing: -90°		

Depth (ft)	Sample Type Symbol	Sample Number	Blows per 6 in.	Pocket Pen. (tsf)	Graphic Log	ASTM Symbol	Field Soil Description & Classification			Laboratory						Other Tests and Field Notes	
							Description	Consistency / Apparent Density	Plasticity	Plasticity Index	Liquid Limit	Water Content (%)	Dry Unit Weight (pcf)	Passing #4 Sieve (%)	Passing #200 Sieve (%)		
25			8 13 21														
30			6 13 20														
35			12 19 22														
40			5 12 19				SANDY SILT (ML) - gray brown, wet, medium dense, fine grained sand				24	40					
							SILTY SAND (SM) - yellowish brown to red brown, wet, dense to very dense, fine to medium grained										

	Project Number: 122539.GEO	<b>BORING LOG B-6</b>  UNIVERSITY OF CALIFORNIA, MERCED PROPOSED STUDENT SERVICE BUILDING 5200 N. LAKE ROAD MERCED, CALIFORNIA	Plate  <b>A-9</b>
	Date: 10-05-11		
	Entry By: M. BELTRAN		
	Checked By: N. DAHLEN		
	File Name:		

Boring Number: B-6			Location:			Drilling Method: Hollow-stem auger		
Boring Total Depth: 51.5 ft			Coordinates (X/Y, Lat/Long): N/A° / N/A°			Drilling Equipment: CME 75		
Depth to Rock: No Rock was Encountered			Datum/Coordinate System: N/A			Drilling Company: SLAGLE DRILLING		
Date Begin/End: 10-04-11 / 10-04-11			Top of Boring Elevation:			Bit Size/Type: 8-inch		
Surface Conditions: Sand and Gravel			Coordinate Data Source: N/A			Hammer Type/Method: FREEFALL / AUTO		
WL Measurement Point: Ground Surface			Depth to Groundwater Initial/Time: 26.0 ft / hrs after			Hammer Drop/Weight: 30 in. / 140 lbs.		
Logged By: M. BELTRAN			Depth to Groundwater Final/Time: 26.0 ft / hrs after			Angle From Horizontal/Bearing: -90°		


Depth (ft)	Sample Type Symbol	Sample Number	Blows per 6 in.	Pocket Pen. (tsf)	Graphic Log	ASTM Symbol	Field Soil Description & Classification				Laboratory					Other Tests and Field Notes			
							Description	Consistency / Apparent Density	Plasticity	Plasticity Index	Liquid Limit	Water Content (%)	Dry Unit Weight (pcf)	Passing #4 Sieve (%)	Passing #200 Sieve (%)				
21 31 50																			
50																			
55																			
60																			
65																			
Boring completed at a depth of 51.5 ft below existing site grade.																			

<p><b>KLEINFELDER</b> Bright People. Right Solutions.</p>	Project Number: 122539.GEO		<p><b>BORING LOG B-6</b></p> <p>UNIVERSITY OF CALIFORNIA, MERCED PROPOSED STUDENT SERVICE BUILDING 5200 N. LAKE ROAD MERCED, CALIFORNIA</p>	<p>Plate</p> <p><b>A-9</b></p>
	Date: 10-05-11			
	Entry By: M. BELTRAN			
	Checked By: N. DAHLEN			
	File Name:			


Boring Number: B-7		Location:		Drilling Method: Hollow-stem auger	
Boring Total Depth: 51.5 ft		Coordinates (X/Y, Lat/Long): N/A° / N/A°		Drilling Equipment: CME 75	
Depth to Rock: No Rock was Encountered		Datum/Coordinate System: N/A		Drilling Company: SLAGLE DRILLING	
Date Begin/End: 10-04-11 / 10-04-11		Top of Boring Elevation:		Bit Size/Type: 8-inch	
Surface Conditions: Sand and Gravel		Coordinate Data Source: N/A		Hammer Type/Method: FREEFALL / AUTO	
WL Measurement Point: Ground Surface		Depth to Groundwater Initial/Time:		Hammer Drop/Weight: 30 in. / 140 lbs.	
Logged By: M. BELTRAN		Depth to Groundwater Final/Time:		Angle From Horizontal/Bearing: -90°	

Depth (ft)	Sample Type Symbol	Sample Number	Blows per 6 in.	Pocket Pen. (tsf)	Graphic Log	ASTM Symbol	Field Soil Description & Classification			Laboratory						Other Tests and Field Notes
							Description	Consistency / Apparent Density	Plasticity	Plasticity Index	Liquid Limit	Water Content (%)	Dry Unit Weight (pcf)	Passing #4 Sieve (%)	Passing #200 Sieve (%)	
							POORLY GRADED SAND AND GRAVEL									
26 9 12							SANDY LEAN CLAY (CL) - dark brown to grayish brown, moist, stiff, fine grained sand									
5 7 10 13												9	105			
10 7 10 13										15	26					
15 15 31 46							SILTY SAND (SM) - grayish brown, moist, dense to very dense, fine grained						11	112		
20 11 17 24															22.8	

	Project Number: 122539.GEO	<b>BORING LOG B-7</b>  UNIVERSITY OF CALIFORNIA, MERCED PROPOSED STUDENT SERVICE BUILDING 5200 N. LAKE ROAD MERCED, CALIFORNIA	Plate
	Date: 10-05-11		<b>A-10</b>
	Entry By: M. BELTRAN		
	Checked By: N. DAHLEN		
	File Name:		


Boring Number: B-7			Location:			Drilling Method: Hollow-stem auger		
Boring Total Depth: 51.5 ft			Coordinates (X/Y, Lat/Long): N/A° / N/A°			Drilling Equipment: CME 75		
Depth to Rock: No Rock was Encountered			Datum/Coordinate System: N/A			Drilling Company: SLAGLE DRILLING		
Date Begin/End: 10-04-11 / 10-04-11			Top of Boring Elevation:			Bit Size/Type: 8-inch		
Surface Conditions: Sand and Gravel			Coordinate Data Source: N/A			Hammer Type/Method: FREEFALL / AUTO		
WL Measurement Point: Ground Surface			Depth to Groundwater Initial/Time:			Hammer Drop/Weight: 30 in. / 140 lbs.		
Logged By: M. BELTRAN			Depth to Groundwater Final/Time:			Angle From Horizontal/Bearing: -90°		

Depth (ft)	Sample Type Symbol	Sample Number	Blows per 6 in.	Pocket Pen. (tsf)	Graphic Log	ASTM Symbol	Field Soil Description & Classification			Laboratory						Other Tests and Field Notes	
							Description	Consistency / Apparent Density	Plasticity	Plasticity Index	Liquid Limit	Water Content (%)	Dry Unit Weight (pcf)	Passing #4 Sieve (%)	Passing #200 Sieve (%)		
25			17 44 50 / 5"				POORLY GRADED SAND WITH SILT (SP-SM) - yellowish brown, moist, very dense, fine to coarse grained, trace gravel up to 2 inch diameter									10.8	
30			10 19 28				SANDY SILT (ML) - gray brown to brown, moist, medium to very dense, fine grained sand, trace gravel up to 1 inch diameter				26	46					
35			6 11 16														
40			9 11 18														

	Project Number: 122539.GEO	<b>BORING LOG B-7</b>  UNIVERSITY OF CALIFORNIA, MERCED PROPOSED STUDENT SERVICE BUILDING 5200 N. LAKE ROAD MERCED, CALIFORNIA	Plate  <b>A-10</b>
	Date: 10-05-11		
	Entry By: M. BELTRAN		
	Checked By: N. DAHLEN		
	File Name:		

Boring Number: B-7			Location:			Drilling Method: Hollow-stem auger		
Boring Total Depth: 51.5 ft			Coordinates (X/Y, Lat/Long): N/A° / N/A°			Drilling Equipment: CME 75		
Depth to Rock: No Rock was Encountered			Datum/Coordinate System: N/A			Drilling Company: SLAGLE DRILLING		
Date Begin/End: 10-04-11 / 10-04-11			Top of Boring Elevation:			Bit Size/Type: 8-inch		
Surface Conditions: Sand and Gravel			Coordinate Data Source: N/A			Hammer Type/Method: FREEFALL / AUTO		
WL Measurement Point: Ground Surface			Depth to Groundwater Initial/Time:			Hammer Drop/Weight: 30 in. / 140 lbs.		
Logged By: M. BELTRAN			Depth to Groundwater Final/Time:			Angle From Horizontal/Bearing: -90°		

Depth (ft)	Sample Type Symbol	Sample Number	Blows per 6 in.	Pocket Pen. (tsf)	Graphic Log	ASTM Symbol	Field Soil Description & Classification			Laboratory						Other Tests and Field Notes	
							Description	Consistency / Apparent Density	Plasticity	Plasticity Index	Liquid Limit	Water Content (%)	Dry Unit Weight (pcf)	Passing #4 Sieve (%)	Passing #200 Sieve (%)		
8			14														
14			29														
15			31														
50			50 / 5"														
Boring completed at a depth of 51.5 ft below existing site grade.																	



**KLEINFELDER**  
Bright People. Right Solutions.

Project Number: 122539.GEO

Date: 10-05-11

Entry By: M. BELTRAN

Checked By: N. DAHLEN

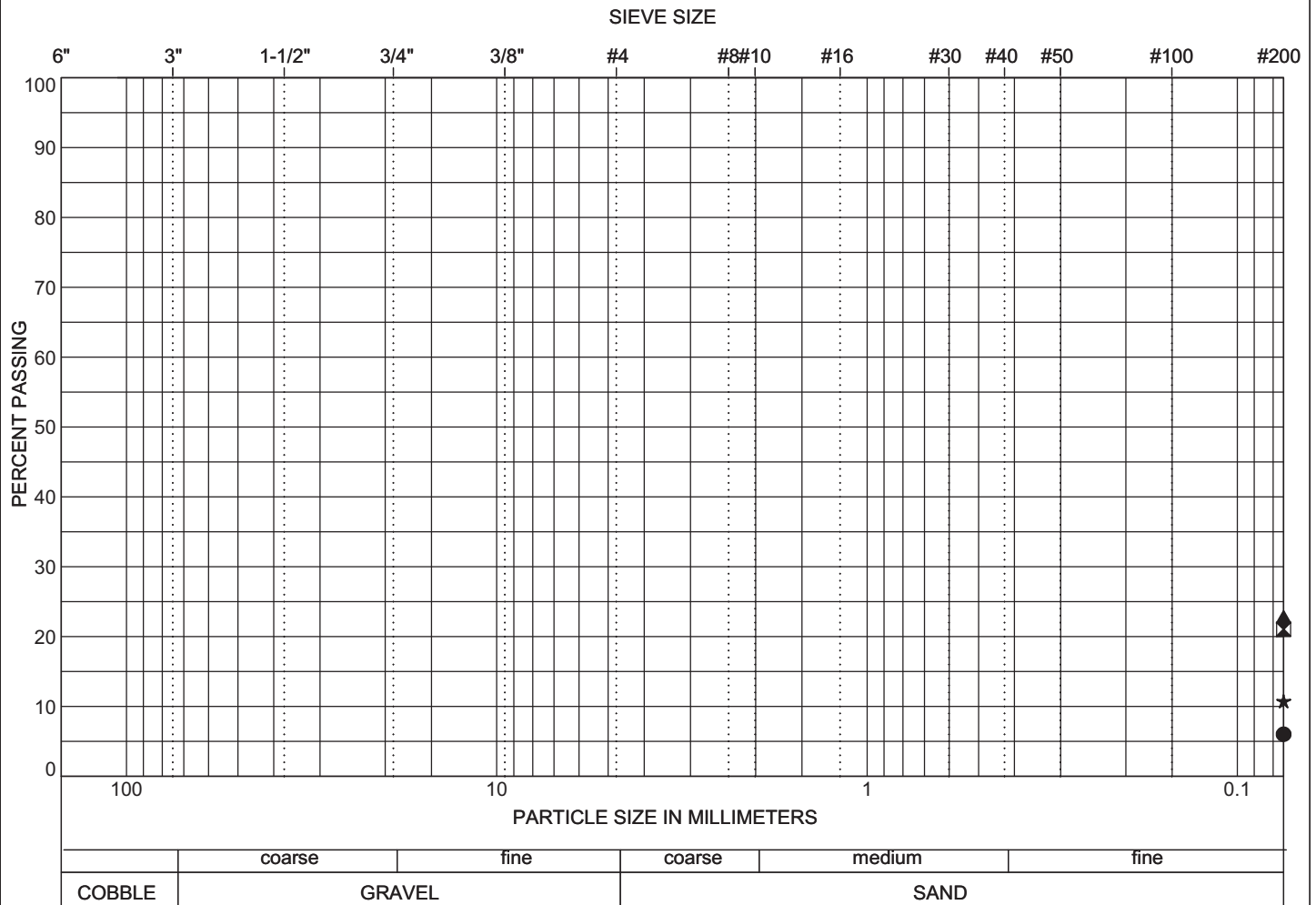
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**BORING LOG B-7**

UNIVERSITY OF CALIFORNIA, MERCED  
PROPOSED STUDENT SERVICE BUILDING  
5200 N. LAKE ROAD  
MERCED, CALIFORNIA

Plate

**A-10**



LEGEND:	SOURCE	DEPTH (ft)	FINES (%)	DESCRIPTION
●	B-6	15.0	6	Poorly Graded SAND with silt (SP-SM)
☒	B-6	45.0	21	Silty SAND (SM)
▲	B-7	20.0	23	Silty SAND (SM)
★	B-7	25.0	11	Poorly Graded SAND with silt (SP-SM)



Drafted By:  
Date: 10/5/2011

Project No.: 122539.GEO  
File Number:

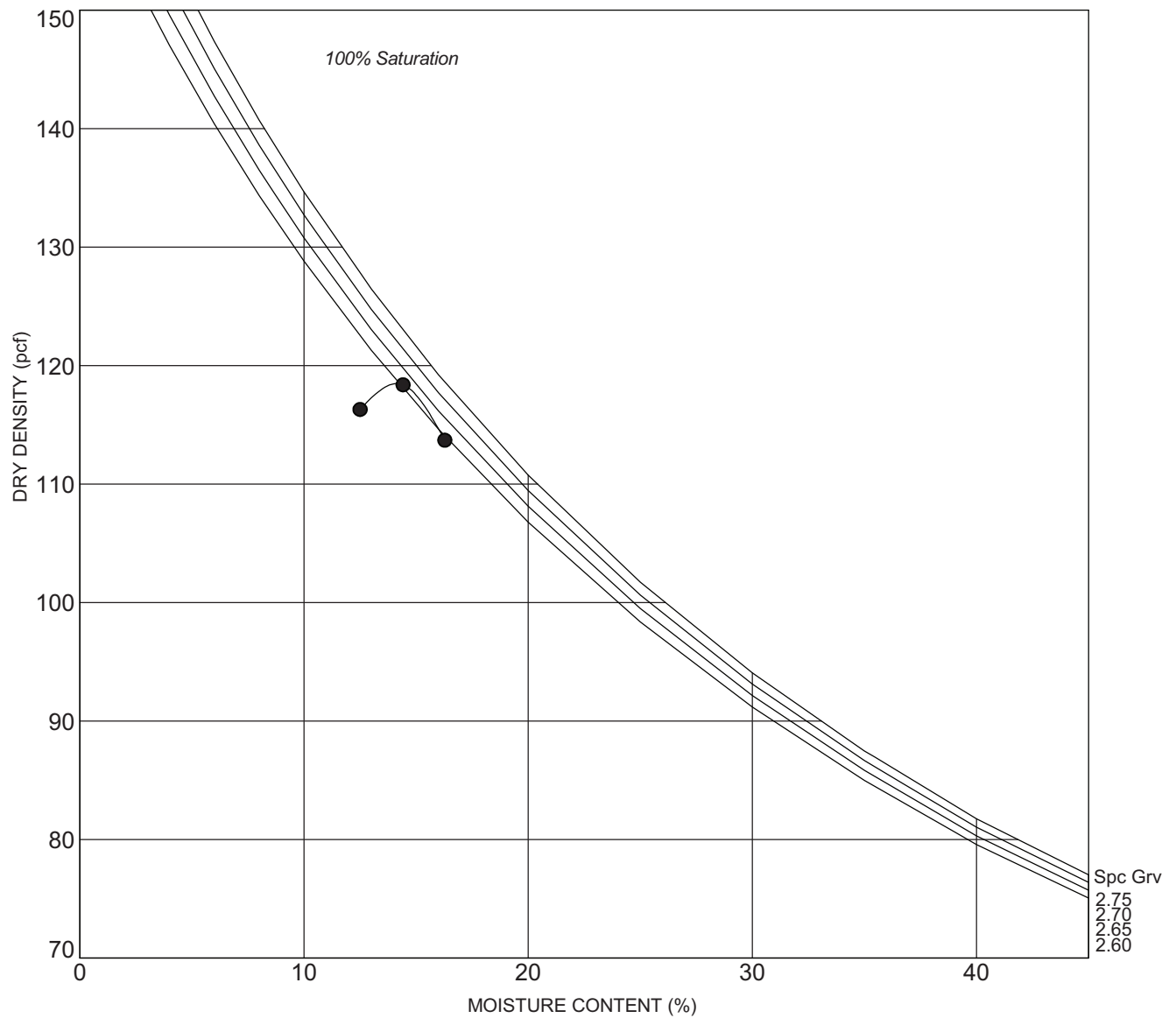
#### SIEVE ANALYSIS

UNIVERSITY OF CALIFORNIA, MERCED  
PROPOSED STUDENT SERVICE BUILDING  
5200 N. LAKE ROAD  
MERCED, CALIFORNIA

PLATE

1 of 1

**B-1**



LEGEND:	SOURCE	DEPTH (ft)	OPTIMUM MOISTURE (%)	MAXIMUM DRY DENSITY (pcf)	TEST METHOD	DESCRIPTION
●	B-2	0.0 - 5.0	14.0	118.4	ASTM D1557 Method A	Sandy Lean CLAY (CL)



**COMPACTION CURVE**  
UNIVERSITY OF CALIFORNIA, MERCED  
PROPOSED STUDENT SERVICE BUILDING  
5200 N. LAKE ROAD  
MERCED, CALIFORNIA

PLATE

1 of 1

**B-2**

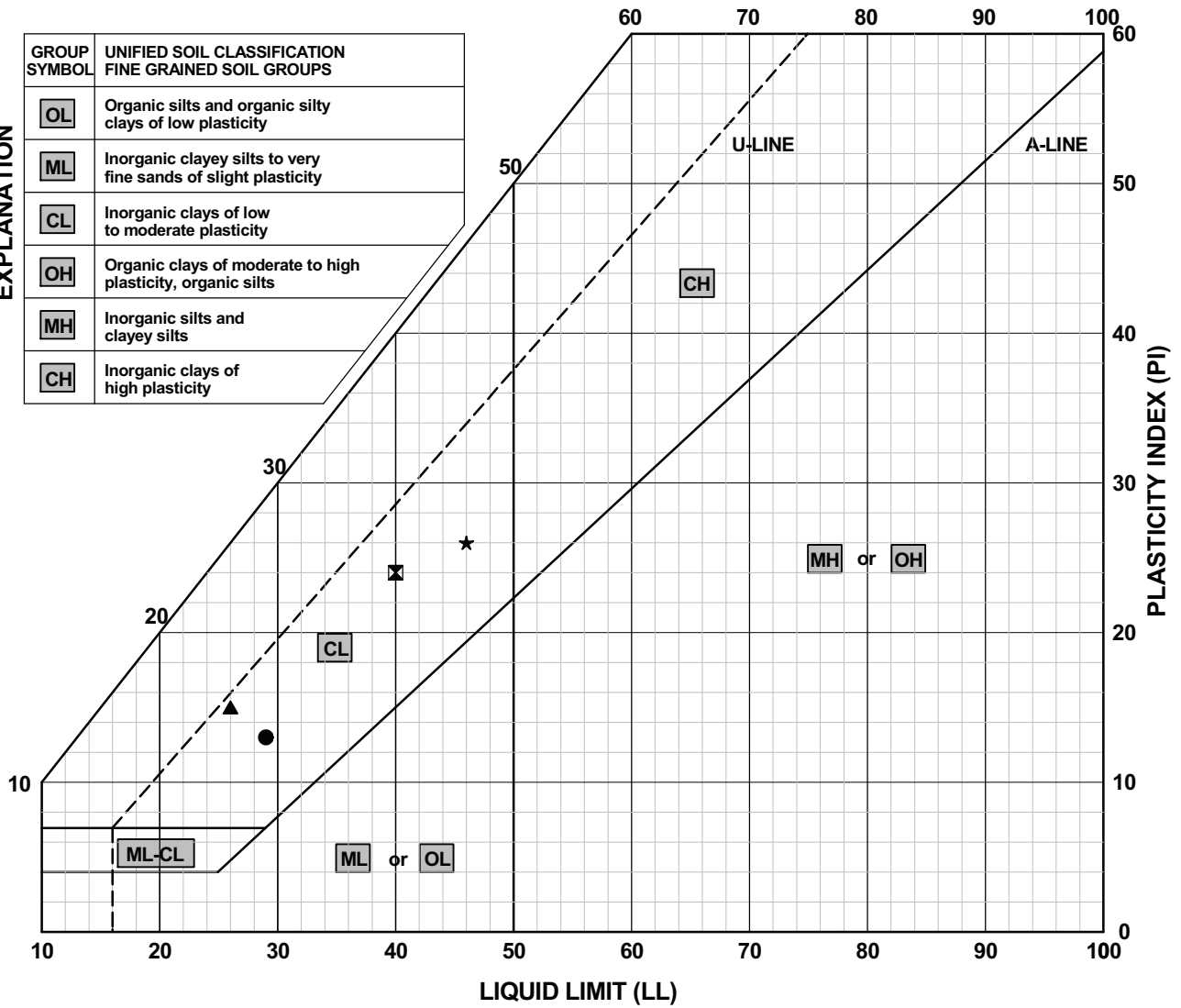
Drafted By:  
Date: 10/31/2011

Project No.: 122539.GEO  
File Number:



**EXPLANATION**

GROUP SYMBOL	UNIFIED SOIL CLASSIFICATION FINE GRAINED SOIL GROUPS
OL	Organic silts and organic silty clays of low plasticity
ML	Inorganic clayey silts to very fine sands of slight plasticity
CL	Inorganic clays of low to moderate plasticity
OH	Organic clays of moderate to high plasticity, organic silts
MH	Inorganic silts and clayey silts
CH	Inorganic clays of high plasticity



LEGEND:	SOURCE	DEPTH (ft)	LL	PL	PI	DESCRIPTION
●	B-6	5.0	29	16	13	Sandy Lean CLAY (CL)
⊠	B-6	40.0	40	16	24	Sandy Lean CLAY (CL)
▲	B-7	10.0	26	11	15	Sandy Lean CLAY (CL)
★	B-7	30.0	46	20	26	Sandy Lean CLAY (CL)



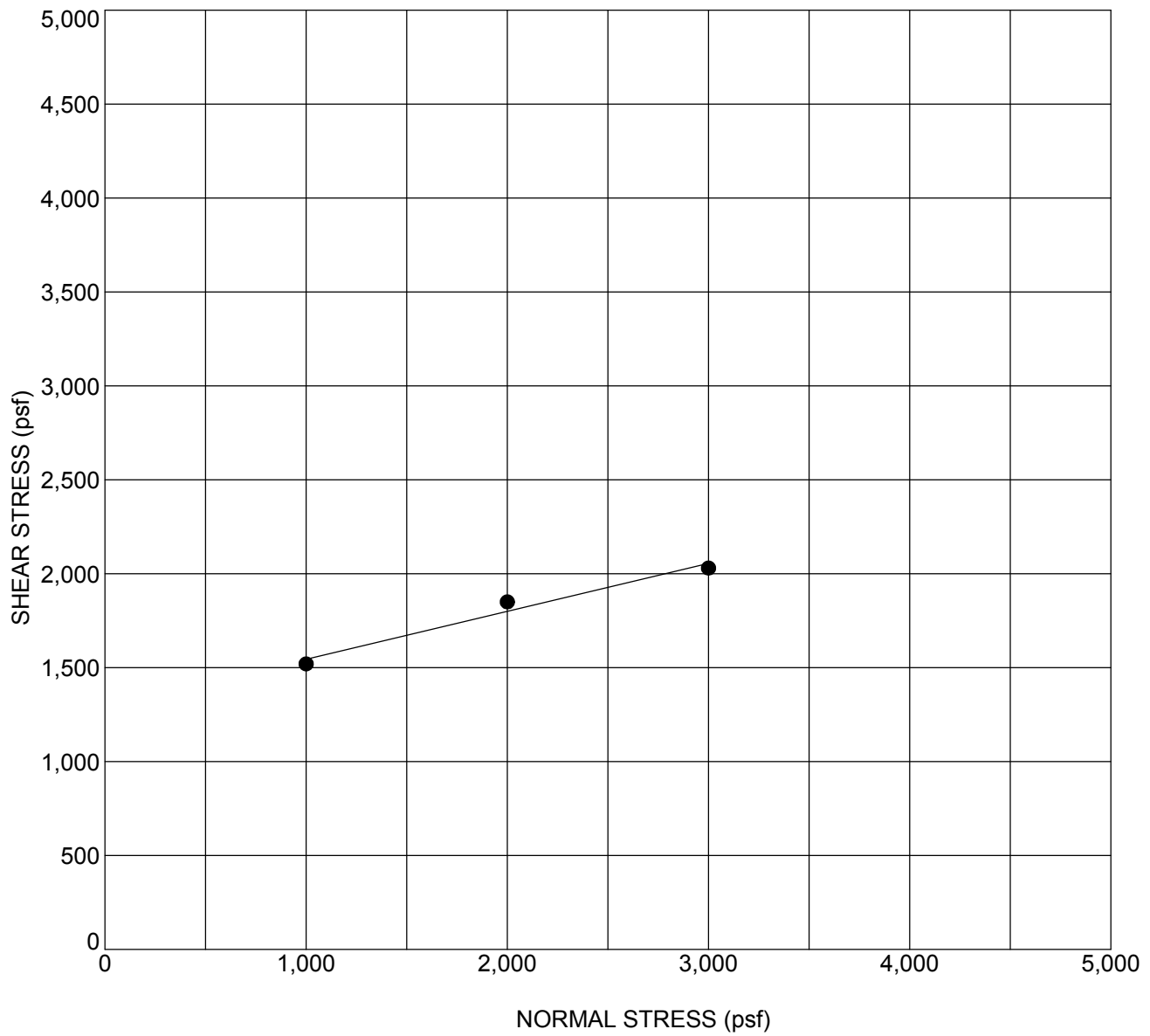
**PLASTICITY CHART**  
 UNIVERSITY OF CALIFORNIA, MERCED  
 PROPOSED STUDENT SERVICE BUILDING  
 5200 N. LAKE ROAD  
 MERCED, CALIFORNIA

PLATE

1 of 1

**B-3**

Drafted By: \_\_\_\_\_ Project No.: 122539.GEO  
 Date: 10/31/2011 File Number: \_\_\_\_\_



SOURCE: B-1  
 DEPTH: 3 ft  
 SOIL DESCRIPTION: Sandy Lean CLAY (CL)

FINAL DRY DENSITY (pcf)	121.7	121.6	118.8
INITIAL WATER CONTENT (%)	8.7	6.3	8.3
FINAL WATER CONTENT (%)	26.0	23.1	15.2
NORMAL STRESS (psf)	1000	2000	3000
MAXIMUM SHEAR (psf)	1520	1850	2030



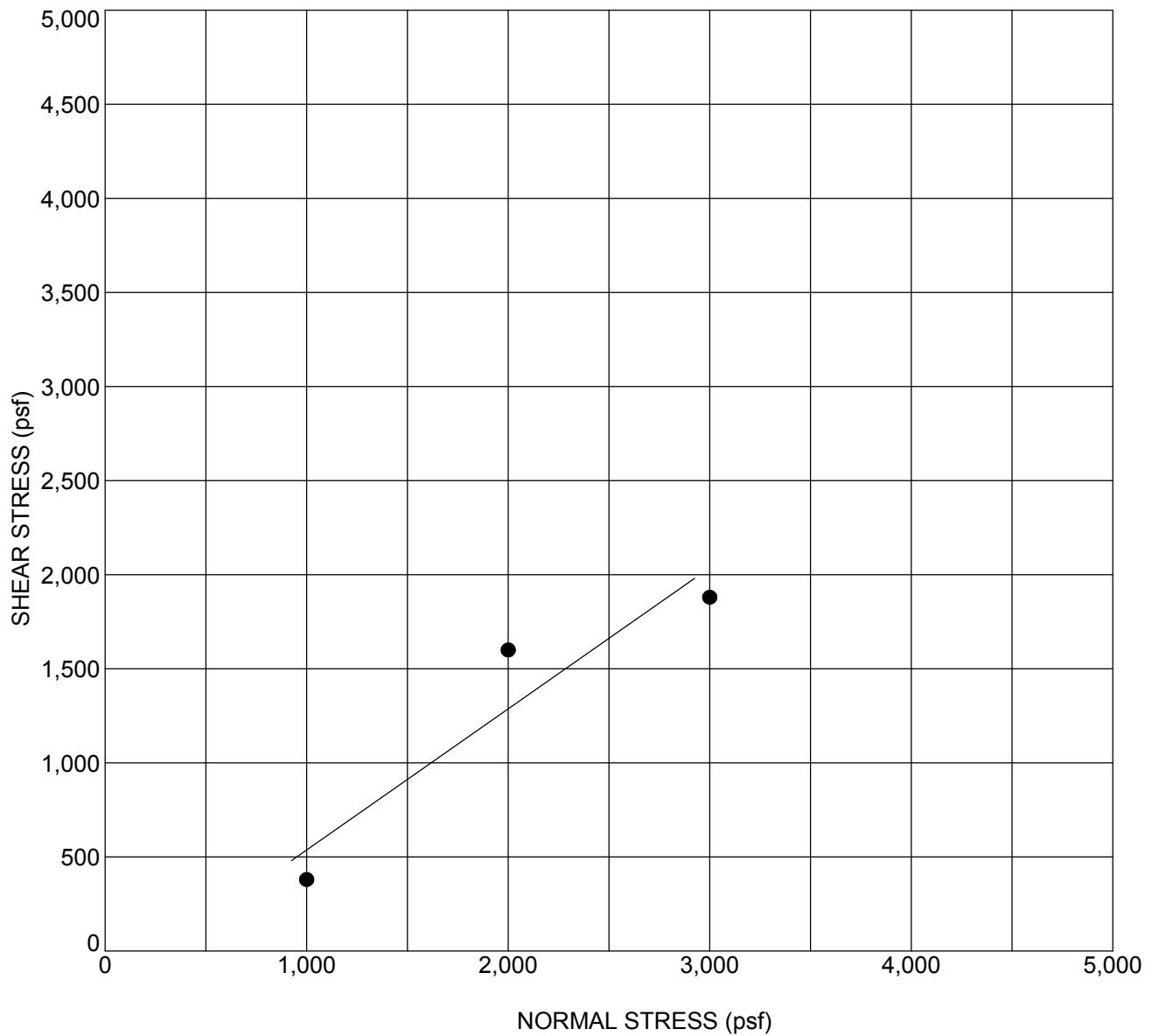
Drafted By: Project No.: 122539.GEO  
 Date: 11/1/2011 File Number:

**DIRECT SHEAR TEST**  
 UNIVERSITY OF CALIFORNIA, MERCED  
 PROPOSED STUDENT SERVICE BUILDING  
 5200 N. LAKE ROAD  
 MERCED, CALIFORNIA

PLATE

**B-4**

KA\_DIRECT\_SHEAR KA CORPORATE STD.GDT KLEINFELDER\_GINT\_LIBRARY\_R2B.GLB 122539.GPJ 11/1/11



SOURCE: B-7  
 DEPTH: 6 ft  
 SOIL DESCRIPTION: Sandy Lean CLAY (CL)

FINAL DRY DENSITY (pcf)	46.9	45.7	47.0
INITIAL WATER CONTENT (%)	9.0	6.9	9.1
FINAL WATER CONTENT (%)	30.7	27.5	25.2
NORMAL STRESS (psf)	1000	2000	3000
MAXIMUM SHEAR (psf)	380	1600	1880



Drafted By: Project No.: 122539.GEO  
 Date: 11/1/2011 File Number:

**DIRECT SHEAR TEST**  
 UNIVERSITY OF CALIFORNIA, MERCED  
 PROPOSED STUDENT SERVICE BUILDING  
 5200 N. LAKE ROAD  
 MERCED, CALIFORNIA

PLATE

**B-5**

Boring: B-6	Wet Unit Weight (pcf) =	110.8
At a depth of approximately 0.0 to 5.0 feet	Moisture Content (%) =	14.0
Soil Description: Sandy Lean CLAY (CL)	Dry Unit Weight (pcf) =	97.2

SATURATION (%) = 51

EXPANSION INDEX = 194

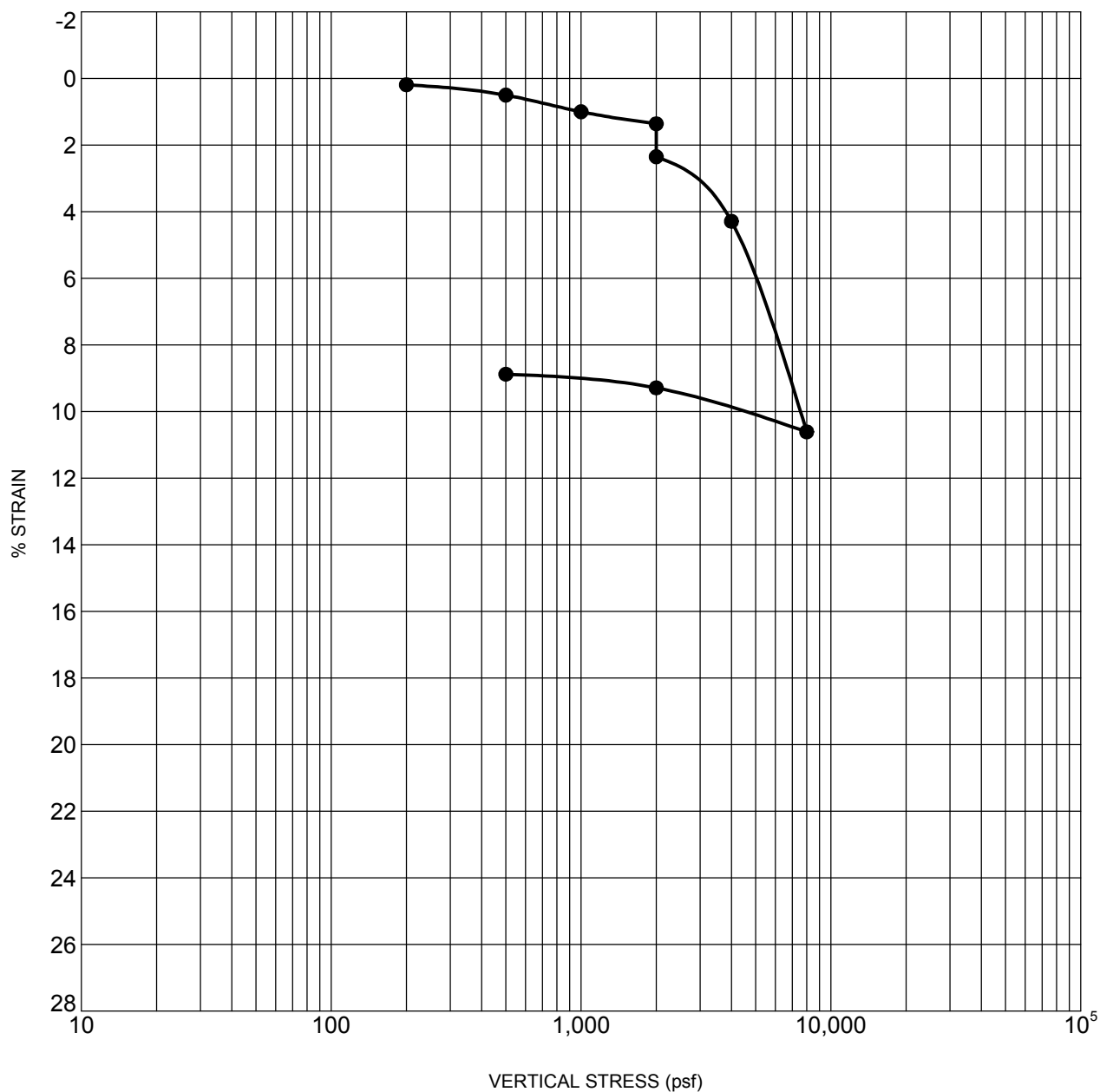


**EXPANSION INDEX**  
 UNIVERSITY OF CALIFORNIA, MERCED  
 PROPOSED STUDENT SERVICE BUILDING  
 5200 N. LAKE ROAD  
 MERCED, CALIFORNIA

PLATE

**B-6**

Drafted By:	Project No.: 122539.GEO
Date: 11/1/2011	File Number:



		Before	After
Boring: B-1	Wet Unit Weight (pcf) =	124.6	147.9
At a depth of approximately 3.0 feet	Moisture Content (%) =	1.4	7.7
Soil Description: Sandy Lean CLAY (CL)	Dry Unit Weight (pcf) =	122.8	137.4

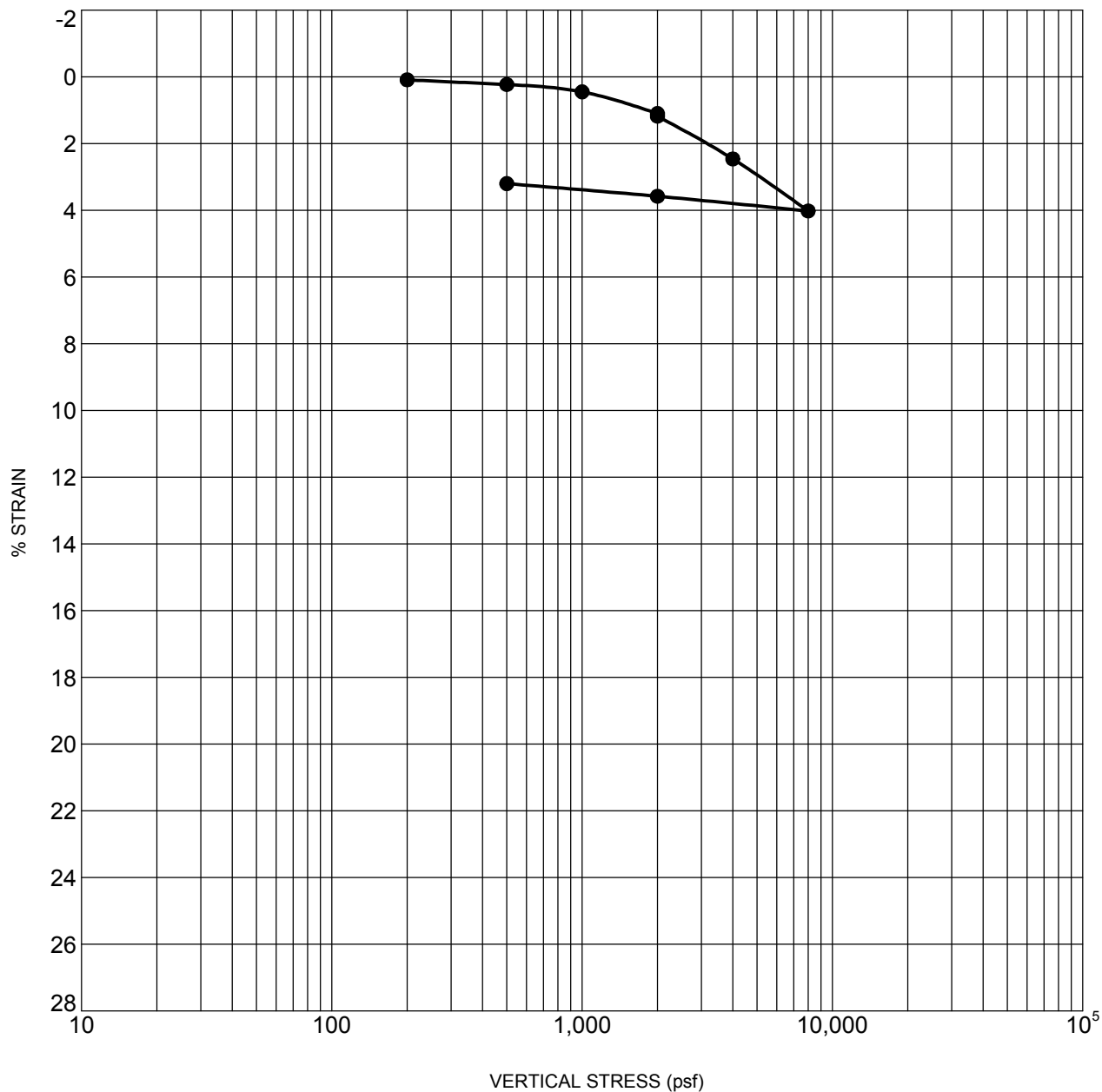


**CONSOLIDATION TEST**  
 UNIVERSITY OF CALIFORNIA, MERCED  
 PROPOSED STUDENT SERVICE BUILDING  
 5200 N. LAKE ROAD  
 MERCED, CALIFORNIA

PLATE

**B-7**

Drafted By: Project No.: 122539.GEO  
 Date: 11/1/2011 File Number:



		<i>Before</i>	<i>After</i>
Boring: B-4	Wet Unit Weight (pcf) =	97.1	106.2
At a depth of approximately 3.0 feet	Moisture Content (%) =	2.7	7.8
Soil Description:	Dry Unit Weight (pcf) =	94.6	98.5

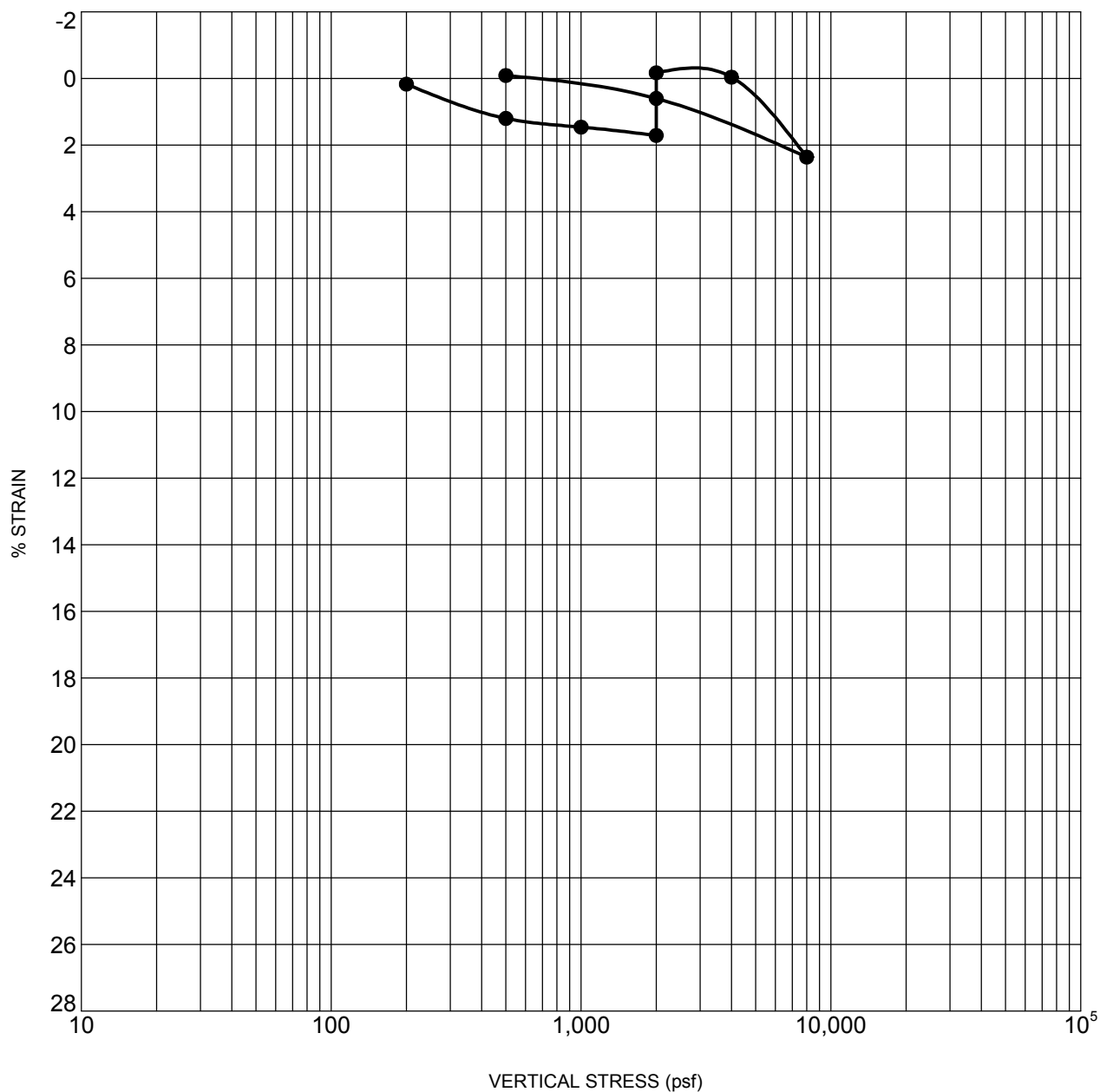


**CONSOLIDATION TEST**  
 UNIVERSITY OF CALIFORNIA, MERCED  
 PROPOSED STUDENT SERVICE BUILDING  
 5200 N. LAKE ROAD  
 MERCED, CALIFORNIA

PLATE

**B-8**

Drafted By: Project No.: 122539.GEO  
 Date: 11/1/2011 File Number:



	<i>Before</i>	<i>After</i>
Boring: B-7	Wet Unit Weight (pcf) = 114.0	119.5
At a depth of approximately 6.0 feet	Moisture Content (%) = 9.1	10.6
Soil Description: Sandy Lean CLAY (CL)	Dry Unit Weight (pcf) = 104.5	108.0



**CONSOLIDATION TEST**  
 UNIVERSITY OF CALIFORNIA, MERCED  
 PROPOSED STUDENT SERVICE BUILDING  
 5200 N. LAKE ROAD  
 MERCED, CALIFORNIA

PLATE

**B-9**

Drafted By: Project No.: 122539.GEO  
 Date: 11/1/2011 File Number:

STUDENT SERVICES BUILDING  
UNIVERSITY OF CALIFORNIA, MERCED  
MERCED, CALIFORNIA

PROJECT NO.: 900120

**BID FORM**

FOR:

PROJECT NO.: 900120  
STUDENT SERVICES BUILDING

UNIVERSITY OF CALIFORNIA  
MERCED CAMPUS, MERCED COUNTY  
MERCED, CALIFORNIA

BID TO:

PHYSICAL PLANNING, DESIGN & CONSTRUCTION  
UNIVERSITY OF CALIFORNIA, MERCED  
767 E. YOSEMITE AVE., SUITE C  
MERCED, CALIFORNIA 95340  
TELEPHONE: (209) 228-4479

BID FROM:

\_\_\_\_\_  
(Name of Bidder)

\_\_\_\_\_  
(Address)

\_\_\_\_\_,  
(City)

\_\_\_\_\_  
(State)

\_\_\_\_\_  
(Zip Code)

\_\_\_\_\_  
(Telephone Number)

\_\_\_\_\_  
(Date Bid Submitted)

Note: All portions of this Bid Form must be completed and the Bid Form must be signed before the Bid is submitted. Failure to do so will result in the Bid being rejected as non-responsive.



1.0 BIDDER'S REPRESENTATIONS

Bidder, represents that a) it, and all Subcontractors, regardless of tier, have the appropriate current and active Contractor's license required by the State of California and the Bidding Documents; b) it has carefully read and examined the Bidding Documents for the proposed Work on this Project; c) it has examined the site of the proposed Work and all Information Available to Bidders; d) it has become familiar with all the conditions related to the proposed Work, including the availability of labor, materials, and equipment. Bidder hereby offers to furnish all labor, materials, equipment, tools, transportation, and services necessary to complete the proposed Work on this Project in accordance with the Contract Documents for the sums quoted. Bidder further agrees that it will not withdraw its Bid within 60 days after the Bid Deadline, and that, if it is selected as the apparent lowest responsive and responsible Bidder, that it will, within 10 days after receipt of notice of selection, sign and deliver to University the Agreement in triplicate and furnish to University all items required by the Bidding Documents. If awarded the Contract, Bidder agrees to schedule and complete the work in accordance with the Master Project Schedule to be developed, maintained and updated by the University's Representative. Bidder agrees to fully comply with the Work within the Contract Time.

2.0 ADDENDA

Bidder acknowledges that it is Bidder's responsibility to ascertain whether any Addenda have been issued and if so, to obtain copies of such Addenda from University's Facility at the appropriate address stated on Page 1 of this Bid Form. Bidder therefore agrees to be bound by all Addenda that have been issued for this Bid.

3.0 (NOT USED)

4.0 LUMP SUM BASE BID

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(Place figures in appropriate boxes.)

Bidder includes the following allowances:

NONE

5.0 SELECTION OF APPARENT LOW BIDDER

Refer to the Instructions to Bidders for selection of apparent low bidder.

6.0 UNIT PRICES – (NOT USED)

7.0 DAILY RATE OF COMPENSATION FOR COMPENSABLE DELAYS

Bidder shall determine and provide below the daily rate of compensation for any Compensable Delay caused by University at any time during the performance of the Work: **(MINIMUM AMOUNT ALLOWED IS \$1.00)**

\$ 

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 X 10 multiplier

(Place figures in appropriate boxes.)

Failure to fill in a dollar figure for the daily rate for Compensable Delay shall render the bid non-responsive.

**University will perform the extension of the daily rate times the multiplier.**

The daily rate shown above will be the total amount of Contractor entitlement for each day of Compensable Delay caused by University at any time during the performance of the Work and shall constitute payment in full for all delay costs, direct or indirect, of the Contractor and all subcontractors, suppliers, persons and entities under Contractor on the Project, including without limitation all subcontractors added by Contract Amendment. The number of days of Compensable Delay shown as a "multiplier" above is not intended as an estimate of the number of days of compensable delay anticipated by the University. The University will pay the daily rate of compensation only for the actual number of days of Compensable Delay, as defined in the General Conditions; the actual number of days of compensable delay may be greater or lesser than the "multiplier" shown above.

8.0 ALTERNATES (NOT USED)

9.0 LIST OF SUBCONTRACTORS

Bidder will use Subcontractors for the Work: (Yes or No) \_\_\_\_\_

If yes, provide in the spaces below (a) the name and the location of the place of business of each subcontractor who will perform the work or labor or render service to the prime contractor in or about the construction of the work or improvements, or a subcontractor licensed by the state of California who, under subcontract to the prime contractor, specifically fabricates and installs a portion of the work or improvement according to the detailed drawings contained in the plans and specifications, in an amount in excess of ½ of 1 percent to the prime contractor's total bid, (b) the portion of the work which will be done by each subcontractor. The prime contractor shall only list one subcontractor for each such portion as is defined by the prime contractor in its bid.

Work Activity	Subcontractor	
	Name	Location (City)

(Note: Add additional pages if required.)

10.0 LIST OF CHANGES IN SUBCONTRACTORS DUE TO ALTERNATES – N/A

11.0 SCOPE OF WORK

Bidder includes the scope of work as defined in Section 01 12 00.02 - Signage

12.0 BIDDER INFORMATION

TYPE OF ORGANIZATION:

\_\_\_\_\_  
(Corporation, Partnership, Individual, Joint Venture, etc.)

If a corporation, corporation is organized under the laws:

STATE OF \_\_\_\_\_.  
(State)

NAME OF PRESIDENT OF THE CORPORATION:

\_\_\_\_\_  
(Insert Name)

NAME OF SECRETARY OF THE CORPORATION:

\_\_\_\_\_  
(Insert Name)

IF A PARTNERSHIP, NAMES AND TITLES OF PERSONS SIGNING THE BID ON BEHALF OF BIDDER  
AND ALL GENERAL PARTNERS:

PERSONS SIGNING ON BEHALF OF BIDDER:

\_\_\_\_\_  
(Insert Names and Titles)

ALL GENERAL PARTNERS:

\_\_\_\_\_  
(Insert Names)  
\_\_\_\_\_

CALIFORNIA CONTRACTORS LICENSE(S):

\_\_\_\_\_  
(Classification)

\_\_\_\_\_  
(License Number)

\_\_\_\_\_  
(Expiration Date)

(For Joint Venture, list Joint Venture's license and licenses for all Joint Venture partners.)

13.0 REQUIRED COMPLETED ATTACHMENTS

The following documents are submitted with and made a condition of this Bid:

1. Bid security in the form of \_\_\_\_\_.  
(Bid Bond or Certified Check)

14.0 DECLARATION

I, \_\_\_\_\_, hereby declare that I am the  
(Printed name)

\_\_\_\_\_ of \_\_\_\_\_  
(Title) (Name of bidder)

submitting this Bid Form; that I am duly authorized to execute this Bid Form on behalf of Bidder; and that all information set forth in this Bid Form and all attachments hereto are, to the best of my knowledge, true, accurate, and complete as of its submission date.

I further declare that this bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the bid is genuine and not collusive or sham; that the bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; that the bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder, or to secure any advantage against the public body awarding the contract of anyone interested in the proposed contract; that all statements contained in the bid are true; and, further, that the bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid.

I declare, under penalty of perjury, that the foregoing is true and correct and that this declaration was executed at: \_\_\_\_\_  
(Name of City if within City, otherwise Name of County), State of \_\_\_\_\_  
\_\_\_\_\_, on \_\_\_\_\_.  
(State) (Date)

\_\_\_\_\_  
(Signature)

**BID BOND**

KNOW ALL PERSONS BY THESE PRESENTS:

That we, \_\_\_\_\_, as Principal, and \_\_\_\_\_, as Surety, are held and firmly bound unto THE REGENTS OF THE UNIVERSITY OF CALIFORNIA, hereinafter called THE REGENTS, in the sum of 10% of the Lump Sum Base Bid for payment of which in lawful money of the United States, well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THE ABOVE OBLIGATION IS SUCH THAT, WHEREAS, Principal has submitted a Bid for the work described as follows:

**BID PACKAGE .02 SIGNAGE  
STUDENT SERVICES BUILDING  
PROJECT NO. 900120  
UNIVERSITY OF CALIFORNIA, MERCED  
MERCED CALIFORNIA**

NOW THEREFORE, if Principal shall not withdraw said Bid within the time period specified after the Bid Deadline, as defined in the Bidding Documents, or within 60 days after the Bid Deadline if no time period be specified, and, if selected as the apparent lowest responsible Bidder, Principal shall, within the time period specified in the Bidding Documents, do the following:

- (1) Enter into a written agreement, in the prescribed form, in accordance with the Bid
- (2) File two bonds with THE REGENTS, one to guarantee faithful performance and the other to guarantee payment for labor and materials, as required by the Bidding Documents.
- (3) Furnish certificates of insurance and all other items as required by the Bidding Documents.

In the event of the withdrawal of said Bid within the time period specified, or within 60 days if no time period be specified, or the disqualification of said Bid due to failure of Principal to enter into such agreement and furnish such bonds, certificates of insurance, and all other items as required by the Bidding Documents, if Principal shall pay to THE REGENTS an amount equal to the difference, not to exceed the amount hereof, between the amount specified in said Bid and such larger amount for which THE REGENTS procure the required work covered by said Bid, if that latter be in excess of the former, then this obligation shall be null and void, otherwise to remain in full force and effect.

In the event suit is brought upon this bond by THE REGENTS, Surety shall pay reasonable attorneys' fees and costs incurred by THE REGENTS in such suit

IN WITNESS WHEREOF, we have hereunto set our hands this \_\_\_\_ day of \_\_\_\_\_, 2012.

Principal:

\_\_\_\_\_  
(Name of Firm)

Surety:

\_\_\_\_\_  
(Name of Firm)

By:

By:

Title:

Title:

Address for Notices:

NOTE: The signature of the person executing the Bid Bond must be notarized. If an attorney-in-fact executes the Bid Bond on behalf of the surety, a copy of the current power of attorney bearing the notarized signature of the appropriate corporate officer must also be included with the Bid Bond. .

July 1, 1998

Revision: 3.1

LF/SF: BID-BOND

**AGREEMENT**

THIS AGREEMENT is made as of the \_\_\_\_ day of \_\_\_\_\_ between the University,  
THE REGENTS OF THE UNIVERSITY OF CALIFORNIA,

whose facility is: University of California  
Merced Campus

whose address for notices is: Physical Planning, Design & Construction  
University of California  
5200 n. Lake Rd.  
Merced, California 95343

and Contractor:

whose address for notices is:

for the Project: Student Services Building  
Project No. 900120  
University of California  
Merced Campus, Merced County  
Merced, California

for the Bid Package:

University's Responsible Administrator: Thomas E. Lollini  
Associate Vice Chancellor for Design & Construction

University's Representative is: Gary Knox

whose address for notices is: Physical Planning, Design & Construction  
University of California  
5200 N. Lake Rd.  
Merced, California 95343

Contract Documents for the  
Work Prepared by: CO Architects  
5055 Wilshire Blvd, 9th Floor  
Los Angeles, CA 90036

University and Contractor hereby agree as follows:

**ARTICLE 1 WORK** - Contractor shall provide all work required by the Contract Documents (the "Work"). Contractor agrees to do additional Work arising from changes ordered by the University pursuant to Article 7 of the General Conditions. Contractor shall (1) pay all sales, consumer and other taxes and (2) obtain and pay for any governmental licenses and permits necessary for the work, other than building and utility permits.

**ARTICLE 2 CONTRACT DOCUMENTS** - "Contract Documents" means the Advertisement for Bids, Instructions To Bidders, Supplementary Instructions to Bidders, Bid Form, this Agreement, General Conditions, Supplementary Conditions, Exhibits, Specifications, List of Drawings, Drawings, Addenda, Notice to Proceed, Change Orders, Notice of Completion, and all other documents identified in this Agreement of which together form the Contract between University and Contractor for the Work (the "Contract"). The Contract constitutes the complete agreement between University and Contractor and supersedes any previous agreements or understandings.

**ARTICLE 3 CONTRACT SUM** - Subject to the provisions of the Contract Documents University shall pay to Contractor, for the performance of the Work, \$\_\_\_\_\_, the "Contract Sum".

The Contract Sum includes the following Allowances:

**(TO BE COMPLETED AT TIME OF AWARD, IF APPLICABLE)**

The Contract Sum includes the following Alternates accepted by University:

**(TO BE COMPLETED AT TIME OF AWARD, IF APPLICABLE)**

University reserves the right to accept the following Alternates within 90 days after the date of this Agreement:

**(TO BE COMPLETED AT TIME OF AWARD, IF APPLICABLE)**

Unit prices, if any, are as follows:

**(TO BE COMPLETED AT TIME OF AWARD, IF APPLICABLE)**

The Contract Sum will be increased by an amount equal to the unit price multiplied by the actual number of units of each unit price item incorporated in the Work.

**ARTICLE 4 CONTRACT TIME** - Contractor shall commence the Work on the date specified in the Notice to Proceed and fully complete the work within 620 days, the "Contract Time".

By signing this agreement, Contractor represents to University that the Contract Time is reasonable for completion of the work and that Contractor will complete the Work within the Contract Time. Time limits stated in the Contract Documents are of the essence of the Contract.

**ARTICLE 5 LIQUIDATED DAMAGES** - If Contractor fails to meet Substantial Completion milestones as described in the summary of work 011110 part 1 (subject to time extensions duly granted in the manner and for the causes specified in the General Conditions), Contractor shall be assessed liquidated damages in the amount of \$2,500.00 per day for each calendar day following the specified date of Substantial Completion for that phase where the Work remains incomplete (Saturdays, Sundays, and holidays included). After Substantial Completion has been achieved on all phases of work Contractor shall be assessed Liquidated Damages in the amount of \$250.00 per day for each calendar day the project remains incomplete following the expiration of the contract time written in Article 4 of the Agreement.

**ARTICLE 6 COMPENSABLE DELAY** - If Contractor is entitled to an increase in the Contract Sum as a result of a Compensable Delay, determined pursuant to Articles 7 and 8 of the General Conditions, the Contract Sum will be increased by the sum of \$\_\_\_ per day for each day for which such compensation is payable.

**ARTICLE 7 DUE AUTHORIZATION** - The person or persons signing this Agreement on behalf of Contractor hereby represent and warrant to University that this Agreement is duly authorized, signed, and delivered by Contractor.

THIS AGREEMENT is entered into by University and Contractor as of the date set forth above.

CONTRACTOR:

\_\_\_\_\_  
(Name of Firm)

\_\_\_\_\_  
(Type of Organization)

By:

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Printed Name)

\_\_\_\_\_  
(Title)

California Contractor's License(s):

\_\_\_\_\_  
(Name of Licensee)

\_\_\_\_\_  
(Classification and License Number)

\_\_\_\_\_  
(Expiration Date)

Employer Identification Number

\_\_\_\_\_  
(EIN NUMBER)

UNIVERSITY:

The Regents of the University of California

Physical Planning, Design & Construction,  
Merced Campus

\_\_\_\_\_  
(Facility)

By:

\_\_\_\_\_  
(Signature)

Thomas E. Lollini

\_\_\_\_\_  
(Printed Name)

Associate Vice Chancellor Design & Construction

\_\_\_\_\_  
(Title)

Attach notary acknowledgment for all signatures of Contractor. If signed by other than the sole proprietor, a general partner, or corporate officer, attach original notarized Power of Attorney or Corporate Resolution.



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**ARTICLE 1  
GENERAL PROVISIONS**

**1.1 BASIC DEFINITIONS**

**1.1.1 APPLICABLE CODE REQUIREMENTS**

The term "Applicable Code Requirements" means all laws, statutes, the most recent building codes, ordinances, rules, regulations, and lawful orders of all public authorities having jurisdiction over University, Contractor, any Subcontractor, the Project, the Project site, the Work, or the prosecution of the Work including without limitation the requirements set forth in Article 3.7.

**1.1.2 APPLICATION FOR PAYMENT**

The term "Application For Payment" means the submittal from Contractor wherein payment for certain portions of the completed Work is requested in accordance with Article 9.

**1.1.3 BENEFICIAL OCCUPANCY**

The term "Beneficial Occupancy" means the University's occupancy or use of any part of the Work in accordance with Article 9.

**1.1.4 CERTIFICATE FOR PAYMENT**

The term "Certificate For Payment" means the form signed by University's Representative attesting to the Contractor's right to receive payment for certain completed portions of the Work in accordance with Article 9.

**1.1.5 CHANGE ORDER**

See Article 7.2 of the General Conditions.

**1.1.6 CLAIM**

See Article 4.3 of the General Conditions.

**1.1.7 COMPENSABLE DELAY**

The term "Compensable Delay" means a delay that entitles the Contractor to an adjustment of the Contract Sum and an adjustment of the Contract Time pursuant to Articles 7 and 8 of the General Conditions.

**1.1.8 CONTRACT**

The term "Contract" shall have the meaning identified in Article 2 of the Agreement.

**1.1.9 CONTRACT DOCUMENTS**

The term "Contract Documents" means all documents listed in Article 2 of the Agreement, as modified by Change Order, including but not limited to the Drawings and Specifications.

**1.1.10 CONTRACT MILESTONE**

The term "Contract Milestone" means any requirement in the Contract Documents that reflects a planned point in time for the start or completion of a portion of the Work measured from i) the date of the Notice to Proceed or ii) the date of another Contract Milestone defined in the Contract Documents, as applicable.

**1.1.11 CONTRACT SCHEDULE**

The term "Contract Schedule" means the graphical representation of a practical plan, in accordance with the Specifications, to perform and complete the Work within the Contract Time in accordance with Article 3.

**1.1.12 CONTRACT SUM**

The term "Contract Sum" means the amount of compensation stated in the Agreement for the performance of the Work, as adjusted by Change Order.

**1.1.13 CONTRACT TIME**

The term "Contract Time" means the number of days set forth in the Agreement, as adjusted by Change Order, within which Contractor must achieve Final Completion.

**1.1.14 CONTRACTOR**

The term "Contractor" means the person or firm identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number.

1.1.15 CONTRACTOR FEE

See Article 7.3 of the General Conditions.

1.1.16 COST OF EXTRA WORK

See Article 7.3 of the General Conditions.

1.1.17 DAY

The term "day," as used in the Contract Documents, shall mean calendar day, unless otherwise specifically provided.

1.1.18 DEFECTIVE WORK

The term "Defective Work" means work that is unsatisfactory, faulty, omitted, incomplete, deficient, or does not conform to the requirements of the Contract Documents, directives of University's Representative, or the requirements of any inspection, reference standard, test, or approval specified in the Contract Documents.

1.1.19 DRAWINGS

The term "Drawings" means the graphic and pictorial portions of the Contract Documents showing the design, location, and dimensions of the Work, generally including plans, elevations, sections, details, schedules, and diagrams. The Drawings are listed in the List of Drawings.

1.1.20 EXCUSABLE DELAY

The term "Excusable Delay" means a delay that entitles the Contractor to an adjustment of the Contract Time but not an adjustment of the Contract Sum, pursuant to Articles 7 and 8 of the General Conditions.

1.1.21 EXTRA WORK

The term "Extra Work" means Work beyond or in addition to the Work required by the Contract Documents.

1.1.22 FIELD ORDER

See Article 7.2 of the General Conditions.

1.1.23 FINAL COMPLETION

The term "Final Completion" means the date at which the Work has been fully completed in accordance with the requirements of the Contract Documents pursuant to Article 9.8.1 of the General Conditions.

1.1.24 GUARANTEE TO REPAIR PERIOD

See Article 12.2 of the General Conditions.

1.1.25 HAZARDOUS MATERIAL

The term "Hazardous Material" means any substance or material identified as hazardous under any California or federal statute governing handling, disposal and/or cleanup of any such substance or material.

1.1.26 PROJECT

The term "Project" means the Work of the Contract and all other work, labor, equipment, and materials necessary to accomplish the Project. The Project may include construction by University or by Separate Contractors.

1.1.27 SEPARATE CONTRACTOR

The term "Separate Contractor" means a person or firm under separate contract with University performing other work related to the Project.

1.1.28 SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES

See Article 3.12 of the General Conditions.

1.1.29 SPECIFICATIONS

The term "Specifications" means that portion of the Contract Documents consisting of the written requirements for materials, equipment, construction systems, standards and workmanship for the Work, and performance of related services.

1.1.30 SUBCONTRACTOR

The term "Subcontractor" means a person or firm that has a contract with Contractor or with a Subcontractor to perform a portion of the Work. Unless otherwise specifically provided, the term Subcontractor includes Subcontractors of all tiers.

**1.1.31 SUBSTANTIAL COMPLETION**

See Article 9.7 of the General Conditions.

**1.1.32 SUPERINTENDENT**

The term "Superintendent" means the person designated by Contractor to represent Contractor at the Project site in accordance with Article 3.

**1.1.33 TIER**

The term "tier" means the contractual level of a Subcontractor or supplier with respect to Contractor. For example, a first-tier Subcontractor is under subcontract with Contractor, a second-tier Subcontractor is under subcontract with a first-tier Subcontractor, and so on.

**1.1.34 UNEXCUSABLE DELAY**

The term "Unexcusable Delay" means a delay that does not entitle the Contractor to an adjustment of the Contract Sum and does not entitle the Contractor to an adjustment of the Contract Time.

**1.1.35 UNILATERAL CHANGE ORDER.**

See Article 7.2 of the General Conditions.

**1.1.36 UNIVERSITY**

The term "University" means The Regents of the University of California.

**1.1.37 UNIVERSITY'S BUILDING OFFICIAL**

The term "University's Building Official" means the individual the University has designated to act in the capacity as the "Building Official" as defined by the California Building Standards Code. The University's Building Official will determine whether the Work complies with Applicable Code Requirements and will determine whether and when it is appropriate to issue a Certificate of Occupancy.

**1.1.38 UNIVERSITY'S REPRESENTATIVE**

The term "University's Representative" means the person or firm identified as such in the Agreement.

**1.1.39 UNIVERSITY'S RESPONSIBLE ADMINISTRATOR**

The term "University's Responsible Administrator" means the person, or his or her authorized designee, who is authorized to execute the Agreement, Change Orders, Field Orders, and other applicable Contract Documents on behalf of the University.

**1.1.40 WORK**

The term "Work" means all construction, services and other requirements of the Contract Documents as modified by Change Order, whether completed or partially completed, and includes all labor, materials, equipment, tools, and services provided or to be provided by Contractor to fulfill Contractor's obligations. The Work may constitute the whole or a part of the Project.

**1.2 OWNERSHIP AND USE OF CONTRACT DOCUMENTS**

1.2.1 The Contract Documents and all copies thereof furnished to or provided by Contractor are the property of the University and are not to be used on other work.

**1.3 INTERPRETATION**

1.3.1 The Contract Documents are complementary and what is required by one shall be as binding as if required by all. In the case of conflict between terms of the Contract Documents, the following order of precedence shall apply:

- .1 The Agreement,
- .2 The Supplementary Conditions,
- .3 The General Conditions,
- .4 The Specifications,
- .5 The Drawings.

1.3.2 With respect to the Drawings, figured dimensions shall control over scaled measurements and specific details shall control over typical or standard details.

1.3.3 With respect to the Contract Documents, Addenda shall govern over other portions of the Contract Documents to the extent specifically noted; subsequent Addenda shall govern over prior Addenda only to the extent specifically noted.

1.3.4 Organization of the Specifications into various subdivisions and the arrangement of the Drawings shall not control Contractor in dividing the Work among Subcontractors or in establishing the extent of work to be performed by any trade.

1.3.5 Unless otherwise stated in the Contract Documents, technical words and abbreviations contained in the Contract Documents are used in accordance with commonly understood construction industry meanings; and non-technical words and abbreviations are used in accordance with their commonly understood meanings.

1.3.6 The Contract Documents may omit modifying words such as "all" and "any," and articles such as "the" and "an," but the fact that a modifier or an article is absent from one statement and appears in another is not intended to affect the interpretation of either statement. The use of the word "including," when following any general statement, shall not be construed to limit such statement to specific items or matters set forth immediately following such word or to similar items or matters, whether or not nonlimiting language (such as "without limitation," "but not limited to," or words of similar import) is used with reference thereto, but rather shall be deemed to refer to all other items or matters that could reasonably fall within the broadest possible scope of such general statement.

1.3.7 Whenever the context so requires, the use of the singular number shall be deemed to include the plural and vice versa. Each gender shall be deemed to include any other gender, and each shall include corporation, partnership, trust, or other legal entity whenever the context so requires. The captions and headings of the various subdivisions of the Contract Documents are intended only for reference and convenience and in no way define, limit, or prescribe the scope or intent of the Contract Documents or any subdivision thereof.

## **ARTICLE 2**

### **UNIVERSITY**

#### **2.1 INFORMATION AND SERVICES PROVIDED BY UNIVERSITY**

2.1.1 If required for performance of the Work, as determined by University's Representative, University will make available a survey describing known physical characteristics, boundaries, easements, and utility locations for the Project site.

2.1.2 University is not subject to any requirement to obtain or pay for local building permits, inspection fees, plan checking fees, or certain utility fees. Except as otherwise provided in the Contract Documents, University will obtain and pay for any utility permits, demolition permits, easements, and government approvals for the use or occupancy of permanent structures required in connection with the Work.

2.1.3 Contractor will be furnished, free of charge, such copies of the Contract Documents as University deems reasonably necessary for execution of the Work.

#### **2.2 ACCESS TO PROJECT SITE**

2.2.1 University will provide, no later than the date designated in the Contract Schedule accepted by University's Representative, access to the lands and facilities upon which the Work is to be performed, including such access and other lands and facilities designated in the Contract Documents for use by Contractor.

#### **2.3 UNIVERSITY'S RIGHT TO STOP THE WORK**

2.3.1 If Contractor fails to correct Defective Work as required by Article 12.2 or fails to perform the Work in accordance with the Contract Documents, University or University's Representative may direct Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated by Contractor. Contractor shall not be entitled to any adjustment of Contract Time or Contract Sum as a result of any such

order. University and University's Representative have no duty or responsibility to Contractor or any other party to exercise the right to stop the Work.

#### **2.4 UNIVERSITY'S RIGHT TO CARRY OUT THE WORK**

2.4.1 If Contractor fails to carry out the Work in accordance with the Contract Documents, fails to provide sufficient labor, materials, equipment, tools, and services to maintain the Contract Schedule, or otherwise fails to comply with any material term of the Contract Documents, and, after receipt of written notice from University, fails within 2 days, excluding Saturdays, Sundays and legal holidays, or within such additional time as the University may specify, to correct such failure, University may, without prejudice to other remedies University may have, correct such failure at Contractor's expense. In such case, University will be entitled to deduct from payments then or thereafter due Contractor the cost of correcting such failure, including without limitation compensation for the additional services and expenses of University's consultants made necessary thereby. If payments then or thereafter due Contractor are not sufficient to cover such amounts, Contractor shall pay the additional amount to University.

#### **2.5 UNIVERSITY'S RIGHT TO REPLACE UNIVERSITY'S REPRESENTATIVE**

2.5.1 University may at any time and from time to time, without prior notice to or approval of Contractor, replace University's Representative with a new University's Representative. Upon receipt of notice from University informing Contractor of such replacement and identifying the new University's representative, Contractor shall recognize such person or firm as University's Representative for all purposes under the Contract Documents.

### **ARTICLE 3 CONTRACTOR**

#### **3.1 REVIEW OF CONTRACT DOCUMENTS AND FIELD CONDITIONS BY CONTRACTOR**

3.1.1 Contractor and its Subcontractors shall review and compare each of the Contract Documents with the others and with information furnished or made available by University, and shall promptly report in writing to University's Representative any errors, inconsistencies, or omissions in the Contract Documents or inconsistencies with Applicable Code Requirements observed by Contractor or its Subcontractors.

3.1.2 Contractor and its Subcontractors shall take field measurements, verify field conditions, and carefully compare with the Contract Documents such field measurements, conditions, and other information known to Contractor before commencing the Work. Errors, inconsistencies, or omissions discovered at any time shall be promptly reported in writing to University's Representative.

3.1.3 If Contractor and its Subcontractors performs any construction activity involving an error, inconsistency, or omission referred to in Articles 3.1.1 and 3.1.2, without giving the notice required in those Articles and obtaining the written consent of University's Representative, Contractor shall be responsible for the resultant losses, including, without limitation, the costs of correcting Defective Work.

#### **3.2 SUPERVISION AND CONSTRUCTION PROCEDURES**

3.2.1 Contractor shall supervise, coordinate, and direct the Work using Contractor's best skill and attention. Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences, procedures, and the coordination of all portions of the Work.

3.2.2 Contractor shall be responsible to University for acts and omissions of Contractor's agents, employees, and Subcontractors, and their respective agents and employees.

3.2.3 Contractor shall not be relieved of its obligation to perform the Work in accordance with the Contract Documents either by acts or omissions of University or University's Representative in the administration of the Contract, or by tests, inspections, or approvals required or performed by persons or firms other than Contractor.

3.2.4 Contractor shall be responsible for inspection of all portions of the Work, including those portions already performed under this Contract, to determine that such portions conform to the requirements of the Contract and are ready to receive subsequent Work.



3.2.5 Contractor shall at all times maintain good discipline and order among its employees and Subcontractors. Contractor shall provide competent, fully qualified personnel to perform the Work.

### **3.3 LABOR AND MATERIALS**

3.3.1 Unless otherwise provided in the Contract, Contractor shall provide and pay for all labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for proper execution and Final Completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.

### **3.4 CONTRACTOR'S WARRANTY**

3.4.1 Contractor warrants to University that all materials and equipment used in or incorporated into the Work will be of good quality, new, and free of liens, claims, and security interests of third parties; that the Work will be of good quality and free from defects; and that the Work will conform with the requirements of the Contract. If required by University's Representative, Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

### **3.5 TAXES**

3.5.1 Contractor shall pay all sales, consumer, use, and similar taxes for the Work or portions thereof provided by Contractor.

### **3.6 PERMITS, FEES, AND NOTICES**

3.6.1 Except for the permits and approvals which are to be obtained by University or the requirements with respect to which University is not subject as provided in Article 2.1.2, Contractor shall secure and pay for all permits, approvals, government fees, licenses, and inspections necessary for the proper execution and performance of the Work. Contractor shall deliver to University all original licenses, permits, and approvals obtained by Contractor in connection with the Work prior to the final payment or upon termination of the Contract, whichever is earlier.

### **3.7 APPLICABLE CODE REQUIREMENTS**

3.7.1 Contractor shall perform the Work in accordance with the following Applicable Code Requirements:

- .1 All laws, statutes, the most recent building codes, ordinances, rules, regulations, and lawful orders of all public authorities having jurisdiction over University, Contractor, any Subcontractor, the Project, the Project site, the Work, or the prosecution of the Work.
- .2 All requirements of any insurance company issuing insurance required hereunder.
- .3 The Federal Occupational Safety and Health Act and all other Applicable Code Requirements relating to safety.
- .4 Applicable titles in the State of California Code of Regulations.
- .5 Applicable sections in the State of California Labor Code.
- .6 All Applicable Code Requirements relating to nondiscrimination, payment of prevailing wages, payroll records, apprentices, and work day.

Without limiting the foregoing, Contractor shall comply with the provisions regarding nondiscrimination, payment of prevailing wages, payroll records, apprentices, and work day set forth in Article 14.

3.7.2 Contractor shall comply with and give notices required by all Applicable Code Requirements, including all environmental laws and all notice requirements under the State of California Safe Drinking Water and Enforcement Act of 1986 (State of California Health and Safety Code Section 25249.5 and applicable sections that follow). Contractor shall promptly notify University's Representative in writing if Contractor becomes aware during the performance of the Work that the Contract Documents are at variance with Applicable Code Requirements.

3.7.3 If Contractor performs Work which it knows or should know is contrary to Applicable Code Requirements, without prior notice to University and University's Representative, Contractor shall be responsible for such Work and any resulting damages including, without limitation, the costs of correcting Defective Work.

### 3.8 SUPERINTENDENT

3.8.1 Contractor shall employ a competent Superintendent satisfactory to University who shall be in attendance at the Project site at all times during the performance of the Work. Superintendent shall represent Contractor and communications given to and received from Superintendent shall be binding on Contractor.

3.8.2 Failure to maintain a Superintendent on the Project site at all times Work is in progress shall be considered a material breach of this Contract, entitling University to terminate the Contract or alternatively, issue a stop Work order until the Superintendent is on the Project site. If, by virtue of issuance of said stop Work order, Contractor fails to complete the Contract on time, Contractor will be assessed Liquidated Damages in accordance with the Agreement.

3.8.3 The Superintendent approved for the Project must be able to read, write and verbally communicate in English.

3.8.4 The Superintendent may not perform the Work of any trade, pick-up materials, or perform any Work not directly related to the supervision and coordination of the Work at the Project site when Work is in progress.

### 3.9 SCHEDULES REQUIRED OF CONTRACTOR

3.9.1 Contractor shall submit a Preliminary Contract Schedule to University's Representative in the form and within the time limit required by the Specifications. University's Representative will review the Preliminary Contract Schedule with Contractor within the time limit required by the Specifications, or, if no such time period is specified, within a reasonable period of time.

3.9.2 Contractor shall submit a Contract Schedule and updated Contract Schedules to University's Representative in the form and within the time limits required by the Specifications and acceptable to University's Representative. University's Representative will determine acceptability of the Contract Schedule and updated Contract Schedules within the time limits required by the Specifications, or if no such time period is specified, within a reasonable period of time. If University's Representative deems the Contract Schedule or updated Contract Schedule unacceptable, it shall specify in writing to Contractor the basis for its objection.

3.9.3 The Preliminary Contract Schedule, the Contract Schedule, and updated Contract Schedules shall represent a practical plan to complete the Work within the Contract Time. Schedules showing the Work completed in less than the Contract Time may be acceptable if judged by University's Representative to be practical. Schedules showing the Work completed beyond the Contract Time may be submitted under the following circumstances:

.1 If accompanied by a Change Order Request seeking an adjustment of the Contract Time consistent the requirements of paragraph 8.4 for Adjustment of the Contract Time for Delay.; or

.2 If the Contract Time has passed, or if it is a practical impossibility to complete the Work within the Contract Time, then the updated Contract Schedule or fragnet schedule shall show completion at the earliest practical date.

University's Representative will timely review the updated Contract Schedule or Fragnet Schedule submitted by Contractor. If University's Representative determines that additional supporting data are necessary to fully evaluate the updated Contract Schedule or Fragnet Schedule, University's Representative will request such additional supporting data in writing. Such data shall be furnished no later than 10 days after the date of such request. University's Representative will render a decision promptly and in any case within 30 days after the later of the receipt of the updated Contract Schedule or Fragnet Schedule or the deadline for furnishing such additional supporting data. Failure of University's Representative to render a decision by the applicable deadline will be deemed a decision denying approval of the updated Contract Schedule or Fragnet Schedule. Acceptance of any schedule showing completion beyond the Contract Time by University's Representative shall not change the Contract Time and is without prejudice to any right of the University. The Contract Time, not the Contract Schedule, shall control in the determination of liquidated damages payable by Contractor under Article 4 and Article 5 of the Agreement and in the determination of any delay under Article 8 of the General Conditions.

3.9.4 If a schedule showing the Work completed in less than the Contract Time is accepted, Contractor shall not be entitled to extensions of the Contract Time for Excusable Delays or Compensable Delays or to adjustments of the Contract Sum for Compensable Delays until such delays extend the Final Completion of the Work beyond the expiration of the Contract Time.

3.9.5 Contractor shall prepare and keep current to the reasonable satisfaction of University's Representative, a Submittal Schedule in the form contained in the Exhibits, for each submittal, as required by the Specifications, and that are coordinated with the other activities in the Contract Schedule.

3.9.6 The Preliminary Contract Schedule, Contract Schedule, and the Updated Contract Schedules shall meet the following requirements:

- .1 Schedules must be suitable for monitoring progress of the Work.
- .2 Schedules must provide necessary data about the timing for University decisions and University furnished items.
- .3 Schedules must be in sufficient detail to demonstrate adequate planning for the Work.
- .4 Schedules must represent a practical plan to perform and complete the Work within the Contract Time.

3.9.7 University's Representative's review of the form and general content of the Preliminary Contract Schedule, Contract Schedule, and Updated Contract Schedules is for the purpose of determining if the above-listed requirements have been satisfied.

3.9.8 Contractor shall plan, develop, supervise, control, and coordinate the performance of the Work so that its progress and the sequence and timing of Work will permit its completion within the Contract Time, any Contract milestones and any Contract phases.

3.9.9 In preparing the Preliminary Contract Schedule, the Contract Schedule, and updated Contract Schedules, Contractor shall obtain such information and data from Subcontractors as may be required to develop a reasonable and appropriate schedule for performance of the work and shall provide such information and data to the University's Representative upon request. Contractor shall continuously obtain from Subcontractors information and data about the planning for and progress of the Work and the delivery of equipment, shall coordinate and integrate such information and data into updated Contract Schedules, as appropriate, and shall monitor the progress of the Work and the delivery of equipment.

3.9.10 Contractor shall act as the expeditor of potential and actual delays, interruptions, hindrances, or disruptions for its own forces and those forces of Subcontractors, regardless of tier.

3.9.11 Contractor shall cooperate with University's Representative in the development of the Contract Schedule and updated Contract Schedules. University's Representative's acceptance of or its review comments about any schedule or scheduling data shall not relieve Contractor from its sole responsibility to plan for, perform, and complete the Work within the Contract Time. Acceptance of or review comments about any schedule shall not transfer responsibility for any schedule to University's Representative or University nor imply their agreement with (1) any assumption upon which such schedule is based or (2) any matter underlying or contained in such schedule. Failure of University's Representative to discover errors or omissions in schedules that it has reviewed, or to inform Contractor that Contractor, Subcontractors, or others are behind schedule, or to direct or enforce procedures for complying with the Contract Schedule shall not relieve Contractor from its sole responsibility to perform and complete the Work within the Contract Time and shall not be a cause for an adjustment of the Contract Time or the Contract Sum.

### **3.10 AS-BUILT DOCUMENTS**

3.10.1 Contractor shall maintain one set of As-built drawings and specifications, which shall be kept up to date during the Work of the Contract. All changes which are incorporated into the Work which differ from the documents as drawn and written shall be noted on the As-built set. Notations shall reflect the actual materials, equipment and installation methods used for the Work and each revision shall be initialed and dated by Superintendent. Prior to filing of the Notice of Completion each drawing and the specification cover shall be signed by Contractor and dated attesting to the completeness of the information noted therein. As-built Documents shall be turned over to the University's Representative and shall become part of the Record Documents.

### **3.11 DOCUMENTS AND SAMPLES AT PROJECT SITE**

3.11.1 Contractor shall maintain the following at the Project site:

- .1 One as-built copy of the Contract Documents, in good order and marked to record current changes and selections made during construction.
- .2 The current accepted Contract Schedule.
- .3 Shop Drawings, Product Data, and Samples.
- .4 All other required submittals.

These shall be available to University's Representative and shall be delivered to University's Representative for submittal to University upon the earlier of Final Completion or termination of the Contract.

### **3.12 SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES**

3.12.1 Definitions:

- .1 Shop Drawings are drawings, diagrams, schedules, and other data specially prepared for the Work by Contractor or a Subcontractor to illustrate some portion of the Work.
- .2 Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams, and other information furnished by Contractor to illustrate or describe materials or equipment for some portion of the Work.
- .3 Samples are physical examples which illustrate materials, equipment, or workmanship and establish standards by which the Work will be judged.

3.12.2 Shop Drawings, Product Data, Samples, and similar submittals are not Contract Documents. Their purpose is to demonstrate, for those portions of the Work for which submittals are required, how Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents.

3.12.3 Contractor shall review, approve, and submit to University's Representative Shop Drawings, Product Data, Samples, and similar submittals required by the Contract Documents with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of University or of Separate Contractors. Submittals made by Contractor which are not required by the Contract Documents may be returned without action by University's Representative.

3.12.4 Contractor shall perform no portion of the Work requiring submittal and review of Shop Drawings, Product Data, Samples, or similar submittals until the respective submittal has been reviewed by University's Representative and no exceptions have been taken by University's Representative. Such Work shall be in accordance with approved submittals and the Contract Documents.

3.12.5 By approving and submitting Shop Drawings, Product Data, Samples, and similar submittals, Contractor represents that it has determined or verified materials and field measurements and conditions related thereto, and that it has checked and coordinated the information contained within such submittals with the requirements of the Contract Documents and Shop Drawings for related Work.

3.12.6 If Contractor discovers any conflicts, omissions, or errors in Shop Drawings or other submittals, Contractor shall notify University's Representative and receive instruction before proceeding with the affected Work.

3.12.7 Contractor shall not be relieved of responsibility for deviations from requirements of the Contract Documents by University's Representative's review of Shop Drawings, Product Data, Samples, or similar submittals, unless Contractor has specifically informed University's Representative in writing of such deviation at the time of submittal and University's Representative has given written approval of the specific deviation. Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples, or similar submittals by University's Representative's review, acceptance, comment, or approval thereof.

3.12.8 Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, Product Data, Samples, or similar submittals, to revisions other than those requested by University's Representative on previous submittals.

### **3.13 USE OF SITE AND CLEAN UP**

3.13.1 Contractor shall confine operations at the Project site to areas permitted by law, ordinances, permits, and the Contract Documents. Contractor shall not unreasonably encumber the Project site with materials or equipment.

3.13.2 Contractor shall, during performance of the Work, keep the Project site and surrounding area free from the accumulation of excess dirt, waste materials, and rubbish caused by Contractor. Contractor shall remove all excess dirt, waste material, and rubbish caused by the Contractor; tools; equipment; machinery; and surplus materials from the Project site and surrounding area at the completion of the Work.

3.13.3 Personnel of Contractor and Subcontractors shall not occupy, live upon, or otherwise make use of the Project site during any time that Work is not being performed at the Project site, except as otherwise provided in the Contract Documents.

### **3.14 CUTTING, FITTING, AND PATCHING**

3.14.1 Contractor shall do all cutting, fitting, or patching of the Work required to make all parts of the Work come together properly and to allow the Work to receive or be received by work of Separate Contractors shown upon, or reasonably implied by, the Contract Documents.

3.14.2 Contractor shall not endanger the Work, the Project, or adjacent property by cutting, digging, or otherwise. Contractor shall not cut or alter the work of any Separate Contractor without the prior consent of University's Representative.

### **3.15 ACCESS TO WORK**

3.15.1 University, University's Representative, their consultants, and other persons authorized by University will at all times have access to the Work wherever it is in preparation or progress. Contractor shall provide safe and proper facilities for such access and for inspection.

### **3.16 ROYALTIES AND PATENTS**

3.16.1 Contractor shall pay all royalties and license fees required for the performance of the Work. Contractor shall defend suits or claims resulting from Contractor's or any Subcontractor's infringement of patent rights and shall Indemnify, defend and hold harmless University and University's Representative from losses on account thereof.

### **3.17 DIFFERING SITE CONDITIONS**

3.17.1 If Contractor encounters any of the following conditions at the site, Contractor shall immediately notify the University's Representative in writing of the specific differing conditions before they are disturbed and before any affected Work is performed, and permit investigation of the conditions:

- .1 Subsurface or latent physical conditions at the site (including Hazardous Materials) which differ materially from those indicated in this Contract, or if not indicated in this Contract, in the Information Available to Bidders; or
- .2 Unknown physical conditions at the site, of an unusual nature, which differ materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract.

3.17.2 Contractor shall be entitled to an adjustment to the Contract Sum and/or Contract Time as the result of extra costs and/or delays resulting from a materially differing site condition, if and only if Contractor fulfills the following conditions:

- .1 Contractor fully complies with Article 3.17.1; and

- .2 Contractor fully complies with Article 4 (including the timely filing of a Change Order Request and all other requirements for Change Orders Requests and Claims).

3.17.3 Adjustments to the Contract Sum and/or Contract Time shall be subject to the procedures and limitations set forth in Articles 7 and 8.

### **3.18 CONCEALED, UNFORESEEN, OR UNKNOWN CONDITIONS OR EVENTS**

3.18.1 Except and only to the extent provided otherwise in Articles 3.17, 7 and 8 of the General Conditions, by signing the Agreement, Contractor agrees:

- .1 To bear the risk of concealed, unforeseen or unknown conditions or events, if any, which may be encountered in performing the Contract; and
- .2 That Contractor's bid for the Contract was made with full knowledge of this risk.

In agreeing to bear the risk of concealed, unforeseen or unknown conditions or events, Contractor understands that, except and only to the extent provided otherwise in Articles 3.17, 7 and 8, concealed, unforeseen or unknown conditions or events shall not excuse Contractor from its obligation to achieve Final Completion of the Work within the Contract Time, and shall not entitle the Contractor to an adjustment of the Contract Sum.

3.18.2 If Contractor encounters concealed, unforeseen or unknown conditions or events that may require a change to the design shown in the Contract Documents, Contractor shall immediately notify University's Representative in writing such that University's Representative can determine if a change to the design is required. Contractor shall be liable to University for any extra costs incurred as the result of Contractor's failure to immediately give such notice.

3.18.3 If, as the result of concealed, unforeseen or unknown conditions or events, the University issues a Change Order or Field Order that changes the design from the design depicted in the Contract Documents, Contractor shall be entitled, subject to compliance all the provisions of the Contract, including those set forth in Articles 4, 7 and 8, to an adjustment of the Contract Sum and/or Contract Time, for the cost and delay resulting from implementing the changes to the design. Except as provided in this Article 3.18.3, or as may be expressly provided otherwise in the Contract, there shall be no adjustment of the Contract Sum and/or Contract Time as a result of concealed, unforeseen or unknown conditions or events. .

3.18.4 Contractor shall, as a condition precedent to any adjustment in Contract Sum or Contract Time under Article 3.18.3, fully comply with Article 4 (including the timely filing of a Change Order Request and all other requirements for Change Orders Requests and Claims).

### **3.19 HAZARDOUS MATERIALS**

3.19.1 The University shall not be responsible for any Hazardous Material brought to the site by the Contractor.

3.19.2 If the Contractor: (i) introduces and/or discharges a Hazardous Material onto the site in a manner not specified by the Contract Documents; and/or (ii) disturbs a Hazardous Material identified in the Contract Documents, the Contractor shall hire a qualified remediation contractor at Contractor's sole cost to eliminate the condition as soon as possible. Under no circumstance shall the Contractor perform Work for which it is not qualified. University, in its sole discretion, may require the Contractor to retain at Contractor's cost an independent testing laboratory.

3.19.3 If the Contractor encounters a Hazardous Material which may cause foreseeable injury or damage, Contractor shall immediately: (i) secure or otherwise isolate such condition; (ii) stop all Work in connection with such material or substance (except in an emergency situation); and (iii) notify University (and promptly thereafter confirm such notice in writing)

3.19.4 Subject to Contractor's compliance with Article 3.19.3, the University shall verify the presence or absence of the Hazardous Material reported by the Contractor, except as qualified under Section 3.19.1 and 3.19.3, and, in the event such material or substance is found to be present, verify that the levels of the hazardous material are below OSHA Permissible Exposure Levels and below levels which would classify the material as a state of California or federal hazardous waste. When the material falls below such levels, Work in the affected area shall resume upon

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direction by the University. The Contract Time and Sum shall be extended appropriately as provided in Articles 7 and 8.

3.19.5 The University shall indemnify and hold harmless the Contractor from and against claims, damages, losses and expenses, arising from a Hazardous Material on the Project site, if such Hazardous Material: (i) was not shown on the Contract Documents or Information Available to Bidders; (ii) was not brought to the site by Contractor; and (iii) exceeded OSHA Permissible Exposure Levels or levels which would classify the material as a state of California or federal hazardous waste. The indemnity obligation in this Article shall not apply to:

- .1 Claims, damages, losses or expenses arising from the breach of contract, negligence or willful misconduct of Contractor, its suppliers, its Subcontractors of all tiers and/or any persons or entities working under Contractor; and
- .2 Claims, damages, losses or expenses arising from a Hazardous Material subject to Article 3.19.2.

3.19.6 In addition to the requirements in Article 3.22, Contractor shall indemnify and hold harmless the University from and against claims, damages, losses and expenses, arising from a Hazardous Material on the Project site, if such Hazardous Material: (i) was shown on the Contract Documents or Information Available to Bidders; (ii) was brought to the site by Contractor; and (iii) exceeded OSHA Permissible Exposure Levels or levels which would classify the material as a state of California or federal hazardous waste. Nothing in this paragraph shall obligate the Contractor to indemnify University in the event of the sole negligence of the University, its officers, agents, or employees.

### **3.20 INFORMATION AVAILABLE TO BIDDERS**

3.20.1 Any information provided pursuant to INFORMATION AVAILABLE TO BIDDERS is subject to the following provisions:

- .1 The information is made available for the convenience of Bidders and is not a part of the Contract.
- .2 The Contractor may rely on written descriptions of physical conditions included in the information to the extent such reliance is reasonable.
- .3 Other components of the information, including but not limited to recommendations, may not be relied upon by Contractor. University shall not be responsible for any interpretation of or conclusion drawn from the other components of the information by the Contractor.

### **3.21 LIABILITY FOR AND REPAIR OF DAMAGED WORK**

3.21.1 Contractor shall be liable for any and all damages and losses to the Project (whether by fire, theft, vandalism, earthquake, flood or otherwise) prior to University's acceptance of the Project as fully completed except that Contractor shall not be liable for damages and losses to the Project caused by earthquake in excess of magnitude 3.5 on the Richter Scale, tidal wave, or flood, provided that the damages or losses were not caused in whole or in part by the negligent acts or omissions of Contractor, its officers, agents or employees (including all Subcontractors and suppliers of all tiers). As used herein, "flood" shall have the same meaning as in the builder's risk property insurance.

3.21.2 Contractor shall promptly repair and replace any Work or materials damaged or destroyed for which the Contractor is liable under Article 3.21.1.

### **3.22 INDEMNIFICATION**

3.22.1 Contractor shall indemnify, defend and hold harmless University, University's consultants, University's Representative, University's Representative's consultants, and their respective directors, officers, agents, and employees from and against losses (including without limitation the cost of repairing defective work and remedying the consequences of defective work) arising out of, resulting from, or relating to the following:



- .1 The failure of Contractor to perform its obligations under the Contract.
- .2 The inaccuracy of any representation or warranty by Contractor given in accordance with or contained in the Contract Documents.
- .3 Any claim of damage or loss by any Subcontractor against University arising out of any alleged act or omission of Contractor or any other Subcontractor, or anyone directly or indirectly employed by Contractor or any Subcontractor.
- .4 Any claim of damage or loss resulting from Hazardous Materials introduced, discharged, or disturbed by Contractor as required per Article 3.19.6.

3.22.2 The University shall not be liable or responsible for any accidents, loss, injury (including death) or damages happening or accruing during the term of the performance of the Work herein referred to or in connection therewith, to persons and/or property, and Contractor shall fully indemnify, defend and hold harmless University and protect University from and against the same as provided in paragraph 3.22.1 above. In addition to the liability imposed by law upon the Contractor for damage or injury (including death) to persons or property by reason of the negligence of the Contractor, its officers, agents, employees or Subcontractors, which liability is not impaired or otherwise affected hereby, the Contractor shall defend, indemnify, hold harmless, release and forever discharge the University, its officers, employees, and agents from and against and waive any and all responsibility of same for every expense, liability, or payment by reason of any damage or injury (including death) to persons or property suffered or claimed to have been suffered through any negligent act, omission, or willful misconduct of the Contractor, its officers, agents, employees, or any of its Subcontractors, or anyone directly or indirectly employed by either of them or from the condition of the premises or any part of the premises while in control of the Contractor, its officers, agents, employees, or any of its Subcontractors or anyone directly or indirectly employed by either of them, arising out of the performance of the Work called for by this Contract. Contractor agrees that this indemnity and hold harmless shall apply even in the event of negligence of University, its officers, agents, or employees, regardless of whether such negligence is contributory to any claim, demand, loss, damage, injury, expense, and/or liability; but such indemnity and hold harmless shall not apply (i) in the event of the sole negligence of University, its officers, agents, or employees; or (ii) to the extent that the University shall indemnify and hold harmless the Contractor for Hazardous Materials pursuant to Article 3.19.5 .

3.22.3 In claims against any person or entity indemnified under this Article 3.22 that are made by an employee of Contractor or any Subcontractor, a person indirectly employed by Contractor or any Subcontractor, or anyone for whose acts Contractor or any Subcontractor may be liable, the indemnification obligation under this Article 3.22 shall not be limited by any limitation on amount or type of damages, compensation, or benefits payable by or for Contractor or any Subcontractor under workers' compensation acts, disability benefit acts, or other employee benefit acts.

3.22.4 The indemnification obligations under this Article 3.22 shall not be limited by any assertion or finding that the person or entity indemnified is liable by reason of a non-delegable duty.

3.22.5 Contractor shall indemnify University from and against Losses resulting from any claim of damage made by any Separate Contractor against University arising out of any alleged acts or omissions of Contractor, any Subcontractor, anyone directly or indirectly employed by either of them, or anyone for whose acts either of them may be liable.

3.22.6 Contractor shall indemnify Separate Contractors from and against Losses arising out of the negligent acts, omissions, or willful misconduct of Contractor, any Subcontractor, anyone directly or indirectly employed by either of them, or anyone for whose acts either of them may be liable.

#### **ARTICLE 4 ADMINISTRATION OF THE CONTRACT**

##### **4.1 ADMINISTRATION OF THE CONTRACT BY UNIVERSITY'S REPRESENTATIVE**

4.1.1 University's Representative will provide administration of the Contract as provided in the Contract Documents and will be the representative of University. University's Representative will have authority to act on behalf of University only to the extent provided in the Contract Documents.

4.1.2 University's Representative will have the right to visit the Project site at such intervals as deemed appropriate by the University's Representative. However, no actions taken during such Project site visit by University's Representative shall relieve Contractor of its obligations as described in the Contract Documents.

4.1.3 University's Representative will not have control over, will not be in charge of, and will not be responsible for construction means, methods, techniques, sequences, or procedures, or for safety precautions and programs in connection with the Work, since these are solely Contractor's responsibility.

4.1.4 Except as otherwise provided in the Contract Documents or when direct communications have been specifically authorized, University and Contractor shall communicate through University's Representative. Except when direct communication has been specifically authorized in writing by University Representative, communications by Contractor with University's consultants and University's Representative's consultants shall be through University's Representative. Communications by University and University's Representative with Subcontractors will be through Contractor. Communications by Contractor and Subcontractors with Separate Contractors shall be through University's Representative. Contractor shall not rely on oral or other non-written communications.

4.1.5 Based on University's Representative's Project site visits and evaluations of Contractor's Applications For Payment, University's Representative will recommend amounts, if any, due Contractor and will issue Certificates For Payment in such amounts.

4.1.6 University's Representative will have the authority to reject the Work, or any portion thereof, which does not conform to the Contract Documents. University's Representative will have the authority to stop the Work or any portion thereof. Whenever University's Representative considers it necessary or advisable for implementation of the intent of the Contract Documents, University's Representative will have the authority to require additional inspection or testing of the Work in accordance with the Contract Documents, whether or not such Work is fabricated, installed, or completed. However, no authority of University's Representative conferred by the Contract Documents nor any decision made in good faith either to exercise or not exercise such authority, will give rise to a duty or responsibility of University or University's Representative to Contractor, or any person or entity claiming under or through Contractor.

4.1.7 University's Representative will have the authority to conduct inspections as provided in the Contract Documents, to take Beneficial Occupancy and to determine the dates of Substantial Completion and Final Completion; will receive for review and approval any records, written warranties, and related documents required by the Contract Documents and assembled by Contractor; and will issue a final Certificate For Payment upon Contractor's compliance with the requirements of the Contract Documents.

4.1.8 University's Representative will be, in the first instance, the interpreter of the requirements of the Contract Documents and the judge of performance thereunder by Contractor. Should Contractor discover any conflicts, omissions, or errors in the Contract Documents; have any questions about the interpretation or clarification of the Contract Documents; question whether Work is within the scope of the Contract Documents; or question that Work required is not sufficiently detailed or explained, then, before proceeding with the Work affected, Contractor shall notify University's Representative in writing and request interpretation, clarification, or furnishing of additional detailed instructions. University's Representative's response to questions and requests for interpretations, clarifications, instructions, or decisions will be made with reasonable promptness. Should Contractor proceed with the Work affected before receipt of a response from University's Representative, any portion of the Work which is not done in accordance with University's Representative's interpretations, clarifications, instructions, or decisions shall be removed or replaced and Contractor shall be responsible for all resultant losses.

## **4.2 CONTRACTOR CHANGE ORDER REQUESTS**

4.2.1 Contractor may request changes to the Contract Sum and/or Contract Time for Extra Work, materially differing site conditions, or Delays to Final Completion of the Work.

4.2.2 Conditions precedent to obtaining an adjustment of the Contract Sum and/or Contract Time , payment of money, or other relief with respect to the Contract Documents, for any other reason, are:

.1 Timely submission of a Change Order Request that meets the requirements of Articles 4.2.3.1 and 4.2.3.2; and

.2 If requested, timely submission of additional informational requested by the University Representative pursuant to Article 4.2.3.3.

4.2.3 Change Order Request:

4.2.3.1 A Change Order Request will be deemed timely submitted if, and only if, it is submitted within 7 days of the date the Contractor discovers, or reasonably should discover the circumstances giving rise to the Change Order Request, unless additional time is allowed in writing by University's Representative for submission of the Change Order Request, provided that if :

- .1 the Change Order Request includes compensation sought by a Subcontractor; AND
- .2 the Contractor requests in writing to the University's Representative, within the 7-day time period, additional time to permit Contractor to conduct an appropriate review of the Subcontractor Change Order Request,

the time period for submission of the actual Change Order Request shall be extended by the number of days specified in writing by the University's Representative.

4.2.3.2 A Change Order Request must state that it is a Change Order Request, state and justify the reason for the request, and specify the amount of any requested adjustment of the Contract Sum, Contract Time, and/or other monetary relief. If the Contractor requests an adjustment to the Contract Sum or other monetary relief, the Contractor shall submit the following with the Change Order Request:

- .1 a completed Cost Proposal in the form contained in the Exhibits meeting the requirements of Article 7; OR
- .2 a partial Cost Proposal and a declaration of what required information is not then known to Contractor. If Contractor failed to submit a completed Cost Proposal with the Change Order Request, Contractor shall submit a completed Cost Proposal meeting the requirements of Article 7 within 7 days of the date the Contractor submitted the Change Order Request unless additional time is allowed by the University's Representative.

4.2.3.3 Upon request of University's Representative, Contractor shall submit such additional information as may be requested by University's Representative for the purpose of evaluating the Change Order Request. Such additional information may include:

- .1 If Contractor seeks an adjustment of the Contract Sum or other monetary relief, actual cost records for any changed or extra costs (including without limitation, payroll records, material and rental invoices and the like), shall be submitted by the deadline established by the University's Representative, who may require such actual cost records to be submitted and reviewed, on a daily basis, by the University's Representative and/or representatives of the University's Representative.
- .2 If Contractor seeks an adjustment of the Contract Time, written documentation demonstrating Contractor's entitlement to a time extension under Article 8.4, which shall be submitted within 15 days of the date requested. If requested, Contractor may submit a fragnet in support of its request for a time extension. The University may, but is not obligated to, grant a time extension on the basis of a fragnet alone which, by its nature, is not a complete schedule analysis. If deemed appropriate by University Representative, Contractor shall submit a more detailed schedule analysis in support of its request for a time extension.
- .3 If Contractor seeks an adjustment of the Contract Sum or other monetary relief for delay, written documentation demonstrating Contractor's entitlement to such an adjustment under Article 7.3.9, which shall be submitted within 15 days of the date requested.
- .4 Any other information requested by the University's Representative for the purpose of evaluating the Change Order Request, which shall be submitted by the deadline established by the University's Representative.

4.2.4 University's Representative will make a decision on a Change Order Request, within a reasonable time, after receipt of a Change Order Request. In the event the Change Order Request is submitted pursuant to Article 8.4.1, the University's Representative shall promptly review and accept or reject it within thirty (30) days. A final decision is any decision on a Change Order Request which states that it is final. If University's Representative issues a final decision denying a Change Order Request in whole or in part, Contractor may contest the decision by filing a timely Claim under the procedures specified in Article 4.3.

4.2.5 Contractor may file a written demand for a final decision by University's Representative on all or part of any Change Order Request as to which the University's Representative has not previously issued a final decision pursuant to Article 4.2.4; such written demand may not be made earlier than the 30th day after submission of the Change Order Request. Within 30 days of receipt of the demand, University's Representative will issue a final decision on the Change Order Request. The University's Representative's failure to issue a decision within the 30-day period shall be treated as the issuance, on the last day of the 30-day period, of a final decision to deny the Change Order Request in its entirety.

### 4.3 CLAIMS

4.3.1 The term "Claim" means a written demand or assertion by Contractor seeking an adjustment or interpretation of the terms of the Contract Documents, payment of money, extension of time, or other relief with respect to the Contract Documents, including a determination of disputes or matters in question between University and Contractor arising out of or related to the Contract Documents or the performance of the Work. However, the term "Claim" shall not include, and the Claims procedures provided under this Article 4, including but not limited to arbitration, shall not apply to the following:

- .1 Claims respecting penalties for forfeitures prescribed by statute or regulation which a government agency is specifically authorized to administer, settle, or determine.
- .2 Claims respecting personal injury, death, reimbursement, or other compensation arising out of or resulting from liability for personal injury or death.
- .3 Claims by University, except as set forth in Article 4.7.4.
- .4 Claims respecting stop notices.

4.3.2 A Claim arises upon the issuance of a written final decision denying in whole or in part Contractor's Change Order Request pursuant to Article 4.2.4.

4.3.3 A Claim must include the following:

- .1 A statement that it is a Claim and a request for a decision pursuant to Article 4.5.
- .2 A detailed factual narrative of events fully describing the nature and circumstances giving rise to the Claim, including but not limited to, necessary dates, locations, and items of work affected.
- .3 A certification, executed by Contractor, that the claim is filed in good faith. The certification must be made on the Claim Certification form, included in the Exhibits to the Contract. The language of the Claim Certification form may not be modified.
- .4 A certification, executed by each Subcontractor claiming not less than 5% of the total monetary amount sought by the claim, that the subcontractor's portion of the claim is filed in good faith. The certification must be made on the Claim Certification form, included in the Exhibits to the Contract. The language of the Claim Certification form may not be modified.
- .5 A statement demonstrating that a Change Order Request was timely submitted as required by Article 4.2.3
- .6 If a Cost Proposal or declaration was required by Article 4.2.3, a statement demonstrating that the Cost Proposal or the declaration was timely submitted as required by Article 4.2.3.
- .7 A detailed justification for any remedy or relief sought by the Claim, including to the extent applicable, the following:
  - .1 If the Claim involves Extra Work, a detailed cost breakdown of the amounts claimed, including the items specified in Article 7.3.2. An estimate of the costs must be provided even if the costs claimed have not been incurred when the Claim is submitted. To the extent costs have been incurred when the Claim is submitted, the Claim must include actual cost records (including without limitation, payroll records, material and rental invoices and the like) demonstrating that costs claimed have actually been incurred. To the extent costs have not yet been incurred at the time the Claim is submitted, actual cost records must be submitted on a current basis not less than once a month during any periods costs are incurred. A cost record will be considered current if submitted within 30 days of the date the cost reflected in the record is incurred. At the request of the University's Representative, claimed extra costs may be subject to further verification procedures (such as having an inspector verify the performance of alleged Extra Work on a daily basis). The cost

breakdown must include an itemization of costs for i) labor including names, classifications, regular hours and overtime hours worked, dates worked, and other pertinent information; ii) materials stored or incorporated in the work including invoices, purchase orders, location of materials either stored or incorporated into the work, dates materials were transported to the project or incorporated into the work, and other pertinent information; and iii) itemization of machinery and equipment including make, model, hours of use, dates of use and equipment rental rates of any rented equipment.

- .2 If the Claim involves an extension of the Contract Time, written documentation demonstrating the Contractor's entitlement to a time extension under Article 8.4, including the specific dates for which a time extension is sought and the specific reasons for entitlement of a time extension.
- .3 If the Claim involves an adjustment of the Contract Sum for delay, written documentation demonstrating the Contractor's entitlement to such an adjustment under Article 7.3.9, including but not limited to, a detailed time impact analysis of the Contract Schedule. The Contract Schedule must demonstrate Contractor's entitlement to such an adjustment under Article 7.3.9.

#### **4.4 ASSERTION OF CLAIMS**

4.4.1 Claims by Contractor shall be first submitted to University's Representative for decision.

4.4.2 Notwithstanding the making of any Claim or the existence of any dispute regarding any Claim, unless otherwise directed by University's Representative, Contractor shall not cause any delay, cessation, or termination in or of Contractor's performance of the Work, but shall diligently proceed with performance of the Work in accordance with the Contract Documents.

4.4.3 Contractor shall submit a Claim in writing, together with all supporting data specified in Article 4.3.3, to University's Representative as soon as possible but not later than 30 days after the date the Claim arises under Article 4.3.2, provided that after written notification to the University's Representative within such time period, the time period for submission of the Claim shall be extended by the number of days specified in writing by the University's Representative where the Claim includes compensation sought by a Subcontractor and the Contractor requests an extension of time to permit it to discharge its responsibilities to conduct an appropriate review of the Subcontractor claim.

4.4.4 Strict compliance with the requirements of Articles 4.2, 4.3 and 4.4 are conditions precedent to Contractor's right to arbitrate or litigate a Claim. Contractor specifically agrees to assert no Claims in arbitration or litigation unless there has been strict compliance with Articles 4.2, 4.3, and 4.4. The failure of Contractor to strictly comply with the requirements of Articles 4.2, 4.3 and 4.4 constitutes a failure by Contractor to exhaust its administrative remedies with the University, thereby denying any court or arbitration panel of jurisdiction to adjudicate the Claim.

#### **4.5 DECISION OF UNIVERSITY'S REPRESENTATIVE ON CLAIMS**

4.5.1 University's Representative will timely review Claims submitted by Contractor. If University's Representative determines that additional supporting data are necessary to fully evaluate a Claim, University's Representative will request such additional supporting data in writing. Such data shall be furnished no later than 10 days after the date of such request. University's Representative will render a decision promptly and in any case within 30 days after the later of the receipt of the Claim or the deadline for furnishing such additional supporting data; provided that, if the amount of the Claim is in excess of \$50,000, the aforesaid 30-day period shall be 60 days. Failure of University's Representative to render a decision by the applicable deadline will be deemed a decision denying the Claim on the date of the deadline. The decision of University's Representative will be final and binding unless appealed in accordance with Articles 4.5.2, 4.5.3, and 4.5.4. The University's Representative's decision on a Claim or dispute will include a statement substantially as follows:

"This is a decision under Article 4.5 of the General Conditions of your contract. If you are dissatisfied with the decision, and if you complied with the procedural requirements for asserting claims specified in Article 4 of the General Conditions of your contract, you may have the right to arbitrate or litigate this decision. If you fail to take appropriate action with 30 days of the date of this decision, the decision shall become final and binding and not subject to further appeal."

4.5.2 If either Contractor or University disputes University's Representative's decision on a Claim, such party (the "Disputing Party") must either provide a written notice of its election to arbitrate or provide written notice of its election to litigate the Claim within 30 days after the decision of University's Representative or, if no decision has been issued, within 30 days from the date of the applicable deadline in Article 4.5.1 for University Representative to render a decision.

4.5.3 If a notice of election to arbitrate or litigate is not given by either party within 30 days after the decision of University's Representative, University's Representative's decision on the Claim will be final and binding and not subject to appeal or challenge.

4.5.4 If the Disputing Party gives timely notice of its election to arbitrate the University's Representative's decision on a Claim, Disputing Party shall have the right, within 120 days after a Notice of Completion, or a Notice of Cessation, as applicable, is filed for the Contract, to make a demand for arbitration in accordance with Article 4.7. Failure to perfect a Claim for which a timely election to arbitrate has been made by the timely filing of a demand for arbitration and timely payment of all applicable and required fees to AAA shall result in the University's Representative's decision on said Claim becoming final and binding and not subject to appeal or challenge. If the Disputing Party makes a timely demand for arbitration, and the amount of the Claim in question, when combined with all other Claims, if any, which are the subject of previously filed demands for arbitration that have not been resolved by settlement or arbitration award, is \$100,000 or more, then the other party may elect to litigate all such Claims by filing a written notice with the American Arbitration Association ("AAA") within 30 days after its receipt of notice from AAA of the Disputing Party's demand for arbitration of the Claim that raises the total amount of Claims subject to arbitration to \$100,000 or more. If the other party fails to give notice of its election to litigate within such 30-day period, it shall be deemed to have consented to arbitration and waived the right to litigate. If after commencement of arbitration the amount of unresolved Claims in arbitration are allowed to be increased to \$100,000 or more, through an AAA-allowed amendment or otherwise, either party may elect to litigate within 30 days following the date that the electing party first receives written notification from AAA that total Claims in arbitration equal or exceed \$100,000. If neither party gives notice of its election to litigate within such 30-day period as applicable, then both parties shall be deemed to have consented to arbitration and waived the right to litigate.

4.5.5 Any litigation shall be filed in the Superior Court of the State of California for the County in which the contract was to be performed.

4.5.6 The parties will attempt in good faith to resolve any controversy or Claim arising out of or relating to this Contract by negotiation.

#### **4.6 MEDIATION**

4.6.1 The parties may agree to mediate any controversy or Claim arising out of or relating to this Contract.

#### **4.7 ARBITRATION**

4.7.1 A demand for arbitration pursuant to Article 4.5 shall include a copy of the Claim presented to University's Representative pursuant to Article 4.4 and a copy of the decision of University's Representative pursuant to Article 4.5, if any. The demand shall state the amount in controversy, if any, and state the remedy sought. The demand shall identify the University's Responsible Administrator as the representative of the responding party and the Office of the General Counsel as counsel for the responding party. The demand shall be filed with the AAA and shall not be deemed to have been made until all applicable fees have been paid to the AAA by the demanding party. Copies of the demand and attachments shall be sent to University's Responsible Administrator as the representative of the responding party and the University's Office of General Counsel as attorney for the responding party, at the addresses set forth in the Project Directory, at the time the demand for arbitration is initiated with the AAA.

4.7.2 Except as modified by this Article 4.7, arbitration shall be initiated and conducted in accordance with the Construction Industry Arbitration Rules of the AAA then in effect. The following additional modifications shall be made to the aforesaid AAA rules:

- .1 Civil discovery shall be permitted for the production of documents and taking of depositions. Other discovery may be permitted in the discretion of the arbitrator. All disputes regarding discovery shall be decided by the arbitrator.
- .2 University's Representative and/or University's consultants, shall if required by agreement with University, upon demand by University join in and be bound by the Arbitration. University's Representative and University's consultants will have the same rights in any arbitration proceeding as are afforded by the AAA rules to Contractor and University.
- .3 Contractor's sureties shall be bound by any arbitration award and may join in any arbitration proceeding.
- .4 Except as provided in Articles 4.7.2.2. and 4.7.2.3 above, no Subcontractor or other person shall have a right or obligation to join in or be a party to any arbitration proceeding provided for in this Article 4 either directly, by joinder, by consolidation or actions, by counterclaim or crossclaim, or otherwise without the express written consent of University, Contractor, and the joining party.
- .5 If more than one demand for arbitration is made by a party with respect to Claims referred to University's Representative, all such Claims shall be consolidated into a single arbitration unless the parties otherwise agree in writing.
- .6 If total Claims are less than \$50,000, AAA expedited procedures as modified by this Article 4 shall apply. If total Claims are between \$50,000 and \$100,000 they shall be heard by a single arbitrator who shall be an attorney. If total Claims are in excess of \$100,000 and are submitted to arbitration, either by agreement or by failure to elect litigation the controversy shall be heard by a panel of three arbitrators, one of which shall be an attorney.
- .7 No arbitrator shall be appointed and no discovery may be commenced prior to the date of Final Completion unless University and Contractor otherwise agree.
- .8 The exclusive forum for determining arbitrability shall be the Superior Court of the State of California. AAA shall not submit to any arbitrator any matter concerning the arbitrability of the dispute if the arbitrability is contested..9 If the expedited procedures of the AAA are applicable, the AAA shall submit simultaneously to each party an identical list of 7 proposed arbitrators drawn from the National Panel of Commercial Arbitrators, and each party may strike 3 names from the list on a peremptory basis and return the list to AAA within 10 days from the date of receipt.
- .10 Except as provided herein, the arbitration shall be conducted and enforced under California law, including the California Arbitration Act (California Code of Civil Procedure section 1280 and following). The Federal Arbitration Act shall not apply to the arbitration.

4.7.3 Unless University and Contractor otherwise agree in writing, the arbitration decision shall be binding upon the parties, made under and in accordance with the laws of the State of California, supported by substantial evidence, and in writing. If the total of all Claims or cross Claims submitted to arbitration is in excess of \$50,000, the award shall contain the basis for the decision, findings of fact, and conclusions of law. Any arbitration award shall be subject to confirmation, vacation, or correction under the procedures and on the grounds specified in the California Code of Civil Procedure including without limitation Section 1296. The expenses and fees of the arbitrators and the administrative fees of the AAA shall be divided among the parties equally. Each party shall pay its own counsel fees, witness fees, and other expenses incurred for its own benefit.

4.7.4 University may, but is not required, to assert as a counterclaim any matter arising out of the claims asserted by Contractor in the arbitration. University's failure to assert any such counterclaim in an arbitration shall be without prejudice to the University's right to assert the counterclaim in litigation or other proceeding.



#### **4.8 WAIVER**

4.8.1 A waiver of or failure by University or University's Representative to enforce any requirement in this Article 4, including without limitation the requirements in Articles 4.2, 4.3, 4.4, and 4.5 in connection with any Claim shall not constitute a waiver of, and shall not preclude the University or University's Representative from enforcing such requirements in connection with any other Claims.

4.8.2 The Contractor agrees and understands that no oral approval, either express or implied, of any Claim shall be binding upon University unless and until such approval is ratified by execution of a written Change Order.

### **ARTICLE 5 SUBCONTRACTORS**

#### **5.1 AWARD OF SUBCONTRACTS AND OTHER CONTRACTS FOR PORTIONS OF THE WORK**

5.1.1 Unless otherwise stated in the Contract Documents, Contractor shall submit in writing, prior to entering into subcontract agreements, the names and addresses of all Subcontractors proposed for the Work that were not previously listed in Contractor's Bid.

5.1.2 Any Subcontractor may be disqualified if University or University's Representative determines that such Subcontractor fails to meet the requirements of the Contract Documents or for any other reason.

5.1.3 In accordance with the Subletting and Subcontracting Fair Practices Act, nothing herein shall be deemed to entitle Contractor, without the approval of University, to substitute other subcontractors for those named in Contractor's List of Subcontractors and List of Changes in Subcontractors Due to Alternates contained in the completed Bid Form; and, except with such approval, no such substitution shall be made.

5.1.4 Except as hereinafter provided, any increase in the cost of the Work resulting from the replacement or substitution of a Subcontractor, as required by University or University's Representative pursuant to Article 5.1.1 shall be borne solely by Contractor and Contractor shall not be entitled to any increase in Contract Sum or extension of Contract Time on account of such replacement or substitution.

#### **5.2 SUBCONTRACTUAL RELATIONS**

5.2.1 Any part of the Work performed for Contractor by a first-tier Subcontractor shall be pursuant to a written subcontract. Each such subcontract shall require the Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to Contractor by the terms of the Contract Documents, to assume toward Contractor all the obligations and responsibilities which Contractor assumes towards University by the Contract Documents, and to perform such portion of the Work in accordance with the Contract Documents. Each such subcontract shall preserve and protect the rights of University under the Contract Documents, with respect to the Work to be performed by Subcontractor, so that subcontracting thereof will not prejudice such rights. Contractor shall cause each such subcontract to expressly include the following requirements:

- .1 Subcontractor waives all rights that Subcontractor may have against University for damages caused by fire or other perils covered by builder's risk property insurance carried by Contractor or University, except for such rights Subcontractor may have to the proceeds of such insurance held by University under Article 11.
- .2 University and entities and agencies designated by University will have access to and the right to audit and the right to copy at University's cost all of Subcontractor's books, records, contracts, correspondence, instructions, drawings, receipts, vouchers, purchase orders, and memoranda relating to the Work. Subcontractor shall preserve all such records and other items for a period of at least 3 years after Final Completion.
- .3 Subcontractor recognizes the rights of University under Article 5.3, Contingent Assignment of Subcontracts, and agrees, upon notice from University that University has elected to accept said assignment and to retain Subcontractor pursuant to the terms of the subcontract, to complete the unperformed obligations under the subcontract and, if requested by University, to execute a written agreement confirming that Subcontractor is bound to University under the terms of the subcontract.

5.2.2 Upon the request of University, Contractor shall promptly furnish to University a true, complete, and executed copy of any subcontract.

5.2.3 Nothing contained in the Contract Documents shall create any contractual relationship between any Subcontractor and University, except when, and only to the extent that, University elects to accept the assignment of the subcontract with such Subcontractor pursuant to Article 5.3, Contingent Assignment of Subcontracts.

### **5.3 CONTINGENT ASSIGNMENT OF SUBCONTRACTS**

5.3.1 Contractor hereby assigns to University all its interest in first-tier subcontracts now or hereafter entered into by Contractor for performance of any part of the Work. The assignment will be effective upon acceptance by University in writing and only as to those subcontracts which University designates in writing. University may accept said assignment at any time during the course of the Work and prior to Final Completion in the event of a suspension or termination of Contractor's rights under the Contract Documents. Such assignment is part of the consideration to University for entering into the Contract with Contractor and may not be withdrawn prior to Final Completion.

## **ARTICLE 6 CONSTRUCTION BY UNIVERSITY OR BY SEPARATE CONTRACTORS**

### **6.1 UNIVERSITY'S RIGHT TO PERFORM CONSTRUCTION AND TO AWARD SEPARATE CONTRACTS**

6.1.1 University reserves the right to award separate contracts for, or to perform with its own forces, construction or operations related to the Work or other construction or operations at or affecting the Project site, including portions of the Work which have been deleted by Change Order. Contractor shall cooperate with University's forces and Separate Contractors.

6.1.2 University will provide coordination of the activities of University's forces and of each Separate Contractor with the Work of Contractor. Contractor shall participate with University and Separate Contractors in joint review of construction schedules and Project requirements when directed to do so. Contractor shall make necessary revisions to the Contract Schedule after such joint review.

### **6.2 MUTUAL RESPONSIBILITY**

6.2.1 Contractor shall afford University and Separate Contractors reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities. Contractor shall connect, schedule, and coordinate its construction and operations with the construction and operations of University and Separate Contractors as required by the Contract Documents.

6.2.2 If a portion of the Work is dependent upon the proper execution or results of other construction or operations by University or Separate Contractors, Contractor shall inspect such other construction or operations before proceeding with that portion of the Work. Contractor shall promptly report to University's Representative apparent discrepancies or defects which render the other construction or operations unsuitable to receive the Work. Unless otherwise directed by University's Representative, Contractor shall not proceed with the portion of the Work affected until apparent discrepancies or defects have been corrected. Failure of Contractor to so report within a reasonable time after discovering such discrepancies or defects shall constitute an acknowledgment that the other construction or operations by University or Separate Contractors is suitable to receive the Work, except as to defects not then reasonably discoverable.

### **6.3 UNIVERSITY'S RIGHT TO CLEAN UP**

6.3.1 If a dispute arises between Contractor and Separate Contractors as to the responsibility under their respective contracts for maintaining the Project site and surrounding areas free from waste materials and rubbish, University may clean up and allocate the cost between those firms it deems to be responsible.

## **ARTICLE 7 CHANGES IN THE WORK**

### **7.1 CHANGES**

7.1.1 University may, from time to time, order or authorize additions, deletions, and other changes in the Work by Change Order or Field Order without invalidating the Contract and without notice to sureties. Absence of such notice shall not relieve such sureties of any of their obligations to University.

7.1.2 Contractor may request a Change Order under the procedures specified in Article 4.2.

7.1.3 A Field Order may be issued by University, does not require the agreement of Contractor, and shall be valid with or without the signature of Contractor.

7.1.4 Contractor shall proceed promptly with any changes in the Work, unless otherwise provided in the relevant Change Order or Field Order.

### **7.2 DEFINITIONS**

7.2.1 A Change Order is a Contract Document (as shown in the Exhibits) which has been signed by both University and Contractor, and states their agreement, as applicable, to the following:

- .1 A change in the Work, if any.
- .2 The amount of an adjustment of the Contract Sum, if any.
- .3 The amount of an adjustment of the Contract Time, if any.
- .4 A modification to any other Contract term or condition.

7.2.2 A Unilateral Change Order may be issued by University, without the Contractor' signature, where the University determines that a change in the Work requires an adjustment of the Contract Sum or Contract Time, even though no agreement has been reached between University and Contractor with regard to such change in the Work.

7.2.3 A Field Order (as shown in the Exhibits) is a Contract Document issued by the University that orders the Contractor to perform Work. A Field Order may, but need not, constitute a change in the Work and may, but need not, entitle Contractor to an adjustment of the Contract Sum or Contract Time.

### **7.3 CHANGE ORDER PROCEDURES**

7.3.1 Contractor shall provide a Change Order Request and Cost Proposal pursuant to Article 4.2 and this Article 7.3 of the General Conditions. Adjustments of the Contract Sum resulting from Extra Work and Deductive Work shall be determined using one of the methods described in this Article 7.3. Adjustments of the Contract Time shall be subject to the provisions in Article 8. Contractor's obligation to provide Cost Proposals shall be subject to the following:

.1 The obligation of Contractor to provide Cost Proposals is not Extra Work, and shall not entitle the Contractor to an adjustment of the Contract Sum or Contract Time.

- .2 The failure of Contractor to timely provide a Cost Proposal pursuant to Article 4.2 and this Article 7.3.1 is a material breach of the Contract. Contractor shall be responsible for any delay in implementing a change for which Contractor failed to timely provide a Cost Proposal consistent with the requirements of Article 4.2 and this Article 7.3.1.

7.3.2 The term "Cost of Extra Work" as used in this Article 7.3 shall mean actual costs incurred or to be incurred by Contractor and each Subcontractor regardless of tier involved, to the extent not otherwise disallowed under Article 7.3.3, and shall be limited to the following (to the extent the Contractor demonstrates that the costs are both reasonable and actually incurred, if such costs have been incurred):

.1 Straight-time wages or salaries for employees employed at the Project site, or at fabrication sites off the Project site, incurred as a result of the performance of the Extra Work.

- .2 Fringe Benefits and Payroll Taxes for employees employed at the Project site, or at fabrication sites off the Project site, incurred as a result of the performance of the Extra Work.
- .3 Overtime wages or salaries, specifically authorized in writing by University's Representative, for employees employed at the Project site, or at fabrication sites

- off the Project site, incurred as a result of the performance of the Extra Work.
- .4 Fringe Benefits and Payroll Taxes for overtime Work specifically authorized in writing by University's Representative, for employees employed at the Project site, or at fabrication sites off the Project site, incurred as a result of the performance of the Extra Work.
  - .5 Costs of materials and consumable items which are furnished and incorporated into the Extra Work, as approved by University's Representative. Such costs shall be charged at the lowest price available to the Contractor but in no event shall such costs exceed competitive costs obtainable from other subcontractors, suppliers, manufacturers, and distributors in the area of the Project site. All discounts, rebates, and refunds and all returns from sale of surplus materials and consumable items shall accrue to University and Contractor shall make provisions so that they may be obtained.
  - .6 Sales taxes on the costs of materials and consumable items which are incorporated into and used in the performance of the Extra Work pursuant to Article 7.3.2.5 above.
  - .7 Rental charges for necessary machinery and equipment, whether owned or hired, as authorized in writing by University's Representative, exclusive of hand tools, used directly in the performance of the Extra Work. Such rental charges shall not exceed the current Equipment Rental Rates published by the California Department of Transportation for the area in which the work is performed. Such rental rates are found at <http://www.dot.ca.gov/hq/construc/equipmnt.html> . Contractor shall attach a copy of said schedule to the Cost Proposal. The charges for any machinery and equipment shall cease when the use thereof is no longer necessary for the Extra Work.
  - .8 Additional costs of royalties and permits due to the performance of the Extra Work.
  - .9 The cost for Insurance and Bonds shall not exceed 2% of items .1 through .8 above.

University and Contractor may agree upon rates to be charged for any of the items listed in this Article 7.3.2. Such agreed upon rates shall be subject to audit pursuant to Article 15.7. Contractor shall promptly refund to University any amounts (including associated mark-ups) in excess of the actual costs of such items.

7.3.3 Cost of Extra Work shall not include any of the following:

- .1 Superintendent(s).
- .2 Assistant Superintendent(s).
- .3 Project Engineer(s).
- .4 Project Manager(s).
- .5 Scheduler(s).
- .6 Estimator(s).
- .7 Small tools (Replacement value does not exceed \$300).
- .8 Office expenses including staff, materials and supplies.
- .9 On-site or off-site trailer and storage rental and expenses.
- .10 Site fencing.
- .11 Utilities including gas, electric, sewer, water, telephone, facsimile, copier equipment.
- .12 Data processing personnel and equipment.
- .13 Federal, state, or local business income and franchise taxes.
- .14 Overhead and Profit.
- .15 Costs and expenses of any kind or item not specifically and expressly included in Article 7.3.2.

7.3.4 The term "Contractor Fee" shall mean the full amount of compensation, both direct and indirect (including without limitation all overhead and profit), to be paid to Contractor for its own Work and the Work of all Subcontractors, for all costs and expenses not included in the Cost of Extra Work, whether or not such costs and expenses are specifically referred to in Article 7.3.3. The Contractor Fee shall not be compounded.

The Contractor Fee shall be computed as follows:

- .1 Fifteen percent (15%) of the cost of that portion of the Extra Work to be performed by the prime contractor with its own forces.
- .2 Fifteen percent (15%) of the cost of that portion of the Work to be performed by a Subcontractor with its own forces, plus 5% for the prime contractor. Total combined Contractor and Subcontractor fee shall not exceed 20%.
- .3 Fifteen percent (15%) of the cost of that portion of the Work to be performed by a sub-subcontractor with its own forces, or any lower tier of Subcontractor, plus 5% for the Subcontractor, plus 5% for the prime contractor. Total combined Contractor, Subcontractor and all sub-subcontractor fee shall not exceed 25%.

7.3.5 Compensation for Extra Work shall be computed on the basis of one or more of the following:

- .1 Where the Work involved is covered by Unit Prices contained in the Contract Documents, by application of the Unit Prices to the quantities of the items involved.
- .2 Where Unit Prices are not applicable, a mutually agreed upon lump sum supported by a Cost Proposal pursuant to 7.3.1.
- .3 Where Contractor and University cannot agree upon a lump sum, by Cost of Extra Work plus Contractor Fee applicable to such Extra Work.

7.3.6 As a condition to Contractor's right to an adjustment of the Contract Sum pursuant to Article 7.3.5.3, Contractor must keep daily detailed and accurate records itemizing each element of cost and shall provide substantiating records and documentation, including time cards and invoices. Such records and documentation shall be submitted to University's Representative on a daily basis.

7.3.7 For Work to be deleted by Change Order, the reduction of the Contract Sum shall be computed on the basis of one or more of the following:

- .1 Unit Prices stated in the Contract Documents.
- .2 Where Unit Prices are not applicable, a lump sum agreed upon by University and Contractor, based upon the actual costs which would have been incurred in performing the deleted portions of the Work as calculated in accordance with Articles 7.3.2 and 7.3.3, supported by a Cost Proposal pursuant to Article 7.3.1.

7.3.8 If any one Change involves both Extra Work and Deleted Work in the same portion of the Work, a Contractor fee will not be allowed if the deductive cost exceeds the additive cost. If the additive cost exceeds the deductive cost, a Contractor Fee will be allowed only on the difference between the two amounts.

7.3.9 The Contract Sum will be adjusted for a delay if, and only if, Contractor demonstrates that all of the following three conditions are met:

- .1 Condition Number One: The delay results in an extension of the Contract Time pursuant to Article 8.4.1.
- .2 Condition Number Two: The delay is caused solely by one or more of the following:
  - .1 An error or omission in the Contract Documents; or
  - .2 The University's decision to change the scope of the Work, where such decision is not the result of any default or misconduct of the Contractor; or
  - .3 The University's decision to suspend the Work, where such decision is not the result of any default or misconduct of the Contractor; or
  - .4 The failure of the University (including the University acting through its consultants, Design Professionals, Separate Contractors or the University's Representative) to perform any Contract obligation where the failure to so perform is not the result of any default or misconduct of the Contractor.

.5 A materially differing site condition pursuant to Article 3.17.

.3 Condition Number Three: The delay is not concurrent with a delay caused by an event other than those listed in Article 7.3.9.2.

7.3.10 For each day of delay that meets all three conditions prescribed in Article 7.3.9 the Contract Sum will be adjusted by the daily rate included in the Agreement and specifically identified as the rate to be paid to Contractor for Compensable Delays. Pursuant to Article 9.7.4, said daily rate shall not apply to delays occurring after Substantial Completion.

7.3.11 Except as provided in Articles 7 and 8, Contractor shall have no claim for damage or compensation for any delay, interruption, hindrance, or disruption.

7.3.12 If for any reason one or more of the conditions prescribed in Article 7.3.9 is held legally unenforceable, the remaining conditions must be met as a condition to obtaining an adjustment of the Contract Time under Article 7.3.10.

#### **7.4 FIELD ORDERS**

7.4.1 Field Orders issued by the University Representative shall be subject to the following:

.1 A Field Order may state that it does or does not constitute a change in the Work.

.2 If the Field Order states that it does not constitute a change in the Work and the Contractor asserts that the Field Order constitutes a change in the Work, in order to obtain an adjustment of the Contract Sum or Contract Time for the Work encompassed by the Field Order, Contractor must follow all procedures set forth in Article 4, starting with the requirement of submitting a timely Change Order Request within 7 days of Contractor's receipt of the Field Order; failure to strictly follow those procedures is a bar to any Claim for an adjustment of the Contract Sum or Contract Time arising from performance of the Work described in the Field Order.

.3 If the Field Order states that it does constitute a change in the Work, the Work described in the Field Order shall be considered Extra Work and the Contractor shall be entitled to an adjustment of the Contract Sum and Contract Time, calculated under and subject to Contractor's compliance with the procedures for verifying and substantiating costs and delays in Articles 7 and 8.

.4 In addition, if the Field Order states that it does constitute a change in the Work, the Field Order may or may not contain University's estimate of adjustment of Contract Sum and/or Contract Time. If the Field Order contains an estimate of adjustment of Contract Sum or Contract Time, the Field Order is subject to the following:

.1 The Contractor shall not exceed the University's estimate of adjustment to Contract Sum or Contract Time without prior written notification to the University's Representative.

.2 If the Contractor asserts that the change in the Work encompassed by the Field Order may entitle Contractor to an adjustment of Contract Sum or Contract Time in excess of the University's estimate, in order not to be bound by University's estimate Contractor must follow all procedures set forth in Article 4, starting with the requirement of submitting a timely Change Order Request within 7 days of Contractor's receipt of the Field Order; failure to strictly follow those procedures is a bar to any Claim for an adjustment of the Contract Sum or Contract Time, in excess of the University's estimate, arising from performance of the Work described in the Field Order.

7.4.2 Upon receipt of a Field Order, Contractor shall promptly proceed to perform the Work as ordered in the Field Order notwithstanding any disagreement by the Contractor concerning whether the Work is extra.

#### **7.5 VARIATION IN QUANTITY OF UNIT PRICE WORK**

7.5.1 University has the right to increase or decrease the quantity of any Unit price item for which an Estimated Quantity is stated in the Bid Form.

## **7.6 WAIVER**

7.6.1 A waiver of or failure by University or University's Representative to enforce any requirement in this Article 7, including without limitation the requirements in Articles 7.3.6, 7.3.8, 7.3.9, 7.3.10, 7.3.11, or 7.3.12 in connection with any adjustment of the Contract Sum, will not constitute a waiver of, and will not preclude the University or University's Representative from enforcing, such requirements in connection with any other adjustments of the Contract Sum.

7.6.2 The Contractor agrees and understands that no oral approval, either express or implied, of any adjustment of the Contract Sum by University or its agents shall be binding upon University unless and until such approval is ratified by execution of a written Change Order.

## **ARTICLE 8**

### **CONTRACT TIME**

#### **8.1 COMMENCEMENT OF THE WORK**

8.1.1 The date of commencement of the Work shall be set forth in the Notice To Proceed. The date of commencement of the Work shall not be postponed by the failure of Contractor, Subcontractors, or of persons or firms for whom Contractor is responsible, to act.

#### **8.2 PROGRESS AND COMPLETION**

8.2.1 By signing the Agreement:

.1 Contractor represents to University that the Contract Time is reasonable for performing the Work and that Contractor is able to perform the Work within the Contract Time.

.2 Contractor agrees that University is purchasing the right to have the Contractor present on the Project site for the full duration of the Contract Time, even if Contractor could finish the Contract in less than the Contract Time.

8.2.2 Contractor shall not, except by agreement or instruction of University in writing, commence operations on the Project site or elsewhere prior to the effective date of insurance required by Article 11 to be furnished by Contractor. The dates of commencement and Final Completion of the Work shall not be changed by the effective date of such insurance.

8.2.3 Contractor shall proceed expeditiously with adequate forces and shall achieve full completion of the Work within the Contract Time. If University's Representative determines and notifies Contractor that Contractor's progress is such that Contractor will not achieve full completion of the Work within the Contract Time, Contractor shall immediately and at no additional cost to University, take all measures necessary, including working such overtime, additional shifts, Sundays, or holidays as may be required to ensure that the Work is fully completed within the Contract Time. Upon receipt of such notice from University's representative, Contractor shall immediately notify University's Representative of all measures to be taken to ensure full completion of the Work within the Contract Time. Contractor shall reimburse University for any extra costs or expenses (including the reasonable value of any services provided by University's employees) incurred by University as the result of such measures.

#### **8.3 DELAY**

8.3.1 Except and only to the extent provided otherwise in Articles 7 and 8, by signing the Agreement, Contractor agrees:

.1 to bear the risk of delays to the Work; and

.2 that Contractor's bid for the Contract was made with full knowledge of this risk.

In agreeing to bear the risk of delays to the Work, Contractor understands that, except and only to the extent provided otherwise in Articles 7 and 8, the occurrence of events that delay the Work shall not excuse Contractor from its obligation to achieve Final Completion of the Work within the Contract Time, and shall

not entitle the Contractor to an adjustment of the Contract Sum.

#### **8.4 ADJUSTMENT OF THE CONTRACT TIME FOR DELAY**

8.4.1 Subject to Article 8.4.2, the Contract Time will be extended for each day of delay for which Contractor demonstrates that all of the following four conditions have been met; a time extension will not be granted for any day of delay for which Contractor fails to demonstrate compliance with the four conditions:

- .1 Condition Number One: The delay is critical. A delay is critical if and only to the extent it delays a work activity that cannot be delayed without delaying Final Completion of the Work beyond the Contract Time. Under this Article 8.4.1.2, if the Contract Schedule shows Final Completion of the Work before expiration of the Contract Time, a delay is critical if and only to the extent the delay pushes Final Completion of the Work to a date that is beyond the Contract Time.
- .2 Condition Number Two: Within 7 days of the date the Contractor discovers or reasonably should discover an act, error, omission or unforeseen condition or event causing the delay is likely to have an impact on the critical path of the Project, (even if the Contractor has not yet been delayed when the Contractor discovers or reasonably should discover the critical path impact of the act, error, omission or unforeseen condition giving rise to the delay) the Contractor submits both a timely and complete Change Order Request that meets the requirements of Article 4.2.
- .3 Condition Number Three: The delay is not caused by:
  - .1 A concealed, unforeseen or unknown condition or event except for a materially differing site condition pursuant to Article 3.17; or
  - .2 The financial inability, misconduct or default of the Contractor, a Subcontractor or supplier; or
  - .3 The unavailability of materials or parts.
- .4 Condition Number Four: The delay is caused by:
  - .1 Fire; or
  - .2 Strikes, boycotts, or like obstructive actions by labor organizations; or
  - .3 Acts of God (As used herein, "Acts of God" shall include only earthquakes in excess of a magnitude of 3.5 on the Richter Scale and tidal waves); or
  - .4 A materially differing site condition pursuant to Article 3.17; or
  - .5 An error or omission in the Contract; or
  - .6 The University's decision to change the scope of the Work, where such decision is not the result of any default or misconduct of the Contractor; or
  - .7 The University's decision to suspend the Work, where such decision is not the result of any default or misconduct of the Contractor; or
  - .8 The failure of the University (including the University acting through its consultants, Design Professionals, Separate Contractors or the University's representative) to perform any Contract obligation unless such failure is due to Contractor's default or misconduct.
  - .9 "Adverse weather," but only for such days of adverse weather, or on-site conditions caused by adverse weather, that are in excess of the number of days specified in the Supplementary Conditions. In order for a day to be considered a day of adverse weather for the purpose of determining whether Contractor is entitled to an adjustment in Contract Time, both of the following conditions must be met:
    - .1 the day must be a day in which, as a result of adverse weather, less than one half day of critical path work is performed by Contractor; and



- .2 the day must be identified in the Contract Schedule as a scheduled work day.

8.4.2 If and only if a delay meets all four conditions prescribed in Article 8.4.1, then a time extension will be granted for each day that Final Completion of the Work is delayed beyond the Contract Time, subject to the following:

- .1 When two or more delays (each of which meet all four conditions prescribed in Article 8.4.1) occur concurrently on the same day, and each such concurrent delay by itself without consideration of the other delays would be critical, then all such concurrent delays shall be considered critical. For the purpose of determining whether and to what extent the Contract Time should be adjusted pursuant to Article 8.4.2, such concurrent critical delays shall be treated as a single delay for each such day.

- .2 Contractor shall be entitled to a time extension for a day of delay that meets all four requirements of Article 8.4.1 if the delay is concurrent with a delay that does not meet all four conditions of Article 8.4.1.

8.4.3 If for any reason one or more of the four conditions prescribed in Article 8.4.1 is held legally unenforceable, then all remaining conditions must be met as a condition to obtaining an extension of the Contract Time under Article 8.4.2.

## **8.5 COMPENSATION FOR DELAY**

8.5.1 To the maximum extent allowed by law, any adjustment of the Contract Sum as the result of delays shall be limited to the amounts specified in Article 7. Such adjustment shall, to the maximum extent allowed by law, constitute payment in full for all delay related costs (including costs for disruption, interruption and hindrance, general conditions, on and off-site overhead and profit) of Contractor, its Suppliers and Subcontractors of all tiers and all persons and entities working under or claiming through Contractor in connection with the Project.

8.5.2 By signing the Agreement, the parties agree that the University is buying the right to do any or all of the following, which are reasonable and within the contemplation of the parties:

- .1 To order changes in the Work, regardless of the extent and number of changes, including without limitation:
  - .1 Changes to correct errors or omissions, if any, in the Contract Documents.
  - .2 Changes resulting from the University's decision to change the scope of the Work subsequent to execution of the Contract.
  - .3 Changes due to unforeseen conditions.
- .2 To suspend the Work or any part thereof.
- .3 To delay the Work, including without limitation, delays resulting from the failure of the University or the University's Representative to timely perform any Contract obligation and delays for University's convenience.

## **8.6 WAIVER**

8.6.1 A waiver of or failure by University or University's Representative to enforce any requirement in this Article 8, including without limitation the requirements in Article 8.4, in connection with any or all past delays shall not constitute a waiver of, and shall not preclude the University or University's Representative from enforcing, such requirements in connection with any present or future delays.

8.6.2 Contractor agrees and understands that no oral approval, either express or implied, of any time extension by University or its agents shall be binding upon University unless and until such approval is ratified by execution of a written Change Order.

## **ARTICLE 9**

## **PAYMENTS AND COMPLETION**

### **9.1 COST BREAKDOWN**

9.1.1 Within 10 days after receipt of the Notice of Selection as the apparent lowest responsible Bidder, and with the Agreement, Contractor shall submit to University's Representative a Cost Breakdown of the Contract Sum in the form contained in the Exhibits. The Cost Breakdown shall itemize as separate line items the cost of each Work Activity and all associated costs, including but not limited to warranties, as-built documents, overhead expenses, and the total allowance for profit. Insurance and bonds shall each be listed as separate line items. The total of all line items shall equal the Contract Sum. The Cost Breakdown, when approved by the University's Representative, shall become the basis for determining the cost of Work performed for Contractor's Applications for Payment.

### **9.2 PROGRESS PAYMENT**

9.2.1 University agrees to pay monthly to Contractor, subject to Article 9.4.3, an amount equal to 95% of the sum of the following:

- .1 Cost of the Work in permanent place as of the date of the Contractor's Application For Payment.
- .2 Plus cost of materials not yet incorporated in the Work, subject to Article 9.3.5.
- .3 Less amounts previously paid.

Under this Article 9.2.1, University may, but is not required, to pay Contractor more frequently than monthly.

9.2.2 After Substantial Completion and subject to Article 9.4.3, University will make any of the remaining progress payments in full.

### **9.3 APPLICATION FOR PAYMENT**

9.3.1 On or before the 10th day of the month or such other date as is established by the Contract Documents, Contractor shall submit to University's Representative an itemized Application For Payment, for the cost of the Work in permanent place, as approved by University's Representative, which has been completed in accordance with the Contract Documents, less amounts previously paid.

The Application For Payment shall be prepared as follows:

- .1 Use the form contained in the Exhibits.
- .2 Itemize in accordance with the Cost Breakdown.
- .3 Include such data substantiating Contractor's right to payment as University's Representative may reasonably require, such as invoices, certified payrolls, daily time and material records, and, if securities are deposited in lieu of retention pursuant to Article 9.5, a certification of the market value of all such securities as of a date not earlier than 5 days prior to the date of the Application For Payment.
- .4 Itemize retention.

9.3.2 Applications For Payment shall not include requests for payment on account of (1) changes which have not been authorized by Change Orders or (2) amounts Contractor does not intend to pay a Subcontractor because of a dispute or other reason.

9.3.3 If required by University, an Application For Payment shall be accompanied by (1) a summary showing payments that will be made to Subcontractors covered by such application and conditional releases upon progress payment or final payment and (2) unconditional waivers and releases of claims and stop notices, in the form contained in the Exhibits, from each Subcontractor listed in the preceding Application For Payment covering sums disbursed pursuant to that preceding Application For Payment.

9.3.4 Contractor warrants that, upon submittal of an Application For Payment, all Work, for which Certificates For Payment have been previously issued and payment has been received from University, shall be free and clear of all claims, stop notices, security interests, and encumbrances in favor of Contractor, Subcontractors, or other persons or firms entitled to make claims by reason of having provided labor, materials, or equipment relating to the Work.

9.3.5 At the sole discretion of University, University's Representative may approve for inclusion in the Application For Payment the cost of materials not yet incorporated in the Work but already delivered and suitably stored either at the Project site or at some other appropriate location acceptable to University's Representative. In such case, Contractor shall furnish evidence satisfactory to University's Representative (1) of the cost of such materials and (2) that such materials are under the exclusive control of Contractor. Only materials to be incorporated in the Work will be considered for payment. Any payment shall not be construed as acceptance of such materials nor relieve Contractor from sole responsibility for the care and protection of such materials; nor relieve Contractor from risk of loss to such materials from any cause whatsoever; nor relieve Contractor from its obligation to complete the Work in accordance with the Contract; nor act as a waiver of the right of University to require fulfillment of all terms of the Contract. Nothing contained within this Article 9.3.5 shall be deemed to obligate University to agree to payment for any non-incorporated materials or any part thereof, payment being in the sole and absolute discretion of University.

#### **9.4 CERTIFICATE FOR PAYMENT**

9.4.1 If Contractor has submitted an Application For Payment in accordance with Article 9.3, University's Representative shall, not later than 5 working days after the date of receipt of the Application For Payment, issue to University, with a copy to Contractor, a Certificate For Payment for such amount as University's Representative determines to be properly due.

9.4.2 If any such Application For Payment is determined not to be in accordance with Article 9.3, University will inform Contractor as soon as practicable, but not later than 5 working days after receipt. Thereafter, Contractor shall have 3 days to revise and resubmit such Application For Payment; otherwise University's Representative may issue a Certificate For Payment in the amount that University's Representative determines to be properly due without regard to such Application For Payment.

9.4.3 Approval of all or any part of an Application For Payment may be withheld, a Certificate For Payment may be withheld, and all or part of a previous Certificate For Payment may be nullified and that amount withheld from a current Certificate For Payment on account of any of the following:

- .1 Defective Work not remedied.
- .2 Third-party claims against Contractor or University arising from the acts or omissions of Contractor or Subcontractors.
- .3 Stop notices.
- .4 Failure of Contractor to make timely payments due Subcontractors for material or labor.
- .5 A reasonable doubt that the Work can be completed for the balance of the Contract Sum then unpaid.
- .6 Damage to University or Separate Contractor for which Contractor is responsible.
- .7 Reasonable evidence that the Work will not be completed within the Contract Time; and that the unpaid balance of the Contract Sum would not be adequate to cover University's damages for the anticipated delay.
- .8 Failure of Contractor to maintain and update as-built documents.
- .9 Failure of Contractor to submit schedules or their updates as required by the Contract Documents.
- .10 Failure to provide conditional or unconditional releases from any Subcontractor or supplier, if such waiver(s) have been requested by University's Representative.
- .11 Performance of Work by Contractor without properly processed Shop Drawings.
- .12 Liquidated damages assessed in accordance with Article 5 of the Agreement.
- .13 Failure to provide updated Reports of Subcontractor Information and Self-Certifications, as applicable.
- .14 Failure to provide a Final Distribution of Contract Dollars with final Application for Payment.
- .14 Any other failure of Contractor to perform its obligations under the Contract Documents.

9.4.4 Subject to the withholding provisions of Article 9.4.3, University will pay Contractor the amount set forth in the Certificate For Payment no later than 10 days after the issuance of the Certificate For Payment.

9.4.5 Neither University nor University's Representative will have an obligation to pay or to see to the

payment of money to a Subcontractor, except as may otherwise be required by law.

9.4.6 Neither a Certificate For Payment nor a progress payment made by University will constitute acceptance of Defective Work.

## **9.5 DEPOSIT OF SECURITIES IN LIEU OF RETENTION AND DEPOSIT OF RETENTION INTO ESCROW**

9.5.1 At the request and expense of Contractor, a substitution of securities may be made for any monies retained by University under Article 9.2 to ensure performance under the Contract Documents. Securities equivalent in value to the retention amount required by the Contract Documents for each Certificate For Payment shall be deposited by Contractor with a state or federally chartered bank in the State of California ("Escrow Agent"), which shall hold such securities pursuant to the escrow agreement referred to in Article 9.5.3 until retention is due in accordance with Article 9.8. Securities shall be valued as often as conditions of the securities market warrant, but in no case less than once per month. Contractor shall deposit additional securities so that the current market value of the total of all deposited securities shall be at least equal to the total required amount of retention.

9.5.2 Alternatively to Article 9.5.1, and at the request and expense of Contractor, University will deposit retention directly with Escrow Agent. Contractor may direct the investment of such deposited retention into interest bearing accounts or securities, and such deposits or securities shall be held by Escrow Agent upon the same terms provided for securities deposited by Contractor. Contractor and its surety shall bear the risk of failure of the Escrow Agent selected.

9.5.3 A prerequisite to the substitution of securities in lieu of retention or the deposit of retention into escrow shall be the execution by Contractor, University, and Escrow Agent of an Escrow Agreement for Deposit of Securities in Lieu of Retention and Deposit of Retention in the form contained in the Exhibits. The Contractor shall submit the Selection of Retention Options and the Escrow Agreement for Deposit of Securities in Lieu of Retention and Deposit of Retention not later than the date when 50% of the Work has been completed. The terms of such escrow agreement are incorporated into the requirements of this Article 9.5.

## **9.6 BENEFICIAL OCCUPANCY**

9.6.1 University reserves the right, at its option and convenience, to occupy or otherwise make use of any part of the Work at any time prior to Substantial Completion or Final Completion upon 10 days' notice to Contractor. Such occupancy or use is herein referred to as "Beneficial Occupancy." Beneficial Occupancy shall be subject to the following conditions:

- .1 University's Representative will make an inspection of the portion of the Project to be beneficially occupied and prepare a list of items to be completed or corrected prior to Final Completion. Prior to Beneficial Occupancy, University will issue a Certificate of Beneficial Occupancy on University's form.
- .2 Beneficial Occupancy by University shall not be construed by Contractor as an acceptance by University of that portion of the Work which is to be occupied.
- .3 Beneficial Occupancy by University shall not constitute a waiver of existing claims of University or Contractor against each other.
- .4 Contractor shall provide, in the areas beneficially occupied and on a 24 hour and 7 day week basis as required, utility services, heating, and cooling for systems which are in operable condition at the time of Beneficial Occupancy. All responsibility for the operation and maintenance of equipment shall remain with Contractor while the equipment is so operated. Contractor shall submit to University an itemized list of each piece of equipment so operated with the date operation commences.
- .5 The Guarantee to Repair Periods, as defined in Article 12.2, will commence upon the occupancy date stated in the Certificate of Beneficial Occupancy except that the Guarantee to Repair Periods for that part of equipment or systems that serve portions of the Work for which University has not taken Beneficial Occupancy or issued a Certificate of Substantial Completion shall not commence until the University has taken Beneficial Occupancy for that portion of the Work or has issued a Certificate of Substantial Completion with respect to the entire Project.

- .6 University will pay all normal operating and maintenance costs resulting from its use of equipment in areas beneficially occupied.
- .7 University will pay all utility costs which arise out of the Beneficial Occupancy.
- .8 Contractor shall not be responsible for providing security in areas beneficially occupied.
- .9 University will use its best efforts to prevent its Beneficial Occupancy from interfering with the conduct of Contractor's remaining Work.
- .10 Contractor shall not be required to repair damage caused by University in its Beneficial Occupancy.
- .11 Except as provided in this Article 9.6, there shall be no added cost to University due to Beneficial Occupancy.
- .12 Contractor shall continue to maintain all insurance required by the Contract in full force and effect.

## **9.7 SUBSTANTIAL COMPLETION**

9.7.1 "Substantial Completion" means the stage in the progress of the Work, as determined by University's Representative, when the Work is complete and in accordance with the Contract Documents except only for completion of minor items which do not impair University's ability to occupy and fully utilize the Work for its intended purpose and a Certificate of Occupancy has been issued by the University's Building Official.

9.7.2 When Contractor gives notice to University's Representative that the Work is substantially complete, unless University's Representative determines that the Work is not sufficiently complete to warrant an inspection to determine Substantial Completion, University's Representative will inspect the Work. If the University's Representative determines that the Work is not substantially completed the University's Representative will prepare and give to Contractor a comprehensive list of items to be completed or corrected before establishing Substantial Completion. Contractor shall proceed promptly to complete and correct items on the list. Failure to include an item on such list does not alter the responsibility of Contractor to complete all Work in accordance with the Contract Documents. Upon notification that the items on the list are completed or corrected, as applicable, the University's Representative will make an inspection to determine whether the Work is substantially complete. Costs for additional inspection by University's Representative shall be deducted from any monies due and payable to Contractor.

9.7.3 When University's Representative determines that the Work is substantially complete, University's Representative will arrange for inspection by University's Building Official and other officials, as appropriate, for the purpose of issuing a Certificate of Occupancy. After a Certificate of Occupancy has been issued by the University's Building Official, the University's Representative will prepare a Certificate of Substantial Completion on University's form as contained in the Exhibits, which, when signed by University, shall establish the date of Substantial Completion and the responsibilities of University and Contractor for security, maintenance, utilities, insurance, and damage to the Work. The University's Representative will prepare and furnish to the Contractor a comprehensive "punch list" of items to be completed or corrected prior to Final Completion.

9.7.4 Unless otherwise provided in the Certificate of Substantial Completion, the Guarantee To Repair Period for the Work covered by the Certificate of Substantial Completion, shall commence on the date of Substantial Completion of the Work except that Substantial Completion shall not commence the Guarantee to Repair Period for any equipment or systems that:

- .1 Are not operational (equipment or systems shall not be considered operational if they cannot be used to provide the intended service; or
- .2 Are not accepted by the University.

The Guarantee To Repair Period for equipment or systems which become operational and accepted subsequent to Substantial Completion will begin on the date of their written acceptance by University.

9.7.5 The daily rate included in the Agreement and specifically identified as the rate to be paid to Contractor for Compensable Delays shall not apply to any delays occurring after the Work is substantially completed.

## **9.8 FINAL COMPLETION, FINAL PAYMENT, AND RELEASE OF RETENTION**

9.8.1 Upon receipt of notice from Contractor that the Work is ready for final inspection, University's Representative will make such inspection. Final Completion shall be when University's Representative determines that the Work is fully completed and in accordance with the Contract Documents, including without limitation, satisfaction of all "punch list" items, and determines that a Certificate of Occupancy has been issued by the University's Building Official. University will file a Notice of Completion within 10 days after Final Completion. After receipt of the final Application For Payment, if University's Representative determines that Final Completion has occurred, University's Representative will issue the final Certificate For Payment.

9.8.2 Final payment and retention shall be released to Contractor, as set forth in Article 9.8.3, after:

- .1 Contractor submits the final Application For Payment and all submittals required in accordance with Article 9.3;
- .2 Contractor submits all guarantees and warranties procured by Contractor from Subcontractors, all operating manuals for equipment installed in the Project, as-built documents, and all other submittals required by the Contract Documents;
- .3 Contractor submits the Final Distribution of Contract Dollars in the form contained in the Exhibits; and
- .4 University's Representative issues the final Certificate For Payment.

At its sole discretion, after Final Completion, University may waive the requirement that Contractor submit a final Application For Payment before making final payment and/or release of retention to Contractor.

9.8.3 Final payment shall be paid not more than 10 days after University's Representative issues the final Certificate For Payment. Retention shall be released to Contractor 35 days after the filing of the Notice of Completion.

9.8.4 Acceptance of final payment by Contractor shall constitute a waiver of all claims, except claims for retention and claims previously made in writing and identified by Contractor as unsettled at the time of the final Application For Payment.

## **ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY**

### **10.1 SAFETY PRECAUTIONS AND PROGRAMS**

10.1.1 Contractor shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the performance of the Contract.

### **10.2 SAFETY OF PERSONS AND PROPERTY**

10.2.1 Contractor shall take adequate precautions for safety of and shall provide adequate protection to prevent damage, injury, or loss to the following:

- .1 Employees involved in the Work and other persons who may be affected thereby.
- .2 The Work in place and materials and equipment to be incorporated therein, whether in storage on or off the Project site, under care, custody, or control of Contractor or Subcontractors.
- .3 Other property at the Project site and adjoining property.

10.2.2 Contractor shall erect and maintain, as required by existing conditions and performance of the Work, adequate safeguards for safety and protection, including providing adequate lighting and ventilation, posting danger signs and other warnings against hazards, promulgating safety regulations, and notifying owners and users of adjacent sites and utilities.

10.2.3 When use or storage of explosives, other hazardous materials, equipment, or unusual methods are necessary for execution of the Work, Contractor shall exercise the utmost care and carry on such activities only under the supervision of properly qualified personnel.

10.2.4 Contractor shall designate a responsible member of Contractor's organization at the Project site whose duty shall be the prevention of accidents. That person shall be the Superintendent, unless otherwise designated by Contractor in writing to University and University's Representative.

10.2.5 Contractor shall not load or permit any part of the Work or the Project site to be loaded so as to endanger the safety of persons or property.

### **10.3 EMERGENCIES**

10.3.1 In an emergency affecting the safety of persons or property, Contractor shall act to prevent or minimize damage, injury, or loss. Contractor shall promptly notify University's Representative, which notice may be oral followed by written confirmation, of the occurrence of such an emergency and Contractor's action.

## **ARTICLE 11 INSURANCE AND BONDS**

### **11.1 CONTRACTOR'S INSURANCE**

11.1.1 Contractor shall, at its expense, purchase and maintain in full force and effect such insurance as will protect itself and University from claims, such as for bodily injury, wrongful death, and property damage, which may arise out of or result from the Work required by the Contract Documents, whether such Work is done by Contractor, by any Subcontractor, by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable. The amounts of such insurance and any additional insurance requirements are specified in the Supplementary Conditions. See Article 3.21 regarding the scope and extent of Contractor's liability for and repair of damaged Work.

11.1.2 The following policies and coverages shall be furnished by Contractor:

.1 COMMERCIAL FORM GENERAL LIABILITY INSURANCE covering all Work done by or on behalf of Contractor and providing insurance for bodily injury, wrongful death, personal injury, property damage, and contractual liability. Except with respect to bodily injury and property damage included within the products and completed operations hazards, the aggregate limit shall apply separately to Work required of Contractor by these Contract Documents. If the insurance under this Article 11.1.2.1 is written on a claims-made form, coverage shall continue for a period of not less than 3 years following termination of this Contract. Coverage shall provide for a retroactive date of placement prior to or coinciding with the effective date of this Contract.

.2 BUSINESS AUTOMOBILE LIABILITY INSURANCE on an "Occurrence" form covering owned, hired, leased, and non-owned automobiles used by or on behalf of Contractor and providing insurance for bodily injury and property damage.

.3 WORKERS' COMPENSATION AND EMPLOYER'S LIABILITY INSURANCE as required by Federal and State of California law. Contractor shall also require all of its Subcontractors to maintain this insurance coverage.

11.1.3 The coverages required under this Article 11 shall not in any way limit the liability of Contractor.

11.1.4 Certificates of Insurance, as evidence of the insurance required by these Contract Documents and on the form contained in the Exhibits, shall be submitted by Contractor to University. The Certificates of Insurance shall provide for no cancellation or modification of coverage without prior written notice to University, in accordance with policy provisions.

11.1.5 In the event Contractor does not comply with these insurance requirements, University may, at its option, provide insurance coverage to protect University; and the cost of such insurance shall be paid by Contractor and may be deducted from the Contract Sum.

11.1.6 Contractor's insurance as required by Article 11.1.2, shall, by endorsement to the policies, include the following:

.1 University, University's officers, agents, employees, consultants, University's Representative, and University's Representative's consultants, regardless of whether or not identified in the Contract Documents or to Contractor in writing, will be included as additional insureds on Contractor's general liability policy for and relating to the Work to be performed by Contractor and Subcontractors. Contractor's general liability insurance policy shall name University as an additional insured pursuant to additional insured endorsement CG2010 (11/85) or a combination of both CG 2010 (10/01) and CG 2037 (10/01). This requirement shall not apply to Worker's Compensation and Employer's Liability Insurance.

.2 A Severability of Interest Clause stating that, "The term 'insured' is hereby used severally and not collectively, but the inclusion herein of more than one insured shall not operate to increase the limits of the insurers' liability."

.3 A Cross Liability Clause stating that, "In the event of claims being made under any of the coverages of the policies referred to herein by one or more insureds hereunder for which another insured hereunder may be liable, then the policies shall cover such insureds against whom a claim is made or may be made in the same manner as if separate policies had been issued to each insured hereunder. Nothing contained herein, however, shall operate to increase the insurers' limits of liability as set forth in the insuring agreements."

.4 University, University's consultants, University's Representative, and University's Representative's consultants will not by reason of their inclusion as insureds incur liability to the insurance carriers for payment of premiums for such insurance.

.5 Coverage provided is primary and is not in excess of or contributing with any insurance or self-insurance maintained by University, University's consultants, University's Representative, and University's Representative's consultants. This provision, however, shall only apply as per the stipulations of Article 11.1.6.1.

11.1.7 The form and substance of all insurance policies required to be obtained by Contractor shall be subject to approval by University. All policies required by Articles 11.1.2.1, 11.1.2.2, and 11.1.2.3 shall be issued by companies with ratings and financial classifications as specified in the Supplementary Conditions.

11.1.8 Contractor shall, by mutual agreement with University, furnish any additional insurance as may be required by University. Contractor shall provide Certificates of Insurance evidencing such additional insurance.

11.1.9 The Certificate of Insurance shall show (1) all companies affording coverage and (2) the name of the insured exactly in the manner as shown on the Bid Form. The name of the insured must be the name under which the entity is licensed by the Contractors State License Board.

11.1.10 If insurance company refuses to use the Certificate of Insurance form as contained in the Exhibits, it must provide a Certificate of Insurance evidencing compliance with this Article and Special Provisions 1 through 4 on the Certificate of Insurance Exhibit by including an endorsement to its Certificate of Insurance form covering Special Provisions 1 through 4 exactly as these provisions appear on the Certificate of Insurance Exhibit.

11.1.11 At the request of University, Contractor shall submit to University copies of the policies obtained by Contractor.



## **11.2 BUILDER'S RISK PROPERTY INSURANCE**

11.2.1 If and only if the Contract Sum exceeds \$200,000 at the time of award, University will provide its standard builder's risk property insurance, subject to the deductibles, terms and conditions, exclusions, and limitations as contained in the provisions of the policy. A copy of the University's standard builder's risk property insurance policy is available at the University's Facility office. In addition, a summary of the provisions of the policy is included as an Exhibit to the Contract. Contractor agrees that the University's provision of its standard builder's risk property insurance policy meets the University's obligation to provide builder's risk property insurance under the Contract and, in the event of a conflict between the provisions of the policy and any summary or description of the provisions contained herein or otherwise, the provisions of the policy shall control and shall be conclusively presumed to fulfill the University's obligation to provide such insurance. The proceeds under such insurance policies taken out by University insuring the Work and materials will be payable to University and Contractor as their respective interests, from time to time, may appear. Contractor shall be responsible for the deductible amount in the event of a loss. In addition, nothing in this Article 11.2 shall be construed to relieve Contractor of full responsibility for loss of or damage to materials not incorporated in the Work, and for Contractor's tools and equipment used to perform the Work, whether on the Project site or elsewhere, or to relieve Contractor of its responsibilities referred to under this Article 11. Materials incorporated in the Work, as used in this Article 11.2, shall mean materials furnished while in transit to, stored at, or in permanent place at the Project site.

11.2.2 Insurance policies referred to under this Article 11.2 shall:

.1 Include a provision that the policies are primary and do not participate with nor are excess over any other valid collectible insurance carried by Contractor.

.2 Include a waiver of subrogation against Contractor, its Subcontractors, its agents, and employees.

11.2.3 Builder's risk insurance coverage under this Article 11.2 will expire as described in the builder's risk property insurance policy.

## **11.3 PERFORMANCE BOND AND PAYMENT BOND**

11.3.1 Contractor shall furnish bonds covering the faithful performance of the Contract (Performance Bond) and payment of obligations arising thereunder (Payment Bond) on the forms contained in Exhibits 3 and 2.

11.3.2 The Payment Bond and Performance Bond shall each be in the amount of the Contract Sum.

11.3.3 The Payment Bond and Performance Bond shall be in effect on the date the Contract is signed by University.

11.3.4 Contractor shall promptly furnish such additional security as may be required by University to protect its interests and those interests of persons or firms supplying labor or materials to the Work. Contractor shall furnish supplemental Payment and Performance Bonds each in the amount of the current Contract Sum at the request of the University.

11.3.5 Surety companies used by Contractor shall be, on the date the Contract is signed by University, an admitted surety insurer (as defined in the California Code of Civil Procedure Section 995.120).

11.3.6 The premiums for the Payment Bond and Performance Bond shall be paid by Contractor.

## **ARTICLE 12 UNCOVERING AND CORRECTION OF WORK**

### **12.1 UNCOVERING OF WORK**

12.1.1 If a portion of the Work is covered contrary to University's Representative's request or direction, or contrary to the requirements of the Contract Documents, it must, if required in writing by University's Representative, be uncovered for University's Representative's observation and be replaced at Contractor's expense without adjustment of the Contract Time or the Contract Sum.

12.1.2 If a portion of the Work has been covered, which is not required by the Contract Documents to be

observed or inspected prior to its being covered and which University's Representative has not specifically requested to observe prior to its being covered, University's Representative may request to see such Work and it shall be uncovered and replaced by Contractor. If such Work is in accordance with the Contract Documents, the costs of uncovering and replacing the Work shall be added to the Contract Sum by Change Order; and if the uncovering and replacing of the Work extends the Contract Time, an appropriate adjustment of the Contract Time shall be made by Change Order. If such Work is not in accordance with the Contract Documents, Contractor shall pay such costs and shall not be entitled to an adjustment of the Contract Time or the Contract Sum.

## **12.2 CORRECTION OF DEFECTIVE WORK AND GUARANTEE TO REPAIR PERIOD**

12.2.1 The term "Guarantee To Repair Period" means a period of 1 year, unless a longer period of time is specified, commencing as follows:

.1 For any Work not described as incomplete in the Certificate of Substantial Completion, on the date of Substantial Completion.

.2 For space beneficially occupied or for separate systems fully utilized prior to Substantial Completion pursuant to Article 9.6, from the first date of such Beneficial Occupancy or actual use, as established in a Certificate of Beneficial Occupancy.

.3 For all Work other than .1 or .2 above, from the date of Final Completion.

12.2.2 Contractor shall (1) correct Defective Work that becomes apparent during the progress of the Work or during the Guarantee To Repair Period and (2) replace, repair, or restore to University's satisfaction any other parts of the Work and any other real or personal property which is damaged or destroyed as a result of Defective Work or the correction of Defective Work. Contractor shall promptly commence such correction, replacement, repair, or restoration upon notice from University's Representative or University, but in no case later than 10 days after receipt of such notice; and Contractor shall diligently and continuously prosecute such correction to completion. Contractor shall bear all costs of such correction, replacement, repair, or restoration, and all losses resulting from such Defective Work, including additional testing, inspection, and compensation for University's Representative's services and expenses. Contractor shall perform corrective Work at such times that are acceptable to University and in such a manner as to avoid, to the extent practicable, disruption to University's activities.

12.2.3 If immediate correction of Defective Work is required for life safety or the protection of property and is performed by University or Separate Contractors, Contractor shall pay to University all reasonable costs of correcting such Defective Work. Contractor shall replace, repair, or restore to University's satisfaction any other parts of the Work and any other real or personal property which is damaged or destroyed as a result of such Defective Work or the correction of such Defective Work.

12.2.4 Contractor shall remove from the Project site portions of the Work and materials which are not in accordance with the Contract Documents and which are neither corrected by Contractor nor accepted by University.

12.2.5 If Contractor fails to commence correction of Defective Work within 10 days after notice from University or University's Representative or fails to diligently prosecute such correction to completion, University may correct the Defective Work in accordance with Article 2.4; and, in addition, University may remove the Defective Work and store salvageable materials and equipment at Contractor's expense.

12.2.6 If Contractor fails to pay the costs of such removal and storage as required by Articles 12.2.4 and 12.2.5 within 10 days after written demand, University may, without prejudice to other remedies, sell such materials at auction or at private sale, or otherwise dispose of such material. Contractor shall be entitled to the proceeds of such sale, if any, in excess of the costs and damages for which Contractor is liable to University, including compensation for University's Representative's services and expenses. If such proceeds of sale do not cover costs and damages for which Contractor is liable to University, the Contract Sum shall be reduced by such deficiency. If there are no remaining payments due Contractor or the remaining payments are insufficient to cover such deficiency, Contractor shall promptly pay the difference to University.

12.2.7 Contractor's obligations under this Article 12 are in addition to and not in limitation of its warranty under Article 3.4 or any other obligation of Contractor under the Contract Documents. Enforcement of Contractor's express warranties and guarantees to repair contained in the Contract Documents shall be in

addition to and not in limitation of any other rights or remedies University may have under the Contract Documents or at law or in equity for Defective Work. Nothing contained in this Article 12 shall be construed to establish a period of limitation with respect to other obligations of Contractor under the Contract Documents. Establishment of the Guarantee To Repair Period relates only to the specific obligation of Contractor to correct the Work and in no way limits either Contractor's liability for Defective Work or the time within which proceedings may be commenced to enforce Contractor's obligations under the Contract Documents.

### **ARTICLE 13 TERMINATION OR SUSPENSION OF THE CONTRACT**

#### **13.1 TERMINATION BY CONTRACTOR**

13.1.1 Subject to Article 13.1.2, Contractor shall have the right to terminate the Contract only upon the occurrence of one of the following:

- .1 Provided that University has not commenced reasonable action to remove any order of a court within the 90 day period, the Work is stopped for 90 consecutive days, through no act or fault of Contractor, any Subcontractor, or any employee or agent of Contractor or any Subcontractor, due to an issuance of an order of a court or other public authority having jurisdiction or due to an act of government, such as a declaration of a national emergency making material unavailable.
- .2 University fails to perform any material obligation under the Contract and fails to cure such default within 30 days, or University has not commenced to cure such default within 30 days where such cure will require a reasonable period beyond 30 days and diligently prosecutes the same to completion, after receipt of notice from Contractor stating the nature of such default(s).
- .3 Repeated suspensions by University, other than such suspensions as are agreed to by Contractor under Article 13.3, which constitute in the aggregate more than 20% of the Contract Time.

13.1.2 Upon the occurrence of one of the events listed in Article 13.1.1, Contractor may, upon 10 days additional notice to University and University's Representative, and provided that the condition giving rise to Contractor's right to terminate is continuing, terminate the Contract.

13.1.3 Upon termination by Contractor, University will pay to Contractor the sum determined by Article 13.4.4. Such payment will be the sole and exclusive remedy to which Contractor is entitled in the event of termination of the Contract by Contractor pursuant to Article 13.1; and Contractor will be entitled to no other compensation or damages and expressly waives the same.

#### **13.2 TERMINATION BY UNIVERSITY FOR CAUSE**

13.2.1 University will have the right to terminate the Contract for cause at any time after the occurrence of any of the following events:

- .1 Contractor becomes insolvent or files for relief under the bankruptcy laws of the United States.
- .2 Contractor makes a general assignment for the benefit of its creditors or fails to pay its debts as the same become due.
- .3 A receiver is appointed to take charge of Contractor's property.
- .4 The commencement or completion of any Work activity on the critical path is more than 30 days behind the date set forth in the Contract Schedule for such Work activity, as a result of an Unexcusable Delay. For a Contract with a Contract Time of less than 300 days, the 30-day period shall be reduced to the number of days commensurate with 10% of the Contract Time.
- .5 Contractor abandons the Work.

13.2.2 Upon the occurrence of any of the following events, University will have the right to terminate the Contract for cause if Contractor fails to promptly commence to cure such default and diligently prosecute such cure within 5 days after notice from University, or within such longer period of time as is reasonably necessary to complete such cure:

- .1 Contractor persistently or repeatedly refuses or fails to supply skilled supervisory personnel, an adequate number of properly skilled workers, proper materials, or necessary equipment to prosecute the Work in accordance with the Contract Documents.
- .2 Contractor fails to make prompt payment of amounts properly due Subcontractors after receiving payment from University.
- .3 Contractor disregards Applicable Code Requirements.
- .4 Contractor persistently or materially fails to execute the Work in accordance with the Contract Documents.
- .5 Contractor is in default of any other material obligation under the Contract Documents.
- .6 Contractor persistently or materially fails to comply with applicable safety requirements.

13.2.3 Upon any of the occurrences referred to in Articles 13.2.1 and 13.2.2, University may, at its election and by notice to Contractor, terminate the Contract and take possession of the Project site and all materials, supplies, equipment, tools, and construction equipment and machinery thereon owned by Contractor; accept the assignment of any or all of the subcontracts; and then complete the Work by any method University may deem expedient. If requested by University, Contractor shall remove any part or all of Contractor's materials, supplies, equipment, tools, and construction equipment and machinery from the Project site within 7 days of such request; and if Contractor fails to do so, University may remove or store, and after 90 days sell, any of the same at Contractor's expense.

13.2.4 If the Contract is terminated by University as provided in this Article 13.2, Contractor shall not be entitled to receive any further payment until the expiration of 35 days after Final Completion and acceptance of all Work by University.

13.2.5 If the unpaid balance of the Contract Sum exceeds the cost of completing the Work, including all additional costs and expenses made necessary thereby, including costs for University staff time, plus all losses sustained, including any liquidated damages provided under the Contract Documents, such excess shall be paid to Contractor. If such costs, expenses, losses, and liquidated damages exceed the unpaid balance of the Contract Sum, Contractor shall pay such excess to University.

13.2.6 No termination or action taken by University after termination shall prejudice any other rights or remedies of University provided by law or by the Contract Documents upon such termination; and University may proceed against Contractor to recover all losses suffered by University.

### **13.3 SUSPENSION BY UNIVERSITY FOR CONVENIENCE**

13.3.1 University may, at any time and from time to time, without cause, order Contractor, in writing, to suspend, delay, or interrupt the Work in whole or in part for such period of time, up to 90 days, as University may determine, with such period of suspension to be computed from the date of delivery of the written order. Such order shall be specifically identified as a "Suspension Order" under this Article 13.3. The Work may be stopped for such further period as the parties may agree. Upon receipt of a Suspension Order, Contractor shall, at University's expense, comply with its terms and take all reasonable steps to minimize costs allocable to the Work covered by the Suspension Order during the period of Work stoppage. Within 90 days after the issuance of the Suspension Order, or such extension to that period as is agreed upon by Contractor and University, University shall either cancel the Suspension Order or delete the Work covered by such Suspension Order by issuing a Change Order.

13.3.2 If a Suspension Order is canceled or expires, Contractor shall continue with the Work. A Change Order will be issued to cover any adjustments of the Contract Sum or the Contract Time necessarily caused by such suspension. Any Claim by Contractor for an adjustment of the Contract Sum or the Contract Time shall be made within 21 days after the end of the Work suspension. Contractor agrees that submission of its claim within said 21 days is an express condition precedent to its right to Arbitrate or Litigate such a claim.

13.3.3 The provisions of this Article 13.3 shall not apply if a Suspension Order is not issued by University. A Suspension Order shall not be required to stop the Work as permitted or required under any other provision of the Contract Documents.

#### **13.4 TERMINATION BY UNIVERSITY FOR CONVENIENCE**

13.4.1 University may, at its option, terminate this Contract, in whole or from time to time in part, at any time by giving notice to Contractor. Upon such termination, Contractor agrees to waive any claims for damages, including loss of anticipated profits, on account thereof; and, as the sole right and remedy of Contractor, University shall pay Contractor in accordance with Article 13.4.4.

13.4.2 Upon receipt of notice of termination under this Article 13.4, Contractor shall, unless the notice directs otherwise, do the following:

- .1 Immediately discontinue the Work to the extent specified in the notice.
- .2 Place no further orders or subcontracts for materials, equipment, services, or facilities, except as may be necessary for completion of such portion of the Work as is not discontinued.
- .3 Promptly cancel, on the most favorable terms reasonably possible, all subcontracts to the extent they relate to the performance of the discontinued portion of the Work.
- .4 Thereafter do only such Work as may be necessary to preserve and protect Work already in progress and to protect materials, plants, and equipment on the Project site or in transit thereto.

13.4.3 Upon such termination, the obligations of the Contract shall continue as to portions of the Work already performed and, subject to Contractor's obligations under Article 13.4.2, as to bona fide obligations assumed by Contractor prior to the date of termination.

13.4.4 Upon such termination, University shall pay to Contractor the sum of the following:

- .1 The amount of the Contract Sum allocable to the portion of the Work properly performed by Contractor as of the date of termination, less sums previously paid to Contractor.
- .2 Plus an amount equal to the lesser of \$50,000 or 5% of the difference between the Contract Sum and the amount of the Contract Sum allocable to the portion of the Work properly performed by Contractor as of the date of termination.
- .3 Plus previously unpaid costs of any items delivered to the Project site which were fabricated for subsequent incorporation in the Work.
- .4 Plus any proven losses with respect to materials and equipment directly resulting from such termination.
- .5 Plus reasonable demobilization costs.
- .6 Plus reasonable costs of preparing a statement of the aforesaid costs, expenses, and losses in connection with such termination.

The above payment shall be the sole and exclusive remedy to which Contractor is entitled in the event of termination of the Contract by University pursuant to Article 13.4; and Contractor will be entitled to no other compensation or damages and expressly waives same.

#### **ARTICLE 14 STATUTORY AND OTHER REQUIREMENTS**

##### **14.1 PATIENT HEALTH INFORMATION**

Contractor acknowledges that its employees, agents, subcontractors, consultants and others acting on its behalf may come into contact with Patient Health Information ("PHI") while performing work at the Project Site. This contact is most likely rare and brief (e.g. walking through a clinic where patient files may be visible, overhearing conversations between physicians while working or touring a hospital, noticing a relative or acquaintance receiving treatment in a University facility, etc.). Contractor shall immediately notify University Representative of any such contact. Any and all forms of PHI should not be examined closer, copied, photographed, recorded in any manner, distributed or shared. Contractor will adopt procedures to ensure that its employees, agents and subcontractors refrain from such activity. If Contractor, its employees, agents or subcontractors do further examine, copy, photograph, record in any manner, distribute or share this information, Contractor will report such actions immediately to the University Representative. Contractor will immediately take all steps necessary to stop any such actions and will ensure that no further violations of this contractual responsibility will occur. Contractor will report to University Representative within five (5) days after Contractor gives University Representative notice of the event/action of the steps taken to prevent future occurrences.

## 14.2 NONDISCRIMINATION

14.2.1 For purposes of this Article 14.2, the term Subcontractor shall not include suppliers, manufacturers, or distributors.

14.2.2 Contractor shall comply and shall ensure that all Subcontractors comply with Section 12900 through 12996, of the State of California Government Code.

14.2.3 Contractor agrees as follows during the performance of the Work:

- .1 Contractor shall provide equal treatment to, and shall not willfully discriminate against or allow harassment of any employee or applicant for employment on the basis of: race; color; religion; sex; age; ancestry; national origin; sexual orientation; physical or mental disability; veteran's status; medical condition (as defined in Section 12926 of the State of California Government Code and including cancer-related medical conditions and or genetic characteristics); genetic information (as defined in the Genetic Information Nondiscrimination Act of 2008 and including family medical history); marital status; gender identity, pregnancy, or citizenship (within the limits imposed by law or University's policy) or service in the uniformed services (as defined by the Uniformed Services Employment and Reemployment Rights Act of 1994). Contractor will also take affirmative action to ensure that any such employee or applicant for employment is not discriminated against on any of the bases identified above. Such equal treatment shall apply, but not be limited to the following: employment; upgrade; demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor also agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause. The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that qualified applicants will receive consideration for employment without regard to: race; color; religion; sex; age; ancestry; national origin; sexual orientation; physical or mental disability; veteran's status; medical condition (as defined in Section 12926 of the State of California Government Code and including cancer-related medical conditions and or genetic characteristics); genetic information (as defined in the Genetic Information Nondiscrimination Act of 2008 and including family medical history); marital status; gender identity, pregnancy, or citizenship (within the limits imposed by law or University's policy) or service in the uniformed services (as defined by the Uniformed Services Employment and Reemployment Rights Act of 1994). For purposes of this provision: (1) "Pregnancy" includes pregnancy, childbirth, and medical conditions related to pregnancy and childbirth; and (2) "Service in the uniformed services" includes membership, application for membership, performance of service, application for service, or obligation for service in the uniformed services.
- .2 Contractor and all Subcontractors will permit access to their records of employment, employment advertisements, application forms, and other pertinent data and records by University or any appropriate agency of the State of California designated by University for the purposes of investigation to ascertain compliance with this Article 14.2. The outcome of the investigation may result in the following:
  - .1 A finding of willful violation of the provisions of this Contract or of the Fair Employment Practices Act may be regarded by University as (1) a basis for determining that Contractor is not a "responsible bidder" as to future contracts for which such Contractor may submit bids or (2) a basis for refusing to accept or consider the bids of Contractor for future contracts.
  - .2 University may deem a finding of willful violation of the Fair Employment Practices Act to have occurred upon receipt of written notice from the Fair Employment Practices Commission that it has (1) investigated and determined that Contractor has violated the Fair Employment Practices Act and (2) issued an order under the State of California Government Code Section 12970 or obtained an injunction under Government Code Section 12973.

- .3 Upon receipt of such written notice from the Fair Employment Practices Commission, University may notify Contractor that, unless it demonstrates to the satisfaction of University within a stated period that the violation has been corrected, Contractor's bids on future projects will not be considered.
- .4 Contractor agrees that, should University determine that Contractor has not complied with this Article 14.2, Contractor shall forfeit to University, as a penalty, for each day or portion thereof, for each person who was denied employment as a result of such non-compliance, the penalties provided in Article 14.3 for violation of prevailing wage rates. Such penalty amounts may be recovered from Contractor; and University may deduct any such penalty amounts from the Contract Sum.
- .5 Nothing contained in this Article 14.2 shall be construed in any manner so as to prevent University from pursuing any other remedies that may be available at law.
- .6 Contractor shall meet the following standards for compliance and provide University with satisfactory evidence of such compliance upon University's request, which shall be evaluated in each case by University:
  - .1 Contractor shall notify its Superintendent and other supervisory personnel of the nondiscrimination requirements of the Contract Documents and their responsibilities thereto.
  - .2 Contractor shall notify all sources of employee referrals (including unions, employment agencies, and the State of California Department of Employment) of the nondiscrimination requirements of the Contract Documents by sending to such sources and by posting the Notice of Equal Employment Opportunity (EEO).
  - .3 Contractor or its representative shall, through all unions with whom it may have agreements, develop agreements that (1) define responsibilities for nondiscrimination in hiring, referrals, upgrading, and training and (2) implement an affirmative nondiscrimination program, in terms of the unions' specific areas of skill and geography, such that qualified minority women, nonminority women, and minority men shall be available and given an equal opportunity for employment.
  - .4 Contractor shall notify University of opposition to the nondiscrimination requirements of the Contract Documents by individuals, firms, or organizations during the term of the Contract.
- .7 Contractor shall include the provisions of the foregoing Articles 14.2.3.2.1 through 14.2.3.2.6 in all subcontracts with Subcontractors, so that such provisions will be binding upon each such Subcontractor.

### **14.3 PREVAILING WAGE RATES**

14.3.1 For purposes of this Article 14.3, the term Subcontractor shall not include suppliers, manufacturers, or distributors.

14.3.2 Contractor shall comply and shall ensure that all Subcontractors comply with Sections 1770, 1771, 1772, 1773, 1774, and 1775 of the State of California Labor Code. Compliance with these sections is required by this Contract.

14.3.3 The State of California Department of Industrial Relations has ascertained the general prevailing per diem wage rates in the locality in which the Work is to be performed for each craft, classification, or type of worker required to perform the Work. A copy of the general prevailing per diem wage rates will be on file at University's principal facility office and will be made available to any interested party upon request. Contractor shall post a copy of the general prevailing per diem wage rates at the job site. By this reference, such schedule is made part of the Contract Documents. Contractor shall pay not less than the prevailing wage rates, as specified in the schedule and any amendments thereto, to all workers employed by Contractor in the execution of the Work. Contractor shall cause all subcontracts to include the provision that all Subcontractors shall pay not less than the prevailing rates to all workers employed by such Subcontractors in the execution of the Work. Contractor shall forfeit to University, as a penalty, not more than \$50 for each calendar day or portion thereof for each worker that is paid less than the prevailing rates as determined by the Director of Industrial Relations for the work or craft in which the worker is employed for any portion of the Work done by Contractor or any Subcontractor. The amount of this penalty shall be determined pursuant to applicable law. Such forfeiture amounts may be deducted from the Contract Sum or sought directly from the surety under its Performance Bond if there are insufficient funds remaining in the Contract Sum. Contractor shall also pay to any worker who was paid less than the prevailing wage rate for the work or craft for



which the worker was employed for any portion of the Work, for each day, or portion thereof, for which the worker was paid less than the specified prevailing per diem wage rate, an amount equal to the difference between the specified prevailing per diem wage rate and the amount which was paid to the worker. Review of any civil wage and penalty assessment shall be made pursuant to section 17420 of the California Labor Code.

#### **14.4 PAYROLL RECORDS**

14.4.1 For purposes of this Article 14.4, the term Subcontractor shall not include suppliers, manufacturers, or distributors.

14.4.2 Contractor and all Subcontractors shall keep an accurate payroll record, showing the name, address, social security number, job classification, straight time and overtime hours worked each day and week, and the actual per diem wages paid to each journeyworker, apprentice, worker, or other employee employed in connection with the Work. All payroll records shall be certified as being true and correct by Contractor or Subcontractors keeping such records; and the payroll records shall be available for inspection at all reasonable hours at the principal office of Contractor on the following basis:

- .1 A certified copy of an employee's payroll record shall be made available for inspection or furnished to such employee or the employee's authorized representative on request.
- .2 A certified copy of all payroll records shall be made available for inspection upon request to University, the State of California Division of Labor Standards Enforcement, and the Division of Apprenticeship Standards of the State of California Division of Industrial Relations.
- .3 A certified copy of all payroll records shall be made available upon request by the public for inspection or copies thereof made; provided, however, that the request by the public shall be made to either University, the Division of Apprenticeship Standards, or the Division of Labor Standards Enforcement. The public shall not be given access to such records at the principal offices of Contractor or Subcontractors. Any copy of the records made available for inspection as copies and furnished upon request to the public or any public agency by University shall be marked or obliterated in such a manner as to prevent disclosure of an individual's name, address, and social security number. The name and address of Contractor awarded the Contract or performing the Contract shall not be marked or obliterated.

14.4.3 Contractor shall file a certified copy of the payroll records with the entity that requested the records within 10 days after receipt of a written request. Contractor shall inform University of the location of such payroll records for the Project, including the street address, city, and county; and Contractor shall, within 5 working days, provide notice of change of location of such records. In the event of noncompliance with the requirements of this Article 14.4 or with the State of California Labor Code Section 1776, Contractor shall have 10 days in which to comply following receipt of notice specifying in what respects Contractor must comply. Should noncompliance still be evident after the 10 day period, Contractor shall forfeit to University, as a penalty, \$25 for each day, or portion thereof, for each worker, until strict compliance is accomplished. Such forfeiture amounts may be deducted from the Contract Sum.

#### **14.5 APPRENTICES**

14.5.1 For purposes of this Article 14.5, the term Subcontractor shall not include suppliers, manufacturers, and distributors.

14.5.2 Only apprentices, as defined in the State of California Labor Code Section 3077, who are in training under apprenticeship standards and written apprentice agreements under Chapter 4, Division 3, of the State of California Labor Code, are eligible to be employed by Contractor and Subcontractors as apprentices. The employment and training of each apprentice shall be in accordance with the provisions of the apprenticeship standards and written apprentice agreements under which the apprentice is training.

14.5.3 Every apprentice shall be paid the standard wage to apprentices, under the regulations of the craft or trade at which the apprentice is employed, and shall be employed only at the Work in the craft or trade to which the apprentice is indentured.

14.5.4 When Contractor or Subcontractors employ workers in any apprenticeship craft or trade on the Work, Contractor or Subcontractors shall 1) send contract award information to the applicable joint apprenticeship committee that can supply apprentices to the site of the public work and 2) apply to the joint apprenticeship committee, which administers the apprenticeship standards of the craft or trade in the area of the Project site, for a certificate approving Contractor or Subcontractors under the apprenticeship standards for the employment and training of apprentices in the area of the Project site. The committee will issue a certificate fixing the number of apprentices or the ratio of apprentices to journeypersons who shall be employed in the craft or trade on the Work. The ratio will not exceed that stipulated in the apprenticeship standards under which the joint apprenticeship committee operates; but in no case shall the ratio be less than 1 hour of apprentice work for every 5 hours of journeyperson work, except as permitted by law. Contractor or Subcontractors shall, upon the issuance of the approval certificate in each such craft or trade, employ the number of apprentices or the ratio of apprentices to journeypersons fixed in the certificate issued by the joint apprenticeship committee or present an exemption certificate issued by the Division of Apprenticeship Standards.

14.5.5 "Apprenticeship craft or trade," as used in this Article 14.5, shall mean a craft or trade determined as an apprenticeship occupation in accordance with rules and regulations prescribed by the Apprenticeship Council.

14.5.6 If Contractor or Subcontractors employ journeymen or apprentices in any apprenticeship craft or trade in the area of the Project site, and there exists a fund for assisting to allay the cost of the apprenticeship program in the trade or craft, to which fund or funds other contractors in the area of the Project site are contributing, Contractor and Subcontractors shall contribute to the fund or funds in each craft or trade in which they employ journeymen or apprentices on the Work in the same amount or upon the same basis and in the same manner done by the other contractors. Contractor may include the amount of such contributions in computing its bid for the Contract; but if Contractor fails to do so, it shall not be entitled to any additional compensation therefor from University.

14.5.7 In the event Contractor willfully fails to comply with this Article 14.5, it will be considered in violation of the requirements of the Contract.

14.5.8 Nothing contained herein shall be considered or interpreted as prohibiting or preventing the hiring by Contractor or Subcontractors of journeyman trainees who may receive on-the-job training to enable them to achieve journeyman status in any craft or trade under standards other than those set forth for apprentices.

#### **14.6 WORK DAY**

14.6.1 Contractor shall not permit any worker to labor more than 8 hours during any 1 day or more than 40 hours during any 1 calendar week, except as permitted by law and in such cases only upon such conditions as are provided by law. Contractor shall forfeit to University, as a penalty, \$25 for each worker employed in the execution of this Contract by Contractor, or any Subcontractor, for each day during which such worker is required or permitted to work more than 8 hours in any 1 day and 40 hours in any 1 calendar week in violation of the terms of this Article 14.6 or in violation of the provisions of any law of the State of California. Such forfeiture amounts may be deducted from the Contract Sum. Contractor and each Subcontractor shall keep, or cause to be kept, an accurate record showing the actual hours worked each day and each calendar week by each worker employed on the Project, which record shall be kept open at all reasonable hours to the inspection of University, its officers and agents, and to the inspection of the appropriate enforcement agency of the State of California.

### **ARTICLE 15 MISCELLANEOUS PROVISIONS**

#### **15.1 GOVERNING LAW**

15.1.1 The Contract shall be governed by the law of the State of California.

## **15.2 SUCCESSORS AND ASSIGNS**

15.2.1 University and Contractor respectively bind themselves and their successors, permitted assigns, and legal representatives to the other party and to the successors, permitted assigns, and legal representatives of such other party in respect to covenants, agreements, and obligations contained in the Contract Documents. Neither party to the Contract shall assign the Contract, in whole or in part, without prior written consent of the other party. Notwithstanding any such assignment, each of the original contracting parties shall remain legally responsible for all of its obligations under the Contract.

## **15.3 RIGHTS AND REMEDIES**

15.3.1 All University's rights and remedies under the Contract Documents will be cumulative and in addition to and not in limitation of all other rights and remedies of University under the Contract Documents or otherwise available at law or in equity.

15.3.2 No action or failure to act by University or University's Representative will constitute a waiver of a right afforded them under the Contract, nor will such action or failure to act constitute approval of or acquiescence in a condition or breach thereunder, except as may be specifically agreed in writing. No waiver by University or University's Representative of any condition, breach or default will constitute a waiver of any other condition, breach or default; nor will any such waiver constitute a continuing waiver.

15.3.3 No provision contained in the Contract Documents shall create or give to third parties any claim or right of action against University, University's Representative, or Contractor.

## **15.4 SURVIVAL**

15.4.1 The provisions of the Contract which by their nature survive termination of the Contract or Final Completion, including all warranties, indemnities, payment obligations, and University's right to audit Contractor's books and records, shall remain in full force and effect after Final Completion or any termination of the Contract.

## **15.5 COMPLETE AGREEMENT**

15.5.1 The Contract Documents constitute the full and complete understanding of the parties and supersede any previous agreements or understandings, oral or written, with respect to the subject matter hereof. The Contract may be modified only by a written instrument signed by both parties or as provided in Article 7.

## **15.6 SEVERABILITY OF PROVISIONS**

15.6.1 If any one or more of the provisions contained in the Contract Documents should be invalid, illegal, or unenforceable in any respect, the validity, legality, and enforceability of the remaining provisions contained herein shall not in any way be affected or impaired thereby.

## **15.7 UNIVERSITY'S RIGHT TO AUDIT**

15.7.1 University and entities and agencies designated by University will have access to and the right to audit and the right to copy at University's cost all of Contractor's books, records, contracts, correspondence, instructions, drawings, receipts, vouchers, purchase orders, and memoranda relating to the Work. Contractor shall preserve all such records and other items during the performance of the Contract and for a period of at least 3 years after Final Completion.

## **15.8 NOTICES**

15.8.1 Except as otherwise provided, all notices, requests, demands, and other communications to be given under the Contract Documents shall be in writing and shall be transmitted by one of the following methods:

- .1 Personally delivered.
- .2 Sent by facsimile copy where receipt is confirmed.
- .3 Sent by courier where receipt is confirmed.

.4 Sent by registered or certified mail, postage prepaid, return receipt requested.

15.8.2 Such notices and other communications in Article 15.8.1 shall be deemed given and received upon actual receipt in the case of all except registered or certified mail; and in the case of registered or certified mail, on the date shown on the return receipt or the date delivery during normal business hours was attempted. Such notices and communications shall be given at the respective street addresses set forth in the Agreement. Such street addresses may be changed by notice given in accordance with this Article 15.8.

#### **15.9 TIME OF THE ESSENCE**

15.9.1 Time limits stated in the Contract Documents are of the essence of the Contract.

#### **15.10 MUTUAL DUTY TO MITIGATE**

15.10.1 University and Contractor shall use all reasonable and economically practicable efforts to mitigate delays and damages to the Project and to one another with respect to the Project, regardless of the cause of such delay or damage.

**SUPPLEMENTARY CONDITIONS**

**1. MODIFICATION OF GENERAL CONDITIONS, ARTICLE 3 – CONTRACTOR**

**Article 3.13.2 is replaced as follows:**

3.13.2 Contractor shall, on a daily basis during performance of the Work, keep the Project site and surrounding area free from the accumulation of dirt, waste materials, and rubbish caused by Contractor. If cleanup is not performed on a daily basis, University may perform cleanup as necessary, and allocate the cost for such cleanup between those firms responsible. Contractor shall remove all dirt, waste material, and rubbish caused by Contractor, along with any tools, equipment, machinery, and surplus materials from the Project site and surrounding area at the completion of the Work. Cleanup of unclean jobsite conditions must be within 24 hours after such notice has been given to Contractor by University's Representative.

**The following article is added to Article 3 of the General Conditions:**

**3.22 DAILY REPORTS**

3.22.1 Contractor shall submit daily reports, on the form contained in the Exhibits, to the University's Representative not later than 2:00 p.m. each work day.

**2. MODIFICATION OF GENERAL CONDITIONS, ARTICLE 7 - CHANGES IN THE WORK**

The following article is added to Article 7 of the General Conditions:

**7.7. LETTER OF INSTRUCTION**

7.7.1 The University's Representative may issue Letter of Instruction (as shown in Exhibit 26) which make interpretations or clarifications of the Contract Documents that do not change the scope of Work or involve an adjustment of the Contract Sum or the Contract Time and that are consistent with the intent of the Contract Documents. Letter of Instruction shall be binding upon Contractor. Contractor shall promptly carry out the requirements of such Letter of Instruction.

**3. MODIFICATION OF GENERAL CONDITIONS, ARTICLE 8 - CONTRACT TIME**

8.4.1.6.11 "Rainy weather", but only for such days of rain that are in excess of the number of days specified:

October – 1 day  
November – 2 days  
December -3 days  
January – 5 days  
February - 6 days  
March – 5 days  
April – 3 days  
May – September – 0 days

In order for a day to be considered a "day of rainy weather" for the purpose of determining whether Contractor is entitled to a time extension, all of the following conditions must be met:

.3 the Contractor must have employed all reasonable rain mitigation measures to enable the work to continue on the day; and

.4 all other conditions of Article 8 must be met.

When the total number of rainy weather days within a month does not exceed the number of days specified; the remaining days shall carry forward to the next month of the project. Remaining rain days for the calendar year shall carry forward to the next calendar year through final completion of the project.

#### **4. MODIFICATION OF GENERAL CONDITIONS, ARTICLE 11 - INSURANCE AND BONDS**

Insurance required by Paragraphs 11.1.2.1 and 11.1.2.2 shall be (i) issued by companies with a Best rating of A- or better, and a financial classification of VIII or better (or an equivalent rating by Standard & Poor or Moody's) or (ii) guaranteed, under terms consented to by the University (such consent to not be unreasonably withheld), by companies with a Best rating of A- or better, and a financial classification of VIII or better (or an equivalent rating by Standard & Poor or Moody's). Such insurance shall be written for not less than the following:

	<u>Minimum Requirement</u>
11.1.2.1 Commercial Form General Liability Insurance-Limits of Liability	
Each Occurrence-Combined Single Limit for Bodily Injury and Property	\$1,000,000
Products-Completed Operations Aggregate	\$2,000,000
Personal and Advertising Injury	\$1,000,000
General Aggregate	\$2,000,000
11.1.2.2 Business Automobile Liability Insurance-Limits of Liability	
Each Accident-Combined Single Limit for Bodily Injury and Property Damage	\$2,000,000

Insurance required by Paragraph 11.1.2.3 shall be issued by companies (i) that have a Best rating of B+ or better, and a financial classification of VIII or better (or an equivalent rating by Standard & Poor or Moody's); or (ii) that are acceptable to the University. Such insurance shall be written for not less than the following:

11.1.2.3 WORKER'S COMPENSATION AND EMPLOYER'S LIABILITY – (as required by Federal and State of California law).

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**EXHIBIT 1 – CERTIFICATE OF INSURANCE**

						DATE ISSUED:	
BROKER/AGENT			<b>COMPANIES AFFORDING COVERAGE</b>				
			COMPANY A				
			COMPANY B				
NAMED INSURED			COMPANY C				
			COMPANY D				
COVERAGES							
<p>This is to certify that policies of insurance listed below have been issued to the insured named above for the policy period indicated. This certificate or verification of insurance is not an insurance policy and does not amend, extend or alter the coverage afforded by the policies listed herein. Notwithstanding any requirement, term or condition of any contract or other document with respect to which this certificate or verification of insurance may be issued or may pertain, the insurance afforded by the policies described herein is subject to all the terms, exclusions and conditions of such policies.</p>							
CO LTR	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFF. DATE (M/D/Y)	POLICY EXP. DATE (M/D/Y)		LIMITS	DEDUCTIBLE
	<b>GENERAL LIABILITY</b> <input type="checkbox"/> COMMERCIAL FORM <input type="checkbox"/> CLAIMS MADE <input type="checkbox"/> OCCURRENCE <input type="checkbox"/> SEVERABILITY OF INTEREST CLAUSE <input type="checkbox"/> CROSS LIABILITY CLAUSE				GENERAL AGGREGATE PRODUCTS/COMPLETED OPERATIONS AGGREGATE PERSONAL & ADVERTISING INJURY EACH OCCURRENCE FIRE DAMAGE (ANY ONE FIRE) MEDICAL EXPENSE (ANY ONE PERSON)	\$ \$ \$ \$ \$ \$	\$
	<b>AUTOMOBILE LIABILITY</b> <input type="checkbox"/> ANY AUTO (CODE 1) <input type="checkbox"/> ALL OWNED AUTOS (CODE 2) <input type="checkbox"/> SCHEDULED AUTOS (CODE 7) <input type="checkbox"/> HIRED AUTOS (CODE 8) <input type="checkbox"/> NON-OWNED AUTOS (CODE 9) <input type="checkbox"/> OTHER				CSL BODILY INJURY (PER PERSON) BODILY INJURY (PER ACCIDENT) PROPERTY DAMAGE	\$ \$ \$ \$	\$
	<b>EXCESS LIABILITY</b> <input type="checkbox"/> UMBRELLA FORM <input type="checkbox"/> OTHER <input type="checkbox"/> CLAIMS MADE    OCCURRENCE				EACH OCCURRENCE \$	AGGREGATE \$	
	<b>PROFESSIONAL LIABILITY*</b> <input type="checkbox"/> CLAIMS MADE <input type="checkbox"/> OCCURRENCE				EACH OCCURRENCE \$	AGGREGATE \$	
	<b>WORKERS' COMPENSATION AND EMPLOYERS' LIABILITY*</b>				<b>AS REQUIRED BY FEDERAL AND CALIFORNIA LAW</b>		
<p><b>SPECIAL PROVISIONS:</b>          *Special Provision #1 and #2 below do not apply to this coverage.</p> <ol style="list-style-type: none"> <li>THE REGENTS OF THE UNIVERSITY OF CALIFORNIA, ITS OFFICERS, AGENTS, EMPLOYEES, CONSULTANTS, REPRESENTATIVES, AND REPRESENTATIVE'S CONSULTANTS ARE INCLUDED AS ADDITIONAL INSURERS BUT ONLY IN CONNECTION WITH <b>900120 Student Services Building</b></li> <li>THIS INSURANCE SHALL BE PRIMARY INSURANCE AS RESPECTS THE REGENTS OF THE UNIVERSITY OF CALIFORNIA, ITS OFFICERS, AGENTS, AND EMPLOYEES. ANY INSURANCE OR SELF-INSURANCE MAINTAINED BY THE REGENTS OF THE UNIVERSITY OF CALIFORNIA SHALL BE EXCESS OF AND NONCONTRIBUTORY WITH THIS INSURANCE.</li> <li>THE PROVISIONS UNDER PARAGRAPHS (1&amp;2) OF THIS SECTION, "SPECIAL PROVISIONS", SHALL APPLY TO CLAIMS, COSTS, INJURIES OR DAMAGES BUT ONLY IN PROPORTION TO AND TO THE EXTENT SUCH CLAIMS, COSTS, INJURIES, OR DAMAGES ARE CAUSED BY OR RESULT FROM THE NEGLIGENT ACTS OR OMISSIONS OF THE NAMED INSURED.</li> <li>SHOULD ANY OF THE INSURANCE PROGRAMS DESCRIBED HEREIN BE MATERIALLY MODIFIED OR CANCELED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING COMPANY WILL MAIL THIRTY (30) DAYS (TEN [10] DAYS FOR NON-PAYMENT OF PREMIUM) WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED BELOW.</li> </ol>							
CERTIFICATE HOLDER: THE REGENTS OF THE UNIVERSITY OF CALIFORNIA. FORWARD TO: Physical Planning Design & Construction UNIVERSITY OF CALIFORNIA, MERCED 5200 N. Lake Rd Merced, CA 95343					THE UNDERSIGNED CERTIFIES THAT HE/SHE IS AUTHORIZED TO SIGN THIS CERTIFICATE AND THAT THE SPECIAL PROVISIONS DESCRIBED HEREIN HAVE BEEN MADE A PART OF THE POLICY(IES) SHOWN ABOVE.		
					AUTHORIZED REPRESENTATIVE		

Bond No.: \_\_\_\_\_

**PAYMENT BOND**

KNOW ALL PERSONS BY THESE PRESENTS:

THAT WHEREAS, The Regents of the University of California ("The Regents") has awarded to \_\_\_\_\_ as Principal a contract dated the \_\_\_\_\_ day of \_\_\_\_\_, 2012 (the "Contract") for the work described as follows:

**STUDENT SERVICES BUILDING  
UNIVERSITY OF CALIFORNIA MERCED CAMPUS  
MERCED COUNTY, MERCED CALIFORNIA**

AND WHEREAS, Principal is required to furnish a bond in connection with the Contract to secure the payment of claims of laborers, mechanics, material suppliers, and other persons as provided by law;

NOW, THEREFORE, we, the undersigned Principal and \_\_\_\_\_ as Surety, are held and firmly bound unto The Regents in the sum of \$ \_\_\_\_\_ for which payment well and truly to be made we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that if Principal, or its heirs, executors, administrators, successors, or assigns approved by The Regents, or its subcontractors shall fail to pay any of the persons named in State of California Civil Code Section 3181, or amounts due under the State of California Unemployment Insurance Code with respect to work or labor performed under the Contract, or for any amounts required to be deducted, withheld, and paid over to the State of California Employment Development Department from the wages of employees of Principal and subcontractors pursuant to Section 13020 of the State of California Unemployment Insurance Code with respect to such work and labor, that Surety will pay for the same in an amount not exceeding the sum specified in this bond, otherwise the above obligation shall become and be null and void.

This bond shall inure to the benefit of any of the persons named in State of California Civil Code Section 3181 as to give a right of action to such persons or their assigns in any suit brought upon this bond.

Surety, for value received, hereby expressly agrees that no extension of time, change, modification, alteration, deletion, or addition to the undertakings, covenants, terms, conditions, and agreements of the Contract, or to the work to be performed thereunder, shall in any way affect the obligation of this bond; and it does hereby waive notice of any such extension of time, change, modification, alteration, deletion, or addition to the undertakings, covenants, terms, conditions, and agreements of the Contract, or to the work to be performed thereunder.

Surety's obligations hereunder are independent of the obligations of any other surety for the payment of claims of laborers, mechanics, material suppliers, and other persons in connection with the Contract; and suit may be brought against Surety and such other sureties, jointly and severally, or against any one or more of them, or against less than all of them without impairing The Regents' rights against the others.

In the event suit is brought upon this bond, the parties not prevailing in such suit shall pay reasonable attorneys' fees and costs incurred by the prevailing parties in such suit.

Correspondence or claims relating to this bond shall be sent to Surety at the address set forth below.

IN WITNESS WHEREOF, we have hereunto set our hands this \_\_\_\_\_  
day of \_\_\_\_\_, 2012.

Principal:

\_\_\_\_\_  
(Name of Firm)

By:

\_\_\_\_\_

Title:

\_\_\_\_\_

Surety:

\_\_\_\_\_  
(Name of Firm)

By:

\_\_\_\_\_

Title:

\_\_\_\_\_

Address for Notices:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**NOTE: Notary acknowledgement for Surety and Surety's Power of Attorney must be attached.**

Bond No.: \_\_\_\_\_

**PERFORMANCE BOND**

KNOW ALL PERSONS BY THESE PRESENTS:

THAT WHEREAS, The Regents of the University of California ("The Regents") has awarded to \_\_\_\_\_ as Principal a contract dated the \_\_\_\_\_ day of \_\_\_\_\_, 2012 (the "Contract"), which Contract is by this reference made a part hereof, for the work described as follows:

**STUDENT SERVICES BUILDING  
UNIVERSITY OF CALIFORNIA MERCED CAMPUS  
MERCED COUNTY, MERCED CALIFORNIA**

AND WHEREAS, Principal is required to furnish a bond in connection with the Contract, guaranteeing the faithful performance thereof;

NOW, THEREFORE, we, the undersigned Principal and \_\_\_\_\_ as Surety are held and firmly bound unto The Regents in the sum of \$ \_\_\_\_\_, to be paid to The Regents or its successors and assigns; for which payment, well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that if Principal, or its heirs, executors, administrators, successors, or assigns approved by The Regents, shall promptly and faithfully perform the covenants, conditions, and agreements of the Contract during the original term and any extensions thereof as may be granted by The Regents, with or without notice to Surety, and during the period of any guarantees or warranties required under the Contract, and shall also promptly and faithfully perform all the covenants, conditions, and agreements of any alteration of the Contract made as therein provided, notice of which alterations to Surety being hereby waived, on Principal's part to be kept and performed at the time and in the manner therein specified, and in all respects according to their true intent and meaning, and shall indemnify, defend, protect, and hold harmless The Regents as stipulated in the Contract, then this obligation shall become and be null and void; otherwise it shall be and remain in full force and effect.

No extension of time, change, alteration, modification, or addition to the Contract, or of the work required thereunder, shall release or exonerate Surety on this bond or in any way affect the obligation of this bond; and Surety does hereby waive notice of any such extension of time, change, alteration, modification, or addition.

Whenever Principal shall be and declared by The Regents to be in default under the Contract, Surety shall promptly remedy the default, or shall promptly:

1. Undertake through its agents or independent contractors, reasonably acceptable to The Regents, to complete the Contract in accordance with its terms and conditions and to pay and perform all obligations of Principal under the Contract, including without limitation, all obligations with respect to warranties, guarantees, and the payment of liquidated damages, or, at Surety's election, or, if required by The Regents.

2. Obtain a bid or bids for completing the Contract in accordance with its terms and conditions, and, upon determination by The Regents of the lowest responsible bidder, arrange for a contract between such bidder and The Regents and make available as work progresses (even though there should be a default or a succession of defaults under the contract or contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the balance of the Contract Sum, and to pay and perform all obligations of Principal under the Contract, including, without limitation, all obligations with respect to warranties, guarantees, and the payment of liquidated damages; but, in any event, Surety's total obligations hereunder shall not exceed the amount set forth in the third paragraph hereof. The term "balance of the Contract Sum," as used in this paragraph, shall mean the total amount payable by The Regents to the Principal under the Contract and any amendments thereto, less the amount paid by The Regents to Principal.

Surety's obligations hereunder are independent of the obligations of any other surety for the performance of the Contract, and suit may be brought against Surety and such other sureties, jointly and severally, or against any one or more of them, or against less than all of them without impairing The Regents' rights against the others.

No right of action shall accrue on this bond to or for the use of any person or corporation other than The Regents or its successors or assigns.

Surety may join in any arbitration proceedings brought under the Contract and shall be bound by any arbitration award.

In the event suit is brought upon this bond by The Regents, Surety shall pay reasonable attorney's fees and costs incurred by The Regents in such suit.

Correspondence or claims relating to this bond shall be sent to Surety at the address set forth below.

IN WITNESS WHEREOF, we have hereunto set our hands this \_\_\_\_\_ day of \_\_\_\_\_, 2012.

Principal:

\_\_\_\_\_  
(Name of Firm)

Surety:

\_\_\_\_\_  
(Name of Firm)

By:

\_\_\_\_\_

By:

\_\_\_\_\_

Title:

\_\_\_\_\_

Title:

\_\_\_\_\_

\_\_\_\_\_

Address for Notices:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**NOTE: Notary acknowledgement for Surety and Surety's Power of Attorney must be attached.**

**APPLICATION FOR PAYMENT**

Number: \_\_\_\_\_ Period to: \_\_\_\_\_

TO UNIVERSITY: THE REGENTS OF THE UNIVERSITY OF CALIFORNIA, MERCED, UNIVERSITY OF CALIFORNIA, 5200 N. LAKE ROAD, MERCED, CA 95344 AND UNIVERSITY'S REPRESENTATIVE:

FROM CONTRACTOR: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_  
PROJECT NAME: STUDENT SERVICES BUILDING  
PROJECT NUMBER: 900120  
FACILITY: University of California, Merced  
CONTRACT DATE: \_\_\_\_\_  
APPLICATION DATE: \_\_\_\_\_

<u>CHANGE ORDER SUMMARY:</u>	<u>Additions</u>	<u>Deductions</u>
Change Orders approved in previous months:	Total: _____	
Change Orders approved this month:		
Number: _____	Date Approved: _____	
_____	_____	
_____	_____	
_____	Total: _____	

NET CHANGE BY CHANGE ORDERS: \_\_\_\_\_

Application is made for payment under the Contract as shown below and in Schedule 1 attached hereto:

1. ORIGINAL CONTRACT SUM	\$ _____
2. NET CHANGE BY CHANGE ORDERS	\$ _____
3. CONTRACT SUM TO DATE (Line 1 ± Line 2)	\$ _____
4. TOTAL AMOUNT COMPLETED TO DATE (Column E on Schedule 1)	\$ _____
5. RETENTION: 5% of Completed Work (Column H on Schedule 1)*	\$ _____
a. Current Value of Securities Deposited in Escrow	\$ _____
b. Current Value of Retention Deposited in Escrow	\$ _____
c. Retention Held by University	\$ _____
Current Retention Value (a + b + c)	\$ _____
6. TOTAL EARNED LESS RETENTION (Line 4 less Line 5)	\$ _____
7. TOTAL AMOUNT PREVIOUSLY PAID	\$ _____
8. CURRENT PAYMENT DUE (Line 6 less Line 7)	\$ _____
9. BALANCE TO FINISH, PLUS RETENTION (Line 3 less Line 6)	\$ _____

\*Pursuant to Article 9.2.2 of the General Conditions.

The undersigned Contractor hereby represents and warrants to University that all Work, for which Certificates For Payment have previously been issued and payment received from University, is free and clear of all claims, stop notices, security interests, and encumbrances in favor of Contractor, any Subcontractor, and any other persons or firms entitled to make claims by reason of having provided labor, materials, or equipment related to the Work.

The following Schedules are attached and incorporated herein, and made a part of this Application For Payment:

- Schedule 1 Cost Breakdown Schedule
- Schedule 2 Certification of Current Market Value of Securities in Escrow in Lieu of Retention
- Schedule 3 List of Subcontractors
- Schedule 4 Declaration of Releases of Claims

\_\_\_\_\_  
(Contractor)

By: \_\_\_\_\_  
(Name)

\_\_\_\_\_  
(Title)

#### DECLARATION

I, \_\_\_\_\_, hereby declare that I am the  
\_\_\_\_\_ of Contractor submitting this Application For  
Payment; that I am duly authorized to execute and deliver this Application For Payment on behalf of  
Contractor; and that all information set forth in this Application For Payment and all Schedules attached  
hereto are true, accurate, and complete as of its date.

I declare, under penalty of perjury, that the foregoing is true and correct and that this declaration was  
subscribed at

\_\_\_\_\_, \_\_\_\_\_, State of \_\_\_\_\_

on \_\_\_\_\_, 20\_\_\_\_.

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Print Name)

STUDENT SERVICES BUILDING  
UNIVERSITY OF CALIFORNIA, MERCED  
MERCED, CALIFORNIA

PROJECT NO.: 900120

PROJECT NAME: STUDENT SERVICES BUILDING

APPLICATION NUMBER: \_\_\_\_\_

PROJECT NUMBER: 900120

APPLICATION DATE: \_\_\_\_\_

FACILITY: University of California, Merced

PERIOD TO: \_\_\_\_\_

CONTRACT DATE: \_\_\_\_\_

CONTRACTOR: \_\_\_\_\_

SCHEDULE 1  
TO  
APPLICATION FOR PAYMENT  
COST BREAKDOWN

<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>	<u>F</u>	<u>G</u>	<u>H</u>
ITEM NO.	DESCRIPTION OF WORK ACTIVITY OR OTHER ITEM	SCHEDULED VALUE	% COMPLETE TO DATE	TOTAL AMOUNT COMPLETED TO DATE (C x D)	TOTAL AMOUNT COMPLETED ON PRIOR APPLICATION FOR PAYMENT	AMOUNT OF THIS APPLICATION (E - F)	RETENTION (5% x E)
001	Bonds/Insurance						
002	Mobilization						
003	Submittals						
004	Shop Drawings						
005	LEED Documents						
006	As-built Update						
007	Closeout Documents						
008	Punchlist						
009	Warranty						
010	Commissioning						

September 1, 2006

Revision: 1

LF:AP



STUDENT SERVICES BUILDING  
UNIVERSITY OF CALIFORNIA, MERCED  
MERCED, CALIFORNIA

PROJECT NO.: 900120

PROJECT NAME: STUDENT SERVICES BUILDING

CONTRACTOR: \_\_\_\_\_

PROJECT NUMBER: 900120

APPLICATION NUMBER: \_\_\_\_\_

SCHEDULE 2  
TO  
APPLICATION FOR PAYMENT

CERTIFICATION OF CURRENT MARKET VALUE  
OF SECURITIES IN ESCROW IN LIEU OF RETENTION

As of \_\_\_\_\_, 20\_\_\_\_ (not earlier than 5 days prior to the date of the Application For Payment of which this certification is a part), the aggregate market value of securities on deposit in Escrow

Account No. \_\_\_\_\_ with \_\_\_\_\_  
(Escrow Agent)

is \_\_\_\_\_ Dollars (\$\_\_\_\_\_).

\_\_\_\_\_  
(Escrow Agent)

\_\_\_\_\_  
(Contractor)

By: \_\_\_\_\_  
(Name)

\_\_\_\_\_  
(Name)

\_\_\_\_\_  
(Title)

\_\_\_\_\_  
(Title)

Date: \_\_\_\_\_

Date: \_\_\_\_\_

NOTE: Notary acknowledgment for Contractor and Escrow Agent must be attached.

PROJECT NAME: STUDENT SERVICES BUILDING  
CONTRACTOR: \_\_\_\_\_  
PROJECT NUMBER: 900120  
APPLICATION NUMBER: \_\_\_\_\_

SCHEDULE 3  
TO  
APPLICATION FOR PAYMENT  
LIST OF SUBCONTRACTORS

Subcontractors listed below are all Subcontractors furnishing labor, services, or materials for the period referred to in the Application For Payment referenced above, of which this Schedule 3 is a part:

<u>Name of Subcontractor</u>	<u>Subcontracted Work Activity</u>	<u>Date Work Activity Completed</u>

\_\_\_\_\_  
(Contractor)

By: \_\_\_\_\_  
(Name)

\_\_\_\_\_  
(Title)

STUDENT SERVICES BUILDING  
UNIVERSITY OF CALIFORNIA, MERCED  
MERCED, CALIFORNIA

PROJECT NO.: 900120

Date: \_\_\_\_\_

PROJECT NAME: STUDENT SERVICES BUILDING

CONTRACTOR: \_\_\_\_\_

PROJECT NUMBER: 900120

APPLICATION NUMBER: \_\_\_\_\_

SCHEDULE 4  
TO  
APPLICATION FOR PAYMENT

DECLARATION OF RELEASE OF CLAIMS

Contractor hereby certifies that attached hereto are releases and waivers of claims and stop notices from all Subcontractors furnishing labor, services, or materials covered by the Certificate For Payment dated \_\_\_\_\_, 20\_\_\_\_, except those listed below:

\_\_\_\_\_  
(Contractor)

By: \_\_\_\_\_  
(Name)

\_\_\_\_\_  
(Title)

Date: \_\_\_\_\_

**SELECTION OF RETENTION OPTIONS**

I (we): \_\_\_\_\_

(Contractor)

**SELECTION OPTION 1**

Check here for Option 1

University will withhold retention

**OR SELECTION OPTION 2**

Check here for Option 2

herewith elect to substitute securities in the form of:

\_\_\_\_\_  
(Type of security)

in lieu of retention being withheld by University for the  
above-referenced project.

**OR SELECT OPTION 3**

Check here for Option 3

herewith elect to have retention on the above-referenced  
project paid directly into the Escrow Account.

\_\_\_\_\_  
(Type of Security to be purchased)

An Escrow Account will be opened with\*\*:

\_\_\_\_\_  
(Name of state or federally chartered bank in  
California)

whose address is:

\_\_\_\_\_  
(Street)

\_\_\_\_\_  
(City, County)

\_\_\_\_\_  
(State, Zip Code)

On Behalf of Contractor\*

On Behalf of University Acknowledged and  
Approved

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Printed Name)

Thomas E. Lollini, FAIA

\_\_\_\_\_  
(Printed Name)

\_\_\_\_\_  
(Title)

Associate Vice Chancellor Design & Construction

\_\_\_\_\_  
(Title)

**\*Signature shall be by the authorized party who signs the Escrow Agreement for Deposit of Securities in Lieu of Retention and Deposit of Retention ("Escrow Agreement").**

**\*\* Note: Contractor and its surety bear the risk of failure of the bank selected.**

**Note: If a completed and signed Escrow Agreement is not submitted with this form, University will not allow deposit of securities in lieu of retention.**

RETURN THIS AGREEMENT SIGNED BY CONTRACTOR AND ESCROW AGENT TO: PHYSICAL  
PLANNING DESIGN AND CONSTRUCTION, UNIVERSITY OF CALIFORNIA, MERCED, 5200 N.  
Lake RD, MERCED CA 95343.

Escrow Account No.: \_\_\_\_\_

**ESCROW AGREEMENT FOR  
DEPOSIT OF SECURITIES IN LIEU OF RETENTION  
AND  
DEPOSIT OF RETENTION**

This Escrow Agreement is made as of \_\_\_\_\_, \_\_\_\_\_, and entered into by and between  
THE REGENTS OF THE UNIVERSITY OF CALIFORNIA, whose address is University of California,  
Office of the President, 1111 Franklin Street, 6th Floor, Oakland, CA 94607-5200, hereinafter called  
"University," and

\_\_\_\_\_,  
whose address is \_\_\_\_\_,

hereinafter called "Contractor," and \_\_\_\_\_,

a state or federally chartered bank in the state of California, whose address is:

\_\_\_\_\_,  
hereinafter called "Escrow Agent."

For consideration hereinafter set forth, University, Contractor, and Escrow Agent agree as follows:

(1) Contractor has the option to deposit securities with Escrow Agent as a substitute for retention required to be withheld by University pursuant to the Contract Documents, hereinafter referred to as "Contract," entered into between University and Contractor for the Project titled **Student Services Building, Project No. 900120** in the amount of \$\_\_\_\_\_, dated \_\_\_\_\_. Alternatively, on written request of Contractor, University shall deposit retention directly with Escrow Agent. When Contractor deposits the securities as a substitute for retention, Escrow Agent shall notify University within 5 days after the deposit. At all times, Contractor shall have on deposit securities the market value of which is at least equal to the cash amount then required to be withheld as retention under the terms of the Contract. Securities shall be held in the name of The Regents of the University of California, Merced Campus (Facility); and Contractor shall be designated as the beneficial owner.

(2) Escrow Agent shall review the market value of securities deposited in escrow under this Escrow Agreement as often as conditions of the securities market warrant, but in no case less than once per month. Escrow Agent shall promptly notify University and Contractor of the market value of the deposited securities if such market value is less than the total amount of retention required to be withheld under the terms of the Contract. Contractor shall promptly deposit additional securities so that the current market value of the total of all deposited securities shall be at least equal to the total required amount of retention. Escrow Agent shall, within 5 days after University's request, provide a statement to University of the current market value of all securities deposited under this Escrow Agreement as of a date not earlier than 5 days prior to such request. The provisions of this Paragraph 2 shall not apply to securities consisting of monetary deposits as allowed by Paragraph 7 held by a bank as Escrow Agent, provided the bank provides monthly statements reflecting the status of the monetary deposits held by the bank to University and Contractor.

(3) Contractor shall not use any or all of the securities deposited in lieu of retention under this Escrow Agreement for any other obligations, including deposits in lieu of retention for other contracts. Contractor represents, covenants and warrants that all deposited securities shall be lien free when tendered to the Escrow Agents and shall remain lien free during their retention by the Escrow Agent.

(4) University shall make progress payments to Contractor for those funds which otherwise would

be withheld from progress payments pursuant to the Contract provision, provided that Escrow Agent holds securities in the form and amount specified herein.

(5) Prior to Contractor's submission of each Application For Payment, Escrow Agent shall issue a current statement of (a) the value of the securities currently being deposited in lieu of retention and (b) the current value of all securities being held in escrow pursuant to this Escrow Agreement. Such statement shall be no more than 5 days old at the time of submission, shall be notarized or have a guarantee of signature, and shall be submitted to Contractor with a copy to University under separate cover. Contractor shall attach such original statement to each Application For Payment. The provisions of this Paragraph 5 shall not apply to securities consisting of monetary deposits as allowed by Paragraph 7 held by a bank as Escrow Agent, provided the bank provides monthly statements reflecting the status of the monetary deposits held by the bank to University and Contractor.

(6) If, at the request of Contractor, University deposits retention directly with Escrow Agent, Escrow Agent shall hold such retention for the benefit of Contractor until such time as the escrow created under the Contract is terminated. All terms and conditions of this Escrow Agreement and the rights and responsibilities of the parties shall be equally applicable and binding when University deposits retention directly with Escrow Agent.

(7) University will allow Contractor to deposit the following securities in lieu of retention and direct the investment of the retention deposits into any of the following which at the time of payment are legal investments under the laws of the State of California:

- a. Direct obligations of the United States of America (including obligations issued or held in book-entry form on the books of the Department of the Treasury of the United States of America or any Federal Reserve Bank), or obligations the timely payment of the principal of and interest on which are fully guaranteed by the United States of America, or tax-exempt obligations which are rated in the highest rating category of a nationally recognized bond rating agency.
- b. Obligations, debentures, notes or other evidence of indebtedness issued or guaranteed by any of the following: Banks for Cooperatives, Federal Intermediate Credit Banks, Federal Home Loan Bank System, Export-Import Bank of the United States, Federal Financing Bank, Federal Land Banks, Federal Farm Credits, Government National Mortgage Association, Farmer's Home Administration, Federal Home Loan Mortgage Corporation, or Federal Housing Administration.
- c. Bonds of the State of California or those for which the faith and credit of the State of California are pledged for the payment of principal and interest.
- d. Interest-bearing bankers acceptances and demand or time deposits (including certificates of deposit) in banks, provided such deposits are either (1) secured at all times, in the manner and to the extent provided by law, by collateral security described in clauses a or b of this Paragraph 7 continuously having a market value at least equal to the amount so invested so long as such underlying obligations or securities are in the possession of the Securities Investors Protection Corporation, (2) in banks having a combined capital and surplus of at least One Hundred Million Dollars, or (3) fully insured by the Federal Deposit Insurance Corporation.
- e. Taxable government money market portfolios restricted to obligations with maturities of one (1) year or less, issued or guaranteed as to payment of principal and interest by the full faith and credit of the United States of America.
- f. Commercial paper rated in the highest rating category of a nationally recognized rating agency, and issued by corporations organized and operating within the United States of America and having total assets in excess of Five Hundred Million Dollars.

(8) Contractor shall be responsible for paying all fees, costs, and expenses incurred by Escrow

Agent in administering the escrow account. These expenses and payment terms shall be determined by Contractor and Escrow Agent. All fees, costs, and expenses of this Escrow Agreement and any transactions carried out hereunder shall be billed by Escrow Agent to Contractor. In the event that any fees, costs, or expenses shall remain unpaid in excess of 30 days from the date due, Escrow Agent may withhold such unpaid amount from any income distributable to Contractor, but shall not withhold such unpaid amount from any income distributable to University.

(9) Interest earned on the securities or the money market accounts held in escrow and all interest earned on the interest shall be for the sole account of Contractor and shall be held in escrow. Interest may be withdrawn by Contractor from time to time, without notice to University, only to the extent that the total amount held in escrow meets or exceeds the required amount of retention.

(10) Except as provided in Paragraph 9, Contractor shall have the right to withdraw all or any part of the escrow account only by written notice to Escrow Agent accompanied by written authorization from University to Escrow Agent stating that University consents to the withdrawal of the amount sought to be withdrawn by Contractor. University shall not be obligated to consent to any withdrawal to the extent of stop notice claims which cannot be satisfied from other funds then due and payable to Contractor.

(11) University shall have the right to draw upon the securities, any interest earned on the securities, and any interest earned on the interest in the event of default by Contractor. Upon 7 days written notice to Escrow Agent from University, with a copy to Contractor, Escrow Agent shall immediately convert the securities, any interest earned on the securities, and all interest earned on the interest to cash and shall distribute the cash as instructed by University. Escrow Agent shall have no duty to determine whether a default has occurred and may rely solely upon the written notice of such default from University.

(12) Upon receipt of written notification from University certifying that final payment is due under the Contract, Escrow Agent shall release to Contractor the amount, if any, by which the value of all securities and interest on deposit less escrow fees and charges of the escrow account exceeds 125% of all stop notice claims on file. Escrow Agent shall pay the remaining amount to University or as directed by University. The escrow shall be closed immediately upon disbursement of all monies and securities on deposit and payment of fees and charges.

(13) Escrow Agent shall rely upon the written notifications from University and Contractor pursuant to this Escrow Agreement; and University and Contractor shall hold Escrow Agent harmless from Escrow Agent's release, conversion, and disbursement of the securities and interest as set forth herein.

(14) Escrow Agent shall have the right to terminate this Escrow Agreement upon 30 days notice to all parties hereunder. Upon receipt of such notice, University and Contractor shall appoint a successor Escrow Agent in writing and deliver written notice of such appointment to Escrow Agent. Thereupon, Escrow Agent shall deliver all assets in its custody to such successor Escrow Agent and all responsibility of Escrow Agent under this Escrow Agreement shall terminate; provided, however, if Contractor and University fail to appoint a successor Escrow Agent on or before the end of the 30 day notice period, then Escrow Agent is authorized and instructed to return all assets, documents, and other items in its custody to University and this Escrow Agreement shall be terminated without further instruction.

(15) The duties and responsibilities of Escrow Agent shall be limited to those expressly set forth in this Escrow Agreement; provided, however, that, with Escrow Agent's written consent, the duties and responsibilities in this Escrow Agreement may be amended at any time or times by an instrument in writing signed by all parties.

(16) Whenever Contractor tenders securities to be deposited in lieu of retention, an authorized representative of the Contractor shall declare under penalty of perjury that the securities are lien free and shall remain lien free during their retention by the Escrow Agent. The declaration shall be in the following form:

“The undersigned, on behalf of \_\_\_\_\_ (Name of Contractor) whose address is \_\_\_\_\_ (Street Address, City, State, Zip Code) represents, covenants and warrants that the securities tendered herewith are lien free and shall remain lien free during their retention by the Escrow Agent.

I, \_\_\_\_\_ (Name), hereby declare that I am the \_\_\_\_\_ (Title) of \_\_\_\_\_ (Name of Contractor), that I am duly authorized to make this representation, and that I declare under perjury under the laws of the State of California that the foregoing is true and correct.”

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Date)

(17) The names of the persons authorized to give written notice or to receive written notice on behalf of University and on behalf of Contractor in connection with this Escrow Agreement, and exemplars of their respective signatures, are as set forth below. Such names may be changed by written notice to the other parties.

On behalf of University:

1. Mary Miller, Vice Chancellor for  
Administration

\_\_\_\_\_  
(Name)

\_\_\_\_\_  
(Signature)

(209) 228-4430

\_\_\_\_\_  
(Telephone Number)

2. M. Monir Ahmed, Assistant Vice  
Chancellor for Business and  
Finance

\_\_\_\_\_  
(Name)

\_\_\_\_\_  
(Signature)

(209) 228-4070

\_\_\_\_\_  
(Telephone Number)

On behalf of Contractor:

- 1.

\_\_\_\_\_  
(Name)

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Telephone Number)

- 2.

\_\_\_\_\_  
(Name)

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Telephone Number)

Contractor, Escrow Agent, and University hereby agree to the covenants contained herein.



IN WITNESS WHEREOF, Contractor, Escrow Agent, and University have executed this Escrow Agreement, the day and year first written above.

University:

Contractor:

By

By

\_\_\_\_\_  
(Signature)  
Mary Miller  
\_\_\_\_\_  
(Printed Name)  
Vice Chancellor for Administration  
\_\_\_\_\_  
(Title)  
(209) 228-4430  
\_\_\_\_\_  
(Telephone Number)

\_\_\_\_\_  
(Signature)  
\_\_\_\_\_  
(Printed Name)  
\_\_\_\_\_  
(Title)  
\_\_\_\_\_  
(Telephone Number)

By

By

\_\_\_\_\_  
(Signature)  
M. Monir Ahmed  
\_\_\_\_\_  
(Printed Name)  
Assistant Vice Chancellor for Business  
and Finance  
\_\_\_\_\_  
(Title)  
(209) 228-4070  
\_\_\_\_\_  
(Telephone Number)

\_\_\_\_\_  
(Signature)  
\_\_\_\_\_  
(Printed Name)  
\_\_\_\_\_  
(Title)  
\_\_\_\_\_  
(Telephone Number)

Escrow Agent:

By:

\_\_\_\_\_  
(Signature)  
\_\_\_\_\_  
(Printed Name)  
\_\_\_\_\_  
(Title)  
\_\_\_\_\_  
(Telephone Number)

**SUBMITTAL SCHEDULE**  
**(Refer to Section 01334 Shop Drawings, Project Data and Samples)**

PROJECT NAME:	STUDENT SERVICES BUILDING UNIVERSITY OF CALIFORNIA, MERCED MERCED CALIFORNIA
PROJECT NO:	900120
FACILITY:	PHYSICAL PLANNING, DESIGN & CONSTRUCTION, UNIVERSITY OF CALIFORNIA, MERCED CAMPUS
CONTRACT DATE:	
Contractor /SUBCONTRACTOR:	
SPECIFICATION SECTION:	
WORK ACTIVITY:	

Event	Scheduled Completion Date	Actual Completion Date	Calendar Days Required to Complete
1. Received by Contractor and Time for Checking			
2. First Delivered to University's Representative and Time for Checking			
3. Return to Contractor			
4. Corrections Completed and Time for Corrections			
5. Next Delivered to University's Representative and Time for Checking			
6. Return to Contractor			
7. Approval for Job Information			
8. Approval for Fabrication and Time for Fabrication			
9. Fabrication Completed			
10. Shipping Date and Time en Route			
11. Delivery to Job			

## COST PROPOSAL

Date: \_\_\_\_\_ Change Request No.: \_\_\_\_\_

Project Name: STUDENT SERVICES BUILDING  
UNIVERSITY OF CALIFORNIA, MERCED  
MERCED, CALIFORNIA

Project No: 900120

Facility: PHYSICAL PLANNING, DESIGN & CONSTRUCTION  
UNIVERSITY OF CALIFORNIA, MERCED  
MERCED CALIFORNIA

Contract Date: \_\_\_\_\_

### SCOPE OF CHANGE:

### INSTRUCTIONS:

1. Complete this form by providing (a) all information required above, (b) the amount and justification based upon the Contract Schedule for any proposed adjustment of Contract Time, (c) the proposed adjustment of Contract Sum, (d) the attached "Cost Proposal Summary," and (e) the attached form titled, "Supporting Documentation for the Cost Proposal Summary."
2. Attach the form titled "Supporting Documentation for the Cost Proposal Summary" for Contractor and each Subcontractor involved in the Extra Work. Each such form shall be completed and signed by Contractor or Subcontractor actually performing the Work activity identified on the form. Attach supporting data to each such form to substantiate the individually listed costs. The costs provided on these forms shall be used to substantiate Additional Costs shown on the Cost Proposal Summary.
3. The Contractor Fee shall be computed on the Cost of Extra Work of Contractor and each Subcontractor involved in the Extra Work; and shall constitute full compensation for all costs and expenses related to the subject change and not listed in the "Supporting Documentation for the Cost Proposal Summary," including overhead and profit.
4. Refer to Article 7.3 of the General Conditions for the method of computing the Contractor Fee.

Adjustment of the Contract Time (Include justification based upon the Contract Schedule):

Refer to Article 8 of the General Conditions.

\_\_\_\_\_  
(Days)

Adjustment of the Contract Sum (Total Additional Cost from Cost Proposal Summary):

\$

Refer to Article 7 of the General Conditions.

Submitted:

\_\_\_\_\_  
(Contractor)

By:

\_\_\_\_\_  
Title:

\_\_\_\_\_  
Date:

Received:

\_\_\_\_\_  
(University's Representative)

By:

\_\_\_\_\_  
Title:

\_\_\_\_\_  
Date:

## COST PROPOSAL SUMMARY

Project Name: STUDENT SERVICES BUILDING  
UNIVERSITY OF CALIFORNIA, MERCED  
MERCED, CALIFORNIA

Project No.: 900120

Facility: University of California, Merced

Change Request No.:

Contractor Name:

		(1)	(2)	(3)	(4)
		Contractor	1st Tier Subs	2nd & Lower Tier Subs	Total
ACTUAL COSTS	1. Straight Time Wages/Salaries - Labor				
	2. Fringe Benefits and Payroll Taxes - Labor				
	3. Overtime Wages/Salaries - Labor				
	4. Fringe Benefits and Payroll Taxes - Overtime				
	5. Materials and Consumable Items				
	6. Sales Taxes (On line 5)				
	7. Rental Charges				
	8. Royalties				
	9. Permits				
	10. Actual Costs (Sum of lines 1-9)				
	11. Insurance & Bonds (up to 2% of line 10)				
CONTRACTOR FEE	12. Sub-Sub (15% of line 10; col. 3)				
	13. Subcontractor (5% of line 10; col. 3)				
	14. Subcontractor (15% of line 10; col. 2)				
	15. Contractor (5% of line 10; col. 2 & 3)				
	16. Contractor (15% of line 10; col. 1)				
	17. Contractor Fee (Sum of lines 12-16)				
	18. Sum of lines 10, 11, & 17				

Actual Costs are taken from line 12 of the attached forms titled, "Supporting Documentation For the Cost Proposal Summary" for Contractor and each Subcontractor involved in the Extra Work.

## SUPPORTING DOCUMENTATION FOR THE COST PROPOSAL SUMMARY

Contractor/Subcontractor Name: \_\_\_\_\_  
Work Activity \_\_\_\_\_  
Facility \_\_\_\_\_  
University of California, Merced

Change Order Request No.: \_\_\_\_\_  
Project No.: 907265

COST ITEM		COST <sup>(1)</sup>
ACTUAL  COSTS	1. Straight Time Wages/Salaries -- Labor	
	2. Fringe Benefits and Payroll Taxes -- Labor: ____ % of line 1	
	3. Overtime Wages/Salaries - Labor (Attach University Representative's written authorization)	
	4. Fringe Benefits and Payroll Taxes -- Overtime: ____ % of line 3	
	5. Materials and Consumable items	
	6. Sales Taxes: ____ % of line 5	
	7. Rental Charges (attach U.S. Army Corps of Engineers' Schedule)	
	8. Royalties	
	9. Permits	
	10. Total Direct Expense -- sum of lines 1-9	
	11. Insurance and Bonds: ____ % of line 10 (up to 2% of line 10)	
TOTAL	12. Sum of lines 10 and 11	

\_\_\_\_\_  
(Company Name)

\_\_\_\_\_  
(Signature) <sup>(2)</sup>

\_\_\_\_\_  
(Title)

\_\_\_\_\_  
(Date)

\_\_\_\_\_  
(Company Name)

\_\_\_\_\_  
(Signature) <sup>(3)</sup>

\_\_\_\_\_  
(Title)

\_\_\_\_\_  
(Date)

NOTES: (1) Round-off all Costs to the nearest dollar.  
(2) This form shall be prepared and signed by Contractor or Subcontractor actually performing the Work activity indicated above.  
(3) If this form is signed by a Subcontractor, it shall be reviewed and signed by Contractor certifying the accuracy of the information.

**FIELD ORDER**

**FIELD ORDER No.: 001**

Project Name: Student Services Building  
Project Number: 900120 - SSB -C  
To CM/Contractor: \_\_\_\_\_  
Address: \_\_\_\_\_

DESCRIPTION OF CHANGE: Student Services Building

Date:

PCO #:

Please provide a Cost Proposal within 7 days of receipt of this Field Order.

In accordance with the General Conditions, Article 7, Paragraph 7.3.6; As a condition to General Contractor's right to an adjustment of the Contract Sum, pursuant to Article 7.3.5.3; General Contractor must keep detailed and accurate records itemizing each element of cost and shall provide substantiating records and documentation, including time cards and invoices. Such records and documentation shall be submitted to and approved University's Representative on a daily basis.

The PTC must follow all procedures set forth and submit per Article 4 of the General Conditions.

Estimated Adjustment  
of Contract Sum: \_\_\_\_\_ \$0 \_\_\_\_\_

Estimated Adjustment  
of Contract Time: \_\_\_\_\_

\_\_\_\_\_  
By: \_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Title)

Date: \_\_\_\_\_

\_\_\_\_\_  
Gary Knox  
(University Representative)

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
Director of Construction Services  
(Title)

Date: \_\_\_\_\_

NOTE: This Field Order will be superseded by a Change Order that will include the scope of the change in the Work and any actual adjustments of the Contract Sum and the Contract Time. Field Order shall only be used for Work currently under contract; and shall not be used to modify Option Sum or Option Time.

## CHANGE ORDER

University of California Facility: Merced Campus

Change Order No. \_\_\_\_\_

Reference Field Order No. \_\_\_\_\_

PROJECT NAME:	STUDENT SERVICES BUILDING		
PROJECT LOCATION:	UNIVERSITY OF CALIFORNIA MERCED, MERCED CALIFORNIA		
PROJECT NO:	900120	CONTRACT DATE:	
TO CONTRACTOR:			
ADDRESS:			

### DESCRIPTION OF CHANGE:

#### ADJUSTMENT OF CONTRACT SUM:

Original Contract Sum:	\$
Prior Adjustments:	\$
Contract Sum Prior to this Change:	\$
Adjustment for this Change:	\$
Revised Contract Sum:	\$

#### ADJUSTMENT OF CONTRACT TIME:

Original Contract Time:		(Days)
Prior Adjustments:		(Days)
Contract Time Prior to this Change:		(Days)
Adjustment for this Change:		(Days)
Revised Contract Time:		(Days)



Contractor waives any claim for further adjustments of the Contract Sum and the Contract Time related to the above described change in the Work.

**RECOMMENDED:**

By: \_\_\_\_\_  
(Signature of University's Representative)

\_\_\_\_\_  
(Printed Name)

Date: \_\_\_\_\_

**REVIEWED AND RECOMMENDED:**

By: \_\_\_\_\_  
(Signature of University's Designated Administrator)

\_\_\_\_\_  
(Printed Name)

Date: \_\_\_\_\_

**FUNDS SUFFICIENT:**

By: \_\_\_\_\_  
(Signature from University's Accounting Office)

\_\_\_\_\_  
(Printed Name)

Date: \_\_\_\_\_

**APPROVED:**

UNIVERSITY: THE REGENTS OF THE  
UNIVERSITY OF CALIFORNIA

\_\_\_\_\_  
(Printed or Typed Name)

By: \_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Title)

Date:: \_\_\_\_\_

**ACCEPTED:**

By: \_\_\_\_\_  
(Contractor Signature)

\_\_\_\_\_  
(Printed Contractor Name)

Date: \_\_\_\_\_

**CONDITIONAL WAIVER AND  
RELEASE UPON PROGRESS PAYMENT**

Upon receipt by the undersigned of a check from:

---

(Name of Contractor or Subcontractor)

in the sum of \$

payable to

and when the check has been properly endorsed and has been paid by the bank upon which it is drawn, this document shall become effective to release any lien, stop notice, or bond right the undersigned has on the Project of The Regents of the University of California located at:

STUDENT SERVICES BUILDING  
UNIVERSITY OF CALIFORNIA, MERCED  
MERCED, CALIFORNIA  
PROJECT #: 900120

---

(Facility and Project Name)

to the following extent. This release covers a progress payment for labor, services, equipment, or material furnished to

---

(Name of Contractor or Subcontractor)

through \_\_\_\_\_ only and does not cover any retentions retained before or after the release  
(Date)

date; extras furnished before the release date for which payment has not been received; extras or items furnished after the release date. Rights based upon work performed or items furnished under a written change order which has been fully executed by the parties prior to the release date are covered by this release unless specifically reserved by the claimant in this release. This release of any lien, stop notice, or bond right shall not otherwise affect the contract rights, including rights between parties to the contract based upon a rescission, abandonment, or breach of the contract, or the right of the undersigned to recover compensation for furnished labor, services, equipment, or material covered by this release if that furnished labor, services, equipment, or material was not compensated by the progress payment. Before any recipient of this document relies on it, that party should verify evidence of payment to the undersigned.

Application for Payment # \_\_\_\_\_

Dated: \_\_\_\_\_

\_\_\_\_\_  
(Company Name)

By:

\_\_\_\_\_  
(Name)

\_\_\_\_\_  
(Title)

**CONDITIONAL WAIVER AND  
RELEASE UPON FINAL PAYMENT**

Upon receipt by the undersigned of a check from

\_\_\_\_\_  
(Name of Contractor or Subcontractor)

in the sum of \$ \_\_\_\_\_

payable to \_\_\_\_\_

and when the check has been properly endorsed and has been paid by the bank upon which it is drawn, this document shall become effective to release any lien, stop notice, or bond right the undersigned has on the Project of The Regents of the University of California located at and named

\_\_\_\_\_  
\_\_\_\_\_  
(Facility and Project Name)

to the following extent. This release covers the final payment for all labor, services, equipment, or material furnished on the Project except for disputed claims for additional work in the amount of \$\_\_\_\_\_.

Before any recipient of this document relies on it, that party should verify evidence of payment to the undersigned.

Dated: \_\_\_\_\_

\_\_\_\_\_  
(Company Name)

By: \_\_\_\_\_  
(Name)

\_\_\_\_\_  
(Title)

Application for Payment # \_\_\_\_\_

**UNCONDITIONAL WAIVER AND  
RELEASE UPON PROGRESS PAYMENT**

NOTICE: THIS DOCUMENT WAIVES RIGHTS UNCONDITIONALLY AND STATES THAT YOU HAVE BEEN PAID FOR GIVING UP THOSE RIGHTS. THIS DOCUMENT IS ENFORCEABLE AGAINST YOU IF YOU SIGN IT, EVEN IF YOU HAVE NOT BEEN PAID. IF YOU HAVE NOT BEEN PAID, USE A CONDITIONAL RELEASE FORM.

The undersigned has been paid and has received a progress payment in the sum of

\$

for labor, services, equipment, or material furnished to:

(Name of Contractor or Subcontractor)

on the Project of The Regents of the University of California located at:

STUDENT SERVICES BUILDING  
UNIVERSITY OF CALIFORNIA, MERCED  
MERCED, CALIFORNIA  
PROJECT NO.: 906270

(Facility and Project Name)

and does hereby release any lien, stop notice, or bond right, that the undersigned has on the above referenced Project to the following extent. This release covers a progress payment for labor, services, equipment, or materials furnished to:

(Name of Contractor or Subcontractor)

through \_\_\_\_\_ only and does not cover any retentions retained before or after the release  
(Date)

release date; extras furnished before the release date for which payment has not been received; extras or items furnished after the release date. Rights based upon work performed or items furnished under a written change order which has been fully executed by the parties prior to the release date are covered by this release unless specifically reserved by the claimant in this release. This release of any lien, stop notice, or bond right shall not otherwise affect the contract rights, including rights between parties to the contract based upon a rescission, abandonment, or breach of the contract, or the right of the undersigned to recover compensation for furnished labor, services, equipment, or material covered by this release if that furnished labor, services, equipment, or material was not compensated by the progress payment.

Dated: \_\_\_\_\_

(Company Name)

By:

(Name)

(Title)

**CONDITIONAL WAIVER AND  
RELEASE UPON FINAL PAYMENT**

NOTICE: THIS DOCUMENT WAIVES RIGHTS UNCONDITIONALLY AND STATES THAT YOU HAVE BEEN PAID FOR GIVING UP THOSE RIGHTS. THIS DOCUMENT IS ENFORCEABLE AGAINST YOU IF YOU SIGN IT, EVEN IF YOU HAVE NOT BEEN PAID. IF YOU HAVE NOT BEEN PAID, USE A CONDITIONAL RELEASE FORM.

The undersigned has been paid in full  
for all labor, services, equipment, or material furnished to

\_\_\_\_\_  
(Name of Contractor or Subcontractor)

on the Project of The Regents of the University of California located at and named

\_\_\_\_\_  
(Facility and Project Name)

and does hereby waive and release any lien, stop notice, or bond right, that the undersigned has on the above referenced Project, except for disputed claims for extra work in the amount of \$\_\_\_\_\_.

Application for Payment # \_\_\_\_\_

Dated: \_\_\_\_\_

\_\_\_\_\_  
(Company Name)

By: \_\_\_\_\_  
(Name)

\_\_\_\_\_  
(Title)

**THE REGENTS OF THE UNIVERSITY OF CALIFORNIA**  
**Master Builder's Risk Program**  
**Coverage Summary**

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*This document summarizes the Builder's Risk policy and is not intended to reflect all the terms, conditions, or exclusions of such policy as of the effective date of coverage. This document is not an insurance policy and does not amend, alter or extend the coverage afforded by the listed policy. The insurance afforded by the policy is subject to all the terms, exclusions and conditions of such policy.*

*Some Projects may be excluded and/or must be underwritten separately any may be subject to different rates, deductibles, and terms and conditions. (See page 13) Therefore, this document should be used as a guideline only.*

**INSURANCE COMPANY:** Allianz Global Risks U.S. Insurance Company

**BEST'S RATING:** A+

**NAMED INSURED:** The Regents of the University of California

**INSURING AGREEMENT**

This Policy, subject to the Limit of Liability and the terms, conditions, and limitations contained herein or endorsed hereon, insures against all risks of direct physical loss of or direct physical damage to Insured Property while at the construction site, stored off-site, or in the course of transit within the Territorial Limits specified in the Schedule during the Period of Insurance of each Insured Project.

**LIMITS OF LIABILITY**

**SCHEDULE OF LIMITS**

This Company shall not be liable for more than the Limit of Liability as stated on the Certificate of Insurance in any one Occurrence for any one Insured Project, subject to the following limits and sublimits:

**MASTER POLICY LIMITS**

\$150,000,000 per project, per occurrence  
\$ 25,000,000 per project, Joisted Masonry

**NOTE:** *This Limit of Liability will correspond with the Total Estimated Construction Cost as indicated on the original Builder's Risk Insurance Application. If the construction costs should increase, the Limit of Liability can be subsequently increased once prior notice has been given by the University's Representative to Aon Risk Insurance Services West, Inc..*

**THE REGENTS OF THE UNIVERSITY OF CALIFORNIA**  
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**SUBLIMITS:**

1. \$5,000,000 for **Wood Frame Construction**
2. \$100,000 for **Pollution Cleanup Expenses**
3. 15% of the declared estimated Total Project Value, subject to a maximum of \$25,000,000 for **Demolition and Increased Cost of Construction**
4. 25% of the adjusted property damage loss, subject to a maximum of \$2,500,000 for **Expediting Expense/Extra Expense**
5. 10% of the declared estimated Total Project Value, subject to a maximum of \$10,000,000 for **Insured Property while Stored Off-site**
6. 10% of the declared estimated Total Project Value, subject to a maximum of \$10,000,000 for **Insured Property while in the Course of Inland Transit**
7. 25% of the declared estimated Total Project Value, subject to a maximum of \$25,000,000 for **Debris Removal**
8. \$500,000 for **Plans, Blueprints and Specifications**
9. \$500,000 for **Trees, Grass, Shrubbery, Seed and Plants**
10. 33% of the declared estimated Total Project Value subject to a maximum of \$50,000,000 for **Water Damage**. (Each Insured Project is also subject to a \$50,000,000 Annual Aggregate for Water Damage.)
11. 15% of the adjusted property damage loss, subject to a maximum of \$10,000,000 for **Green/LEED Rating System**
12. 10% of the adjusted property damage loss, subject to a maximum of \$50,000 for **Mold/Fungi**
13. 5% of the declared estimated Total Project Value, subject to a maximum of \$10,000,000 for additional **Architects, Engineering and Professional Fees**
14. \$100,000 for **Claims Preparation Expenses**
15. \$500,000 for **Fire Department Service Charges**

**THE REGENTS OF THE UNIVERSITY OF CALIFORNIA**  
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**TERMS AND CONDITIONS**

**NAMED INSURED**

The Regents of the University of California and all affiliated and subsidiary companies, corporations, ventures, partnerships or other organizations, all owned, controlled or managed by the Named Insured and all as now exist or may hereafter be constituted or acquired.

**ADDITIONAL INSUREDS**

General Contractors and subcontractors of every tier to the extent required by any contract or subcontract for an Insured Project, and then only as their respective interests may appear, any individual(s) or entity(ies) specified in such contract or subcontract, are recognized as Additional Insureds hereunder. As respects architects, engineers, manufacturers and suppliers, the foregoing is limited to their site activities only.

**ATTACHMENT/TERMINATION**

Insurance hereunder applies to all projects specifically declared under the Master Policy in a Quarterly Report Endorsement or in a Project Declaration Endorsement, where the project is scheduled to begin during the term of the Master Policy. The Master Policy term commences on September 1, 2011 at 12:01AM and ends on September 1, 2014 at 12:01AM.

Coverage for each Insured Project declared under the Master Policy will go into effect and continue in full force and effect during the Certificate Period specified in the project's Certificate of Insurance.

**NOTIFICATION OF COVERAGE/TERMINATION:** *The Certificate Period will correspond with the Estimated Dates of Commencement and Completion of Work as indicated on the original Builder's Risk Insurance Application. If construction is not completed on time and coverage beyond the Estimated Date of Completion of Work is required, prior notification must be given by the University Representative to Aon Insurance Services West, Inc.*

**DEDUCTIBLES**

\$25,000 for **All Other Perils** for Projects **over** \$2,500,000 at the time of the loss  
**except** Water Damage  
\$10,000 for **All Other Perils** for Projects **under** \$2,500,000 at the time of the loss  
**except** Water Damage  
\$100,000 for **Water Damage** for **all** projects

**NOTE:** *The contractor shall be responsible for the deductibles.*



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**EXCLUSIONS**

**PROPERTY EXCLUDED**

This Policy does not insure:

1. Land, but this exclusion does not apply to excavation and grading as long as the cost of the excavation and grading is included in the Limit of Liability as stated in the Certificate of Insurance.
2. Contractor's plant and equipment, machinery, tools, or property of similar nature not destined to become a permanent part of the Insured Project but this exclusion shall not apply to formwork, fences, shoring, falsework and temporary buildings as long as the value of these items are included in the estimated Limit of Liability as stated in the Certificate of Insurance.
3. Automobiles or other vehicles, watercraft or aircraft.
4. Water.
5. Accounts, bills, currency, deeds, securities, books, records, manuscripts, other similar papers, or data processing media.
6. Existing buildings or structures or any other existing property.
7. Owner supplied material, equipment, machinery and supplies, unless the value of such is included in the Limit of Liability as stated in the Certificate of Insurance.
8. Transmission and/or distribution lines; including wires, cables, poles, towers and all equipment attached thereto beyond 1,000 feet from the perimeter of the project site.
9. Partially or completely excavated or open trench, pipeline or workface, at any one time beyond 1,000 feet in length.

**EXCLUDED CAUSES OF LOSS**

1. Loss or damage caused by, or resulting from, wear and tear, moth, vermin, termites or other insects, inherent vice, latent defect, gradual deterioration, wet or dry rot and rust, corrosion, erosion or normal settling, shrinkage, and/or expansion of buildings and/or foundations.
2. Any loss of use or occupancy or consequential loss of any nature howsoever caused.
3. Liquidated damages and/or penalties for delay or detention in connection with guarantees of performance or efficiency.
4. Hostile or warlike action.
5. Nuclear reaction, nuclear radiation, or radioactive contamination.

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6. Any cost or expenses incurred to test for, monitor, or assess the existence, concentration or effects of Fungi.
7. Loss or damage caused by or resulting from infidelity or dishonesty on the part of the Insured and/or any employee of the Insured; inventory shortage or unexplained disappearance.
8. Loss or damage caused by or resulting from frost, falling ice, or freezing, unless resulting directly from damage caused by fire, lightning, explosion, windstorm, riot, riot attending a strike, civil commotion, aircraft, vehicles, or smoke.
9. Loss or damage caused by or resulting from the enforcement of any ordinance or law, or any order of governmental or municipal authority; by suspension, lapse, termination and/or cancellation of any license, lease, or permit, or any injunction or process of any court, unless otherwise endorsed herein.
10. Loss or damage caused by, resulting from, contributed to or made worse by actual, alleged, or threatened release, discharge, escape or dispersal of Contaminants and/or Pollutants.
11. Loss or damage to Insured Property while aboard any aircraft or watercraft.
12. The cost of making good faulty or defective workmanship, material, construction, designs, plans and/or specifications unless direct physical loss or direct physical damage not otherwise excluded under this policy ensues and then this Policy will cover such ensuing loss or damage only.
13. Loss, damage, corruption, destruction, distortion, interruption, disruption, erasure, deletion, alteration, loss of use, reduction in functionality, loss of access to, denial of access to or breakdown of Electronic Data from any cause whatsoever.
14. Loss or damage to Used Equipment caused by mechanical and/or electrical breakdown.
15. Loss or damage directly or indirectly caused by, resulting from, contributed to, or aggravated by Land Movement.
16. Loss or damage directly or indirectly caused by, resulting from, contributed to, or aggravated by Flood.
17. Loss or damage covered under any guarantee or warranty, expressed or implied, by any manufacturer or supplier whether or not such manufacturer or supplier is an Insured under this policy.
18. Terrorism.
19. Loss or damage arising out of the performance of the professional activities of any consulting engineer, architect, or designer, or any person employed by them or any others whose acts they are legally liable for whether or not named as an Insured under this Policy.

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**SELECTED EXTENSIONS OF COVERAGE**

**1. EXPEDITING/EXTRA EXPENSES**

Subject to the stated sublimit, this Policy is extended to cover extra charges for overtime, night work, work on public holidays, the extra cost of rental construction equipment, express freight, including air freight all incurred solely:

- A. to facilitate the repair or replacement of the Insured Property which has sustained physical loss or physical damage from a peril insured, or;
- B. which are necessary to return the work on the Insured Property to the same schedule actually being observed immediately prior to the sustaining of physical loss or physical damage from a peril insured.

This Policy does not cover charges incurred to expedite work on parts of the Insured Property which have not sustained physical loss or physical damage.

**2. DEMOLITION AND INCREASED COST OF CONSTRUCTION**

- A. Subject to the stated sublimit, in the event of direct physical loss and/or direct physical damage by perils insured under this Policy, the Company shall also pay:
  - (i) The increased cost to repair, replace or re-erect the Insured Property caused by the enforcement of any building, zoning or land use ordinance or law in force at the time of loss. If the Insured Property is replaced, it must be intended for similar occupancy of the current Insured Property, unless otherwise required by zoning or land use ordinance or law.
  - (ii) The cost to demolish and clear the construction site of undamaged parts of the Insured Property caused by the enforcement of any building, zoning or land use law in force at the time of the loss.
- B. In no event, however, shall the Company be liable for costs associated with the enforcement of any ordinance or law which requires any Insured or others to test for, monitor, clean up, remove, contain, treat, detoxify, or neutralize, or in any way respond to or assess the discharge, dispersal, release or escape of smoke, vapors, soot, fumes, acids, alkali, toxic chemicals, liquids or gasses, waste materials or other irritants, any Contaminants and/or Pollutants.
- C. The Company shall not pay for the increased cost of construction until the Insured Property is actually repaired, replaced, or re-erected at the same construction site or elsewhere and as soon as reasonably possible after the loss or damage, not to exceed thirty (30) months.

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D. In no event, however, shall the Company pay more:

- (i) If the Insured Property is repaired, replaced or re-erected at the same construction site than the amount the insured actually spends to:
  - a) Demolish and clear the construction site; and
  - b) Repair, replace or re-erect the Insured Property but not for more than property of like height, floor area and style at the same construction site.
- (ii) If the Insured Property is not repaired, replaced, or re-erected at the same construction site than:
  - a) The amount the Insured actually spends to demolish and clear the construction site; and
  - b) The cost to replace, at the same construction site, the damaged or destroyed Insured Property with other property;
    - 1) of like kind and quality;
    - 2) of like height, floor area and style; and
    - 3) used for the same purpose.
- (iii) Than the stated sublimit of Demolition and Increased Cost of Construction.

**3. FIRE DEPARTMENT SERVICE CHARGES**

Subject to the stated sublimit, when property insured is destroyed or damaged by a peril insured, this Policy shall also pay for the cost of fire department service charges for which the Insured is liable, provided they are assumed by contract or written agreement prior to a loss or they are required by a local ordinance.

**4. PLANS, BLUEPRINTS, AND SPECIFICATIONS**

Subject to the stated sublimit, in the event of direct physical loss or direct physical damage to plans, blueprints or specifications by perils insured under this policy, this insurance shall also pay the costs of mechanical reproduction from originals stored off-site for plans, blueprints or specifications.

**5. TREES, GRASS, SHRUBBERY, SEED AND PLANTS**

Subject to the stated sublimit, this policy is extended to insure direct physical loss or direct physical damage to trees, grass, shrubbery, seed and plants caused by or resulting from fire, lightning, windstorm, hail, explosion, smoke, collision by aircraft or vehicle, riot, riot attending a strike or civil commotion, vandalism or malicious mischief.

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**6. DEBRIS REMOVAL**

Subject to the stated sublimit, in the event of direct physical loss or physical damage to Insured Property by perils insured under this policy, this insurance shall also pay the cost of removal of material and debris being a part of the Insured Property located at the construction site and the cost to demolish and clear the construction site of undamaged parts caused by the enforcement of any building, zoning or land use law in force at the time of the loss.

This Policy also covers cost or expense to:

- A. Extract Contaminants and/or Pollutants from the debris; or
- B. Extract Contaminants and/or Pollutants from land and/or water; or
- C. Remove, restore, or replace land and/or water made necessary due to the presence of Contaminants and/or Pollutants; or
- D. Remove or transport any property, material, or debris to a site for storage or decontamination required because the property, material, or debris is affected by Contaminants and/or Pollutants, whether or not such removal, transport, or decontamination is required by law or regulation.
- E. This sub-clause (Items A - D above), is subject to a sublimit for **Pollution Cleanup Expenses**.

It is a condition precedent to recovery under this clause, that the Company shall have paid, or agreed to pay for direct physical loss or direct physical damage to the Insured Property and that the Insured shall give written notice to the Company of intent to claim for cost of removal of debris or the cost of cleanup no later than (12) twelve months after the date the original physical loss or physical damage occurred.

**7. ARCHITECT, ENGINEERING AND PROFESSIONAL FEES**

Subject to the stated sublimit, Architect, Engineering and Professional Fees shall mean the additional architectural and engineering expenses, excluding any costs for redesign or betterment, or owner's consultant service expenses, or owner's legal, appraisal, title and/or inspection fees incurred to facilitate repair or replacement of the Insured Property which has sustained physical loss or physical damage from an insured peril.

**8. GREEN/LEED**

Subject to the stated sublimit, in the event of a direct physical loss or direct physical damage not otherwise excluded in the policy to Insured Property by perils insured under the policy the Insurer shall also pay the reasonable additional cost, if any, incurred by the Insured to repair or replace such damaged or destroyed Insured Property in a manner and with products or materials of otherwise equivalent quality and function that meet the requirements of the LEED Rating System.

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Coverage under this extension applies only if the Insured Project has been registered with the US Green Building Council during the Period of Insurance specified on the Certificate of Builder's Risk Insurance and prior to any loss, and only to the initial and intended building certification level that has been registered with the US Green Building Council, in accordance with the criteria outlined in order to comply with the requirements of the LEED Rating System existing at the time of the loss or damage to the Insured Project, which upon completion will undergo the process of being certified by the US Green Building Council.

The following exclusions and limitations apply to this coverage extension:

No coverage is provided under this extension:

- A. If no such products or materials exist at the time of the loss or damage; or
- B. If the Insured does not repair or replace the damaged or destroyed Insured Property.

In no event will the policy pay more than the lesser of the:

- A. The cost to repair; or
- B. The cost to replace;

the damaged Insured Property in a manner and with products or materials of otherwise equivalent quality and function that meet the requirements of the LEED Rating System existing at the time of the loss or damage.

No coverage is provided under this extension of coverage for any of the following items:

- A. Re-registering the Insured project with the US Green Building Council.
- B. Failure to meet the registered LEED Building Rating certification level.
- C. Land and land values.
- D. Any additional cost incurred to comply with any law or ordinance.
- E. Personal property of others in the Insured's care, custody or control.
- F. Raw materials, stock-in-process and finished goods.
- G. Motor vehicles.
- H. Property located outside the Territorial Limits of the policy.

## **9. CLAIMS PREPARATIONS EXPENSE**

Subject to the stated sublimit, this policy is extended to include reasonable expenses incurred by the Insured, or by the Insured's representatives for preparing the details of a claim resulting from a loss which would be payable under this policy. However, the Company shall not be liable for expenses incurred by the Insured in utilizing or retaining the services of attorneys, insurance agents or brokers; or any subsidiary, related or associated entities either partially or wholly owned by an attorney or public adjuster.

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**10. MOLD/FUNGI**

Subject to the stated sublimit, in the event of direct physical loss or direct physical damage to Insured Property by perils insured under the policy, the insurance shall also pay, subject to the Limit of Liability and the terms, conditions, and limitations of this policy, the cost to clean up or remove Mold/Fungi from Insured Property located at the construction site.

Notwithstanding any terms or conditions, this policy does not insure any cost or expense incurred to test for, monitor, or assess the existence, concentration or effects of Mold/Fungi.

**SELECTED GENERAL CONDITIONS**

**1. REQUIREMENTS IN CASE OF LOSS**

In the event of loss or damage to Insured Property the Insured shall:

- A. Give immediate notice to the insurance company;
- B. Protect the Insured Property from further loss or damage;
- C. Within ninety (90) days from the date of discovery of the loss or damage, the Named Insured shall render a statement to the Insurer signed and sworn to by the Named Insured stating the knowledge and belief of the Insured as to the time and cause of the loss or damage and the interest of the Insured and all others in the Insured Property;
- D. Exhibit to any person designated by the Insurer all that remains of the Insured Property.
- E. Coordinate and cooperate with investigation and/or inspection of property and provide documentation as requested by the insurance adjuster. Do NOT destroy or salvage damaged property unless authorized to do so by the insurance adjuster.
- F. Submit to examinations under oath by any person named by the Insurer and produce for examination all writings, books of account, bills, invoices and other vouchers, or certified copies thereof if originals be lost, at such reasonable time and place as may be designated by the Insurer or its representative, and permit extracts and copies thereof to be made. No such examination under oath or examination of books or documents shall be deemed to be a waiver of any defense which the Insurer might otherwise have with respect to any loss or claim; but all such examinations and acts shall be deemed to have been made or done without prejudice to the Company's liability.
- G. Subject to the Limit of Liability and the terms, conditions, and limitations of the policy, all adjusted losses shall be paid or made good to the Named Insured within sixty (60) days after presentation and acceptance of the satisfactory proof of interest and loss to the Insurer. No amount shall be paid on an adjusted loss or made good if the Insured has collected the same from others.

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**2. VALUATION**

Subject to the Limit of Liability, sublimits or Aggregate Limit of Liability, the Insurer shall not be liable beyond the cost to repair, replace, or re-erect the Insured Property at the time and place of loss, with materials of like kind and quality, less the cost of betterment, salvage, or other recovery including contractors reasonable profit and overhead in the proportion as that included in the original contract documents, or 15% profit and overhead, whichever is lesser. If the Insured Property is not replaced, then the loss shall be settled on the Actual Cash Value basis with proper deduction for depreciation, salvage or other recovery and exclusive of profit and overhead.

**3. PROTECTION OF PROPERTY**

In the case of direct physical loss or direct physical damage to Insured Property by perils insured under the policy, it shall be lawful and necessary for the Insured, his or their factors, servants, or assigns, to sue, labor, and travel for in and about the defense, safeguard, and recovery of the Insured Property, or any part thereof, without prejudice to this insurance, nor shall the acts of the Insured or Insurer, in recovering, saving, and preserving the Insured Property in case of loss be considered a waiver or an acceptance of abandonment. The expenses so incurred shall be borne by the Insured and the Insurer proportionately to the extent of their respective interests.

**4. OTHER INSURANCE**

This Policy shall not provide coverage to the extent of any other insurance, whether prior or subsequent hereto in date, and by whomsoever effected, directly or indirectly covering the same property against the same peril; and the Company shall be liable for direct physical loss or direct physical damage only for the excess value beyond the amount due from such other insurance, subject to the applicable Deductible.

**5. INSUREDS' REPRESENTATIVE**

The first Named Insured shall be the sole and irrevocable agent of each and every Insured for the purpose of:

- A. Payment of premium;
- B. Giving or receiving notice of cancellation;
- C. Requesting amendments to this policy and accepting amendments to the policy made by the Insurer.

**6. LOSS PAYABLE**

Loss, if any, shall be payable to the first Named Insured and/or its assigned designee.

**7. PARTIAL OCCUPANCY OR USE**

Notwithstanding anything to the contrary elsewhere in the policy, the Owner and/or tenants may occupy or use any completed or partially completed portion of the Insured Property, provided that the Insured warrants that all fire protection shall be in service and fully operational during such occupancy or use.



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**SELECTED DEFINITIONS**

The following terms have been defined in the Master Policy and will be applied in the interpretation of certain wording used herein or within the Master Policy.

**1. FLOOD:**

Flood shall mean the rising, overflowing or breaking of boundaries of rivers, lakes, streams, ponds or similar natural or man-made bodies of water, or from waves, tidal waves, tidal waters, wave wash, or spray from any of the foregoing, surface waters, rain accumulation run off, all whether driven by wind or not.

**2. CONTAMINANTS OR POLLUTANTS:**

Contaminants and/or Pollutants shall mean any material which after its release or discharge can cause or threaten damage to human health and/or human welfare, or causes or threatens damage, deterioration, loss of value, marketability and/or loss of use to Insured Property; including, but not limited to, bacteria, virus, or hazardous substances as listed in the Federal Water Pollution Control Act, Clean Air Act, Resource Conservation and Recovery Act of 1976, and/or Toxic Substances Control Act, or as designated by the U.S. Environmental Protection Agency.

**3. LAND MOVEMENT:**

Land Movement shall mean all land movement however caused, whether by natural event or man-made including but not limited to, earthquake, volcanic eruption, tsunami, subsidence, landslide, mudflow, or rockfall.

**4. OCCURRENCE:**

Occurrence shall mean any one loss, disaster, or casualty, or series of losses, disasters, or casualties arising out of one event. With respect to the perils of Water Damage, Flood, Land Movement, or riots, one event shall be construed to be all losses arising during a continuous period of seventy-two (72) hours.

The Insured may choose the time from which any such seventy-two (72) hour period shall be deemed to have commenced, provided it shall not be earlier than the time of the first loss sustained by the Insured during the Occurrence.

**5. WATER DAMAGE:**

All water damage excluding flood, however caused, whether by natural event or man-made, including but not limited to interior water damage, damage due to water from pipe breakage or sprinkler leakage, damage from rainfall and/or resulting runoff; all whether wind driven or not.

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**PROJECTS EXCLUDED AND/OR MUST BE UNDERWRITTEN SEPARATELY. THESE PROJECTS MAY BE SUBJECT TO DIFFERENT RATES, DEDUCTIBLES, AND TERMS AND CONDITIONS.**

(A) Construction Cost exceeds:

- \$150 Million regardless of Construction Type
- \$5 Million for Wood Frame
- \$25 Million for Joisted Masonry
- \$50 Million for Structural Renovations

(B) Project involves:

- Construction occurring outside of the State of California
- Co-Generation Facility
- Stadium or arena
- Bridge
- Tunnel
- Excavations greater than 1,000 feet in length or 40 feet in depth
- Transmission and/or distribution lines extending greater than 1,000 feet in length from the perimeter project site including cable, telecom, wires, poles, towers, and electrical
- Directional Drilling
- Gas Turbine
- Power Plants
- Standalone Projects for Water or Sewer Pipelines, Cut and Cover, Open Trench, Utility Relocations, Central Utility Plants, Waste Water, or Water Treatment Facilities. Standalone projects means when the scope of work is not included in the estimated Construction Cost of a building project

(C) Project requires coverage for:

- Land Movement (e.g. Earthquake)
- Flood
- Terrorism
- Delay in Completion

EXHIBIT 13A  
EXHIBIT  
REPORT OF SUBCONTRACTOR INFORMATION

Sheet No. \_\_\_\_\_ of \_\_\_\_\_

Provide the following information for each contracting party including the Contractor and each Subcontractor regardless of tier.\* Attach additional sheets if necessary.

1	2A	2B	3	4	5	6	7		8				
Full Name of Business	Portion of the Work	Dollar Amt	Street Address City, State & ZIP	Tel No / FAX No	Contact Name	Type of Owner- ship	License Info**		Business categories* (Check <u>all</u> categories that apply)				
							License Classification**	License No.**	SBE*	DBE*	WBE*	DVBE*	N/A
(GC)													
(Sub 1)													
(Sub 2)													
(Sub 3)													
						Column 6 – Type of Ownership SP = Sole Proprietorship P = Partnership C = Corporation JV = Joint Venture O = Other			Column 8 - Business Categories SBE = Small Business Enterprise DBE = Disadvantaged Business Enterprise WBE = Woman Business Enterprise DVBE = Disabled Veteran Business Enterprise				

\* Regardless of tier, a completed Self-Certification must be submitted for the General Contractor and each Subcontractor shown on this Exhibit.

\*\* List only those License Classification and Numbers relevant to this project.

PROJECT NO.: 900120

EXHIBIT 13B  
EXHIBIT  
**FINAL DISTRIBUTION OF CONTRACT DOLLARS**

1                      1

Sheet No. \_\_\_\_\_ of \_\_\_\_\_

Provide the following information for each contracting party including the Contractor and each Subcontractor regardless of tier.\* Attach additional sheets if necessary.

[illegible]

\*Regardless of tier, a completed Self-Certification must have been submitted for the General Contractor and each Subcontractor shown on this Exhibit.

\*\*Refer to the Report of Subcontractor Information for license and other information.

EXHIBIT 14  
**SELF-CERTIFICATION**

For the Contractor and each Subcontractor indicated on the Report of Subcontractor Information, the following must be completed.

Indicate all Business category(ies) that apply by initialing next to the applicable category(ies):

\_\_\_\_\_  
(Initial, if applicable) **Small Business Enterprise (SBE)** - an independently owned and operated concern certified, or certifiable, as small business by the Federal Small Business Administration (SBA). (Size standards by Standard Industrial Classification codes required by the Federal Acquisition Regulations, Section 19.102, may be found at [www.sba.gov/size](http://www.sba.gov/size). The University may rely on written representation by the vendors regarding their status.) Annual average receipts, computed from the gross receipts for the last 3 fiscal years, do not exceed the amount listed in the MAXIMUM RECEIPTS TABLE below. The average annual receipt is computed by taking the sum of the gross receipts of the prior 3 fiscal years and dividing by 3.

MAXIMUM RECEIPTS TABLE	
Construction Services (by Contractor's License Classification):	AVERAGE ANNUAL RECEIPTS (Preceding 3 Years)
Class "A" - General Engineering	\$31,000,000
Class "B" - General Building	\$31,000,000
Class "C" - Specialty	\$13,000,000
Architectural & Engineering Services	\$4,500,000 (except landscape architectural services)
Landscape Architectural Services	\$6,500,000
Other services	For appropriate amount, see <a href="http://www.sba.gov/size">www.sba.gov/size</a>

\_\_\_\_\_  
(Initial, if applicable) **Disadvantaged Business Enterprise (DBE)** - a business concern which is at least 51% owned by one or more socially and economically disadvantaged individuals or, in the case of any publicly owned business, at least 51% of the stock of which is owned by such individuals and whose management and daily business operations are controlled by one or more of such individuals. Socially disadvantaged individuals are those who have been subjected to racial or ethnic prejudice or cultural bias because of their identity as members of a group without regard to their individual qualities. Economically disadvantaged individuals are those socially disadvantaged individuals whose ability to compete in the free private enterprise system has been impaired due to diminished capital and credit opportunities as compared to others in the same business area who are not socially disadvantaged. Business owners who certify that they are members of named groups (Black Americans, Hispanic Americans, Native Americans, Asian-Pacific Americans, Asian-Indian Americans) are to be considered socially and economically disadvantaged.

\_\_\_\_\_  
(Initial, if applicable) **Women-Owned Business Enterprise (WBE)** - a business that is at least 51% owned by a woman or women who also control and operate it. "Control" in this context means exercising the power to make policy decisions. "Operate" in this context means being actively involved in the day-to-day management.

\_\_\_\_\_  
(Initial, if applicable) **Disabled Veteran Business Enterprise (DVBE)** - a business that is at least 51% owned by one or more disabled veterans or, in the case of any publicly owned business, at least 51% of the stock of which is owned by such individuals and whose management and daily business operations are controlled by one or more of such individuals. A Disabled Veteran is a veteran of the military, naval, or air service of the United States with a service connected disability who is a resident of the State of California. To qualify as a veteran with a service connected disability, the person must be currently declared by the United States Veterans Administration to be 10% or more disabled as a result of service in the armed forces.

\_\_\_\_\_  
(Initial, if applicable) **None of the above categories apply.**

I hereby certify under penalty of perjury under the laws of the State of California that I have read this certification and know the contents thereof, and that the business category indicated above reflects the true and correct status of the business in accordance with Federal Small Business Administration criteria and Federal Acquisition Regulations, FAR 19 pertaining to small, disadvantaged, women-owned, and disabled veteran business enterprises. I understand that falsely certifying the status of this business, obstructing, impeding or otherwise inhibiting any University of California official who is attempting to verify the information on this form may result in suspension from participation in University of California business contracts for a period up to five (5) years and the imposition of any civil penalties allowed by law.

INFORMATION FURNISHED BY:

\_\_\_\_\_  
(Print or Type Name of Owner and/or Principal)

\_\_\_\_\_  
(Name of Business or Firm)

a

\_\_\_\_\_  
(Insert type of business e.g. corporation, sole proprietorship, partnership, etc.)

By:

\_\_\_\_\_  
(Print Name)

\_\_\_\_\_  
(Title)

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Date)

#### PRIVACY NOTICE

The State of California Information Practices Act of 1977 (effective July 1, 1978) requires the University of California to provide the following information to individuals who are asked to supply personal information about themselves. Information furnished on the Self-Certification form may, in some cases, identify personal information of an individual.

- The University of California, Merced, is requesting the information contained in this form and the accompanying Report of Subcontractor Information.
- The Small Business Outreach Program Manager at the University of California, Merced, is responsible for maintaining the requested information. The contact information for the Small Business Outreach Program Manager may be found at:  
<http://www.ucop.edu/purchserv/documents/sbdrmgr.pdf>
- The maintenance of information is authorized in part by Public Contract Code section 10500.5.
- Furnishing the information requested on this form is mandatory. If SBE, DBE, WBE and/or DVBE status is applicable, furnishing such information is mandatory.
- Failure to provide the information may be a violation of bidding procedures and/or breach of the contract and the University may pursue any and all remedies permitted by the provisions of the Contract Documents.
- The information on this form is collected for monitoring and reporting purposes in accordance with state law and University policy.
- The individual may access information contained in this form and related forms by contacting the Small Business Outreach Program Manager(s).

**EXHIBIT 15**  
**CERTIFICATE OF SUBSTANTIAL COMPLETION**

Project Name: STUDENT SERVICES BUILDING

Contractor: \_\_\_\_\_

Project Number: 900120

Date of Issuance: \_\_\_\_\_

The Work has been reviewed and the date of Substantial Completion is hereby established as of the date of issuance above.

A Certificate of Occupancy has been issued by the University's Building Official \_\_\_\_\_ on \_\_\_\_\_, \_\_\_\_\_.

A list of items to be completed or corrected is included herein. The failure to include any items on such list does not alter the responsibility of Contractor to complete all of the Work in accordance with the Contract Documents.

In accordance with the Contract Documents, Contractor is notified as follows:

1. Without limitation of Contractor's obligation to fully complete the Work within the Contract Time, Contractor shall complete or correct the Work on the list of items attached hereto within \_\_\_\_\_ days from the date of Substantial Completion.
2. Contractor shall be responsible for all Contract requirements except items or responsibilities of University set forth in Paragraph 2 above.
3. List of items to be completed or corrected: See Attached List

**UNIVERSITY'S REPRESENTATIVE:**

\_\_\_\_\_  
(Name of Firm)

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Typed or Printed Name)

\_\_\_\_\_  
(Title)

\_\_\_\_\_  
(Date)

**UNIVERSITY: THE REGENTS OF THE UNIVERSITY OF CALIFORNIA**

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Typed or Printed Name)

\_\_\_\_\_  
(Title)

\_\_\_\_\_  
(Date)

cc: Office of Risk Management

**EXHIBIT 16**  
**GUARANTEE/WARRANTY FORM**

Date: \_\_\_\_\_  
Project Name STUDENT SERVICES BUILDING  
UNIVERSITY OF CALIFORNIA, MERCED  
Project Location Merced County, Merced, California  
Project Number 900120  
GUARANTEE FOR: \_\_\_\_\_

(Specification SECTION and Contract No.)  
(the "Contract"), between the Regents of the University of California ("University") and

\_\_\_\_\_  
(Name of Contractor)  
("Contractor") and \_\_\_\_\_  
(Name of Subcontractor)

Hereby guarantee to University that the portion of the work described as follows:

\_\_\_\_\_  
\_\_\_\_\_  
Which it has provided for the above referenced Project, is of good quality; free from defects; free from any liens, claims, and security interests; and has been completed in accordance with Specifications SECTION \_\_\_\_\_ and the other requirements of the Contract.

The undersigned further agrees that, if at any time within \_\_\_\_\_ months after the date of the guarantee the undersigned receives notice from University that the aforesaid portion of the Work is unsatisfactory, faulty, deficient, incomplete, or not in conformance with the requirements of the Contract, the undersigned will, within 10 days after receipt of such notice, correct, repair, or replace such portion of the Work, together with any other parts of the Work and any other property which is damaged or destroyed as a result of such defective portion of the Work or the correction, repair, or replacement thereof; and that it shall diligently and continuously prosecute such correction, repair, or replacement to completion.

In the event the undersigned fails to commence such correction, repair, or replacement within 10 days after such notice, or to diligently and continuously prosecute the same to completion, the undersigned, collectively and separately, do hereby authorize University to undertake such correction, repair, or replacement at the expense of the undersigned; and Contractor will pay to University promptly upon demand all costs and expenses incurred by University in connection therewith.

**SUBCONTRACTOR**

Signed: \_\_\_\_\_  
Title: \_\_\_\_\_  
Typed Name: \_\_\_\_\_  
Name of Firm: \_\_\_\_\_  
Contractor License Classification, Code, and Number: \_\_\_\_\_  
Address: \_\_\_\_\_

**CONTRACTOR**

Signed: \_\_\_\_\_  
Title: \_\_\_\_\_  
Typed Name: \_\_\_\_\_  
Name of Firm: \_\_\_\_\_



**Student Services Building**  
**Project No.: 900120**

University of California,  
Merced

**Request for Information**

RFI Number:			
Date Created:	___ ___/___ ___/___ ___		
Answer			
Required by:	___ ___/___ ___/___ ___		
Priority:	<input type="checkbox"/> Urgent	<input type="checkbox"/> High	
	<input type="checkbox"/> Normal	<input type="checkbox"/> Low	

**Submitted By**

Company:	_____	Subject:	_____
Contact:	_____	Discipline:	_____
Telephone:	_____	Category:	_____
Email:	_____	Reason:	_____

**Question**

**Suggestion**

**Answer**

Received  
By: \_\_\_\_\_ Date: \_\_\_ \_\_\_/\_\_\_ \_\_\_/\_\_\_ \_\_\_

EXHIBIT 18  
UTILITY SERVICE INTERRUPTION/SHUT DOWN REQUEST

A minimum of 7 working days advance notice  
is required prior to each utility service interruption/shut down  
(Refer to Section 01113 Special Requirements)

SUBMIT DIFFERENT FORM FOR EACH UTILITY

To University's Representative: \_\_\_\_\_

Submitted by Contractor: \_\_\_\_\_

(Printed Name/Title) \_\_\_\_\_

Project No: 900120 \_\_\_\_\_

Project Name: STUDENT SERVICES BUILDING \_\_\_\_\_

Date Request Submitted: \_\_\_\_\_

Shut Down Date Requested: \_\_\_\_\_

Commencing Time of Shut Down: \_\_\_\_\_ A.M. \_\_\_\_\_ P.M.

Duration of Shutdown: \_\_\_\_\_ A.M. \_\_\_\_\_ P.M.

Type of Utility Service to be shut down:

Contractor Signature: \_\_\_\_\_

The above shut down HAS / HAS NOT been scheduled as requested.

EXHIBIT 18  
UTILITY SERVICE INTERRUPTION/SHUT DOWN REQUEST

Additional comments if required:

Confirmed by telephone with \_\_\_\_\_  
Confirmed via fax on \_\_\_\_\_ by \_\_\_\_\_

EXHIBIT 19  
UNIVERSITY OF CALIFORNIA, MERCED CAMPUS  
NEW CONSTRUCTION PROJECT INFORMATION FORM  
TO COMPLY WITH THE TERMS OF THE  
GENERAL PERMIT TO DISCHARGE STORM WATER  
ASSOCIATED WITH CONSTRUCTION ACTIVITY (WQ ORDER No. 2009-0009-DWQ)

**I. NOTICE OF INTENT**

<b>UNIVERSITY OF CALIFORNIA, MERCED CAMPUS</b>	<b>WDID#</b>	<b>5F24S319219</b>
--	--------------	--------------------

**II. PROPERTY OWNER**

Name <b>UNIVERSITY OF CALIFORNIA</b>	Contact Person <b>Gary Knox</b>		
Mailing Address <b>5200 N LAKE ROAD</b>	Title <b>DIRECTOR OF CONSTRUCTION SERVICES</b>		
City <b>MERCED</b>	State <b>CA</b>	Zip <b>95343</b>	Phone <b>(209) 228-4404</b>

**III. CONTRACTOR INFORMATION**

Contractor	Contact Person		
Mailing Address	Title		
City	State	Zip	Phone (   ) -   -

**IV. NEW CONSTRUCTION PROJECT INFORMATION**

Project No <b>906270</b>			
Project Name Housing 4: The Summits		University's Representative	
Physical Address/Location	Latitude	Longitude	County
City (or nearest City) Merced	Zip	Site Phone Number (   ) -   -	Emergency Phone Number (   ) -   -
A. Total size of construction site area: ___ Acres		B. Total area to be disturbed: ___ Acres (% of total___)	
C. Percent of site imperviousness (including rooftops):    Before Construction: ___%    After Construction: ___%			
D. Tract Number(s): ___,		E. Mile Post Marker:	
F. Is the construction site part of a larger common plan of development or sale? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	G. Name of plan or development: <b>UNIVERSITY OF CALIFORNIA, MERCED CAMPUS</b>		H. Construction commencement date: ___/___/___
I. Percentage of site to be mass graded:		J. Projected construction dates: Complete grading: ___/___/___ Complete project: ___/___/___	
K. Type of Construction (Check all that apply):			
1. <input type="checkbox"/> Residential      2. <input type="checkbox"/> Commercial      3. <input type="checkbox"/> Industrial      4. <input type="checkbox"/> Reconstruction      5. <input type="checkbox"/> Transportation 6. <input type="checkbox"/> Utility      Description: 7. <input type="checkbox"/> Other (Please List):			

## V. IMPLEMENTATION OF NPDES PERMIT REQUIREMENTS

### A. STORM WATER POLLUTION PREVENTION PLAN (SWPPP) (check one)

- ☐ A SWPPP has been prepared for this facility and is available for review:  
Date Prepared: \_\_\_/\_\_\_/\_\_\_ Date Amended: \_\_\_/\_\_\_/\_\_\_
- ☐ A SWPPP will be prepared and ready for review by (enter date): \_\_\_/\_\_\_/\_\_\_
- ☐ A tentative schedule has been included in the SWPPP for activities such as grading, street construction, home construction, etc.

### B. MONITORING PROGRAM

- ☐ A monitoring and maintenance schedule has been developed that includes inspection of the construction BMPs before Anticipated storm events and after actual storm events and is available for review.
- If checked above: A qualified person has been assigned responsibility for pre-storm and post-storm BMP inspections to identify effectiveness and necessary repairs or design changes. ☐ YES ☐ NO
- Name: \_\_\_\_\_ Phone: (\_\_\_\_) \_\_\_\_ - \_\_\_\_

### C. PERMIT COMPLIANCE RESPONSIBILITY

A qualified person has been assigned responsibility to ensure full compliance with the Permit, and to implement all elements of the Storm Water Pollution Prevention Plan including:

1. Preparing an annual compliance evaluation. ☒ YES ☐ NO  
Name: \_\_\_\_\_ Phone: (\_\_\_\_) \_\_\_\_ - \_\_\_\_
2. Eliminating all unauthorized discharges. ☐ YES ☐ NO

## VI. VICINITY MAP AND FEE (must show site location in relation to nearest named streets, intersections, etc.)

Have you included a vicinity map with this submittal? ☒ YES ☐ NO

UC Merced pays annual fee; no fee required by Contractor

## VII. CONTRACTOR CERTIFICATION

"I certify under penalty of law that this document and all attachments were prepared under my direction and supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment. In addition, I certify that the provisions of the permit, including the development and implementation of a Storm Water Pollution Prevention Plan and a Monitoring Program Plan will be complied with."

Printed Name: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Title: \_\_\_\_\_

## THE NEXT SECTION TO BE COMPLETED BY UNIVERSITY'S REPRESENTATIVE

### VIII. UNIVERSITY CERTIFICATION

"I certify under penalty of law that this document and all attachments were prepared under my direction and supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment. In addition, I certify that the provisions of the permit, including the development and implementation of a Storm Water Pollution Prevention Plan and a Monitoring Program Plan will be complied with."

Printed Name: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Title: \_\_\_\_\_

**EXHIBIT 20**  
**AUTOMATIC SPRINKLER SYSTEMS**

**CONTRACTOR'S MATERIAL AND TEST CERTIFICATE FOR ABOVEGROUND PIPING**

<b>Procedure</b>										
Upon completion of work, inspections and tests shall be made by the General Contractor's Representative and witnessed by the University's Representative. All defects shall be corrected and system left in service before General Contractor's personnel finally leave the job.										
A certificate shall be filled out and signed by both representatives. Copies shall be prepared by approving authorities, University and General Contractor. It is understood the University's Representative's signature in no way prejudices any claim against General Contractor for faulty material, more workmanship, or failure to comply with approving authority's requirements or local ordinances.										
Property Name								Date		
Property Address										
Plans	Accepted by Approving Authorities (Names)									
	Address									
	Installation conforms to Accepted Plans							Yes	No	
	Equipment Used is Approved							Yes	No	
	If No, State Deviations									
Instructions	Has Person in charge of fire equipment been instructed as to location of control valves and care and maintenance of this equipment?							Yes	No	
	If No, Explain									
	Have copies of the following been left on the premises?									
	1. System Components Instructions							Yes	No	
	2. Care and Maintenance Instructions							Yes	No	
	3. NFPA 25							Yes	No	
Location of System	Supplies the following Bldg(s):									
Sprinklers	Make	Model		Year of Manufacturer	Orifice Size	Quantity		Temperature Rating		
Pipe and Fittings	Pipe conforms to			Standard			Yes	No		
	Fittings conform to			Standard			Yes	No		
Alarm Value or Flow Indicator	Alarm Device				Max Time to Operate through Test Connection					
	Type	Make	Model	Min.	Sec.					
Dry Pipe Operating Test	Dry Valve				QOD					
	Make	Model	Serial No.	Make	Model	Serial No.				
	Time to Trip Through Test Connection*		Water Pressure	Air Pressure	Trip Point Air Pressure	Time Water reached Test Outlet*		Alarm Operated Properly		
		Min	Sec	PSI	PSI	PSI	Min	Sec	Yes	No
	w/o QOD									
	w/ QOD									
	If No, Explain									

*\*Measured from time Inspector's test connection is opened.*

Deluge and Preaction Valves	Operation		Pneumatic		Electric		Hydraulic	
	Piping Supervised		Yes	No	Detecting Media Supervised		Yes	No
	Does valve operate from the Manual Trip and/or Remote Controls Station						Yes	No
	Is there an accessible facility in each circuit for testing						Yes	No
	If, No Explain							
	Make	Model	Does each circuit operate Supervision Loss Alarm		Does each circuit operate Valve Release		Maximum Time to operate Release	
		Yes	No	Yes	No	Min.	Sec.	
Test Description	<p><b>Hydrostatic:</b> Hydrostatic tests shall be made at not less than 2000 psi (13.6 bars) for 2 hours or 50 psi (3.4 bars) above static pressure in excess of 150 psi (10.2 bars) for 2 hours. Differential dry-pipe valve clappers shall be left open during test to prevent damage. All above ground piping leakage shall be stopped.</p> <p><b>Flushing:</b> Flow the required rate until water is clear as indicator has no collection of foreign material in burlap bags as outlet such as hydrants and blow-offs. Flush at flows not less than 4000 GPM (1514 l/min) for 4-inch pipe, 600 GPM (1171 L/min) for 5-inch pipe. 2000 GPM (7570 L/min) for 12-inch pipe. When supply cannot produce stipulated flow rates, obtain maximum available.</p> <p><b>Pneumatic:</b> Establish 40 psi (2.7 bars) air pressure and measure dry, which shall not exceed 1-1/2 psi (0.1 bars) in 24 hours. Test pressure tanks at normal water level and air pressure and measure air pressure drop, which shall not exceed 1-1/2 psi (0.1 bars) in 24 hours.</p>							
Tests	All Piping hydrostatically tested at _____ PSI for _____ Hours				If No, State Reason			
	Dry Piping Pneumatically Tested		Yes	No				
	Equipment Operates Properly		Yes	No				
	Do you certify as the Sprinkler General Contractor that additives and corrosive chemicals, Sodium Silicate or derivatives of Sodium Silicate, Brine or other corrosive chemicals were not used for testing systems or stopping leaks? <input type="checkbox"/> Yes <input type="checkbox"/> No							
	Drain Test	Reading of Gage located near Water Supply Test Pipe: _____ PSI			Residual Pressure with Valve in Test Pipe open wide: _____ PSI			
	<i>Underground mains and lead in connections to system risers flushed before connection made to sprinkler piping</i>							
	Verified by copy of the U Form No. 85B				Yes	No	Other	Explain
	Flushed by Installer of Underground Sprinkler Piping				Yes	No		
Blank Testing Gaskets	Number Used		Locations			Number Removed		
	Welded Piping		Yes	No	If Yes...			
	Do you certify as the sprinkler contract that welding procedures comply with the requirements of at least AWS D10.9 Level AR-3?						Yes	No
	Do you certify that the welding was performed by welders qualified in compliance with the requirements of at least AWS D10.0, Level AR-3?						Yes	No
	Do you certify that welding was carried out in compliance with a document quality control procure to insure that all discs are retrieved, that openings in piping are smooth, that slag and other welding residue are removed, and that the internal diameters of piping are not penetrated?						Yes	No
Hydraulic Data Nameplate	Nameplate Provided		Yes	No				
	If No, Explain							
Remarks	Date left in service with all Control Valves open:							
Signatures	Name of Sprinkler General Contractor:							
	Test Witnessed By							
	For Property University (Signed)				Title		Date	
	For Sprinkler General Contractor (Signed)				Title		Date	
Additional Explanation and Notes (Note: Add additional pages if required)								

**EXHIBIT 21**  
**AUTOMATIC SPRINKLER SYSTEMS**  
**CONTRACTOR'S MATERIAL AND TEST CERTIFICATE FOR UNDERGROUND PIPING**

<b>Procedure</b>											
Upon completion of work, inspections and tests shall be made by the General Contractor's Representative and witnessed by the University's Representative. All defects shall be corrected and system left in service before General Contractor's personnel finally leave the job.											
A certificate shall be filled out and signed by both representatives. Copies shall be prepared by approving authorities, University and General Contractor. It is understood the University's Representative's signature in no way prejudices any claim against General Contractor for faulty material, more workmanship, or failure to comply with approving authority's requirements or local ordinances.											
Property Name								Date			
Property Address											
Plans											
Accepted by Approving Authorities (Names)											
Address											
Installation conforms to Accepted Plans								<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
Equipment Used is Approved								<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
If No, State Deviations											
Instructions											
Has Person in charge of fire equipment been instructed as to location of control valves and care and maintenance of this equipment?								<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
If No, Explain											
Have copies of appropriate Instructions and Care and Maintenance Charts been left on premises								<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
If No, Explain											
Location of System											
Supplies the following Bldg(s):											
Underground Pipes and Joints											
Pipe Types and Class						Type Joint					
Pipe conforms to				Standard		<input type="checkbox"/>	Yes	<input type="checkbox"/>	No		
Fittings conform to				Standard		<input type="checkbox"/>	Yes	<input type="checkbox"/>	No		
If No, Explain											
Joints needing anchorage, clamped, strapped or blocked in accordance with _____ Standard						<input type="checkbox"/>	Yes	<input type="checkbox"/>	No		
If No, Explain											
If, No Explain											
Make		Model		Does each circuit operate Supervision Loss Alarm		Does each circuit operate Valve Release		Maximum Time to operate Release			
				Yes		No		Min.			
								Sec.			
Test Description											
<u>Flushing:</u> Flow the required rate until water is clear as indicator has no collection of foreign material in burlap bags as outlet such as hydrants and blow-offs. Flush at flows not less than 4000 GPM (1514 l/min) for 4-inch pipe, 600 GPM (1171 L/min) for 5-inch pipe. 2000 GPM (7570 L/min) for 12-inch pipe. When supply cannot produce stipulated flow rates, obtain maximum available.											
<u>Hydrostatic:</u> Hydrostatic tests shall be made at not less than 2000 psi (13.6 bars) for 2 hours or 50 psi (3.4 bars) above static pressure in excess of 150 psi (10.2 bars) for 2 hours. Differential dry-pipe valve clappers shall be left open during test to prevent damage. All above ground piping leakage shall be stopped.											
<u>Leakage:</u> COMPLETE											
Flushing Tests											
New Underground Piping flushed according to _____ Standard								<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
By (Company)											
If No, Explain											
How Flushing was Obtained						Through what Type Opening					
<input type="checkbox"/> Public Water		<input type="checkbox"/> Tank or Reservoir		<input type="checkbox"/> Fire Pump		<input type="checkbox"/> Hydrant Butt		<input type="checkbox"/> Open Pipe			
Lead-In's flushed according to _____ Standard						Number Removed					
By (Company)											



	If No, Explain			
	How Flushing was Obtained		Through what Type Opening	
	Public Water	Tank or Reservoir	Fire Pump	Hydrant Butt      Open Pipe
Hydrostatic Test	All new Underground Piping hydrostatically tested at _____ PSI for _____ hours			
	Joints Covered			Yes      No
Leakage Test	Total Amount of Leakage measured _____ gals. for _____ hours			
Hydrants	Number Installed	Type and Make	All Operate Satisfactorily	
			Yes	No
Control Valves	Water Control Valves left wide open			Yes      No
	If No, Explain			
	Hose Threads of Fire Department Connections and hydrants interchangeable with those of Fire Department answering alarm			Yes      No
Remarks	Date left in service:			
Signatures	Name of Installer General Contractor:			
	Test Witnessed By			
	For Property University (Signed)	Title	Date	
	For Sprinkler General Contractor (Signed)	Title	Date	
Additional Explanation and Notes <i>(Note: Add additional pages if required)</i>				

**EXHIBIT 22**  
**MATERIAL SUBSTITUTION PROPOSAL**

TO (NAME): \_\_\_\_\_

PROJECT: STUDENT SERVICES BUILDING PROJECT No.: 900120

A. We hereby submit for your consideration the following product instead of the specified item:

1. Section: \_\_\_\_\_
2. Article Number: \_\_\_\_\_
3. Specified Item: \_\_\_\_\_
4. Proposed Substitution (Mfg., Type, Model, etc.): \_\_\_\_\_

B. Complete all of the following:

1. Does this substitution offer University a cost credit (including costs for changes by other subcontractors)?

☐ Yes      ☐ No      How much? \$ \_\_\_\_\_

List of Subcontractors, if any that may be affected by the substitution.	
Name	Trade

2. Does this substitution offer earlier delivery or less Contract Time?

☐ Yes      ☐ No

How much and why? \_\_\_\_\_

3. How does this substitution affect any dimensions, layout, or details of other subcontractors as shown on the Drawings?

\_\_\_\_\_

4. What are the specific differences between this substitution and the specified item?

\_\_\_\_\_

C. Attach the following as applicable (Check if attached):

- |   |                          |
|---|--------------------------|
| 1. Manufacturer's technical data                                      | <input type="checkbox"/> |
| 2. Laboratory test or performance results                             | <input type="checkbox"/> |
| 3. Drawings & wiring diagrams of the proposed product                 | <input type="checkbox"/> |
| 4. Drawings & description of changes required by other subcontractors | <input type="checkbox"/> |
| 5. Samples  | <input type="checkbox"/> |
| 6. Manufacturer's guarantee & maintenance instructions                | <input type="checkbox"/> |

D. Submitted by Contractor: \_\_\_\_\_

Statement by Contractor that the proposed substitution is in full compliance with the requirements of the Contract Documents and Applicable Code Requirements.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

E. University Review Decision:

For Use Only by University's Representative				
<input type="checkbox"/>	Accepted	<input type="checkbox"/>	Rejected	<input type="checkbox"/>
<input type="checkbox"/>		<input type="checkbox"/>	Revise and Resubmit	<input type="checkbox"/>
<input type="checkbox"/>		<input type="checkbox"/>		See Attached

University's  
Representative

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**Exhibit 23 - Submittal Approval Page**

*By Submittal Item*

<b>Preparer Approval</b>	<b>University Approval</b>
<p>Spec Section    Sub Section    Item No.    Rev</p> <p>Description: _____</p> <p>By: _____</p> <p>Date: _____</p>	
<b>University of California, Merced Approval</b>	<b>Design Team Approval</b>
<p><input type="checkbox"/> Approved <input type="checkbox"/> Approved as Noted <input type="checkbox"/> Revise &amp; Resubmit <input type="checkbox"/> Rejected</p> <p>Review is general and only for conformance with the design concept of the project and with the information given in the contract documents, and shall not be construed as reliving the Contractor of responsibility for omissions or errors, including performance, details, dimensions, materials, configuration, etc. Review of a separate item does not indicate acceptance of an assembly which the item functions.</p> <p>By: _____</p> <p>Date: _____</p>	

**MATERIAL SUBMITTAL TRANSMITTAL / APPROVAL FORM**

From: \_\_\_\_\_ Date: \_\_\_\_\_

Subcontractor: \_\_\_\_\_

Specification Section: \_\_\_\_\_ Sub-section: \_\_\_\_\_

Product: \_\_\_\_\_

Comply with Specifications: Yes No

Substitution: Yes No If Substitution, Provide Exhibit 22

Reviewed By: \_\_\_\_\_

Submitted to UCM: \_\_\_\_\_

UCM Received: \_\_\_\_\_

Submitted to Design Team/UC Rep. \_\_\_\_\_

Notes: Submittal copy sent via email to:

Item No.	Specification	Description of Material/Shop Drawing	Date	Status

By completing this form the undersigned General Contractor certifies that the material and shop drawings complies with all drawings and specifications of subject contract and the General Contractor has reviewed submittal procedures specified in division 1. Checking is for general conformance with the design concept only. Reviews are subject to all contract requirements. No contract requirements are waived unless specifically noted. General Contractor is responsible for identifying all proposed material substitutions, dimensions, quantities, techniques of construction and coordination with all other trades

EXHIBIT 24  
WASTE MANAGEMENT PLAN  
CONSTRUCTION/MAINTENANCE/ALTERATION AND DEMOLITION PROJECTS

Project Name: \_\_\_\_\_  
Project No.: \_\_\_\_\_  
Name of Company: \_\_\_\_\_  
Contact Person: \_\_\_\_\_  
Telephone: \_\_\_\_\_  
Project Site Location: \_\_\_\_\_  
Project Type: ☐ New Construction ☐ Demolition  
☐ Maintenance/Alteration  
Project Size (in sqft): \_\_\_\_\_

1 Materials	Pre-Project		Project Updates For Period: _____ to _____		
	2 Estimated Generation		3 Recycled/Salvaged/Disposed		4 Disposal Location
	Cubic Yard(s)	Metric Ton(s)	Cubic Yard(s)	Metric Ton(s)	
<b>Total</b>					

\*Attach proposed Recycling & Waste Bin Location plan for approval by University Representative.

Signature \_\_\_\_\_ Title \_\_\_\_\_ Date \_\_\_\_\_

- Column 1: "Material" – Enter materials targeted for recycling and/or salvage and include a category for waste materials requiring disposals
- Column 2: "Estimated Generation" – Enter estimated volumes (cu. yd.) or quantities (metric tons) of recyclable and waste materials generated and state number of salvageable items
- Columns 3: "Recycled/Salvaged/Disposed" – Enter volumes (cu. yd.) or quantities (metric tons) of materials recycled and disposed and state number of items salvaged
- Column 4: "Disposal Location" – Enter end-distribution of recycled, salvaged and disposed materials

EXHIBIT 25  
WASTE MANAGEMENT REPORT  
CONSTRUCTION/MAINTENANCE/ALTERATION AND DEMOLITION PROJECTS

Project Name: \_\_\_\_\_

Project No.: \_\_\_\_\_

Name of Company: \_\_\_\_\_

Contact Person: \_\_\_\_\_

Telephone: \_\_\_\_\_

Project Site Location: \_\_\_\_\_

Project Type: ☐ New Construction ☐ Demolition  
☐ Maintenance/Alteration

Project Size (in sqft): \_\_\_\_\_

Pre-Project	Project Updates		
	For Period: _____ to _____		
1 Materials	3 Recycled/Salvaged/Disposed		4 Disposal Location
	Cubic Yard(s)	Metric Ton(s)	
<b>Total</b>			

Signature \_\_\_\_\_ Title \_\_\_\_\_ Date \_\_\_\_\_

- Column 1: "Material" – Enter materials targeted for recycling and/or salvage and include a category for waste materials requiring disposals
- Column 2: "Recycled/Salvaged/Disposed" – Enter volumes (cu. yd.) or quantities (metric tons) of materials recycled and disposed and state number of items salvaged
- Column 3: "Disposal Location" – Enter end-distribution of recycled, salvaged and disposed materials



## Letter of Instruction

Detailed, Grouped by Each Number

**Student Services Building**

5200 N Lake Rd  
Merced CA 95343

**Project # 900120 - SSB -C**

Tel: 209 228-4479 Fax: 209 228-4468

**University of California, Merced**

**Number: 001**

**Date: 5/9/2012**

**To:**

**From:** University of California, Merced  
Gary Knox  
5200 North Lake Road  
Merced, CA 95343

**Subject****Type****Reason**

Student Services Building

**Location****Reference****Not To Exceed Cost**

0

**Description**

The following information is hereby issued as a clarification or interpretation of the Contract Documents. This is a clarification or interpretation only and not intended to change the scope of the Work, the Contract Sum, or the Contract Time.

**Signature**

**Signed Date**

**Prolog Manager**

Printed on: 5/9/2012

PM2008UCMerced

Page 1 of 1

November 5, 2004  
Revision: 3.1/2.1/1.2  
LF/SF/BF:EX26

Exhibit 26  
Letter of Instruction



**EXHIBIT 27**

**GENERAL CONTRACTOR CLAIM CERTIFICATION**

Pursuant to Article 4.3.3 of the General Conditions, I certify as follows:

1. The Claim to which this certification is attached is made in good faith.
2. Amounts claimed for costs, expenses and damages incurred by General Contractor are accurate and complete. Supporting data for amounts incurred by General Contractor is accurate and complete. Any such supporting data, including any such new amounts, submitted after the execution of this certification, will be accurate and complete.
3. To the best of my knowledge and belief, amounts claimed, and supporting data submitted by General Contractor on behalf of any and all subcontractors or suppliers, of all tiers, or any person or entity under General Contractor, are accurate and complete. General Contractor will not submit, after the date of execution of this certification, any such supporting data, including any such new amounts that, to the best of my knowledge and belief, is not accurate and complete.
4. The amount requested accurately reflects the adjustment of the Contract Sum for which the General Contractor believes the University is liable.
5. Attached hereto is a certification that has been executed by each Subcontractor claiming not less than 5% of the total monetary amount sought by the claim to which this certification is attached.
6. I am duly authorized to certify the Claim on behalf of the General Contractor.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this declaration was executed at: \_\_\_\_\_(Name of City if within a City, otherwise Name of County), in the State of \_\_\_\_\_(State), on \_\_\_\_\_(Date).

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Print Name)

\_\_\_\_\_  
(Name of General Contractor)

**EXHIBIT 28**

**SUBCONTRACTOR CLAIM CERTIFICATION**

Pursuant to Article 4.3.3 of the General Conditions, I certify as follows:

1. The portion of the Claim made on behalf of the Subcontractor to which this certification is attached is made in good faith.
2. Amounts claimed for costs, expenses and damages incurred by the Subcontractor are accurate and complete. Supporting data for amounts incurred by the Subcontractor is accurate and complete. Any such supporting data, including any such new amounts, submitted to Contractor after the execution of this certification, will be accurate and complete.
3. To the best of my knowledge and belief, amounts claimed, and supporting data submitted to Contractor by the Subcontractor on behalf of any and all subcontractors or suppliers to Subcontractor, of all tiers, or any person or entity under Subcontractor, are accurate and complete. Subcontractor will not submit, after the date of execution of this certification, any such supporting data, including any such new amounts that, to the best of my knowledge and belief, is not accurate and complete.
4. The amount requested accurately reflects the amount for which the Subcontractor believes the University is liable to Contractor.
5. I am duly authorized to certify the Claim on behalf of the Subcontractor.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this declaration was executed at: \_\_\_\_\_ (Name of City if within a City, otherwise Name of County), in the State of \_\_\_\_\_ (State), on \_\_\_\_\_ (Date).

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Print Name)

\_\_\_\_\_  
(Name of Subcontractor)

**CONTRACTOR / SUBCONTRACTOR DAILY REPORT**

**Contractor**

**/Subcontractor:** \_\_\_\_\_

**Daily Details**

Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

Temperature: A.M. \_\_\_\_ °F P.M. \_\_\_\_ °F

Weather: \_\_\_\_\_

**Manpower** *(List Quantity)*

Project Managers: \_\_\_\_\_ Other: \_\_\_\_\_

Superintendents: \_\_\_\_\_ Other: \_\_\_\_\_

Non-Working

Foremen: \_\_\_\_\_ Other: \_\_\_\_\_

Working Foremen: \_\_\_\_\_ Other: \_\_\_\_\_

Journeyman: \_\_\_\_\_ Other: \_\_\_\_\_

Apprentices: \_\_\_\_\_ Other: \_\_\_\_\_

Laborers: \_\_\_\_\_ Other: \_\_\_\_\_

**Subcontractors on Site:** \_\_\_\_\_

**Work Performed in Each**

**Area:** \_\_\_\_\_

**Equipment  
Rented/Used:**

---

---

---

**Shortages/Discrepancies  
of Delivered Materials:**

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---

---

**Delays/Problems:**

---

---

---

**Unsafe or Hazardous  
Conditions:**

---

---

---

**Questions:**

---

---

**Last Safety Meeting**

Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

Topic: \_\_\_\_\_

**Number of Additional Sheets Attached:** \_\_\_\_\_

**Signed:** \_\_\_\_\_

STUDENT SERVICES BUILDING  
UNIVERSITY OF CALIFORNIA, MERCED  
MERCED, CALIFORNIA

PROJECT NO.: 900120

**Printed Name:**

**Title:**

# HOT WORK PERMIT

**BEFORE INITIATING HOT WORK, ENSURE PRECAUTIONS ARE IN PLACE!**  
**MAKE SURE AN APPROPRIATE FIRE EXTINGUISHER IS READILY AVAILABLE!**

This Hot Work Permit is required for any operation involving open flames or producing heat and/or sparks. This includes, but is not limited to: Brazing, Cutting, Grinding, Soldering, Thawing Pipe, Torch-Applied Roofing, and Cadwelding

## INSTRUCTIONS

1. Verification below is to be completed by a qualified person.
2. The completed original is to be presented to the inspector prior to commencing work.
3. Must also be submitted to C.M. 24 hours before work is started to insure proper notifications are made.

### HOT WORK BEING DONE BY:

☐ UCM Employee

☐ Contractor: \_\_\_\_\_

Date: \_\_\_\_\_ W.O.# \_\_\_\_\_

Start Time: \_\_\_\_\_

Location / Building / Floor \_\_\_\_\_

Nature of Job / Object \_\_\_\_\_

Name of Person Doing Hot Work \_\_\_\_\_

I verify the above location has been examined, the precautions checked on the Required Precautions Checklist have been taken to prevent fire, and permission is authorized for work.

Signed: \_\_\_\_\_

Permit	Date	Time
Expires		AM PM

Fire Detection      Disabled      Reactivated

Date / Time      \_\_\_\_\_

Initial:      \_\_\_\_\_

**THIS PERMIT IS GOOD FOR  
ONE DAY ONLY**

Ref: -

Inspection No. -

## REQUIRED PRECAUTIONS CHECKLIST

- ☐ Automatic Fire Detection Disabled?
- ☐ Available sprinklers, hose streams, and extinguishers are in service/operable?
- ☐ Hot work equipment is in good repair?

### Requirements within 10 m (35 feet) or work:

- ☐ Flammable liquids, dust, lint, and oil deposits removed?
- ☐ Explosive atmosphere in area eliminated?
- ☐ Floors swept clean?
- ☐ Combustible floors wet down, covered with damp sand or fire-resistant sheets?
- ☐ Remove other combustibles where possible. Otherwise protect with fire-resistant tarpaulins of metal sheets?
- ☐ All wall and floor openings covered?
- ☐ Fire-resistant tarpaulins suspended beneath work?

### Work on walls or ceiling / enclosed equipment:

- ☐ Construction is non-combustible and without combustible covering or insulation?
- ☐ Combustibles on other side of walls moved away?
- ☐ Danger exists by condition of heat into another area?
- ☐ Enclosed equipment cleaned of all combustibles?
- ☐ Containers purged of flammable liquids/vapors?

### Fire Watch / Hot Work area monitoring:

- ☐ Fire watch will be provided during and for 30 minutes after work, including any coffee or lunch breaks?
- ☐ Fire watch is supplied with suitable extinguishers?
- ☐ Fire watch is trained in use of this equipment? And is sounding alarm?
- ☐ Fire watch may be required for adjoining areas, above and below?
- ☐ Monitor hot work area 30 minutes after job is completed.

### Other precautions taken:

- ☐ Confined space entry permit required?
- ☐ Area protected with smoke or heat detection?
- ☐ Ample ventilation to remove smoke/vapor from work area?
- ☐ Lockout / tagout required?

Student Services Building  
University of California Merced  
Project No. 900120

EXHIBIT 30 – WELDING/HOT WORK PERMIT

# Requests for Inspections and/or Tests

Initial Inspection No.: \_\_\_\_\_ (CM)

Student Services Building  
5200 N Lake Rd

Project No.: 900120  
Tel: 209-228-4612

University of California – Merced  
Fax: 209-228-7664

Date of Request: \_\_\_\_\_

Person Accompanying  
Inspector: \_\_\_\_\_

Date of Inspection: \_\_\_\_\_

Cell Phone: \_\_\_\_\_

Installing Company: \_\_\_\_\_

Requested  
Time: \_\_\_\_\_ Reference # \_\_\_\_\_

## Description

## System / Discipline

## Location – Items to Be Inspected

## Quality Control

Verified by: \_\_\_\_\_ on \_\_\_\_\_ (date).

## IOR's Observations

### Items Passed

### Items Failed

Signature

Signed Date



PHYSICAL PLANNING, DESIGN & CONSTRUCTION

UNIVERSITY OF CALIFORNIA, MERCED  
5200 N. Lake Road  
Merced, CA 95340  
209- 228-4479 fax 209- 228-4468

**Student Services Building # 900120**  
INDOOR ENVIRONMENTAL QUALITY CREDITS 3.1 & 3.2  
CONSTRUCTION IAQ MANAGEMENT PLAN

I. INTRODUCTION

1. Purpose and Scope

- This Construction IAQ Management Plan (CIAQMP) establishes guidelines to prevent indoor air quality problems during the construction process in order to help sustain the comfort and well being of construction workers and building occupants of the University of California, Student Services Building Project No. 900120. The CIAQMP addresses issues and practices that help minimize contamination of the building from construction activities.
- The provisions set forth in this CIAQMP shall apply to The Universities Prime Trade Contractors and any of their subcontractors working on the Student Services Building project site. All parties involved in the execution of Construction shall receive and read a copy of this plan prior to entering the work area. If changes in the site or working conditions require changes in the indoor air quality management procedures, appropriate amendments will be made.

II. CONSTRUCTION INDOOR AIR QUALITY MANAGEMENT PLAN

The prime trade contractor will implement the following IAQ control measures during construction, as recommended in the SMACNA IAQ Guidelines for Occupied Buildings under Construction, Chapter 3.

1. HVAC Protection

- Construction dust and debris should be prevented from entering ductwork and spaces. The following HVAC protection requirements generally apply to either the return side, central filtration, or supply side of the system.
- The return side of the HVAC system is to be shut down and sealed off completely with plastic during activities that produce high dust or pollution are underway. These activities may be drywall sanding, concrete cutting, wood sawing, and insulating.
- When the HVAC system needs to be operated during construction, install Temporary minimum Merv 8 filters, and replace them with new clean media just prior to occupancy.
- During construction, diffusers and window units should also be sealed in plastic for protection. Upon completion of work they should be inspected for dust deposits and cleaned as needed.

2. Source Control

- In attempts to control pollution, the use of low-emitting paints, finishes, sealants, adhesives, and carpeting, have been detailed in the Project specifications.





## PHYSICAL PLANNING, DESIGN & CONSTRUCTION

UNIVERSITY OF CALIFORNIA, MERCED  
5200 N. Lake Road  
Merced, CA 95340  
209- 228-4479 fax 209- 228-4468

- If there is a need to use alternative products, a substitution request is to be submitted for review of compliance with volatile organic compounds (VOC) requirements.
- Any cleaning products used on site should have low VOC content or be nontoxic to minimize building contamination.
- Idling of motor vehicles near buildings where emissions could be drawn into occupied areas is strictly prohibited.
- Whenever possible, pollution sources should be directly exhausted to the outside with the use of a portable fan vented to the outside.
- Containers will be kept closed as much as possible to reduce emissions. Waste materials will also be covered or sealed to reduce release of odors or dust.

### 3. Pathway Interruption

- Interruption of potential contaminant pathways will be done to prevent dust and other contaminants from migrating from work site to clean or occupied areas.
- Dust curtains will be used to isolate construction activities.
- Pollutant sources will be located as far away as possible from supply ducts and areas occupied by workers when feasible.
- Depressurize areas where hazardous work is occurring.

### 4. Housekeeping

- Site cleaning is important in maintaining indoor air quality during construction.
- All materials will be stored neatly and on elevated platforms, under cover, and in a clean dry location. Materials not stored in an enclosed location will have tops and sides securely covered with waterproof sheeting.
- Protect stored and installed porous/absorptive materials from moisture.
- Cleaning will be done frequently to remove construction dust and debris.
- Spills or excessive applications will be cleaned up promptly.
- Work areas will be kept as dry as possible to discourage the growth of mold and bacteria.

### 5. Scheduling

- Sequencing of construction materials installation has been set up to minimize absorption of VOCs by porous building materials. Install high-VOC/offgassing materials (VOC sinks). materials prior to installation of soft Occupancy of the buildings is not expected until construction completion.

### 6. Flush-out

- Throughout construction and prior to occupancy, MERV 13 filters will be installed for use with outdoor air filtration media.
- All filtration media will be replaced prior immediately prior to occupancy.
- After construction ends and prior to occupancy, a building flush out will be performed per LEED-NC version 2.2 OPTION 1 of EQ Credit 3.2.



PHYSICAL PLANNING, DESIGN & CONSTRUCTION

UNIVERSITY OF CALIFORNIA, MERCED  
5200 N. Lake Road  
Merced, CA 95340  
209- 228-4479 fax 209- 228-4468

### III. IMPLEMENTATION/DOCUMENTATION OF THE CIAQMP

#### 1. Meetings

- Prior to construction, UC Merced will conduct a meeting with the foremen From the Prime Trade Contractors on site, and discuss indoor air quality management methods listed in the CIAQMP. Each of the foremen will receive a copy of the CIAQMP. All procedures outlined in this plan will be monitored, in the event a facility or procedure is not found to be in compliance, the responsible parties will be instructed to correct the deficiency. Jobsite foremen will convey pertinent information acquired in this meeting to field personnel at weekly safety meetings.
- UC Merced shall identify an IAQ management coordinator and other personnel with IAQ management responsibilities.

#### 2. LEED Documentation Submittals

UC Merced will complete the documentation required for LEED (Leadership in Energy and Environmental Design) v2.2 certification, including:

- LEED Letter Templates for credits EQ 3.1 & EQ 3.2 filled out and signed by UC Merced declaring that this Construction Management Plan has been implemented for the project.
- A list of each air filter used during construction (MERV of 8) and at the end of construction (MERV of 13). List the MERV value, manufacturer name and model number for each filter.
- 18 photographs (6 photographs taken on 3 different occasions during construction), documenting adherence to the CIAQMP. Photographs will document the manufacturing and site delivery process, the installation, protection and housekeeping activities, and the flushing and re-filtering of systems. The photographs will be date stamped and will include a description identifying the SMACNA approach featured by each photograph. Photographs will be submitted to the Architect for approval.
- Brief description of how each of the SMACNA approaches were employed on the project.
- Manufacturer cut sheets for each air filter used, with the MERV values highlighted/circled.
- Any additional documentation as requested by the U.S. Green Building Council during the LEED application and audit process.

**SECTION 01 12 00.02  
SUMMARY OF WORK**

**PART 1 - GENERAL**

**1.1 WORK REQUIRED BY CONTRACT DOCUMENTS**

- A. Scope of Work: The work to be done includes all labor, tools and equipment necessary to furnish and install all materials and equipment shown on the drawings and described herein and to perform tests described herein, to provide complete and operating systems to the extent specified and shown on the Drawings. The Prime Trade Contractor shall furnish all equipment, material and supplies, except where specifically noted as existing or as supplied by The University. The University is the Regents of the University of California.
- B. The new Student Services Building (SSB) at UC Merced is a 34,583gsf facility that sits on a one-acre triangular site. The SSB complex is comprised of two structures, a one-story pavilion building (6,004gsf) fronting onto Scholars Lane, and a 3-story building (28,579gsf) that is parallel to Ansel Adams Road. The building is classified as Type II, B construction, non-rated, fully sprinklered. The one story pavilion houses two large, 120-seat general assembly spaces on level one. The three story building houses two, 90-seat student services suites on level one, offices on level two, and open floor plan student services suites on level three. Both buildings are steel construction with lateral braces, and are clad in a combination of aluminum and glass storefront, aluminum strip windows and insulated, exterior lath and plaster wall assembly. The exterior circulation corridors and associated stairways on the 3-story building are steel construction as well. Mechanical equipment for both buildings is housed on each individual roof and is shielded by a rooftop mechanical screen.

**1.2 PROJECT PHASING**

- A. Work Phases: The project will be delivered in two phases with Substantial Completion of the Pavilion Building by July 15, 2013 and Substantial Completion of the entire project by December 15, 2013.

**1.3 SCOPE OF WORK – SPECIFICATIONS**

Furnish all labor, material, equipment, taxes and supervision necessary to perform all requirements of the following specification sections in complete accordance with the Contract Documents:

- .1 Section 10 14 40 – Signage
- .2 Section 10 14 40.01 – Interior Signage Schedule by Door Number
- .3 Section 10 14 40.02 – Interior Signage Schedule by Sign Type

**1.4 SCOPE OF WORK - GENERAL**

Prime Trade Contractor also includes, but is not limited to, the following general items required for Prime Trade Contractor's work:

1. Permits, licenses and fees associated with this trade's business as required for this Scope of Work.
2. Shop drawings, manufacturer's data, and samples.
3. Receiving, unloading and protecting supplies and material.
4. Hoisting, staging, loading, unloading and coordinating with other Prime Trade Contractors.
5. Scaffolding, ladders, rolling staging, etc., unless specifically excluded below.
6. Work areas to be left broom clean on a daily basis. Clean up of general construction debris to University's general dumpster on a daily basis. If necessary, one person from each Prime Trade Contractor will be assigned to a composite clean up crew supervised by University's Representative every Wednesday. This will be strictly enforced, and any Prime Trade Contractor not providing labor will be charged for the clean up by the University on a monthly basis. Only building construction contractors onsite will be required for composite clean up.
7. Temporary support for own work. Temporary construction water will be provided on site. Protect all water connections to source from leaking and tripping hazards. Temporary electricity source will be provided by University.
8. Welding and temporary power for welding.
9. Lifting, staging, storage and transportation of own personnel, materials and equipment.
10. Multiple mobilizations, shift work and/or weekend work as required to meet this Scope of Work and Preliminary Prime Trade Contractor Schedule and Preliminary Master Schedule.
11. Protection of work to prevent damage until accepted by University
12. Export to campus stockpile within a one mile radius all excavated spoils generated, unless specifically excluded below.
13. Coordinate the work in this section with all separate Prime Trade Contractors as required.
14. Schedule and coordinate all inspections and testing required.
15. The University will provide limited vertical and horizontal control as described in Section 01 71 23 – Field Engineering. Prime Trade Contractor shall include all additional surveying and layout as required for this Scope of Work.
16. Permits, fees and authorizations from appropriate agencies for the delivery, set up and use of Prime Trade Contractor's crane and equipment on the project.
17. Onsite Superintendent, Foreman or Project Manager must have a cellular phone to allow the University's Representative to contacto them during construction hours. Provide the phone numbers of two persons that can respond to emergencies 24 hours a day.
18. Streets must be kept continuously clean during and after staging and matieral deliveries while Prime Trade Contractor is on site.

19. Relocate temporary construction services as required to perform this scope of work to locations approved by University's Representative; i.e.. toilets, fencing, barriers, etc.
20. When using scaffolding and or temporary stairs provided by separate contractors, provide all waivers of liability and indemnification as required by separate contractors as regards scaffolding and/or temporary stairs.
21. When using any manufacturer or product which is not listed first or as the Basis of Design in the specifications, include all additional impact costs such as field coordination, required modifications by separate contractors, redesign for Architect/Engineer, and similar costs as specified in Section 01 25 00-Product Options and Substitutions.
22. The Prime Trade Contractor receiving material deliveries shall provide all necessary personnel, flagmen, barricades, cones, ribbons, Traffic Police escorts, and the like to keep the streets, parking lot and lay down yard continuously safe and clean during and after staging of material deliveries. Special provisions shall be arranged by the University's Representative should any prolonged blockage be necessary of any Emergency Access Route. No long term and or overnight storage in this zone will be allowed. Materials/equipment left in this area will be removed at the contractor's expense.
23. Prime Trade Contractor shall be sole responsible for safe work practices regarding lock out tag out. The Prime Trade Contractor shall check all utilities are in a safe condition before proceeding with any work. The University's Representative or personnel employed by the University shall assist in the PTC shutting down water, electrical, fire sprinkler, etc., but the PTC retains the final and sole responsibility for providing a safe work environment for its workers and supervisions on a daily (or hourly as required) basis.
24. On-site portable toilets and sanitary wash stations with regular cleaning and service will be provided. Each Contractor to keep in their own control additional toilet paper, hand towels and sanitary hand wipes, etc. for their crew's use in the event replacement/service is lacking by the toilet provider.
25. No eating inside of buildings – eat only in designated lunch areas. Provide clean up of all food waste and trash immediately after eating.
26. No AM/FM radios, CD players, iPods, MP3 players, iPhone, head phones or ear buds of any type, etc., on site.
27. Prime Trade Contractor must pay for own parking.
28. Prime Trade Contractors are responsible for disposal and recycling of materials per LEED requirements to dumpsters provided by others.
29. The Jobsite is adjacent to ongoing campus activities. Due to noise constraints, work hours are from 7:00AM to 5:00PM on weekdays. All work is to be performed with minimal interruption to campus activities. Weekend work must be pre-approved by the University.
30. Coordinate and provide submittals, submittal schedule, including shop drawings, manufacturer's data, samples, mockups, as-builts documents as specified. Coordination of each Prime Trade Contractor's work scope is required to be done between all Prime Trade Contractors.
31. Provide all project record documents, including as-builts, warranty and guarantee as required per contract documents. Provide weekly update of as-builts documents onto Construction Manager's plan set. IN no case shall work be covered prior to as-builts updates. Prime Trade Contractor to provide

transparancies, CADD Files, etc., and transfer all weekly as-built information, including RFI's to these documents as required by contract documents.

32. Task lighting for own work.

33. Welding and temporary power for welding. Submit welder's certifications. Responsible for providing welding procedures. All on site welding shall be done with OSHA approved protective shields, and shields must be in place prior to start of welding work. Shields are required to protect the general public and onsite workers from direct eye contact to welder's arc and keep welding slag spotter confined to the designated welding area.

34. Safety requirements for own work. OSHA approved personal protective safety equipment such as hard hats, work shoes, gloves, goggles, masks, vests, harnesses, etc. shall be worn by all Prime Trade Contractors personnel and 3<sup>rd</sup> party delivery men at all times when on project site.

35. Multiple move-ons as required to meet this Scope fo Work and the Prime Trade Contractor Schedule and Primary Master Schedule.

36. Each Prime Trade Contractor is responsible to provide backing, head out, wall or ceiling opening layout requirements to other Prime Trade Contractors. Failure to communicate these requirements to other Prime Trade Contractors will transfer the responsibility for these items back to the initial Prime Trade Contractor.

37. Schedule and coordinate all inspections and testing required for own work. Copy Construction Manager on all communications with Inspectors. Provide timely notice, not to delay work. Cost of re-inspection due to non-compliant work shall be the responsibility of the Prime Trade Contractor.

38. A minimum of one Superintendent/Foreman is required for duration of own work on project. Superintendent/Foreman must be on site when work is performed. Superintendent/Foreman may not be changed without Construction Manager's approval. Subcontractors are to be supervised by Prime Trade Contractor Superintendent/Foreman. No exceptions.

39. No smoking within perimeter of building.

40. This Scope of Work is written to complement the Plans and Specifications and does not modify any portion of the Plans and Specifications unless specific scope item states to modify Plans or Specifications by using the word "modify" or "change" or "disregard".

41. Some scopes of work overlap the scopes of work of other contractors. This does not absolve either contractor of their obligation to complete their scope of work. In all cases of dispute, the Owner and/or Construction Manager shall have the final decision as to responsibility and/or payment allocation.

42. Contractors are required to attend mandatory pre-installation meetings prior to commencement of work.

43. Prime Trade Contractor is to contact Underground Service Alert prior to commencing any undergrounding trenching and/or shoring/excavation: (800) 227-2600.

#### 1.5 SCOPE OF WORK - SPECIFIC

1. Provide all material, equipment, fabrication and installation required for the following:
  - a. Interior Room Identification Signs
  - b. Illuminated Exterior Building Monument Sign

- c. Interior Wall-Mounted LEED Display Sign

1.6 FINAL COMPLETION

- A. Final Completion shall be applicable to the entire work as required by Article 4 of the Contract Agreement.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01 12 00.029

**SECTION 01 25 00**  
**PRODUCT OPTIONS AND SUBSTITUTIONS**

**PART 1 - GENERAL**

- 1.1 GENERAL PROVISIONS REGARDING SPECIFICATION OF PRODUCTS, MATERIAL OR EQUIPMENT BY BRAND OR TRADE NAME.
- A. Products, material or equipment specified by both brand or trade name and model number are approved for use, provided the General Contractor complies with all Contract requirements. Specification of a product, material or equipment by brand or trade name and model number is not a representation or warranty that the product, material or equipment can be used without modification, to meet the requirements of the plans and specifications; General Contractor shall, at its sole cost, modify such products, material, or equipment so that they comply with all requirements of the plans and specifications.
  - B. The first-named product, material or equipment specified by brand or trade name and model number is the basis for the Project design and the use of any item other than the first-named one may require modifications of that design. If General Contractor uses any product, material or equipment other than the first-named one, General Contractor shall, at its sole cost:
    - 1. Make all revisions and modifications to the design and construction of the Work necessitated by the use the product, material or equipment.
    - 2. Be responsible for all costs of any changes resulting from the use of the product, material or equipment including without limitation, costs or changes which affect other parts of the Work, the work of Separate Contractors, or any other property or operations of the University.
  - C. When a product, material or equipment specified by brand or trade name is followed by the words "or equal," a substitution may be permitted if the substitution is equal to or superior to the first-named product, material or equipment in quality, utility and appearance and if the substitution complies with all other requirements of the plans and specifications.
  - D. A product, material or equipment specified by brand or trade name followed by the words "or equal, no known equal," signifies that University does not have sufficient knowledge to specify a product, material or equipment, other than the one specified by brand or trade name, that is suitable for use on the Project. The use of the words "no known equal" is not intended to discourage substitution requests in accordance with the requirements specified herein.
  - E. When catalog numbers and specific brands or trade names not followed by the designation "or equal" are used in conjunction with a product, material or equipment required by the specifications, substitutions will not be allowed and the named product, material or equipment must be used.
  - F. Specification of a product, material or equipment by brand or trade name and model number is not a representation or warranty that the product, material or equipment is available; General Contractor should confirm, prior to submitting its Bid, the availability



of any product, material or equipment specified by brand or trade name and model number.

- G. **COMPLETE AND ACCEPTABLE SUBSTITUTION SUBMITTALS SHALL BE DELIVERED TO THE UNIVERSITY'S REPRESENTATIVE NO LATER THAN 35 DAYS FROM THE NOTICE TO PROCEED. SUBMITTALS MAY BE REQUIRED SOONER THAN 35 DAYS IF THE NOTICE TO PROCEED WAS DELAYED BY THE GENERAL CONTRACTOR OR IF REQUIRED BY EARLY ACTIVITIES INDICATED ON THE PRELIMINARY MASTER PROJECT SCHEDULE.**

1.2 **SPECIAL REQUIREMENTS FOR PRODUCTS, MATERIAL OR EQUIPMENT, OTHER THAN THE FIRST-NAMED PRODUCT, MATERIAL OR EQUIPMENT, SPECIFIED BY BOTH BRAND OR TRADE NAME AND MODEL NUMBER.**

- A. In addition to complying with all other submittal requirements of the Contract, submit within 5 days after the date of commencement specified in the Notice to Proceed, for review and approval by the University's Representative, General Contractor prepared specifications and drawings, including design and engineering calculations, prepared by an appropriate licensed professional, depicting all revisions and modifications to the design and construction of the Work necessitated by the use of the product, material or equipment. If no revisions or modifications are necessary, submit within 5 days after the date of commencement specified in the Notice to Proceed, a written representation that no revisions or modifications to the design or construction of the Work are necessitated by the use of the product, material or equipment. General Contractor shall utilize the first-named product, material or equipment if General Contractor fails to make the appropriate required submittal pursuant to this paragraph within the 5-day period.
- B. A product, material or equipment, other than the first-named product, material or equipment, specified by both brand or trade name and model number may be used if no revisions or modifications to the design or construction of the Work are necessitated by the use of the product, material or equipment. If such revisions or modifications are necessary, the product, material or equipment may be used only if the revisions or modifications are approved in writing by the University's Representative. General Contractor has the burden of demonstrating, through the procedures specified herein, that any such revisions or modifications will not be detrimental to the quality, utility or appearance of the Project or any portion of the Project. The University's Representative may refuse to approve any such proposed revisions or modifications where, in the reasonable opinion of the University's Representative, General Contractor has failed to demonstrate, through the procedures specified herein, that the revisions or modifications are not detrimental to the quality, utility or appearance of the Project or any portion of the Project.

1.3 **SPECIAL REQUIREMENTS FOR SUBSTITUTIONS.**

- A. In addition to complying with all other submittal requirements of the Contract, submit written data demonstrating that the proposed substitution is equal to or superior to the first-named product, material or equipment in quality, utility and appearance and otherwise complies with all requirements of the plans and specifications, including:

1. Complete technical data including drawings, performance specifications, samples, and test reports of the article proposed for substitution.
  2. Statement by General Contractor that the proposed substitution is in full compliance with the requirements of the Contract Documents and Applicable Code Requirements.
  3. List of Subcontractors, if any, that may be affected by the substitution.
  4. General Contractor prepared specifications and drawings, including design and engineering calculations, prepared by an appropriately licensed professional, depicting all revisions and modifications to the design and construction of the Work necessitated by the use of the substitution. If no revisions or modifications are necessary, submit a written representation that no revisions or modifications to the design or construction of the Work are necessitated by the use of the product, material or equipment.
- B. At the request of and within the timeframes specified by the University's Representative:
1. Submit samples as deemed necessary by the University's Representative to evaluate the proposed substitution.
  2. Submit proposed substitution to tests deemed necessary by the University's Representative to evaluate the proposed substitution. Such tests shall be made by an independent Testing Laboratory and at the sole expense of General Contractor, after review and approval of the test procedures by University's Representative. If re-testing is deemed necessary by the University's Representative to evaluate the proposed substitution, such re-testing shall be made by an independent Testing Laboratory at the sole expense of the General Contractor.
  3. Provide any additional information deemed necessary by the University's Representative to evaluate the proposed substitution.
- C. If University's Representative, in reviewing a proposed substitution, requires revisions or corrections to be made to previously accepted shop drawings and supplemental supporting data to be resubmitted, General Contractor shall do so within the time period specified by the University's Representative. A proposed substitution may be rejected if General Contractor fails to submit such revisions, corrections, or supplemental supporting data within the specified time period.
- D. Except for products, material or equipment designated in the Bidding Documents for evaluation of substitutions prior to award, requests for substitution, including the data required by Paragraph 1.3.A, must be submitted to the University's Representative not later than 35 days after the date of commencement specified in the Notice to Proceed. No requests for substitutions of products, material or equipment subject to the 35-day deadline shall be considered unless the request and supporting data is submitted on or before the deadline, except those deemed, in University's Representative's sole opinion, to be necessary because (i) previously specified or approved manufactured products, material or equipment are no longer manufactured, (ii) of University initiated change orders, or (iii) it is in the best interest of University to accept such substitution.
- E. If a product, material or equipment is designated in the Bidding Documents for evaluation of substitutions prior to award, then a request for substitution of the product, material or equipment, including the data required by Paragraph 1.3.A, must be submitted

by the deadline specified in the Bidding Documents. Because of time constraints, only one submittal will be allowed for each such substitution request. Requests for substitutions of products, material or equipment designated for evaluation prior to award may not be made after the deadline specified in the Bidding Documents, and such requests shall not be considered unless the request and supporting data is submitted on or before the deadline specified in the Bidding Documents. Notwithstanding the foregoing, the University may consider, after award of the Contract, requests for substitution of a product, material or equipment designated for evaluation prior to award where, in University's Representative's sole opinion, a substitution is necessary because (i) previously specified or approved manufactured products, material or equipment are no longer manufactured, (ii) of University initiated change orders, or (iii) it is in the best interest of University to accept such substitution.

- F. In reviewing the supporting data submitted for substitutions, University's Representative will use, for purposes of comparison, all the characteristics of the specified material or equipment as they appear in the manufacturer's published data even though all the characteristics may not have been particularly mentioned in the Specifications. If more than 2 submissions of supporting data are required, the cost of reviewing the additional supporting data shall be at General Contractor's expense.
- G. General Contractor has the burden of demonstrating, through the procedures specified herein, that its proposed substitution is equal to or superior to the first-named product, material or equipment in quality, utility and appearance and complies with all other requirements of the plans and specifications. If revisions or modifications to the design or construction of the work are necessitated by the use of the substitution, General Contractor also has the burden of demonstrating, through the procedures specified herein, that the use of the substitution will not be detrimental to the quality, utility or appearance of the Project or any portion of the Project.
- H. The University's Representative may refuse to approve any requested substitution where, in the reasonable opinion of the University's Representative, General Contractor has failed to demonstrate, through the procedures specified herein, that the proposed substitution is equal to, or superior to, the first-named product, material or equipment, in quality, utility and appearance and that the proposed substitution complies with all other requirements of the plans and specifications.
- I. University's Representative may reject any substitution not proposed in the manner and within the time limits prescribed herein.
- J. Substitutions are not allowed unless approved in writing by the University's Representative. Any such approval shall not relieve General Contractor from the requirements of the Contract Documents.
- K. The 35-day and 5-day submittal periods do not excuse General Contractor from completing the Work within the Contract Time or excuse General Contractor from paying liquidated damages if Final Completion is delayed.
- L. If revisions or modifications to the design or construction of the Work are necessitated by the use of a substitution, the substitution may be used only if the revisions and modifications are approved in writing by the University's Representative. The

University's Representative may refuse to approve any such proposed revisions or modifications where, in the reasonable opinion of the University's Representative, General Contractor has failed to demonstrate, through the procedures specified herein, that the revisions or modifications are not detrimental to the quality, utility and appearance of the Project or any portion of the Project.

- M. If a substitution request is finally rejected by the University Representative, General Contractor shall furnish and install:
1. the first-named product, material, or equipment; or
  2. a product, material, or equipment, other than the first-named product, material or equipment, specified by both brand or trade name and model number, provided General Contractor complies with the submittal requirements (including deadlines) of subsection 1.2 above.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION 01 25 00

**SECTION 01 26 13**  
**REQUESTS FOR INFORMATION**

**PART 1 - GENERAL**

**1.1 SUMMARY**

- A. This section contains the procedures to be followed by the General Contractor for submitting requests for clarification or additional information.

**1.2 PROCEDURES**

- A. Notification by the General Contractor:
1. Submit all requests for clarification and/or additional information in writing to the University's Representative using the Request for Information (RFI) form (Exhibit 17).
  2. RFI's not completely and correctly filled out by the General Contractor will not be answered. Impacts to the Project arising from the General Contractor's failure to properly submit RFI's are the General Contractor's sole responsibility.
  3. Number RFI's sequentially. Submit a new RFI for each new question. Follow RFI number with sequential alphabetical suffix as necessary for each resubmission. For example, the first RFI shall be '001.' The second RFI shall be '002.' The first resubmittal of RFI 002 shall be '002A.'
- B. Limit each RFI to one subject and one subject only. RFI's addressing more than one subject will not be answered.
- C. Submit RFI's if one of the following conditions occur:
1. General Contractor discovers an unforeseen condition or circumstance that is not described in the Contract Documents.
  2. General Contractor discovers an apparent conflict or discrepancy between portions of the Contract Documents that appears to be inconsistent or is not reasonably inferred from the intent of the Contract Documents.
  3. General Contractor discovers what appears to be an omission from the Contract Documents that cannot be reasonably inferred from the intent of the Contract Documents.
- D. Non Compliant RFI's
1. RFI's will not be recognized or accepted if, in the opinion of the University's Representative, one of the following conditions exist:
    - a. The General Contractor submits the RFI as a request for substitution.
    - b. The General Contractor submits the RFI as a submittal.
    - c. The General Contractor submits the RFI under the pretense of a Contract Documents discrepancy or omission without thorough review of the Documents.
    - d. The General Contractor submits the RFI in manner that suggest that specific portions of the Contract Documents are assumed to be excluded or by taking an isolated portion of the Contract Documents in part rather than whole.
    - e. The General Contractor submits an RFI in an untimely manner without proper coordination and scheduling of Work or related trades.

2. If over 10% of the RFI's received from the General Contractor are found to fall into these categories, the General Contractor will be back charged the cost to the University of the additional effort required to respond to these inappropriate questions. Such back charges may include expenses incurred by the University's Design Professional as determined by the University's Representative. Said back charges will be deducted from the Contract Sum.

## PART 2 - PRODUCTS (NOT USED)

## PART 3 - EXECUTION

### 3.1 Requests for Information

- A. General Contractor shall ask for any clarification or request for information immediately upon discovery. General Contractor shall submit RFI's in a reasonable time frame so as not to affect the project schedule while allowing the full response time described below. RFI's shall include:
  1. Specification Section or Drawing Number and Detail impacted.
  2. Address impacts to schedule and cost.
  3. Suggest possible solutions to fit field conditions, if appropriate.
- B. Response Time:
  1. The University's Representative, whose decision will be final and conclusive, shall resolve such questions and issue instructions to the General Contractor within a reasonable time frame. In most cases, RFI's will receive a response within 14 days. In some cases, this time frame may need to be lengthened for complex issues, or shortened for emergency situations, as mutually agreed in writing between the University's Representative and the General Contractor.
  2. Should the General Contractor proceed with the Work affected before receipt of a response from the University's Representative, any portion of the Work which is not done in accordance with the University's Representative's interpretations, clarifications, instructions, or decisions is subject to removal or replacement and the General Contractor shall be responsible for all resultant losses.
- C. Failure to Agree: In the event of failure to agree as to the scope of the Contract requirements, the General Contractor shall follow procedures set forth in the General Conditions.

END OF SECTION 01 26 13

**SECTION 01 31 00**  
**PROJECT COORDINATION**

**PART 1 - GENERAL**

**1.1 COORDINATION REQUIREMENTS**

- A. General Contractor shall coordinate the Work and shall not delegate responsibility for coordination to any Subcontractor.
  - 1. General Contractor shall anticipate the interrelationship of all Subcontractors and their relationship with the Work.
  - 2. General Contractor shall resolve differences or disputes between Subcontractors concerning coordination, interference, or extent of the Work between Sections.
  - 3. General Contractor shall coordinate the Work of Subcontractors so that portions of the Work are performed in a manner that minimizes interference with the progress of the Work.
  - 4. General Contractor shall not obstruct spaces and installations that are required to be clear by Applicable Code Requirements.
  - 5. General Contractor shall not cover any piping, wiring, ducts, or other installations until they have been inspected and approved and required certificates of inspection issued.
  - 6. General Contractor shall remove and replace all Work that does not comply with the Contract Documents. Repair or replace any other Work or property damaged by these operations with no adjustment of Contract Sum.
  - 7. General Contractor shall coordinate all portions of the Work requiring careful coordination in order to fit in space available. Before commencing such portions of the Work, prepare supplementary drawings for review by the University's Representative.
  - 8. General Contractor shall ensure that anchorage, blocking, joining, and other detailing are provided as required.
- B. Electrical and Mechanical Coordination
  - 1. Routing and Coordination of overhead Mechanical, Fire Sprinkler, Plumbing and/or Electrical Installations
    - a. General Contractor shall schedule and coordinate the Work of all Mechanical, Fire Sprinkler, Plumbing, Electrical and Technology Subcontractors having installation responsibilities within the ceiling space, with respect to the sequence of Work and the allocation of space among the trades. The planned sequence of Work in such areas and any proposed departure from it affecting or potentially affecting coordination of the overall installation shall be brought promptly, in writing, to the attention of the University's Representative.
    - b. The General Contractor and above named Subcontractors, with assistance from the Drywall Subcontractor, shall participate in the preparation of a coordinated 3-D Building Information Model (BIM) of the overhead mechanical, electrical, technology, fire protection and plumbing utilities demonstrating how these utilities will fit within the designated ceiling and vertical shaft spaces. These utilities will be fully

- coordinated one with the other as well as with architectural and structural components of the building. The Drywall Subcontractor will provide input as to location of king studs and other wall and ceiling components which potentially impact placement of utilities. This effort shall be in accordance with the Coordination Process Article of the Instructions to Bidders. The Structural Steel Subcontractor shall provide a 3-D model of their work based on their approved shop drawings. Verify this scope.
- c. Should unavoidable conflicts be encountered during the preparation or review of the Shop Drawings, or during construction, they shall be promptly brought to the attention of the University's Representative, in writing, for resolution.
  - d. Where the Drawings are diagrammatic, showing only the general arrangement of the systems, General Contractor shall have responsibility for the fitting of materials and equipment to other parts of the equipment and structure, and to make adjustments as necessary or required to resolve space problems, preserve service room, and avoid architectural and structural elements and the Work of other trades. General Contractor may be required to identify certain areas to relocate installations within the spaces depicted on the Drawings, e.g., ductwork may be shifted within the space shown to accommodate other systems. Such functional relocations shall not be deemed a change to the requirements of the Contract. In the event a major re-routing of a system appears necessary, General Contractor shall prepare and submit for approval, Shop Drawings of the proposed rearrangement.
  - e. Because of the diagrammatic nature and small scale of the Drawings, all necessary offsets, adjustments, and transitions required for the complete installation are not shown. General Contractor shall carefully investigate the structural and finish conditions affecting all the Work and shall arrange such Work accordingly, furnishing such fittings, equipment, valves, accessories, etc., as may be required to meet such conditions, at no additional cost to the University.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01 31 00



**SECTION 01 31 19  
PROJECT MEETINGS**

**PART 1 - GENERAL**

**1.1 GENERAL CONTRACTOR PRECONSTRUCTION CONFERENCE(S)**

- A. Prior to commencement of Work, a preconstruction conference will be conducted by the University's Representative to discuss procedures that are to be followed during performance of the Work.
- B. Location: As designated by University's Representative.
- C. Attending shall be:
  - 1. University's Representative.
  - 2. General Contractor's Project Manager
  - 3. General Contractor's Project Site Superintendent.
  - 4. Subcontractors, as appropriate or as requested by the University's Representative.
  - 5. Others as appropriate or as requested by the University's Representative.

**1.2 BILLING MEETINGS**

- A. Monthly billing meeting shall be conducted by University's Representative each month prior to submittal of the Application For Payment (Exhibit 4).
- B. Location: As designated by University's Representative.
- C. Attending shall be:
  - 1. University's Representative.
  - 2. University's Inspection Team.
  - 3. Others as appropriate or as requested by the University's Representative.

**1.3 AOC (ARCHITECT, OWNER, CONSTRUCTION MANAGER) PROGRESS MEETINGS**

- A. Weekly progress meetings will be held to discuss and resolve field problems. The University's Representative shall conduct these meetings.
- B. Location: At University's Representative job trailer and via conference call.
- C. Attending shall be:
  - 1. University's Representative.
  - 2. University's Consultants (optional)
  - 3. University's Design Professional and Design Professional's Consultants as appropriate.
  - 4. Others as appropriate or as requested by the University's Representative.

**1.4 PREPATORY MEETINGS AND PRE-INSTALLATION CONFERENCES**

- A. The University's Representative will conduct a pre-installation conference at the site before each construction activity that requires coordination with other construction or when required in technical Specification Section.
- B. Attendance will be required of parties directly affecting, or affected by, or involved in the installation and its coordination or integration with other materials and installations that

have preceded or will follow the particular item of work or activity under consideration. Parties attending the conference shall be qualified and authorized to act on behalf of entity each represents.

- C. Conference Schedule: Schedule conference to assure a sufficient amount of time prior to the scheduled work or activity under consideration so that any concerns, problems or disagreements can be resolved without delaying the Project. Notify the University's Representative 7 days in advance of meeting date.
- D. The University's Representative will make physical arrangements for conferences, prepare agenda, preside at conferences, record minutes, and distribute copies within two days after conference to the University's Representative, the Project Inspector, conference participants and those affected by the decisions made at the conference. The University's Representative will record in the minute's significant discussions and agreements and disagreements.
- E. Do not proceed with the work or activity if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of work and reconvene the conference at the earliest feasible date.

#### 1.5 GUARANTEES, BONDS, WARRANTIES AND SERVICE/OPERATION AND MAINTENANCE CONTRACTS/DATA REVIEW MEETING

- A. Eleven months following the date of Substantial Completion, a meeting shall be conducted by the University's Representative for the purpose of reviewing the guarantees, bonds, and service and maintenance contracts for materials and equipment. The General Contractor shall take action as appropriate to implement repair or replacement of defective items, and to extend service and maintenance contracts as required.
- B. Attending shall be:
  - 1. University's Representative.
  - 2. University's Consultants, as appropriate.
  - 3. University's Design Professional and Design Professional's Consultants as appropriate.
  - 4. General Contractor superintendent(s) whom will be managing the project from on site.
  - 5. Subcontractors, as appropriate or as requested by the University's Representative.
  - 6. Others as appropriate or as requested by the University's Representative.

#### 1.6 LEAN SCHEDULING AND PULL-PLANNING MEETINGS

- A. The University Representative will be utilizing the "Last Planner System" to develop and implement a phased schedule that supplements and supports the Master Schedule included within the bid documents.
  - 1. This will require time commitment from officers and supervisors of General Contractor and all Subcontractors.
  - 2. General Contractor will be required to provide their input and commitment to the final schedule.

3. There will be a workshop held prior to the start of construction where the process will be explained in detail and the Master Project Schedule reviewed. Periodically “pull planning” sessions will be held to refine and expand on the detail in the Master Project Schedule. These sessions will require the contractor’s superintendents and foreman to brainstorm and create detailed activities and resource requirements that support the Master Schedule.

B. Attending shall be:

1. University’s Representative.
2. University’s Consultants (optional).
3. University’s Design Professional and Design Professional’s Consultants as appropriate (optional)
4. General Contractor superintendent(s) whom will be managing the project from on site.
5. Subcontractors, as appropriate or as requested by the University’s Representative.
6. Others as appropriate or as requested by the University’s Representative.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01 31 19

**SECTION 01 31 42**  
**GENERAL CONTRACTOR SCHEDULES**

**PART 1 - GENERAL**

**1. GENERAL CONTRACTOR SCHEDULE**

The University's Representative will be utilizing the "Last Planner System" to develop and implement a phased schedule that supplements and supports the Preliminary Master Project Schedule included within the bid documents. This will require time commitment from officers and supervisors of the General Contractor and all Subcontractors. The General Contractor and all Subcontractors will be required to provide their input and commitment to the final schedule.

**A. Pull Planning Sessions**

1. There will be a workshop held prior to the start of construction where the process will be explained in detail and the Preliminary Master Project Schedule reviewed.
2. Periodically "pull planning" sessions will be held to refine and expand on the detail in the Preliminary Master Project Schedule.
3. These sessions will require the General Contractor and Subcontractor's superintendents and foreman to brainstorm and create detailed activities and resource requirements that support the Preliminary Master Project Schedule.
4. After the General Contractor and all Subcontractors agree to each other's input, all parties will commit to this updated schedule.

**B. Submit**

1. Six week look-ahead schedules will be reviewed and updated each week and will be the basis of a Weekly Work Plan (WWP).
2. The General Contractor will be required to submit their WWP on a weekly basis prior to that week.

**C. Form**

1. The WWP will consist of a production plan in which quantity goals as well as weekly manpower requirements established consistent with meeting the overall project schedule.
2. Prepare the WWP in sufficient detail to demonstrate preliminary planning for the Work and to represent a practical plan to complete the Work within the Contract Time and in accordance with the Preliminary Master Project Schedule.

**D. Activities**

1. The WWP will consist of a production plan in which quantity goals as well as weekly manpower requirements established consistent with meeting the overall project schedule.
2. Identify all holidays, including University holidays, and non-working days on the WWP.

3. During the Pull Planning Sessions the General Contractor and each Subcontractor will identify all Work activities in correct sequence for the completion of the Work. Work activities will include the following:
  - a. Major Contractor-furnished equipment, materials, and building elements, and scheduled activities requiring submittals or University's prior approval.
  - b. System test dates.
  - c. Scheduled overtime Work if required by Contract Documents.
  - d. Dates designated for working spaces, storage areas, access, and other facilities to be provided by University.
  - e. Dates orders and decisions from University on designated items are due.
  - f. Dates for delivery of University-furnished equipment.
  - g. Dates for University-furnished utilities.
  - h. Connection and relocation of existing utilities.
  - i. Connection to or penetrating existing structures.
  - j. Scheduled inspections as required by Codes, or as otherwise specified.
4. During the Pull Planning Sessions the General Contractor and each Subcontractor will identify all Work activities that constitute the critical path.
  - a. Critical Work activities are defined as Work activities which, if delayed or extended, will delay the scheduled completion of one or more of the milestones specified in this Section or the scheduled completion of the Work, or both. All other Work activities are defined as non-critical Work activities and are considered to have float.

#### 1.2 PRELIMINARY MASTER PROJECT SCHEDULE

- A. The Preliminary Master Project Schedule shall be utilized for monitoring progress of the Work and represent a practical plan to complete the Work within the Contract Time.
- B. The Preliminary Master Project Schedule will identify the following milestone events:
  1. Refer to the Preliminary Master Project Schedule shown in the Bidding Documents for milestone events.
- C. The Preliminary Master Project Schedule will identify all holidays and non- working days.
- D. Updating.
  1. The Preliminary Master Project Schedule and WWP will be monitored and updated each week during the construction phase by the whole project team.
  2. Monitoring and evaluation will cover not only future activities; but completed activities will be evaluated from a "lesson learned" perspective in order to improve on future planning activities.
  3. Project team members will be held accountable for meeting these goals.
  4. No Applications For Payment will be processed nor shall any progress payments become due until updated information is accepted by University's Representative.

1.3 TIME CONTROL

- A. Set up control procedures so that approved schedules are adhered to. General Contractor's responsibility is to properly notify University's Representative of anticipated and actual time delays (refer to General Conditions).

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01 31 42

**SECTION 01 31 45  
CONTRACT SCHEDULES**

**PART 1 - GENERAL**

**1.1 PRELIMINARY CONTRACT SCHEDULE**

- A. Within the time stated in the Notice of Selection as Apparent Lowest Responsible Bidder, General Contractor shall submit a preliminary work plan or schedule of proposed operations to the University's Representative for approval. This schedule shall acknowledge the full contract duration as well as significant known contract constraints. In preparation of the plan or schedule, the General Contractor shall make due allowance for and include the following:
  - 1. Preparation of equipment and material submittals for review.
  - 2. Procurement schedule.
  - 3. Construction and installation schedule.
  - 4. Major milestones.
  - 5. Commissioning
  - 6. Training
- B. Form
  - 1. Prepare the Preliminary Contract Schedule in sufficient detail to demonstrate preliminary planning for the Work and to represent a practical plan to complete the Work within the Contract Time.

**1.2 PROJECT OR CONTRACT SCHEDULE**

- 1. Within 30 working days of receipt of the Notice to Proceed, the General Contractor shall submit a detailed project schedule. This Detailed Project Schedule shall incorporate the first 90 calendar days of contract Work as shown in the accepted Preliminary Contract Schedule.
- 2. Form:
  - a. The Detailed Contract Schedule shall be CPM (Critical Path Method), using PDM (Precedence Diagram Method) method of scheduling, with time scaled diagrams (plots) and tabular charts.
  - b. The Detailed Contract CPM Schedule when approved by the University, shall serve as the contract schedule for the project.
  - c. The Detailed Contract CPM Schedule duration shall conform to the full contract duration; and may include one or more float activities, to show full accounting of the Contract Time.
  - d. Prepare the Detailed Contract Schedule in sufficient detail to demonstrate serious planning for the Work and to represent a practical plan to complete the Work within the Contract Time.
  - e. Identify all holidays, UC Merced finals weeks and non-working days.
  - f. Critical Work activities are defined as Work activities that, if delayed or extended, will delay the scheduled completion of 1 or more of the milestones

specified in this Section or the scheduled completion of the Work, or both. All other Work activities are defined as non-critical Work activities and are considered to have float.

- g. Float is defined as the time that a non-critical Work activity can be delayed or extended without delaying the scheduled completion of milestones specified in this Section or the scheduled completion of the Work, or both. Neither the General Contractor nor the University shall have an exclusive right to the use of float. The party using float shall document the effect on the updated Contract Schedule.

B. Content:

1. The Contract Schedule shall identify all Work activities in correct sequence for the completion of the Work. Work activities shall include the following:
  - a. Major General Contractor-furnished equipment, materials, and building elements, and scheduled activities requiring submittals or University's Representative's prior approval.
    - 1) Show dates for the submission, review, and approval of each such submittal. Dates shall be shown for the procurement, fabrication, delivery, and installation of major equipment, materials, and building elements, and for scheduled activities designated by the University.
    - 2) A minimum of 18 days shall be allotted for University's Representative to review each submittal.
2. Date mobilization complete.
3. System test dates.
4. Scheduled overtime Work if required by Contract Documents.
5. Dates General Contractor requests designated workspaces, storage area, access, and other facilities to be provided by the University.
6. Dates General Contractor requests orders and decisions from the University on designated items.
7. Dates General Contractor requests University-furnished equipment.
8. Dates General Contractor requests University-furnished utilities.
9. Dates General Contractor requests Ansel Adams lane closures for installation of storm drain and sanitary sewer connections to University utilities.
10. Mock-up construction and reviews
11. Connection and relocation of existing utilities including utility shutdowns.
12. Connecting to or penetrating existing structures.
13. Scheduled inspections as required by Codes, or as otherwise specified.
14. Milestone activities showing the point of substantial completion and final completion for each stage of the work, if designated in the Contract Documents, shall be included in The Preliminary Contract Schedule, Contract Schedule, and updates.
  - a. The Site Infrastructure Phase 4 project will complete chilled water, heating hot water, electrical and communication underground utility improvements ready for



connection to the Student Services Building project between December 3, 2012 and February 28, 2013 (verify exact dates of separate contractor's work with University Representative).

- b. The Site Infrastructure Phase 4 project will complete Ranchers Road and Ansel Adams street improvements between May 20, 2013 and August 16, 2013 (verify exact dates of separate contractor's work with University Representative).
- c. The Site Infrastructure Phase 4 project will complete portions of the Student Services Building sidewalk, driveway, bike path and streetlight improvements between May 20, 2013 and August 16, 2013 (verify exact dates of separate contractor's work with University Representative).
- d. The one-story Pavilion building is to be ready for issuance of an Occupancy Certificate by July 15, 2013.
- e. The three-story building is to be ready for issuance of an Occupancy Certificate by December 15, 2013.

C. Presentation

1. Network Logic Diagrams

- a. The Contract Schedule shall include all construction and demolition activities, procurement of equipment components and major off-site fabricated items, through the entire construction phase, including pre-commissioning and job close out. Completion or "Punch List" work shall be included in the Contract Time.
- b. The Contract Schedule shall include a complete sequence of construction, in adequate detail for the planning and coordination of the Work. Unless approved by the University's Representative, there shall be no activities shown with durations in excess of 20 working days.
- c. The Contract Schedule shall be depicted in the form of precedence diagramming method (PDM) and shall be segregated or divided into bands of activities to reflect the General Contractor's scheduling areas and/or phasing of all construction and procurement activities.
- d. The PDM Diagram may be divided into a number of separate pages with suitable notation relating to the interface points from one page to the other. Individual pages shall not exceed 30 by 42 inches.
- e. Each activity shall be drawn so that the early start and early finish dates (or actual dates) are clearly indicated. The schedule plot also shall show the dates in tabular form.
- f. Each activity shall reflect at least the following information:
  - 1) Description of the work.
  - 2) Activity duration (in work days).
  - 3) Activity number.
  - 4) Activity relationship and float.
- g. All activities shall be shown, distinguishing critical
- h. path activities, non-critical activities and milestone activities.
- i. For large schedules, a summary page shall be provided indicating the major milestones. The summary page shall include a legend that clearly identifies all

- symbols used within the CPM PDM Diagram. The summary page shall include an index listing all sheets within each sub-network.
- j. Graphic schedules shall be accompanied by electronic data files of the network, showing all activities, durations, dependencies and constraints. The files shall be provided on 3.5 inch disk, Zip 100 disk, or CD-ROM, MS Windows format.
- 2. Tabular Computer Reports
    - a. Accompanying the Construction Schedule, the Contractor shall submit various computer generated tabular reports as further described within this Section.
    - b. As requested by the University's Representative, the Contractor will be required to submit additional Schedule and Cost Reports.
- D. Computer System and Computer Generated Tabular Reports:
- 1. The computer system selected shall be based on PRIMAVERA/PRIMAVISION®, or equal.
  - 2. The computer software employed by the University's Representative will be capable of:
    - a. Numeric or Alpha/Numeric activity numbering.
    - b. Activity codings (to facilitate selecting groups or groupings of activities), with at least a 6-position alpha/numeric code.
    - c. Activity description field of at least 48 characters.
    - d. Reporting capabilities that allow sorting of a group or groupings of activities to generate various computer tabular reports and, establishing various planning schedules, as well as bar graphs.
    - e. Identifying any user assigned constraint; e.g., start not earlier than on the printout, adjacent to the activity.
    - f. Activity coding to allow graphic presentation in Gantt or PERT chart format.
  - 3. Computer generated tabular reports:
    - a. Construction Schedule tabular reports shall include the activity number, activity description, duration, remaining duration, percent complete, early start date, early finish date, late start date, late finish date, total float, precedence relationships, lead/lag values and shall correlate work days to schedule dates. If the activity is completed or in progress, it shall have actual start or actual finish dates in lieu of the planned dates. The following sorts are required:
      - 1) A Schedule of all activities, sorted by activity number, with the CPM Logic.
      - 2) A Schedule of all activities, sorted by early start date without the CPM Logic.
      - 3) A Schedule of all activities, sorted by total float without the CPM Logic.
      - 4) When requested, a Schedule of all activities showing successors, predecessors and constraints.
    - b. Computer generated bar graphs of all activities. The following sorts are required:
      - 1) Sorted by early start only.
      - 2) Sorted by trade and/or responsibility, by early start.
    - c. Computer generated milestone schedule.

E. Submission

1. Upon receipt, the University's Representative shall review the, Detailed Contract Schedule; the University's Representative and the General Contractor shall meet to jointly review the Schedule.
2. If the Schedule is found to be acceptable, the schedule will then be approved by the University's Representative as the Baseline Construction Schedule (Contract Schedule).
3. If the General Contractor or the University's Representative determines the Contract Schedule to be in need of revision, within 10 working days thereafter, the General Contractor shall revise and resubmit the Schedule to the University's Representative for approval, and, upon acceptance thereof, the Schedule shall be approved as the Baseline Construction Schedule (Contract Schedule).

F. Distribution:

1. University's Representative, 3 copies.
2. Contractor's Superintendent.

G. Updating:

1. General Contractor shall update the Contract Schedule reflecting progress as of the end of the month and shall submit to the University's Representative for approval by no later than the tenth day of the following month. The updates shall be made as follows:
  - a. The schedule update shall consist of updated CPM Schedule reports similar to the Baseline Construction Schedule. The CPM Schedule reports shall report progress based upon percent complete of actual time and remaining duration. If the General Contractor is behind schedule, or requests an extension to the Contract time, the Contract Schedule must be updated and submitted for review in support of the request. Contract Schedules must be updated any time that delays or a change in scheduled work occurs.
  - b. The updated Contract Schedule shall reflect an up-to-date status of the contract work as completed, and materials furnished and in permanent place that qualify for payment.
  - c. The updated Contract Schedule shall reflect the true effect of all processed change orders for the progress month. Subject to the provisions stated in the General Conditions, the General Contractor will be granted an extension to the contract time for the cumulative effect any approved change orders have had on the critical path; refer to General Conditions for the prerequisites for entitlement to a time extension.
  - d. The updated Contract Schedule shall include all delays for the progress month. Subject to the provisions stated in the General Conditions, the General Contractor will be granted an extension to the contract time for the cumulative effect any excusable delay(s) had on the critical path. No time extension will be granted for a claimed delay, unless the General Contractor can demonstrate to the satisfaction of the University's Representative the claimed delay affected the controlling operation or operations of the project. To receive an extension to the contract time, the following conditions must be met:
    - 1) Written notice has been provided, within 7 days of the delay.

- 2) The written notice meets the notice requirements as outlined in the General Conditions.
  - 3) The General Contractor has met the conditions of the General Conditions, all of which are prerequisites for entitlement of an extension of the contract time. The General Contractor may submit, with the written notification or with the updated Construction Schedule, a CPM sub-net sketch that delineates the activities that were affected by the delay and the effect the delay had on the critical path. No time extension will be granted if the General Contractor has not met the requirements of the General Conditions, or if the General Contractor has not satisfactorily demonstrated that the claimed delay affected the critical path. Accordingly, all delays not incorporated into the updated Construction Schedule shall be deemed denied by the University.
2. At the updating, in addition to the above, the General Contractor shall provide short interval schedule reports, which include:
    - a. A bar graph spanning 1 month prior to the datum line to 2 months beyond the datum line.
    - b. A "Four-Week Look Ahead" or predicated status report, covering the work within the next 4 week period, with activities sorted by early start.
  3. The General Contractor shall provide an Accompanying Narrative Report as needed to explain changes to the schedule, changes to the critical path and shall include a list of critical activities that require action from the University's Representative. The Accompanying Narrative Report shall include a listing of all delays that affected the critical path and shall clearly explain the impact the claimed delay(s) had on the critical path and shall include an account audit of days lost/gained.
  4. Other conditions under which additional schedule updating will be required are as follows:
    - a. When delay in completion of any work items or sequence of work items result in an indicated extension of the project completion.
    - b. When delays in submittals or deliveries or work stoppages known to the General Contractor are encountered that make replanning or rescheduling of the work necessary.
    - c. When the schedule does not represent the actual prosecution and progress of the work.
  5. Subject to all other requirements of the Contract Documents, nothing in these requirements shall be deemed to be a usurpation of the General Contractor's authority and responsibility to plan and schedule the Work.
  6. Distribute copies as required for initial distribution and monthly distribution.

### 1.3 RECOVERY PLAN

- A. If Contractor is behind schedule by more than ten (10) calendar days for any stage of work, based on the updated Contract Schedule after incorporating all approved time extensions, Contractor shall submit to The University's Representative within five (5) working days of notification of such delay, a "Recovery Plan." The Recovery Plan shall be based on proposed revisions to Contract Schedule for the next sixty (60) calendar day period and shall show how

Contractor intends to bring the work back on schedule. The Recovery Plan shall also include a written description of the measures that Contractor intends to take without additional cost to The University to regain schedule compliance. The Recovery Plan activities shall be identified according to their relationship to activities on the accepted schedule.

- B. Should Contractor fail to submit and execute such Recovery Plan, The University shall have the option to require Contractor to employ any or all measures that The University deems fit to regain schedule compliance without additional cost to The University.
- C. The Recovery Plan submitted by Contractor, upon acceptance by The University's Representative, shall be incorporated into the Contract Schedule during the next update.
- D. Contractor will be required to submit a Recovery Plan for each update that indicates that the work progress is more than ten (10) calendar days behind schedule.
- E. Should Contractor dispute the determination of The University's Representative regarding the status on Contract delay, such dispute shall not relieve the Contractor of the responsibility to comply with the requirements of this Section and other related Sections until the dispute is resolved per Article 4 of the General Conditions.

#### 1.4 TIME CONTROL

- A. Set up control procedures so that approved schedules are adhered to. General Contractor's responsibility is to properly notify University's Representative of anticipated and actual time delays (refer to General Conditions).
- B. Time extension requests shall be submitted in accordance with the provisions of General Conditions.
- C. The General Contractor's time extension request shall be reviewed and evaluated by the University's Representative. A request for the extension shall be deemed denied if not responded to by University's Representative within 21 days.

#### PART 2 - PRODUCTS (NOT USED)

#### PART 3 - EXECUTION (NOT USED)

END OF SECTION 01 31 45

**SECTION 01 33 23**  
**SHOP DRAWINGS, PRODUCT DATA AND SAMPLES**

**PART 1 - GENERAL**

**1.1 REQUIREMENTS INCLUDED**

- A. Shop Drawings, Product Data, and Samples shall be submitted to the University's Representative only in connection with proposed substitutions or when specifically required by the Specifications. General Contractor will, however, be required to certify in writing that materials to be provided will be as specified by individual Specification Sections. The University's Representative will not review any other such submittals. Product Data and Samples for proposed substitutions shall be submitted to University's Representative in accordance with Section 01 25 00 Product Options and Substitutions. General Contractor shall be responsible for obtaining copies of Shop Drawings, Product Data, and Samples as it may require for its own use.

**1.2 RELATED REQUIREMENTS**

**A. Definitions**

- 1. The terms "Shop Drawings" and "Product Data" as used herein also include, but are not limited to fabrication, erection, layout and setting drawings, manufacturers' standard drawings, descriptive literature, catalogues, brochures, performance and test data, wiring and control diagrams as well as all other drawings and descriptive data pertaining to materials, equipment, piping, duct, conduit systems, and methods of construction as required to show that the materials, equipment, or systems and the positions thereof conform to the Contract Documents.
- 2. As used herein, the term "manufactured" applies to standard units usually mass-produced. The term "fabricated" means items specifically assembled or made out of selected materials to meet individual design requirements. Shop Drawings shall establish the actual detail of all manufactured or fabricated items, indicate proper relationship to adjoining Work, and amplify design details of mechanical and electrical equipment in proper relationship to physical spaces in the structure.

**B. Manufacturer's Instructions**

- 1. Where any item of Work is required by the Contract Documents to be furnished, installed, or performed in accordance with a specified product manufacturer's instructions, General Contractor shall procure and distribute the necessary copies of such instructions to the University's Representative and the General Contractor shall furnish, install, or perform the Work in strict accordance therewith.

**C. Submittal Schedule**

- 1. The minimum time required by University's Representative and University's Design Professional to review and process Shop Drawings, Product Data and Samples shall be 18 days after receipt.
- 2. The General Contractor shall submit a schedule for submission of Shop Drawings, Product Data, and Samples (the "Submittal Schedule"). The schedule shall include the General Contractor's time to process the submittal(s),

and the time required for review by the University's Representative and University's Design Professional. The schedule shall be agreed upon by the University's Representative, the University's Design Professional, and the General Contractor in order that submittals will be available when needed by the construction process and so that each party can plan its workload in an orderly manner. All required submittals shall be initially submitted no later than 2 months after the Notice to Proceed.

3. General Contractor shall prepare the Submittal Schedule in the form contained in the Submittal Schedule (Exhibit 6) and coordinate it with the Contract Schedule. No submittals will be processed prior to University's Representative and University's Design Professional receiving and approving the Submittal Schedule, unless an exception is made by the University's Representative.
4. In preparing the Submittal Schedule, the General Contractor must first determine from the Contract Schedule the date the particular item is needed for the Work. Working backwards, the General Contractor will add the required number of days for shipment, time for fabrication, and similar items to determine the date of the first submittal. General Contractor shall be responsible for the impact to the schedule resulting from submittals that do not conform to contract requirements. General Contractor shall make reasonable allowances in the Submittal Schedule for the re-submittal of items that do not conform to contract requirements.
5. The Submittal Schedule shall be adjusted to meet the needs of the construction process and the Contract Schedule. Submit 2 copies of the Submittal Schedule after it is completed and each time it is updated by the General Contractor.

### 1.3 SHOP DRAWINGS

- A. Present information required on Shop Drawings in a clear and thorough manner. Identify details by reference to drawing and detail, schedule and/or room numbers shown and specified.
- B. The General Contractor shall prepare Shop Drawings that comply with the Requirements of Section 01 78 39 Project As-Built Documents.

### 1.4 PRODUCT DATA

- A. Preparation
  1. Clearly mark each copy to identify pertinent products or models.
  2. Show performance characteristics and capacities.
  3. Show dimensions and clearances required.
  4. Show wiring or piping diagrams and controls.
- B. Manufacturer's standard schematic drawings and diagrams
  1. Modify the standard schematic drawings and other diagrams to delete information that is not applicable to the Work.
  2. Supplement standard information to provide information specifically applicable to the Work.
  3. Clearly indicate manufacturer's model or part number intended for Project.

C. Material Safety Data Sheets

1. Material Safety Data Sheets (MSDS) shall be submitted for all hazardous substances so defined by the State of California. MSDS shall also be provided for all substances furnished under this contract that are not available to the general public from retail outlets; e.g., paints, coatings, lacquers, varnishes, sealers, removers, thinners, solvents, adhesives, cleaners, acids, putty, fillers, disinfectants, fungicides, pesticides, gases, oils, lubricants, treatments, liquid-applied flooring, etc.

1.5 SAMPLES

A. Samples shall be of sufficient size and quality to clearly illustrate the following:

1. Functional characteristics of the products with integrally related parts and attachment devices.
2. Full ranges of color, texture and pattern or as specified by the University's Representative.
3. Or as specified.

B. Field Samples and mock-ups

1. Erect at the Project site, at a location as directed by the University's Representative;
2. Size: As specified;
3. Fabricate each Sample and mock-up to be complete and fully finished;
4. Remove mock-ups at conclusion of the Work;
5. Or as specified.

1.6 LEED™ SUBMITTAL INFORMATION

A. All information noted in Section 01 81 13 LEED® Requirements shall be noted on Exhibit 49, LEED NC v3.0 Product Data Submittal Data Form of every submittal including , but not limited to:

1. Distance in miles from final assembly location to project site;
2. All recycled content information;
3. All FSC certified wood information;
4. All electric, natural gas and water efficiency information;
5. VOC and other LEED® related issues.

B. Any submittals not containing this information on the cover will be rejected.

1.7 GENERAL CONTRACTOR'S REVIEW OF SUBMITTALS

- A. Review, edit as appropriate, and stamp Shop Drawings, Product Data, and Samples prior to submission. Submittals shall clearly show that they have been reviewed by the General Contractor for conformance with the requirements of the Contract Documents and for coordination with other Sections. General Contractor's stamp and signature shall indicate that the submittal has been reviewed by the General Contractor for conformance with the Contract requirements. Submittals that do not comply with this paragraph shall not be reviewed.



- B. Determine and verify
  - 1. Field measurements.
  - 2. Field construction criteria.
  - 3. Catalog numbers and similar data.
  - 4. Conformance with Contract Documents.
- C. Coordinate each submittal with requirements of the Work and of the Contract Documents.
- D. Notify the University's Representative and University's Design Professional in writing, at time of submission, of any changes in the submittals from requirements of the Contract Documents.
- E. Do not proceed with fabrication or Work that requires submittal review approval.

#### 1.8 SUBMITTAL REQUIREMENTS

- A. The General Contractor shall:
  - 1. Submit items in a group or in a sequence which provide the University's Representative with sufficient information to review items of Work which require coordination with each other. Submissions that do not provide sufficient information to review items of Work requiring coordination with each other shall be returned to the General Contractor for re-submittal.
  - 2. Submit submittals promptly in timely manner to avoid delay in the Work or in the Work of any Separate General Contractor.
  - 3. Submit a completed Exhibit 23 Material Submittal Approval Form with every submittal.
  - 4. Submit new samples as required for initial submittal.
- B. Number of Submittals Required
  - 1. Shop Drawings: Submit 9 blue line reproductions and an electronic file of shop drawings to the University's Representative . The University's Representative shall return 1 blue line reproduction or an electronic copy with review comments to the General Contractor. Verify Quantity Required.
  - 2. Project Data and Non-Reproducible Submittals: Submit 9 copies to the University's Representative. The University's Design Professional shall return 1 copy with review comments to the General Contractor.
  - 3. Samples and Non-Reproducible Submittals: Submit number as specified in individual Specification Section(s) to University's Representative.
  - 4. University may require submittals to be submitted electronically in the format of AUTOCAD® (latest version available at date of Bid). Files must be ORIGINAL.DWG format. Electronic media must be CD-ROM. One set of original plots must be provided with the electronic media.
    - a. Drawings are to use a specified title block, orientation and north arrow provided by the University.
    - b. All actual Drawings are to be done on Model space and plot set up/title block are on Paper space.
    - c. Shop Drawing size should be 30"x42"unless is requested differently by the University's Representative.

- d. All Cross references within the same AUTOCAD® Drawing must be bound.

C. Submittals shall contain:

1. A unique number. Follow Submittal Number with incremental alphabetical suffix as necessary for each resubmission. For example, the first submittal will be '001'. The second submittal will be '002'. The first resubmittal of submittal 002 will be '002A.'
2. Actual date of submission, date of submission as shown on Submittal Schedule, date response due, and dates of any previous submissions.
3. Project name and number.
4. Contract identification.
5. The names of:
  - a. General Contractor.
  - b. Subcontractor.
  - c. Supplier.
  - d. Manufacturer.
  - e. Bid Package Number if applicable.
6. Identification of the product with the Specification Section number.
7. Field dimensions clearly identified as such.
8. Relation to adjacent or critical features of the Work or materials including interaction with work of other trades.
9. Reference standards such as American Society for Testing and Materials (ASTM) or Federal Specification (FS) numbers.
10. Identification of changes from requirements of the Contract Documents.
11. Identification of revisions on re-submittals. Note any departures from the Contract Documents or changes in previously reviewed submittals that were not commented upon by the University's Representative.
12. An 8 by 3 inch blank space for review stamps.
13. General Contractor's stamp, initialed or signed, certifying to the review of the submittal; verification of materials field measurements and conditions; and compliance of the information within the submittal with requirements of the Work and of the Contract Documents.
14. General Contractor shall submit submittal(s) with transmittal provided by the University's Representative.

D. Resubmission Requirements

1. Shop Drawings and Product Data
  - a. Note any departures from the Contract Documents or changes in previously reviewed submittals that were not commented upon by the University's Representative.
  - b. University's Representative and the University's Design Professional will review a total of 2 submittals for the same item at no cost to the General Contractor. The cost for the review of more than 2 submittals of the same item shall be deducted from the Contract Sum.
2. Samples: Submit samples as required for review/approval.

E. Distribution

1. Reproduce and distribute copies of Shop Drawings and Product Data that carry the University's Representative's review stamp, to the following locations:
  - a. General Contractor's Project site file.

- b. Record documents file maintained by the General Contractor.
    - c. Separate General Contractors.
    - d. Subcontractors.
    - e. Supplier, manufacturer or fabricator.
  - 2. Distribute Samples that carry the University's Representative's review stamp as directed.
  - 3. Provide electronic copies of Shop Drawings and Product Data that have the final approved review stamp to the University's Representative for file.
- F. University's Representative and the University's Design Professional will review General Contractor's submittals, such as Shop Drawings, Product Data and Samples, for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. Review of such submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the General Contractor as required by the Contract Documents.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01 33 23

**SECTION 01 35 00  
SPECIAL REQUIREMENTS**

**PART 1 - GENERAL**

**1.1 DEFINITION OF PROJECT SITE**

- A. General Contractor's use of the Project site for the Work and storage is restricted to the areas designated on the Drawings.
- B. The Project site is located at University of California, Merced Campus, 5200 N. Lake Rd. Merced CA 95344.

**1.2 WORK HOURS**

- A. No Work shall be done outside of standard Monday through Friday 7:00 A.M. to 5:00 P.M. working hours, on holidays or weekends unless prior written approval has been obtained from the University's Representative.

**1.3 SITE INGRESS AND EGRESS**

- A. General Contractor shall use the Project Access Road off of Lake Road at Ranchers Road as shown on the Site Logistics Plan.
- B. General Contractor shall construct and maintain temporary access roads and laydown areas as shown on the Site Logistics Plan. All temporary access roads shall comply with all applicable laws, regulations & permit requirements.

**1.4 SITE RESTRICTIONS**

**A. OUT OF BOUNDS AREAS**

- 1. Little Lake
  - a. The General Contractor shall not permit any personnel or construction vehicle to approach within 100 feet of Little Lake except with the prior written approval of the University's Representative.
  - b. The General Contractor shall ensure that no personnel shall use the Lake to fish, swim or for other non-construction activities.
  - c. The General Contractor shall ensure that no run-off shall enter the Lake except as indicated on the Drawings.
  - d. The General Contractor shall ensure that no construction garbage, detritus, waste or debris (whether solid or liquid) of any type shall enter the Lake.
- 2. Merced Irrigation District
  - a. The General Contractor shall not permit any personnel or construction vehicle to approach within 50 feet of the Fairfield Canal and the penstock between Le Grand and Fairfield Canals except with the prior written approval of the University's Representative.

- b. The General Contractor shall ensure that no personnel shall use the Fairfield Canal or the penstock between Le Grand and Fairfield Canals to fish, swim or for other non-construction activities.
- c. The General Contractor shall ensure that no run-off shall enter the Fairfield Canal or the penstock between Le Grand and Fairfield Canals except as indicated in the Contract documents.
- d. The General Contractor shall ensure that no construction garbage, detritus, waste or debris (whether solid or liquid) of any type shall enter the Fairfield Canal or the penstock between Le Grand and Fairfield Canals.

## 1.5 ROADS

- A. Existing roads and existing or planned construction roads shall be used for construction access within the limits defined herein.
- B. General Contractor shall take all necessary precaution to insure the safety of University Students, Faculty and Visitors at all times.
- C. General Contractor must obtain prior written approval from the University's Representative to block streets or parking areas at any time.
- D. The General Contractor shall clear all roads (including Lake Road), parking areas and sidewalks affected by the Contractor's operations. This will include the immediate removal of dust, dirt, or any other debris or detritus so that roads and sidewalks are maintained in a safe and usable condition.

## 1.6 PARKING

- A. All parking locations and arrangements must be coordinated and approved by University's Transportation and Parking Services (TAPS) prior to the start of work.
- B. A parking permit and fee to utilize the University of California, Merced (UCM) parking facilities will be required for all areas. Parking permits can be purchased on a monthly basis at a fee of \$30 per month per vehicle. Contact Transportation and Parking Services (TAPS) at (209) 228-4548 or visit the Facilities modular behind Central Plant for information on obtaining permits. A valid permit must be displayed at all times by all vehicles while parking on campus, whether in fenced construction areas or not.
- C. The General Contractor shall not permit any personnel to park within the construction site or construction yard. Parking will be limited to a maximum of one company insured vehicle on site or within the construction yard.
- D. On-street parking is not permitted in areas not designated for parking or construction.
- F. Vehicles found to be on university property without a valid permit, will be cited. Fines range from \$50.00 for no permit to \$445.00 for parking in a handicapped stall without a valid blue tag.

## 1.7 TRAFFIC CONTROL

- A. The General Contractor shall adopt all practical means to minimize interference to traffic. Access to other facilities under construction shall be maintained at all times. The General Contractor shall provide a schedule of any activity that will impact traffic, or any planned closing of the streets, for approval by the University's Representative and shall give a minimum of 14 working days notice before closing any street or access.
- B. General Contractor shall furnish at General Contractor's expense all barricades, lights, and other devices and means necessary to control traffic and shall maintain these devices at all times to protect the public and/or Work.
- C. It is the responsibility of the General Contractor performing Work on or adjacent to a highway to install and maintain such devices as are necessary to provide safe passage for the traveling public through the Work, as well as for the safeguard of workers. Before Work begins, traffic control plans for handling traffic through a construction or maintenance Project shall be submitted to and approved by the University's Representative and public agency or authority having jurisdiction over the highway, in accordance with Chapter 5 of the CalTrans Traffic Manual.
- D. The General Contractor shall comply with the provisions of 01 35 40 Environmental Mitigation.
- E. The General Contractor shall ensure that all of the General Contractor's activities that affect traffic control, road use, materials delivery, equipment delivery, rights of way and preservation of 3<sup>rd</sup> party access rights are coordinated with those of all Separate General Contractors.

## 1.8 SURROUNDING SITE CONDITION SURVEY

- A. Prior to commencing the Work, General Contractor, and University's Representative shall tour the Project site together to examine and record damage to existing adjacent buildings, campus streets and city streets, bicycle paths, sidewalks, and all other improvements. This record shall serve as a basis for determination of subsequent damage due to General Contractor's operations and shall be signed by all parties making the tour. Any cracks, sags, or damage to the adjacent buildings and improvements not noted in the original survey, but subsequently discovered, shall be reported to the University's Representative.

## 1.9 INTERRUPTION OF BUILDING SERVICES

- A. Planned utility service shutdowns shall be accomplished during periods of minimum usage. In some cases this will require Work activities before 8:00 A.M. and after 5:00 P.M. and weekend Work, at no additional cost to the University. At least 7 working days advance notice shall be given to the University's Representative before interruptions to utility service (refer to Exhibit 18 Utility Service Interruption/Shut Down Request) and other interferences with use of existing buildings, surrounding hardscape and roads.
- B. Shutdowns critical to the completion of the project shall be listed as Milestones on the project schedule. The General Contractor shall program Work so that service will be

restored in the minimum possible time, and shall cooperate with the University in reducing shutdowns of utility systems.

- C. The University reserves the right to deny shutdown requests based on scheduled work load, research projects, and usage of surrounding buildings or other activities planned on campus.

#### 1.10 PROTECTION OF EXISTING STRUCTURES AND UTILITIES

- A. The Drawings show, if applicable, existing above and below grade structures, drainage lines, storm drains, sewers, water, gas, electrical, hot water, and other utilities that are known to the University.
- B. General Contractor shall locate all known existing installations before proceeding with construction operations that may cause damage to such installations. Existing installations shall be kept in service where possible and damage to them shall be repaired at no additional cost to the University.
- C. Existing underground structures and utilities shall be kept in service unless prior approval to interrupt or shutdown service is obtained from University's Representative. If damaged, they shall be repaired by the General Contractor with no adjustment of Contract Sum or Contract Time.
- D. The General Contractor shall coordinate all Work with the operations of separate Contractors as needed. This shall include, but not be limited to, the responsibility of the General Contractor to coordinate with University's separate Site Infrastructure Phase 4 Contractor installing underground utilities, Ansel Adams and Ranchers Road street improvements, sidewalks and streetlights. Such coordination should take place prior to any excavation or trenching operations by the General Contractor.
- E. If any other structures or utilities are encountered, the General Contractor shall request University's Representative to provide direction on how to proceed with the Work.
- F. If any structure or utility is damaged by the General Contractor, the General Contractor shall take appropriate action to ensure the safety of persons and property.
- G. No Work is to be performed on energized electrical equipment unless scheduled with the University's Representative. The University reserves the right to specify specific conditions for all Work involving energized high-voltage electrical equipment.
- H. General Contractor shall uncover, prior to any earthwork for new construction, all existing piping where crossings, interferences or connections are shown on the Drawings, from 1 foot below proposed construction limit to the existing ground surface. Any variation in the actual elevations and the indicated elevations shall be brought to the University's Representative's attention. If the General Contractor does not expose all existing utilities, General Contractor shall not be entitled to additional compensation for Work necessary to avoid interferences.
- I. If interferences occur at locations other than the general locations shown on the Drawings, and such utilities are damaged before their locations have been established, or create an interference, the General Contractor shall notify the University's Representative

and a method for repairing the damage or correcting the interference shall be supplied by the University's Representative. Payment for additional Work due to interferences not shown on the Drawings shall be in accordance with the General Conditions.

- J. Care shall be exercised to prevent damage to adjacent facilities including walks, streets, curbs, and gutters; where equipment will pass over these obstructions suitable planking shall be placed. Damaged facilities, due to the General Contractor operations, shall be removed and replaced at the General Contractor's expense.

#### 1.11 PROTECTION OF PERSONNEL

- A. General Contractor shall take proper precautions to ensure the safety of all persons at all times during the construction period.

#### 1.12 PROJECT SITE SECURITY

- A. The General Contractor shall install and maintain 8' high chain link site security fencing and gates as shown on the Site Logistics Plan. Fencing at the building perimeter shall include black shade screen to shield construction activities from view. General Contractor shall be responsible for keeping areas involved in this Work locked and secure at all times when Work is not in progress.
- B. All persons working on the Project site shall receive a site safety briefing and Natural Resource Awareness Training from the University prior to being allowed to start work.

#### 1.13 CONSTRUCTION STAGING & MULTIPLE CONSTRUCTION CONTRACTS

- A. The following describes the scheduling of the Work and the coordination required for the Work done by Separate Contractors:
  - 1. The University reserves the right to let other construction contracts.
  - 2. The following projects may be in progress at times during this project:
    - a. Rec Center North
    - b. Site Infrastructure Phase 4
    - c. Science & Engineering Building 2
    - d. Housing 4: The Summits
  - 3. Disagreements between the General Contractor and other Separate Contractors about concurrent use of Work areas or access to the Project site which are not resolved by the participants shall be referred to the University's Representative and the General Contractor agrees to abide by the University's Representative's determination as to concurrent use or priority of access and to perform its Work in compliance with the University's Representative's resolution at no additional cost to the University.
- B. All material and equipment for construction operations shall be brought in and the Work so conducted as to avoid any interference with existing University facilities or their normal operations, and with concurrent construction Work by other Separate Contractors.



1.14 FINAL EXAM SCHEDULE

- A. General Contractor shall be advised that academic finals week takes place on the UC Merced campus during May, August and December of each year. During these periods of time, students are involved in intensive testing relative to their academic course work. During these periods of time, noise level generated as a result of construction activity must be kept to a minimum. General Contractors will be expected to Work with the University's requirements to achieve a level of noise that is acceptable to the University. Actual schedule for finals weeks during each year will be coordinated with General Contractor following the issuance of the Notice to Proceed.

1.15 WORK SITE DECORUM

- A. Extreme care to limit noise and odors shall be taken at all times. Loud or unnecessary conversation shall be avoided. The playing of radios tapes, or compact discs shall be strictly prohibited.
- B. General Contractor shall control the conduct of its employees and those of its subcontractors and suppliers so as to prevent interaction initiated by said employees with University of California Merced students, staff, or other individuals (except those associated with the Project), on or adjacent to the Project site. Without limitation, unwanted interaction by these employees includes whistling at, motioning toward, or initiating conversations with passersby. In the event that any employee initiates such unwanted interaction, or utilizes profanity, General Contractor shall, either upon request of University's Representative or on its own initiative, replace said employee with another of equivalent technical skill, at no additional cost to the University.
- C. Smoking is prohibited in and within 20 feet of any entrance, window, or air intake of all University buildings and in enclosed areas. Smoking will not be allowed in the construction area. Smoking will be allowed in a designated area within the construction storage yard only.
- D. Firearms are prohibited on University property.
- E. Alcoholic beverages are prohibited on University property unless the prior written approval of the University's Representative is obtained.
- F. Pets are prohibited on the Project site.

1.16 PUBLICITY

- A. General Contractor shall not release any information, story, photograph, plan or drawing relating to the Project to anyone, including press or other public communications medium, except as submitted and approved for release by the University's Representative.

1.17 PROJECT SIGN

- A. No signs or advertisements will be permitted on the Project site, except with express permission of University's Representative.

1.18 JOB OFFICE

- A. Space on the Project Site is limited. Trailer space must be requested and approved by the University's Representative. Storage and office trailers are to be located in the temporary laydown area as shown on the Site Logistics Plan. Space will be allocated by the University's Representative. General Contractor shall provide and maintain all temporary facilities as required for completion of the Project. Verify location of temp laydown area on drawings.

1.19 SALVAGE

- A. All material and equipment removed as part of this Project is the property of the Contractor and shall be removed from the Campus and legally disposed of, unless otherwise stated in the General Contractor's "Scope of Work".

1.20 CLEANUP

- A. During the progress of the Work, the General Contractor shall keep the Project site in a neat and clean condition that is free of debris to the satisfaction of the University's Representative. All materials and debris accumulated in conjunction with completing this Work shall be disposed of in the jobsite trash dumpsters provided by the General Contractor and disposed of off campus. General Contractor shall not use University refuse containers.

1.21 UNIVERSITY FURNISHED CONSTRUCTION DOCUMENTS

- A. University will furnish to the General Contractor 1 set of Drawings and Specifications and 1 CD of the Drawings and Specifications upon an award of the Contract at no cost. If more than 1 set is required or if the General Contractor wants the Drawings in another size other than the size issued with the Bidding Documents, the General Contractor will pay the actual cost of reproduction for printing.

1.22 JOB CONDITIONS

- A. Protection: Where roof edge does not terminate in a parapet wall and/or where Work is in progress overhead and materials or objects could potentially fall, the General Contractor is required to construct temporary covered pedestrian walkways over each building entrance. Walkway covers shall extend out 12 feet in length for the first floor and an additional 4 feet for each additional floor of the building. Walkway covers shall extend from face of building. General Contractor shall be required to place and maintain yellow safety construction flagging or ropes with signage to prevent pedestrians from coming within 25 feet of Work in progress overhead and to route pedestrians in and out of building entrances.
- B. Safety Precautions: Perform Work in such a manner as to prevent damage to existing facilities to remain or to be salvaged. Hazardous Work shall not be left standing or hanging, but shall be knocked or pulled down to avoid damage or injury to employees or the public.

C. Crane Operation, Staging and Storage

1. Operator Training and Crane Certification: Prior to starting crane operations, General Contractor shall provide copies of operator's training and crane certification to the University's Representative.
2. Crane Staging Area: General Contractor shall be required to coordinate with the University's Representative a minimum of 5 working days in advance of loading and removal of materials from the roof. General Contractor is responsible for providing necessary staging area for crane.
3. Storage: General Contractor shall not be allowed on-site crane storage unless with the prior written approval of the University's Representative.

1.23 NOT USED

1.24 PROJECT SITE SUPERINTENDENT

- A. General Contractor shall employ a competent Project Site Superintendent/Foreman satisfactory to the University's Representative. The Project Site Superintendent/Foreman shall be in attendance at the Project site at all times during the performance of the Work. Project Site Superintendent/Foreman shall represent the General Contractor and communications given to and received from the Project Site Supervisor shall be binding on General Contractor.
- B. The General Contractor shall submit to the University's Representative the qualifications of the Project Site Superintendent/Foreman prior to commencement of the Work. The University's Representative shall approve the Project Site Superintendent/Foreman based on his/her experience with projects similar to type, scope, size, and complexity.
- C. The Project Site Superintendent/Foreman approved for the Project by the University's Representative, must be able to proficiently read, write and verbally communicate in English. The Project Site Superintendent/Foreman may not perform the Work of any trade, pick-up materials, or perform any Work not directly related to the supervision and coordination of the Work at the Project site while Work is in progress.
- D. Failure to maintain a Project Site Superintendent/Foreman on the Project site at all times Work is in progress shall be considered a material breach of this Contract, entitling University to terminate the Contract or alternatively, issue a stop Work order until the Project Site Superintendent/Foreman is on the Project site. If, by virtue of issuance of said stop Work order, General Contractor fails to complete the Contract on time, General Contractor will be assessed Liquidated Damages in accordance with the Agreement.
- E. If the Project Site Superintendent/Foreman fails to perform to the satisfaction of the University's Representative, the University's Representative may, upon 15 days written notice, require the General Contractor to remove the Project Site Superintendent/Foreman from the Project and replace the Project Site Superintendent/Foreman with a replacement acceptable to the University's Representative.

- F. If the General Contractor elects a replacement of the Project Site Superintendent/Foreman, such replacement shall be discussed with the University's Representative prior to actual replacement. The same criteria employed by the University's Representative to approve the initial Project Site Superintendent/Foreman shall also apply to the University's Representative's approval of any subsequent Project Site Superintendent/Foreman.

1.25 OTHER GENERAL CONTRACTOR SITE PERSONNEL

- A. In addition to the Project Site Superintendent/Foreman, the General Contractor shall provide site personnel of quality and quantity sufficient to carry out all of the on-site General Contractor responsibilities described in the Contract Documents. See Instructions to Bidders for other site personnel requirements that may also be required.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01 35 00

SECTION 01 35 40 - ENVIRONMENTAL MITIGATION

PART 1 - GENERAL

1.1 WORK INCLUDED

A. Related Sections

1. 01 81 13 LEED® Requirements
2. 01 74 19 Site Waste Management Program
3. 01 35 43 Hazardous Materials Procedures

B. Requirements

1. The Environmental Mitigation requirements for this Project are recorded in this Specification Section. The mitigation measures may include, but are not limited to, procedures and standards to control:
  - a. Dust Palliation
    - (1) All construction, demolition, excavation, extraction or other earthmoving activities shall comply with the San Joaquin Valley Air Pollution Control District (SJVAPCD) Regulation VIII - Fugitive PM10 Prohibitions.
    - (2) All disturbed areas, including storage piles, shall be sprinkled with water or other dust control agents/chemical stabilizers acceptable to SJVAPCD, or shall be covered with vegetative ground cover, so as to effectively prevent dust emissions. Additional watering or acceptable dust control agents/chemicals shall be applied during dry weather or windy days until dust emissions are not visible.
    - (3) Trucks hauling dirt and debris shall be effectively wetted and/or maintain not less than six inches freeboard and/or cover the top of the load to reduce wind blown dust or spills.
    - (4) Dirt or debris spilled onto paved surfaces shall be swept up immediately to reduce resuspension of particulate matter caused by vehicle movement. Approach routes to the Project site shall be cleaned daily of construction related dirt or mud. The use of dry rotary brushes and blower devices is prohibited except where preceded by sufficient wetting to limit visible dust emissions and the prior written approval of the University's Representative.
    - (5) On-site stockpiles of excavated material shall be covered or watered.
    - (6) Traffic speeds on unpaved roads shall be limited to 15 mph.
    - (7) If an area having 0.5 acres or more of disturbed surface area remains unused for seven or more calendar days, the area must comply with conditions for a stabilized surface area as defined in Rule 8011 of SJVAPCD and General Contractor shall comply with the record keeping requirements specified in Rule 8011 of SJVAPCD.

- b. Other Air Pollutants
  - (1) When feasible, construction equipment should use alternative fuel sources such as propane, natural gas or electricity.
  - (2) Minimize idling time of machinery to a maximum of 10 minutes when construction equipment is not in use.
  - (3) Construction equipment rated greater than 100 horsepower shall have, to the extent feasible, diesel exhaust controlled by use of catalyst-based diesel particulate filters.
  - (4) Use low-emission on-site station equipment.
- c. Noise
  - (1) Construction equipment shall be properly outfitted and maintained with adequate mufflers and other appropriate noise reduction devices to minimize construction-generated noise.
  - (2) Stationary noise sources such as generators or pumps shall be located away from noise sensitive land-uses and occupied buildings.
  - (3) Prior to construction activities, General Contractor shall coordinate with the County Parks and Recreation Division to reduce the likelihood that planned events at the Lake Yosemite Park are adversely affected by project construction.
  - (4) Comply with all applicable sound ordinances as required.
  - (5) Should the General Contractor need to generate construction noise adjacent to occupied buildings, the General Contractor shall inform the University's Representative in writing 14 calendar days prior to generating the noise.
  - (6) The General Contractor shall comply with the provisions of Section 01113 Special Requirements with regard to Work Hours.
- d. Odors
  - (1) Work that causes excessive odors shall be performed only after coordination with the University's Representative. Filtering of air intakes to air handling units may be needed to prevent odors and vapors from entering buildings.
  - (2) General Contractor shall provide 14 working days advance written notice to the University's Representative in order for advance notices to be forwarded to building occupants. Work stoppage may occur if advance notification has not been coordinated or if odors and vapors from the work are found to generate complaints from building occupants.
- e. Light
  - (1) The General Contractor shall minimize up-light and light spill by focusing light sources and using shielding.
  - (2) No light sources shall be directed across the site boundaries.

## 1.2 ARCHAEOLOGICAL RESOURCES

### A. GENERAL

- 1. If during the course of construction, evidence of deposits of historical or archaeological interest is found, the General Contractor shall cease the Work

affecting the find and immediately notify the University's Representative and shall not disturb deposits until written notice from University's Representative is given to proceed.

2. General Contractor will be compensated for lost time or changes in construction to avoid the find based upon normal change order procedures if Critical Path is affected.

B. Procedures

1. If a potentially significant archaeological find is identified during construction, the University may incorporate into the proposed project design measures that will minimize or eliminate direct impacts to the deposit. These may include avoidance of the site by inclusion in landscaping or open space, placement of fill over the site, and/or project redesign. If this is not feasible, or if such measures will not ensure the avoidance of impacts, the University will ensure that an archaeological testing program is carried out to assess the significance of the find.
2. If a find is determined to be significant, and if it cannot be preserved intact through project design measures, then the University will retain an archaeologist to design and carry out a treatment plan to document the data and/or preserve such scientific samples of the data for which the site is significant as may be appropriate, given the significance of the find.
3. Any significant finds that are recovered shall be retained by University and will be donated to an appropriate cultural or historical center. Unauthorized collection of artifacts is prohibited. If human remains are encountered, Work will be halted and the Merced County Coroner will be contacted immediately by the University's Representative. If human remains are determined to be Native American, the Coroner will notify the Native American Heritage Commission. The Commission will then notify the person it believes to be the most likely descendant. That descendant will work with the University to develop a program for reinternment of the remains and any associated artifacts.
4. When Native American archaeological, ethnographic, or spiritual resources are found, identification and handling of those resources will be conducted jointly by a University appointed Archaeologist and Native American representatives who are approved by the local Native American community as scholars of their cultural traditions. The Archaeologist shall either be certified by the Society of Professional Archaeologist, or meet the Federal Standards appearing in 36 CFR 61. If no approved Native American representative is available, persons who represent tribal government and/or organizations in the surrounding region shall be consulted. If historic archaeological resources are found, identification and handling of those resources will be conducted by historical archaeologists or architectural historians retained by the University.

1.3 PALEONTOLOGICAL RESOURCES

A. General

1. If during the course of construction, evidence of deposits of paleontological interest is found, the General Contractor shall cease the Work affecting the find

- and immediately notify the University's Representative. Do not disturb deposits until written notice from University's Representative is given to proceed.
2. General Contractor will be compensated for lost time or changes in construction to avoid the find based upon normal change order procedures if Critical Path is affected.

B. Procedures

1. Prior to project construction, construction personnel shall be informed by the General Contractor of the potential for encountering significant paleontological resources.
2. If a potentially significant paleontological find is discovered, the General Contractor shall cease all operations in the area of the find until a University appointed paleontologist has been afforded the opportunity to assess the significance of the find and implement appropriate measures to protect or scientifically remove the find.
3. Collection of fossil resources by other than the University's consulting paleontologist is prohibited.
4. A University appointed, qualified paleontologist may be intermittently present to inspect exposures of the Merhten Formation, North Merced Gravels, and Riverbank Formation during construction operations to ensure that paleontological resources are not destroyed by project construction.

1.4 NOXIOUS OR TOXIC MATERIALS

A. The General Contractor shall ensure that:

1. No noxious or toxic materials shall be used in or around occupied buildings without prior approval of the University's Representative.
2. Chemical wastes shall be stored in covered metal containers and shall be removed from the premises daily.
3. There shall be no accumulations of wastes that create hazardous conditions.
4. Adequate ventilation is provided during use of volatile or noxious substances. Such materials shall only be used after 48 hours previous notification to the University's Representative and preferably on weekends or "down" periods.
5. Chemicals, such as mineral spirits, oil, or paint thinner, are not dumped into storm or sanitary drains or on University property or on any adjoining property.
6. Vehicle maintenance or servicing shall not spill oil or fuel onto the ground and if a spill occurs, it shall be cleaned up immediately and the soil disposed of according to local, State, and/or Federal requirements.
7. Chemical storage, including fuel and oil, shall be double contained.
8. The General Contractor's Project Site Superintendent shall be trained in the prevention and correction of spills.
9. General Contractor shall have immediate access to spill control equipment, such as absorbent, shovels, and containers.



#### 1.5 REMOVAL AND DISPOSAL OF EXCESS SOIL

- A. All materials and debris accumulated in conjunction with completing this Work shall be disposed of legally by the General Contractor off the University's property. General Contractor shall not use University refuse containers. Clear soil spoils shall be transported and deposited at a designated on-campus site.
- B. General Contractor is to coordinate with University Representative to identify the on-campus location of a temporary staging area for storage of excavated soil. The intent of this area is to serve as a nearby storage area for excavated soil intended by the General Contractor to be used for backfill or fill later in the project. This area is to be restored to original condition after its use is no longer required.

#### 1.6 REMOVAL AND DISPOSAL OF WASTE MATERIALS

- A. All waste materials resulting from the process of clearing and construction shall be legally disposed of by the General Contractor as follows:
  - 1. All refuse and debris, concrete and other inert materials, combustible and incombustible substances, resulting from the processes of construction, shall be removed from the University's property. The General Contractor shall not use any refuse container belonging to the University. The General Contractor shall provide debris boxes for the use of the General Contractor and all of their Subcontractors and dispose all debris off-site excepting chemical and hazardous waste which shall be disposed of by the Subcontractor generating the waste. General Contractor shall be responsible for depositing their waste into the debris boxes provided by the General Contractor on a daily basis.
  - 2. Chemical Waste: All chemical waste, including solvents, oils or any other material that may be harmful to plant life, shall be disposed of in accordance with local, State and/or Federal regulations. Chemical waste shall not be stored on the University's property. At completion of Work, any contaminated soil shall be removed from the University's property and replaced with good soil by the General Contractor at no additional cost to the University.
- B. The General Contractor shall not burn or bury rubbish or waste materials on the University's property.
- C. During construction, the General Contractor shall maintain buildings, premises and property free from accumulations of waste materials and rubbish. The General Contractor shall legally dispose of such waste, rubbish and debris at reasonable intervals off the University's property.

#### 1.7 CONTROL OF NONNATIVE & INVASIVE PLANT SPECIES

- A. General Contractor shall ensure that seeds from invasive plant species are not transported into the Campus site by earth moving equipment. At a minimum, the General Contractor shall ensure that:

1. All earth moving equipment shall be washed down (wheels, under-carriage, bucket/bed, etc.) prior to being transported to the Project site. All earth moving equipment shall be clean and free of seeds or other plant material before being brought on site.
2. The General Contractor shall notify the University's Representative of the source location of all off-site fill material a minimum of 10 calendar days prior to importing material to the Project site and appropriate steps shall be taken to minimize the potential for invasive species to colonize areas disturbed during construction due to use of such fill.
3. Any organic material used during project construction for erosion control, or any material used for hydroseeding or revegetating disturbed areas is certified free of invasive species.

#### 1.8 PROTECTION OF SENSITIVE AREAS OUTSIDE PROJECT SITE BOUNDARY

- A. General Contractor shall install and maintain all temporary construction fencing around the Project site in accordance with Section 01 56 00 Temporary Barriers and Enclosures and in accordance with fencing layout shown on the Site Logistics Plan. Fencing shown to be installed at the building site, as opposed to the laydown area, will include black shade meshing to obstruct views into the construction site.
- B. General Contractor shall operate strictly within the confines of the fence and in the staging area described in the Site Logistics Plan (see Information Available to Bidders).
- C. In no instances shall construction related vehicles or General Contractor's personnel travel beyond the Project site boundary except on roads.
- D. In no instance shall the General Contractor allow any material, whether solid or liquid, to migrate from the Project site across, under or over the temporary construction fencing except when said material is being removed from the Project site in accordance with the Contract Documents.
- E. General Contractor shall be responsible for the removal and relocation of temporary construction fencing on multiple occasions as required to accommodate the construction operations of the University's separate Site Infrastructure Phase 4 Contractor adjacent to and on the Student Services Building site.

#### 1.9 NATURAL RESOURCE AWARENESS TRAINING FOR CONSTRUCTION PERSONNEL

- A. Training Program
  1. Prior to working on the Project site, all construction personnel shall attend a training program provided by the University Representative on Monday and Wednesday mornings at 7:30am or when agreeable with University's Representative. The training will include at minimum, a description of the species at risk and their habitat, the importance of the species and their habitat, the general measures being implemented to conserve the sensitive areas/species, and the boundaries within which the project may be accomplished.

2. The training shall be conducted in English and shall consist of a presentation and the distribution of appropriate literature. The General Contractor shall ensure that all Subcontractor and General Contractor supplier personnel attend a training session before they start working at the Project site.
3. The General Contractor shall ensure that the following site regulations, which will be identified in the Training program, are adhered to:
  - a. All food related items shall be properly disposed of, and signs indicating that the feeding of wildlife is prohibited shall be placed at the Project site.
  - b. Vehicle traffic shall occur primarily between dawn and dusk, and shall be limited to 20 mph to reduce the potential for wildlife road mortality.
  - c. Any trench or pit shall be constructed in such a way as to provide ramps of either fill or planks to prevent kit fox and other species from becoming entrapped.
  - d. Pipes, culverts, etc. greater than four inches in diameter shall be stored in such a way as to prohibit foxes or other species from using these areas as temporary refuge. In addition, these structures shall be thoroughly inspected each morning for kit fox or other species.
  - e. No firearms shall be allowed on University Property.
  - f. No pets shall be permitted on University Property.
  - g. The use of pesticides on the Project site by the General Contractor, including but not limited to rodenticides, insecticides and herbicides, is prohibited unless prior written approval of the University's Representative is obtained.
  - h. Construction vehicles shall be limited to a maximum speed of 10 mph in the vicinity of breeding ponds of California tiger salamander during the salamander movement period. The location of the breeding ponds and dates of the movement period shall be identified by the University's Representative.
  - i. If construction activities occur within 0.6 miles of salamander breeding ponds, the General Contractor shall erect drift fences or other effective salamander barriers around the site before 1<sup>st</sup> February in the winter prior to the start of construction. The fences shall be positioned so as to allow salamander's access to the breeding ponds but to exclude them from the Project site. Prior to fence erection, layout of the fences shall be submitted to the University's Representative for review and approval.
  - j. The University's Representative shall identify any areas containing burrowing owls. The General Contractor shall establish "Sensitive Areas" around the occupied owl holes identified by the University's Representative. The Sensitive Areas shall not be disturbed by the General Contractor. The Sensitive Areas shall extend to a distance of 160 feet from each occupied burrow during the non-breeding season of 1<sup>st</sup> September through 31 January. The sensitive Areas shall extend to a distance of 250 feet from each occupied burrow during the breeding season of 1<sup>st</sup> February through 31<sup>st</sup> August. The General Contractor shall erect a temporary fence during the breeding season around occupied burrows. If in the opinion of the University's Representative, the Sensitive Area method is impractical, the owls may be passively relocated. To relocate the owls, the General Contractor shall fit one-

way doors across the entrances to those burrows identified by the University's Representative. The doors shall be positioned so that the owls can exit but not enter their burrows. The doors shall remain in place for 72 hours. Before and during the relocation process, the General Contractor shall establish a 250 feet Sensitive Area around the burrows identified for relocation. No relocation activity shall be carried out during the breeding season.

- k. The University's Representative shall identify the location of active raptor nests adjacent to the Project site. Should an active Swanson's Hawk nest be located within 1000 feet of the Project site, or an active nest of another raptor species be identified within 250 feet of active construction, the University's Representative will, in consultation with the California Department of Fish & Game, determine the actions necessary to protect the nest site. Such actions may include avoiding construction within a distance from the nest determined by the University's Representative for a period determined by the University's Representative

#### 1.10 AUTHORITY OF THE UNIVERSITY'S REPRESENTATIVE TO SUSPEND WORK

- A. The University's Representative has the authority to suspend construction work when such work causes or threatens to cause harm to sensitive habitat or species.
- B. General Contractor will be fully responsible for any and all damages and sanctions placed against the Project for any violations of these requirements.

#### 1.11 SURFACE WATER CONTROL

- A. All portions of the Work shall be kept free of standing water at all times during construction of the Work herein specified. Where required, temporary drainage ditches, berms, or pumping systems shall be constructed to divert drainage water away from the Project site and the resultant water shall be carried to the nearest water course approved by the University's Representative and disposed of without erosion to the surrounding area. Care shall be taken to prevent silting of the water courses. Silt that is deposited, as a result of the Work in this Project, shall be removed and disposed of by the General Contractor, at the General Contractor's expense and to the satisfaction of the University's Representative. The General Contractor shall follow CALTRANS "Handbook of Practices, Storm Water Pollution Practice."

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01 35 40

**SECTION 01 35 43**  
**HAZARDOUS MATERIALS PROCEDURES**

**PART 1 - GENERAL**

**1.1 CONTRACTOR'S RESPONSIBILITY**

- A. Except as otherwise specified, in the event General Contractor encounters on the Project site material reasonably believed to be asbestos, polychlorinated biphenyl (PCB), lead, or other hazardous substances that have not been rendered harmless, General Contractor shall immediately stop work in the area affected and report the condition to the University's Representative in writing. The Work in the affected area shall not thereafter be resumed except by written agreement of University and General Contractor if in fact the material is asbestos, PCB, lead, or other hazardous substances and has not been rendered harmless. The Work in the affected area shall be resumed in the absence of asbestos, PCB, lead, or other hazardous substances, or when such materials have been rendered harmless.
- B. Disclose any hazardous substance or condition exposed during the Work to the University's Representative for decision or remedy.
- C. In no event, shall the General Contractor install materials that contain asbestos, PCB, lead or other known hazardous materials without specific prior written approval by the University's Representative.
- D. Disposal of lighting ballasts containing PCB's shall be accomplished by the University. The General Contractor shall coordinate with the University's Representative regarding a date, location and time for delivery to a location on Campus to be designated.
- E. Regulated Carcinogens by California Code of Regulations (CCR) Title 8, Section 5200 et seq.
  - 1. Products containing chemicals regulated as carcinogens by California Occupational Safety and Health Act (OSHA) are not allowed for use on University projects. The OSHA regulated carcinogens are:
    - a. 2-Acetylaminofluorene, 5209
    - b. 4-Aminodiphenyl
    - c. Benzidine (and its salts)
    - d. 3,3'-Dichlorobenzidine (and its salts)
    - e. 4-Dimethylaminoazobenzene
    - f. alpha-Naphthylamine
    - g. beta-Naphthylamine
    - h. 4-Nitrobiphenyl
    - i. N-Nitrosodimethylamine
    - j. beta-Propiolactone
    - k. bis-Chloromethyl ether
    - l. Methyl chloromethyl ether
    - m. Ethyleneimine
    - n. Methylene Chloride, 5202
    - o. Methylenedianiline (MDA), 1535, 5200
    - p. Cadmium, 1532, 5207
    - q. Asbestos, 1529, 5208, 5208.1, 8358

- r. Vinyl Chloride, 5210
- s. Coke Oven Emissions, 5211
- t. 1,2-Dibromo-3-Chloropropane (DBCP), 5212
- u. Acrylonitrile, 5213
- v. Inorganic Arsenic, 5214
- w. 4,4'-Methylenebis(2-Chloroaniline) (MBOCA), 5215
- x. Formaldehyde, 5217
- y. Benzene, 5218
- z. Ethylene Dibromide (EDB), 5219
- aa. Ethylene Oxide (EtO), 5220
- bb. 1,3 Butadiene, 5201
- 2. Case-by-case exceptions may be considered for products containing the following COSHA recognized carcinogens:
  - a. Methylene Chloride, 5202
  - b. Cadmium, 1532, 5207
  - c. Inorganic Arsenic, 5214
  - d. Formaldehyde, 5217
  - e. Benzene, 5218
- 3. Case-by-case exceptions may only be made when suitable alternative products are not available. Such exceptions are subject to approval by the University's Representative.
- 4. Exceptions require that the General Contractor shall have an established carcinogen program as required by COSHA and shall submit to University's Representative, a copy of the COSHA Confirmation of Report for COSHA carcinogens.
- 5. When exceptions are granted the General Contractor is responsible for providing to the University's Representative a copy of the semi-annual Confirmation of Report received from COSHA or, in lieu of that, a copy of the General Contractor's semi-annual report as submitted to COSHA at periods not to exceed 6 months, or at project closeout, whichever occurs first.

## 1.2 ASBESTOS IN BUILDINGS NOTIFICATION

- A. California Health and Safety Code, Section 25915, Chapter 10.4, Division 20 requires UC Merced employees and contractors working for the campus to be notified of the presence of asbestos in buildings constructed prior to 1979. For information about asbestos in specific buildings, contact the University's Representative.
- B. It is important to note that the presence of asbestos does not mean you have been exposed to asbestos. Exposure strictly refers to the inhalation or ingestion of friable asbestos particles. Asbestos becomes friable through drilling, sanding or similar destructive processes usually associated with remodeling or demolition work. Intact, bonded, sealed and undisturbed asbestos does not pose a hazard.
- C. General Contractors who disturb or potentially disturb friable or non-friable asbestos must comply with all Federal State and Local rules and regulations regarding hazardous materials.

1.3 LEAD BASED PAINT IN BUILDINGS

- A. The California Department of Health Services requires the certification of employees and supervisors performing lead related construction activities in residential and public buildings, as defined in Title 17, California Code of Regulations, Division 1, Chapter 8. Lead related construction work is defined in Title 17 as any construction, alteration, painting, demolition, salvage, renovation, repair, or maintenance of any residential or public building, including preparation and cleanup, that, by using or disturbing lead containing material or soil, may result in significant exposure of adults or children to lead.
- B. It is important to note that the presence of lead does not mean you have been exposed to lead. Exposure strictly refers to the inhalation or ingestion of lead dust. Lead becomes dust through drilling, sanding or similar destructive processes usually associated with remodeling or demolition work. Intact, bonded, sealed and undisturbed lead does not pose a hazard.
- C. For information about lead in specific buildings, contact the University Representative
- D. General Contractors who disturb or potentially disturb lead must comply with all Federal State and Local rules and regulations regarding hazardous materials.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01 35 43

**SECTION 01 41 00**  
**REGULATORY REQUIREMENTS**

**PART 1 - GENERAL**

**1.1 CODES, AGENCIES, AND REFERENCES**

- A. The Work shall be performed in accordance with Applicable Code Requirements and applicable requirements of all other regulatory agencies, including, but not limited to, the following:
1. Americans with Disabilities Act - Title II.
  2. California Environmental Quality Act.
  3. California Health and Safety Code.
  4. National Fire Protection Association (NFPA).
  5. Federal Occupational Safety and Health Administration.
  6. Federal Clean Water Act, including but not limited to the Storm Water Pollution Prevention requirements.
  7. Federal Endangered Species Act.
  8. Federal Clean Air Act.
  9. Porter-Cologne Water Quality Act, State of California
  10. Endangered Species Act, State of California
  11. California Fish & Game Code, Section 1600, et. seq.
  12. Resource Conservation and Recovery Act (RCRA) and the California Hazardous Waste Control Law.
  13. Comprehensive Environmental Response and Cleanup Liability Act (CERCLA)
  14. California Building Code (CBC)

**1.2 STANDARDS AND CODES**

- A. Applicable laws, codes, rules, regulations, ordinances and standards
1. Code of Federal Regulations
    - a. Title 33, Navigation and Navigable Waters
    - b. Title 40, Protection of Environment
    - c. Title 50, Wildlife and Fisheries
  2. California Code of Regulations (CCR)
    - a. Title 8, Industrial Relations/Elevators
    - b. Title 14, Natural Resources
    - c. Title 17, Public Health
    - d. Title 19, Public Safety



- e. Title 20, Public Utilities and Energy
  - f. Title 21, Public Works
  - g. Title 22, Environmental Health
  - h. Title 23, Waters
  - i. Title 24, California Building Standards Code
    - 1) Part 2, California Building Code 2010
    - 2) Part 3, California Electric Code 2010
    - 3) Part 4, California Mechanical Code 2010
    - 4) Part 5, California Plumbing Code 2010
    - 5) Part 6, California Energy Code 2010
    - 6) Part 7, California Elevator Safety Construction Code 2007
    - 7) Part 9, California Fire Code 2010
    - 8) Part 11 California Green Building Standards Code 2010
    - 9) Part 12, California State Reference Standards 2010
  - j. Title 27 Environmental Protection 2007
3. San Joaquin Valley Air Pollution Control District Regulation #8 2004

### 1.3 REFERENCES

- A. Unless otherwise specified, specific references to codes, regulations, standards, manufacturers' instructions, or requirements of regulatory agencies, when used to specify requirements for materials or design elements, shall mean the latest edition of each in effect at the date of submission of bids, or the date of the Change Order (Exhibit 9) or Field Order (Exhibit 8), as applicable.

### 1.4 CONFLICTS

- A. Unless otherwise directed by the University's Representative, if a conflict exists between referenced regulatory requirements and the Contract Documents, the General Contractor shall refer the matter to the University's Representative for further instruction.
- B. Nothing stated in this Section of the Specifications or other Sections of the Specifications, the other Contract Documents or the Bidding Documents or shown on the Drawings shall be construed as allowing Work that is not in strict compliance with all applicable Federal, State, regional, and local statutes, laws, regulations, rules, ordinances, codes and standards.

### 1.5 TRENCHING AND SHORING

- A. All Work shall be in full accordance, but not necessarily limited to the following codes and regulations: Titles as listed in Section 1.2 Standards and Codes above, State of California, California Code of Regulations (CCR), California Occupational Safety and Health Administration (OSHA).
  - 1. Pursuant to Labor Code 6707, the General Contractor shall include in the bid all costs incident to the provisions of adequate sheeting, shoring, bracing or equivalent method for

the protection of life or limb that shall conform to applicable Federal and State safety orders.

2. Before beginning any excavation 5 feet or more in depth, the General Contractor shall submit to the University's Representative a detailed Drawing showing the design of shoring, bracing, sloping, or other provisions to be made for worker protection from the hazard of caving ground during the excavation. The proposed design shall comply with the standards established by the State of California Construction Safety Orders, Title 8 and Title 24 of the California Code of Regulations (CCR). If the design varies from such shoring system standards, the Drawing shall be prepared by a registered civil or structural engineer whose name and registration number shall be indicated on the Drawing. If a dispute arises as to whether the plan must be prepared by a registered civil or structural engineer, the University's Representative's determination of the matter shall be final and conclusive on the General Contractor. The cost of required engineering services shall be borne by the General Contractor and shall be deemed to have been included in the Contract Sum for the Work as stated in the Agreement.
3. Neither the review nor approval of any Drawing showing the design of shoring, bracing, sloping, or other provisions for worker protection, shall relieve the General Contractor from the obligation to comply with construction State of California Construction Safety Order and Title 24 of the California Code of Regulations (CCR) for the design and construction of such protective Work, and the General Contractor shall indemnify the University and the University's Representative from any and all claims, liability, costs, actions and causes of action arising out of or related to the failure of such protective systems. The General Contractor shall defend the University, its officers, employees, Design Professional and agents and the University's Representative in any litigation or proceeding brought with respect to the failure of such protective systems.
4. All Work including any temporary construction shall be in full compliance with the latest orders of the Division of Industrial Safety of the State of California and all codes and regulations as called for hereinafter in these specifications.

#### 1.6 REGULATORY NOTIFICATIONS

- A. Submit all required notifications to Federal, State of California, State in which disposal facility is located if not in California, regional, and local agencies with regulatory responsibilities associated with the Work activities that are included in the Contract. All notifications shall be served in writing, in the form required by the agency requiring notification, and in a timely manner so as not to negatively impact the Project schedule. Serve notifications at least 10 working days in advance (or earlier if required by agency) of activity requiring notice. The General Contractor shall serve all required notifications in writing to all governmental and quasi-government agencies having notification requirements pertaining to any portion of the Work included in the Project.
- B. General Contractor shall comply with the State General Construction Activity Storm water Permit National Pollutant Discharge Eliminate System (NPDES) for the campus and comply with the University's Storm Water Pollution Prevention Plan.

1.7 NOTIFICATIONS, CERTIFICATES AND UNIFORM HAZARADOUS WASTE MANIFEST

A. Permits

1. General Contractor will not be required to obtain a County of Merced building permit.

B. Fire Department

1. General Contractor shall be responsible for issuing in writing to the University's Representative the following notifications prior to starting site Work:
  - a. Hazardous Condition Notification - Hot Work: must be coordinated before starting any hot work (welding, burning, or cutting, etc.) involving use of gas or electric welding equipment. General Contractor shall report to the University's Representative, at the beginning and 30 minutes prior to the end of each shift that such "hot" work takes place
  - b. Hazardous Conditions Notification-General: for the storage or use of any flammable liquid in excess of 10 gallons or in any confined area where vapors can be ignited. The General Contractor shall report to the University's Representative at the beginning and 30 minutes prior to the end of each shift that such work takes place
  - c. Hazardous Condition Notification-Special Conditions: Coordinate in advance with the University's Representative before restricting access to or blocking of any building exit or Work that will require the shutdown of building fire protection or alarm systems. The General Contractor shall report to the University's Representative at the beginning and 30 minutes prior to the end of each shift that such work takes place
  - d. At the end of the Work, the General Contractor must submit Automatic Sprinkler Systems- Material and Test Certificate for Aboveground Piping and Automatic Sprinkler Systems- Material and Test Certificate for Underground Piping for approval by the University (Exhibits 20 and 21). The Automatic Sprinkler underground and aboveground will not be accepted until these certificates have been completed and submitted.

- C. Prior to commencing clearing, excavation and trenching, Contractor shall locate all known existing installations before proceeding with construction operations that may cause damage to such installation. Existing installations shall be kept in service where possible and damage to them shall be repaired at no additional cost to the University.

- D. Uniform Hazardous Waste Manifest: General Contractor shall be responsible for coordination with the University's Representative for obtaining a Uniform Hazardous Waste Manifest prior to removal of asbestos containing materials, polychlorinated biphenyl (PCB), or other hazardous materials from the Project site. Manifest will be provided by the University's Representative. Only the University's Representative will be allowed to sign individual manifests on behalf of the General Contractor/University.

1.8 CIVIL OR CRIMINAL PENALTIES OR FINES

- A. General Contractor shall be liable for the payment of any and all civil or criminal penalties or fines imposed by the U.S. Fish & Wildlife Service (USFWS), U.S. Army Corps of Engineers (USACE), California Department of Fish & Game (CDFG), Central Valley Regional Water

Quality Control Board (CVRWQCB) or any other applicable regulatory agency for General Contractor's violations of the federal Endangered Species Act (ESA), Clean Water Act (CWA), California Endangered Species Act (CESA), Porter-Cologne Water Quality Control Act (Porter-Cologne); any regulation promulgated to implement said statutes; the UC Merced Biological Opinion; or any applicable authorization issued by the USFWS, USACE, CDFG, CVRWQCB, or other applicable federal, state or local regulatory agency.

- B. In the event General Contractor is found liable for civil actions under the abovementioned statutes, regulations, permits or authorizations, General Contractor shall be responsible for the payment of any civil penalties imposed by any applicable regulatory agency. Penalties may vary according to the applicable statute, including but not limited to, penalties of up to \$50,000 per day of violation of the CWA, \$25,000 for each ESA violation, and \$15,000 per day of violation of Porter-Cologne.
- C. In the event General Contractor is convicted of criminal actions under the abovementioned statutes, regulations, permits or authorizations, General Contractor shall be responsible for satisfying applicable terms of imprisonment and the payment of any criminal fines imposed by the regulatory agency. Fines may vary according to the applicable statute, including but not limited to, fines of \$250,000 per day of violation of the CWA, \$50,000 for each ESA violation, and \$15,000 per day of violation of Porter-Cologne.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01410

**SECTION 01 42 13**  
**ABBREVIATIONS, SYMBOLS & DEFINITIONS**

**PART 1 - GENERAL**

**1.1 ABBREVIATIONS**

A. The following abbreviations of organizations may be used in the Contract Documents:

AA	Aluminum Association
AABC	Associated Air Balance Council
AAMA	Architectural Aluminum Manufacturers' Association
AAN	American Association of Nurserymen, Inc.
AASHTO	American Association of State Highway and Transportation Officials
ABAG	Association of Bay Area Governments
ABPA	Acoustical and Board Products Association
ABPTA	American Bearing Power Transmission Association
ACI	American Concrete Institute
ACIL	American Council of Independent Laboratories
ACPA	American Concrete Pipe Association
ADA	Americans with Disabilities Act of 1990
ADAAG	American with Disabilities Act Accessibility Guidelines
ADC	Air Diffusion Council
AFBMA	Anti-Friction Bearing Manufacturers Association
AFI	Air Filter Institute
AGA	American Gas Association
AF&PA	American Forest and Paper Association
AGC	Associated General Contractors of America
AHA	American Hardboard Association
AI	The Asphalt Institute
AIA	American Institute of Architects
AIEE	American Institute of Electrical Engineers
AIMA	Acoustical and Insulation Materials Association
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
AITC	American Institute of Timber Construction
ALSC	American Lumber Standards Committee
AMCA	Air Moving and Conditioning Association
ANSI	American National Standards Institute
AOAC	Association of Official Analytical Chemists
APA	American Plywood Association
API	American Petroleum Institute
AQMD	Air Quality Management District
ARI	Air-Conditioning and Refrigeration Institute
ASA	American Standards Association
ASAH	American Society of Architectural Hardware Consultants
ASCE	American Society of Civil Engineers
ASHRAE	American Society of Heating, Refrigerating and Air-Conditioning Engineers

ASME	American Society of Mechanical Engineers Association
ASTM	American Society for Testing and Materials
AWCI	Association of Wall and Ceiling Industries
AWG	American Wire Gauge
AWI	Architectural Woodwork Institute
AWPA	American Wood-Preservers' Association
AWPB	American Wood Preservers Bureau
AWPI	American Wood Preservers Institute
AWS	American Welding Society
AWWA	American Water Works Association
BHMA	Builders Hardware Manufacturers' Association
BICSI	Building Industry Consulting Service International
BOCA	Building Officials and Code Administrators
CAC	California Administrative Code
CARB	California Air Resources Board
CBC	California Building Code
CBSC	California Building Standards Commission
CCR	California Code of Regulations
CDA	Copper Development Association, Inc.
CDFG	California Department Fish and Game
CE	Corps of Engineers (U.S. Dept. of the Army)
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response and Cleanup Liability Act
CESO	California Elevator Safety Order
CGA	Compressed Gas Association
CISPI	Cast Iron Soil Pipe Institute
CLFMI	Chain Link Fence Manufacturer's Institute
CLPA	California Lathing and Plastering Association
CMC	California Mechanical Code
CMM	State of California, Business, Transportation and Housing Agency, Department of Transportation "Materials Manual"
COSHA	California Occupational Safety and Health Act
CPC	California Plumbing Code
CPSC	Consumer Product Safety Commission
CRI	Carpet and Rug Institute
CRSI	Concrete Reinforcing Steel Institute
CS	Commercial Standards of NBS (U.S. Dept. of Commerce)
CSS	State of California, Business, Transportation and Housing Agency, Department of Transportation "Standard Specifications"
CTI	Cooling Tower Institute
CVRWQCB	Central Valley Regional Water Quality Control Board
DHI	Door & Hardware Institute
DHS	California Department of Health Services
DSA	Division of State Architect
DSA/AC	Division of State Architect, Access Compliance Section
EIA	Electronic Industrial Alliance
EPA	Environmental Protection Agency

ESO	Electrical Safety Orders of Division of Industrial Safety, Title 8, CAC
ETL	Electrical Testing Laboratories
FCC	Federal Communications Commission
FFDA	Federal Food and Drug Administration
FGMA	Flat Glass Marketing Association
FIA	Factory Insurance Association
FM	Factory Mutual System, Factory Mutual Engineering Corporation
FS	Federal Specifications
FSC	Forest Stewardship Council
GA	Gypsum Association
GFI	Ground Fault Interrupter
HCP	Habitat Conservation Plan
HEPA	High Efficiency Particulate Air
HI	Hydronics Institute
HMI	Hoists Manufacturers Institute
HMMA	Hollow Metal Manufacturers Association
HPMA	Hardwood Plywood Manufacturers Association
IAPMO	International Association of Plumbing and Mechanical Officials
IAQ	Indoor Air Quality
IBEW	International Brotherhood of Electrical Workers
IBR	Institute of Boiler and Radiator Manufacturers
ICBO	International Conference of Building Officials
ICEA	Insulated Cable Engineering Association
IEC	International Electrotechnical Commission
IEQ	Indoor Environmental Quality
IEEE	Institute of Electrical and Electronics Engineers
IES	Illuminating Engineering Society of North America
IGCC	Insulating Glass Certification Council
IPCEA	Insulated Power Cable Engineers' Association
ISA	Instrument Society of America
ISO	International Standards Organization
ITU	International Telecommunications Union
LEED <sup>®</sup>	Leadership in Energy & Environmental Design
LIA	Lead Industries Association
MBMA	Metal Building Manufacturer's Association
MIA	Marble Institute of America
MID	Merced Irrigation District
MIL	U.S. Government, Military Specification
MLSFA	Metal Lath/Steel Framing Association
MM	State of California, Business, Transportation and Housing Agency, Department of Transportation "Materials Manual"
MSS	Manufacturers Standardization Society of Valves and Fittings Industry
NAAB	National Association of Air Balance
NAAMM	The National Association of Architectural Metal Manufacturers
NACE	National Association of Corrosion Engineers
NBFU	National Board of Fire Underwriters
NBGQA	National Building Granite Quarries Association, Inc.
NBHA	National Builders' Hardware Association

NBS	National Bureau of Standards
NCCP	National Communities Conservation Plan
NCMA	National Concrete Masonry Association
NCPWB	National Certified Pipe Welding Bureau
NEBB	National Environmental Balancing Bureau
NECA	National Electrical Contractors Association
NEMA	National Electrical Manufacturers Association
NEPA	National Environmental Protection Act
NETA	National Electrical Testing Association
NFPA	National Fire Protection Association
NHLA	National Hardwood Lumber Association
NIOSH	National Institute of Occupational Safety and Health
NPA	National Particleboard Association
NPDES	National Pollutant Discharge Eliminate System
NRC	Noise Reduction Coefficient
NRCA	National Roofing Contractors Association
NRMCA	National Ready Mixed Concrete Association
NSF	National Sanitation Foundation
NWMA	National Woodwork Manufacturers Association, Inc.
NWWDA	National Wood Window and Door Association
OSHA	Office of Safety and Health Act
OSHPD	Office of Statewide Health Planning and Development
PCA	Portland Cement Association
PCB	Polychlorinated Biphenyl
PCI	Precast/Prestressed Concrete Institute
PDI	Plumbing and Drainage Institute
PI	Perlite Institute
PS	Product Standard of United States Department of Commerce
RCRA	Resource Conservation & Recovery Act
RCSC	Research Council on Structural Connection
RFCI	Resilient Floor Covering Institute
RIS	Redwood Inspection Service
RUS	U.S. Department of Agriculture, Rural Utilities Service
SJVAPCD	San Joaquin Valley Air Pollution Control District
SAE	Society of Automotive Engineers
SBC	State Building Code
SBS	State Building Standards Electrical Code, Title 24, Part 3
SCS	Scientific Certification Systems
SDI	Steel Door Institute
SFM	State of California, Office of State Fire Marshal
SIGMA	Sealed Insulating Glass Manufacturers Association
SJI	Steel Joist Institute
SMACNA	Sheet Metal & Air Conditioning Contractors' National Association, Inc.
SPIB	Southern Pine Inspection Bureau (Grading Rules)
SPR	Simplified Practice Recommendation
SSPC	Society for Protective Coatings
STC	Sound Transmission Coefficient
SWI	Sealant and Waterproofers Institute



SWPPP	Storm Water Pollution Prevention Plan
TCA	Tile Council of America, Inc.
TIA	Telecommunications Industry Association
UBC	Uniform Building Code
UCM	University of California Merced
UCMFM	University of California Merced Facilities Management
UFAS	Uniform Federal Accessibility Standards
UHMW	Ultra-High Molecular Weight
UL	Underwriters' Laboratories, Inc.
USA	Underground Service Alert
USDA	United States Department of Agriculture
USFWS	United States Fish & Wildlife Service
USGBC	United States Green Building Council
USS	United States Standards
USSG	United States Steel Gauge
WAPA	Western Area Power Authority
WCLIB	West Coast Lumber Inspection Bureau
WH	Warnock Hersey
WIC	Woodwork Institute of California
WLPDIA	Western Lath/Plaster/Drywall Industries Association
WRSI	Western Concrete Reinforcing Steel Institute
WWPA	Western Wood Products Association
WWPOA	Western Wood Preserving Operators Association
WWTP	Waste Water Treatment Plant

B. Additional abbreviations, used on the Drawings, are listed thereon.

## 1.2 SYMBOLS

A. Symbols, used only on the Drawings, are shown thereon.

## 1.3 DEFINITIONS

- A. The following terms, when used on the Drawings or in the Specifications, shall have the following meanings:
1. AS DIRECTED - "As directed by the University's Representative."
  2. AS REQUIRED - "As required by Applicable Code Requirements; by good building practice; by the condition prevailing; by the Contract."
  3. AS SELECTED - "As selected by the University's Representative."
  4. BY OTHERS - Work on this Project that is outside the scope of Work to be performed by the General Contractor under this Contract, but that will be performed by the University, Separate General Contractors, or other means.
  5. EQUAL - Of same quality, appearance, and utility to that specified, as determined by the University's Representative. The General Contractor bears the burden of proof of quality.
  6. FABRICATED - Items specifically assembled or made out of selected materials to meet individual design requirements.

7. FURNISH - "Supply only, not install (unless required to be provided or installed elsewhere in the Contract Documents)."
8. INSTALL - "Install or apply only, not furnish."
9. MANUFACTURED – Applies to standard units usually mass-produced.
10. OFF SITE - Outside the Work area as shown on the Drawings or the property lines.
11. PROJECT SITE - Geographical location of the Project.
12. PROVIDE - "Furnish and install."
13. SHOWN - "As indicated on the Drawings."
14. SPECIFIED - "As written in the Contract Documents."
15. SUBMIT - "Submit to University's Representative."
16. OFCI - UNIVERSITY-FURNISHED, GENERAL CONTRACTOR  
INSTALLED - "To be furnished by University and installed by General Contractor as part of the Work. Scope of work includes receipt, off-loading, inspection, on-site storage of material and protection after installation until acceptance."

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01 42 13

SECTION 01 43 39  
MOCK-UPS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes: Requirements for full-size, physical assemblies that are constructed on-site or off-site as specified.
1. Construct mock-ups of the following:
    - a. Full-size composite exterior enclosure assembly constructed on site at location designated by University Representative.
    - b. Laboratory casework mock-up constructed at location designated by University Representative.
    - c. Polished concrete finish topping constructed on site at location designated by University Representative.
  2. Design Concept: Mock-up is intended to permit verification of workmanship and visual qualities of the final completed installation.
  3. Mock-ups will be used:
    - a. To verify qualities of materials, and execution.
    - b. Field test composite exterior enclosure assembly mock-up to determine if system components and its integration with adjacent assemblies meet performance requirements.
    - c. To provide Exterior Enclosure Work with the opportunity to coordinate work.
  4. Review requirements specified in other appropriate Sections for specific mock-ups and for materials, methods, and additional sample submittal requirements.
  5. Accepted mock-up shall be used as a visual standard for the final installation.
- B. Related work not included in this section:
1. First-install mock-ups for products, systems, and finishes as specified in individual technical specification sections, which will become part of the completed Work.
- C. Related Sections:
1. Section 01 43 40 "Exterior Enclosure Performance Requirements"
  2. Section 05 12 30 "Architecturally Exposed Structural Steel Framing"
  3. Section 05 52 13 "Pipe and Tube Railings"
  4. Section 05 70 00 "Decorative Metal"
  5. Section 07 27 13 "Modified Bituminous Sheet Air Barriers."
  6. Section 07 42 13 "Metal Wall Panels"
  7. Section 07 62 00 "Sheet Metal Flashing and Trim."

8. Section 07 84 00 "Penetration Firestopping"
9. Section 07 92 00 "Joint Sealants"
10. Section 08 41 13 "Aluminum-Framed entrances and Storefronts."
11. Section 08 44 13 "Glazed Aluminum Curtain Walls"
12. Section 08 80 00 "Glazing"
13. Section 09 24 00 "Insulated Plaster System."
14. Section 09 29 00 "Gypsum Board"
15. Section 09 30 00 "Tiling"
16. Section 09 91 13 " Exterior Painting"
17. Section 09 91 23 "Interior Painting"
18. Section 26 50 00 "Lighting Fixtures"
19. Additional Sections as required for completion of mock-ups as specified or as shown on the Drawings.

## 1.2 REFERENCES

- A. The publications listed below form a part of this Section to the extent referenced. The publications are referred to in the text by the basic designation only.
- B. Unless otherwise noted, standards, manuals, and codes refer to the latest edition of such standards, manuals, and codes as of the date of issue of this Project Manual.
- C. Referenced Standards:
  1. ASTM E 1105 Standard Test Method for Field Determination of Water Penetration of Installed Exterior Windows, Skylights, Doors, and Curtain Walls, by Uniform or Cyclic Static Air Pressure Difference.

## 1.3 DESCRIPTION OF MOCK-UPS

- A. Composite Exterior Enclosure Assembly: Free-standing composite exterior enclosure assembly mock-up to be constructed at a location separate from the actual building and near the Project site, as shown on the Drawings, or, if not shown, as directed by University's Representative.
  1. This mock-up will be constructed "out of sequence" with respect to normal sequence of construction of component parts of the exterior enclosure to obtain approval by the University before commencing with the work represented by the composite exterior enclosure mock-up.
  2. Provide finishes to match reviewed sample submittals.
  3. Construct mock-up as shown on the Drawings.

4. Mock-up shall show:
  - a. Exterior wall assembly as specified in Division 05 Section "Cold-Formed Metal Framing", "Architecturally Exposed Structural Steel Framing (AESS)", "Decorative Metal", Division 07 "Modified Bituminous Sheet Air Barriers" and "Sheet Metal Flashing and Trim"
  - b. Insulated plaster system as specified in Division 09 Section "Insulated Plaster System."
  - c. Metal wall panels as specified in Division 07 Section "Metal Wall Panels",
  - d. Joint sealants as specified in Division 07 Section "Joint Sealants."
  - e. Flashings as specified in Division 07 Section "Sheet Metal Flashing and Trim."
  - f. Glazed-aluminum curtain wall systems as specified in Division 08 Section "Glazed-Aluminum Curtain Walls."
  - g. Aluminum windows as specified in Division 08 Section "Aluminum-Framed Entrances and Storefronts."
  - h. Glazing as specified in Division 08 Section "Glazing."
  - i. Portland cement plastering as specified in Division 09 Section "Portland Cement Plastering."

B. Site Concrete: Mock-up to be constructed at location near the Project Site, as directed by University Representative.

1. This mock-up will be constructed "out of sequence" with respect to normal sequence of construction to obtain approval by the University before commencing of work represented by the site concrete mock-up.

#### 1.4 GENERAL REQUIREMENTS FOR MOCK-UPS

A. Maintain quality control over Work of various Section of Specifications, manufacturers, products, services, workmanship, and site conditions to produce mock-ups in accordance with the Contract Documents.

B. Pre-Installation Conference

1. Conduct pre-installation conference in accordance with Section 01 31 19 "Project Meetings."
2. Convene pre-installation conference at least one week prior to commencing work on Mock-ups.

C. Workmanship:

1. Comply with standards specified in technical specification sections.
2. Provide qualified personnel to produce mock-up of specified quality.
  - a. Use products, materials, finishes, fabrication methods, details, anchorage system, and construction methods identical with those required for the Work.
  - b. Use supervisor who will be involved in the actual construction.
3. Secure mock-ups in place with positive anchorage devices designed and sized to withstand stresses, vibration, and tests.

4. Provide finish to match approved samples.
- D. Assemble and erect complete, with specified attachment and anchorage devices, flashings, seals and finishes.
  1. Anchorage and assembly shall conform to code requirements for seismic stability.
  2. Include, as part of the mock-up, required shoring and bracing to support mock-up.
  3. Coordinate mock-up construction with delivery and assembly of related materials and components to be included in each mock-up.
- E. Visual examination and testing of composite exterior enclosure assembly mock-up shall be completed prior to fabrication and installation of any component system.
- F. Correct work installed within the composite exterior enclosure assembly mock-up which is not acceptable to the University's Representative or does not pass testing requirements at no additional cost to the University. Correct subsequent installations elsewhere in the Work, which is not in accordance with the approved mock-up at no additional cost to the University.
- G. University's approval of component exterior enclosure assembly mock-up will not relieve the General Contractor of the responsibility for any deviations from the requirements of the Contract Documents unless the General Contractor has specifically informed the University's Representative in writing of any deviation at the time of the mock-up review and the University's Representative has given written approval of the specific deviation.
- H. Make necessary additions and modifications to the details shown on the Drawings as may be required to comply with specified performance requirements while maintaining the design concept.
- I. Maintain composite exterior enclosure assembly mock-up in a clean and undamaged condition during construction and dispose of mock-ups when no longer required as determined by University's Representative.
- J. Exterior Enclosure Mock-up support framing, seismic bracing, connections, and related hardware shall be designed under the direct supervision of a Professional Engineer experienced in the design of the work, registered and licensed in the state of California, using performance and design criteria and requirements specified in Section 01 43 39.

#### 1.5 SUBMITTALS

- A. General: Review all Sections.
- B. Product data and samples for each component part of the exterior enclosure assembly as specified in each technical specification.
- C. Mock-up shop drawing: Submit detailed shop and erection drawings of component exterior enclosure assembly. Drawing shall include all large scale details for all components required for each composite exterior enclosure assembly mock-up, required supports, joint anchor assembly, sealant application, water collection and drainage systems, anchorage, and other required work to complete composite mock-up.

- D. Test Procedures: Prior to testing submit detailed test procedures, schedules, and reporting procedures.
- E. Test Reports: Submit test reports as required by testing requirements specified in this section.
- F. Submit structural calculations prepared and stamped by a Professional Engineer licensed in the state of California.

## PART 2 - PRODUCTS

### 2.1 MATERIALS

- A. General: Except as otherwise specified, materials for mock-up shall be as shown and specified in the respective Specification Sections.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine site and area to receive mock-up and conditions under which mock-ups are to be constructed. Correct any deficiencies.

### 3.2 REVIEW AND ACCEPTANCE

- A. Upon completion of mock-up construction, notify University's Representative and make arrangements for review.
- B. Acceptable mock-ups shall become the standard of quality for the Work, as approved by University's Representative. Establish and document quality control standards for materials, fabrication, assembly and erection, including finishes, tolerances, sealant colors, and sealant applications.
- C. Maintain mock-ups in neat, clean, and "as-accepted" conditions.
- D. Mock-ups shall be completed and shall be approved by the University's Representative in writing, prior to commencing with Work.
- E. Modify the mock-ups, or construct new components if requested by the University's Representative, for further evaluation and until final acceptance is obtained.

### 3.3 TESTING OF COMPOSITE EXTERIOR ENCLOSURE ASSEMBLY

- A. Conduct testing in the presence of University Representative. Provide minimum one week prior notice of date and time of testing.
- B. Composite exterior enclosure assembly mock-up is subject to observation and inspection by University Representative throughout construction and testing.

- C. Construct test chamber in accordance with procedures and requirements of ASTM E 1105. Construct portable negative pressure enclosure unit sealed against the composite exterior wall mock-ups on the indoor side, and use suspended pipe grid with nozzles to supply the required water flow to the exterior of composite exterior wall mock-ups. Provide test enclosure equivalent in size to composite exterior wall mock-ups, unless directed otherwise. If required for the performance test, seal the south side of the mock-up. Provide air system, pressure measuring apparatus, and water-spray system in accordance with ASTM E 1105.
1. Perform water penetration tests of the storefront, glazed aluminum curtain wall, and aluminum windows in accordance with procedures and requirements of ASTM E 1105, Procedure B with at least 3 cycles. Water-spray system shall deliver water uniformly against exterior surface of composite exterior wall mock-up at a minimum rate of 5 gallons per square foot per hour. Test pressure shall be an air pressure difference of 20 percent of design pressure, with minimum differential of 6.24 lbf/ft<sup>2</sup> (299 Pa) and maximum of 12.0 lbf/ft<sup>2</sup> (575 Pa).
  2. Perform a separate water penetration tests of the portland cement plaster assembly including wall system, sheathing, air barriers, including reveals, control joints, trim, and joints with adjacent materials using a modified ASTM E 1105 test for which no chamber test is required. Spray water into the mock-up at a rate of 5 gallons per square foot per hour for a period of 1.5 hours. Provide a thirty-minute drain period.
  3. Water Leakage: Water leakage is defined as any controlled water that appears on any normally exposed interior surfaces, that is not contained or drained back to the exterior, or that can cause damage to adjacent materials or finishes. Water contained within drained flashings, gutters, and sills is not considered water leakage.
  4. Prepare test reports as required by ASTM E 1105.
  5. If water leakage occurs, revise and retest composite exterior wall mock-ups. Modifications must be realistic in terms of job conditions, must maintain standards of quality and durability, and are subject to review and action by Project Manager. Leave composite exterior wall mock-ups in place during installation of work
  6. Approval of composite exterior wall mock-ups is a prerequisite for final approval of shop drawings.

### 3.4 AS-BUILT DRAWINGS

- A. Once mock-up testing is complete, provide As-Built Drawings documenting all deviations from the approved Shop Drawings and Construction Documents.

### 3.5 COMPLETION

- A. The mock-up must be approved in writing by the University's Representative prior to commencement of the Work.
- B. The mock-up may be rejected if the quality is inadequate or if it does not meet the intent of the Construction Documents. In the event that the mock-up is rejected, remove and replace it.
- C. Retain and maintain final approved mock-up during construction in an undisturbed condition as a standard for judging the completed Work.



- D. Except as otherwise specified, remove at no additional cost to the University, free-standing mock-ups which are not to be permanent prior to completion of Project but not before the work they are being used to judge has been accepted by the University's Representative.

END OF SECTION 01 43 39

SECTION 01 43 40  
EXTERIOR ENCLOSURE PERFORMANCE REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. This section includes exterior enclosure performance requirements which consists of components specified in the following sections:

1. Division 01 Section "Mockups"
2. Division 05 Section "Cold-Formed Metal Framing."
3. Division 05 Section "Decorative Metal."
4. Division 07 Section "Modified Bituminous Sheet Air Barriers."
5. Division 07 Section "Self-Adhering Sheet Waterproofing."
6. Division 07 Section "Metal Wall Panels."
7. Division 07 Section "Hot Fluid-Applied Rubberized Asphalt Waterproofing."
8. Division 07 Section "Water Repellents."
9. Division 07 Section "PVC Roofing."
10. Division 07 Section "Roof Accessories."
11. Division 07 Section "Sheet Metal Flashing and Trim."
12. Division 07 Section "Joint Sealants."
13. Division 08 Section "Aluminum-Framed Entrances and Storefronts."
14. Division 08 Section "Unit Skylights."
15. Division 08 Section "Glazing."
16. Division 08 Section "Glazed Aluminum Curtain Walls."
17. Division 09 Section "Insulated Plaster System."

1.2 REFERENCES

- A. Published specifications, standards, tests, or recommended methods of trade, industry, or governmental organizations apply to work of this Section where cited by abbreviations noted below.
1. ASTM International (ASTM).
  2. American Architectural Manufacturers Association's "Field Check of Metal Curtain Walls for Water Leakage" (AAMA 501.2).
  3. American Society of Civil Engineer's "Minimum Design Loads for Buildings and Other Structures" (ASCE/SEI 7-05).
  4. California Building Code, 2007 Edition (CBC).

### 1.3 ENGINEERING DESIGN RESPONSIBILITY

- A. The Exterior Enclosure requirements shown by the details are intended to establish basic dimensions of units or modules, profiles and sight lines of members. Within these limitations, the General Contractor is responsible for the engineering design of their work, and to make modifications of, and additions to the details as may be required to fulfill the performance requirements. The General Contractor shall maintain the visual design concept as shown, including member sizes, profiles and alignment of components, provided they meet performance requirements. To ensure coordination, the General Contractor shall provide their exterior framing system shop drawings combined with the information from the curtain wall and aluminum-framed entrances and storefronts shop drawings.
- B. Exterior Enclosure, support framing, connections, and related hardware shall be designed under the direct supervision of a Professional Engineer experienced in the design of the work, registered and licensed in the State of California, using performance and design criteria and requirements specified in this Section.
- C. It is recognized that the design details do not cover some conditions or modifications, which may be required. It is, however, intended that conditions not detailed shall be developed through the General Contractor's Shop Drawings to the same level of aesthetics and in compliance with performance criteria as indicated for detailed areas and as stipulated in these specifications. The General Contractor, by accepting a contract for the work, acknowledges this and agrees that University's Representative shall have the final say as to all matters whether detailed or not in the design details.
- D. Review of calculations and shop drawings by University's Representative will not relieve General Contractor of any responsibilities for providing a system with the required performance requirements. If the structural calculations indicate any deficiencies, General Contractor shall, at its expense, provide all items necessary to comply with the requirements of the Contract Documents.
- E. Structural calculations shall be prepared and stamped by a Professional Engineer licensed in the State of California and shall include, but not be limited to the following:
  - 1. A repetition of the design criteria contained in the specifications, also conform to requirements of the CBC, unless otherwise noted in the specifications.
  - 2. Calculations to determine dead, live, wind and seismic loads of cladding and cladding supports.
  - 3. Analysis of Exterior Enclosure System components and fasteners or anchorage to Exterior Enclosure System Support Framing.
  - 4. Analysis of Exterior Enclosure System Support Framing elements, fasteners, and anchorage components to main building structure.
  - 5. Cross reference structural calculations to the applicable production and erection shop drawing details.
  - 6. Clearly indicate loads applied to the main building structure in Shop Drawings or in drawings included in the calculations, with clear references to locations in the main

building structure. Include load magnitude and direction, load combination, and point of application to the main building structure.

7. Include list of load combinations.

- F. General Contractor is responsible for the strength and serviceability of Exterior Enclosure Systems, support framing, related hardware, and connections to the building.
- G. Incorporate changes resulting from review of Composite Exterior Enclosure Assembly Mock-Up specified in Division 01, Section "Mockups".
- H. Incorporate changes resulting from testing of Composite Exterior Enclosure Assembly Mock-Up specified in Division 01, Section "Mockups".

#### 1.4 SYSTEM DESCRIPTION

- A. Refer to Exterior Enclosure System component sections for system descriptions specific to individual components.

#### 1.5 PERFORMANCE REQUIREMENTS

- A. Regulatory Agencies: Design and execution of Exterior Enclosure System components shall comply with the requirements of all governing codes and regulatory agencies.
- B. Design, fabricate and erect Support Systems for Exterior Enclosures including component parts, connections and related hardware so that completed Exterior Enclosure System components meet or exceed following requirements.
  - 1. Wind Design: In accordance with Chapter 6 of ASCE 7-05, "Wind Loads".
    - a. Importance Factor ( $I_w$ ) = 1.15.
    - b. Wind Exposure Category: C.
    - c. Basic Wind Speed: 85 miles per hour.
  - 2. Seismic Design: In accordance with Chapter 13 of ASCE 7-05, "Seismic Design Requirements for Nonstructural Components".
    - a. Seismic Design Category D
    - b. Importance Factor ( $I_p$ ) = 1.25.
    - c. Short Period Spectral Design Parameter ( $SDS$ ) = 0.472
    - d.  $A_p$  and  $R_p$  as appropriate for component or connection.
  - 3. Maximum allowable deflection between supports:
    - a. Metal Wall Panels, Aluminum-Framed Entrances and Storefronts, and Glazed Aluminum Curtain Walls:  $L/240$ .
      - 1) Perpendicular to the plane of the wall, net deflection of framing members shall not exceed  $L/360$  times span, or 1/2 inch, whichever is less. Span is defined as the distance between anchor centerline. For cantilevers, span is defined as two times the distance between anchor centerline and end of cantilever.

- 2) Perpendicular to the plane of a soffit, net deflection of framing members shall not exceed  $L/600$  times span, or 1/4 inch, whichever is less, using the dead load combined with wind load forces. Span is defined as the distance between anchor centerline.
    - 3) In the plane of the wall, deflection of horizontal framing members shall not exceed 1/16 inch. This includes sag due to dead load.
    - 4) At connection points of framing members to anchors, combined movement of anchor relative to building structure, and framing member relative to anchor, shall not exceed 1/16 inch in any direction.
  4. Structural Performance Criteria for ASTM E330:
    - a. Test Load: 31 psf, positive or negative.
    - b. Proof Load: 46.5 psf, positive or negative.
    - c. Load duration: 10 seconds.
    - d. Deflections shall be measured between supports and shall not exceed the most restrictive criterion for cladding type or support framing type listed in the appropriate specification for that type.
    - e. No permanent deformation exceeding  $L/100$  or failure to structural support framing members will be allowed.
  5. Seismic Racking Requirements:
    - a. There shall be no failure or deterioration of the system when the unit is laterally racked to the Service Seismic Drift level, defined as 0.0025 times the distance between supports or 3/4 inch, whichever is greater, in both directions and repeated for three cycles. System must pass the static water infiltration requirements as described in the appropriate section following the Seismic Racking Test.
    - b. There shall be no falling hazard created when the unit is laterally racked to the Maximum Seismic Drift level, defined as 0.0075 times the distance between supports or 3/4 inch, whichever is greater, in both directions and repeated for three cycles. Permanent damage is permitted to occur to the system.
  6. Thermal Movement: Construct Exterior Enclosure Systems as to provide for expansion and contraction of component materials as will be caused by ambient temperature ranging from 10 to 120 degrees Fahrenheit without causing buckling, opening of joints, glass breakage, undue stress of fasteners, or other detrimental effects.
  7. Additional requirements are specified in individual Exterior Enclosure System component sections.
- C. Glass Statistical Factor (Safety Factor):
  1. Glass thicknesses, when shown, are for convenience of detailing only and are to be confirmed by General Contractor and glass manufacturer.
  2. All glass for the size opening shown shall be provided in thicknesses such that the probability of breakage at the "Design Wind Pressure", per CBC Section 1620, will not exceed 8 lights per 1000 lights (Safety Factor 2.5). The glass manufacturer shall provide, on request, substantiating glass breakage data if such data is not otherwise available as manufacturer's published data.

- D. Building Movement: Design, fabricate and install Exterior Enclosure System components to withstand building movements including thermal movements, loading deflections, shrinkage, creep and similar deflections, shrinkage, creep and similar movements.
- E. Exterior Enclosure System components, support framing, connections, and related hardware shall be designed for its own dead load plus the critical of either wind or earthquake loading in accordance with the requirements of CBC.
- F. Exterior Enclosure System components including support framing to accommodate tolerances of building structure framing.
- G. Exterior Enclosure System work as erected shall meet specified minimum structural and weather resistance requirements, as demonstrated by engineering calculations.

#### 1.6 SUBMITTALS

- A. Certifications: Submit the following certifications indicating:
  - 1. Aluminum-Framed Entrances and Storefronts and Glazed Aluminum Curtain Walls Subcontractors' qualifications.
  - 2. Each Exterior Enclosure System component manufacturer's qualifications.
  - 3. Manufacturer of each Exterior Enclosure System component has reviewed Contract Documents.
  - 4. Glass manufacturer has reviewed Shop Drawings and provided verifications required by Quality Assurance Article.
  - 5. Organic Coating Applicator's qualifications specified.
  - 6. That aluminum has been given specified thickness of organic coating.
- B. List of Exterior Enclosure System Work Suppliers: Before submission of Shop Drawings or Samples, submit a complete listing of products, manufacturers, and fabricators for the principal Exterior Enclosure System work components. Approval of listed firms and products by University's Representative will be tentative, subject to review of subsequent submittals.
- C. Schedule:
  - 1. Prepare a proposed schedule covering the complete Exterior Enclosure System work from initial submittal to erection of last Exterior Enclosure System element including mock-ups.
  - 2. Consider the nature and complexity of each submittal item and allow ample time for review, revision, correction, resubmittal, and approval sufficiently in advance of the construction requirements.
  - 3. Commence preparation of proposed schedule immediately upon receipt of the Notice to Proceed.
  - 4. Base proposed schedule upon the specific anticipated direction and sequence of construction operations.
  - 5. Coordinate proposed schedule with all involved and interfacing trades and operations .

6. Coordinate the submittal process to help insure an orderly and timely review of submittals in the proposed construction sequence.
  7. Designate work progress areas and sequence for the information of all involved trades and University's Representative. Determine size of work progress areas to optimize preparation, submittals and review of shop drawings.
  8. Submit final production Shop Drawings after approval of architectural mock-up and completion of mock-up testing.
  9. Submit final erection Shop Drawings after approval production Shop Drawings.
- D. Product Data for each Exterior Enclosure System component.
- E. Integrated Shop Drawings:
1. Prepare one set of Integrated Shop Drawings for all Exterior Enclosure System components. Separate Shop Drawings for each Exterior Enclosure System components will not be acceptable.
  2. Include additional information as specified in Exterior Enclosure System component sections.
  3. Shop drawings consists of both production and erection drawings.
  4. Make submittals as soon as practical. Shop Drawings for mating of adjacent work pieces or elements shall be submitted together to allow concurrent review. Where submittals are not so coordinated, review time may be extended pending receipt of shop drawings for mating of interrelated pieces.
  5. Production Drawings:
    - a. Prior to fabrication, submit complete production drawings for the fabrication of Exterior Enclosure System components.
    - b. Show complete elevations, layouts, dimensions, sections, details and finishes of each Exterior Enclosure System component and element and identified with a number that will be marked on an unexposed surface for identification during erection.
    - c. Show that each Exterior Enclosure System component has received prior approval of Exterior Enclosure System erector, and the manufacturer or fabricator of each Exterior Enclosure System components.
    - d. Production Shop Drawings to be stamped by the Professional Structural Engineer responsible of the design of Exterior Enclosure System components.
    - e. Drawings to indicate in detail all parts of each Exterior Enclosure System component including elevations, full-size sections, jointing, interfaces, periphery conditions, types and thickness of metal, flashing and details, field connection, weep and drainage system, finishes, sealing methods, glazing and glass sizes and details.
    - f. Show relation to adjoining work, joint treatment, and items to be installed in the work of other trades.
  6. Erection Drawings

- a. Show building plans and elevations locating elements. Identify each Exterior Enclosure System component and element with same identification number used in production drawings.
  - b. Include sections and details showing support framing connections to structural clips, cast-in items and their relation to the structure.
  - c. Include field installed anchor location drawings.
  - d. Description of all loose, cast-in and field hardware.
  - e. Erection sequence, installation procedures and handling requirements.
- F. Samples: Provide as specified in Exterior Enclosure System component sections.
- G. Design Calculations: Calculations shall be prepared and stamped by Professional Engineer licensed in the State of California and shall include, but not be limited to, following.
1. Analysis of all Exterior Enclosure System components elements, fasteners, and anchorage components for compliance to the criteria established in this Section.
  2. Include computations for the justification of all Exterior Enclosure System components and anchorage assemblies.
  3. Include calculations for determining dead, live, wind, and seismic loads.
  4. Magnitude of allowable structural deflections at all principle Window Wall and Glazed Aluminum Curtain Wall Systems framing elements and the structural analysis of all connections.
  5. Stress and deflection calculation for wind load.
  6. Calculations for connection detail between mullion and horizontal member.
  7. Calculations for end support detail of main support members.
  8. Calculations to show adequacy of fasteners.
  9. Include loads to be imposed on structural brackets, number, and location of brackets, and tolerances for installation of brackets.
  10. Cross reference structural calculations to the applicable production and erection shop drawing details.
- H. Manufacturer's Test Reports: Provide as specified in Exterior Enclosure System component sections.
- I. Maintenance Manual: Submit three copies of an assembled and bound maintenance manual, describing the materials, devices, and procedure to be followed in cleaning and maintaining Exterior Enclosure System component work. Include manufacturer's data describing the actual components used in Exterior Enclosure System component work including descriptive literature, detail specifications, available performance test data, instructions for installation, metal alloys, sealants, gaskets, and all other major components.



1.7 QUALITY ASSURANCE

- A. The General Contractor shall engage qualified Subcontractor to provide Exterior Enclosure System which consists of the following components:
1. Glazed aluminum curtain wall systems and windows specified in Division 08 Section "Glazed Aluminum Curtain Walls."
  2. Entrances and storefronts specified in Division 08 Section "Aluminum-Framed Entrances and Storefronts."
  3. Decorative metal specified in Division 05 Section "Decorative Metal", and metal wall panels specified in Division 07 Section "Metal Wall Panels."
  4. Hot fluid-applied rubberized asphalt waterproofing specified in Division 07 Section "Hot Fluid-Applied Rubberized Asphalt Waterproofing."
  5. Water repellents specified in Division 07 Section "Water Repellents."
  6. Insulated Plaster System specified in Division 09, Section "Insulated Plaster System."
  7. Exterior wall system as specified in Division 05, Section "Cold-Formed Metal Framing", Division 07, Section "Self-Adhering Sheet Waterproofing", Division 07 "Modified Bituminous Sheet Air Barriers", and Division 07 Section "Sheet Metal Flashing and Trim."
  8. PVC roofing specified in Division 07 Section "PVC Roofing", roof accessories specified in Division 07 Section "Roof Accessories" and unit skylights specified in Division 08 Section "Unit Skylights."
  9. Sealant systems as required for exterior enclosure system components as specified with each system and in Division 07, Section "Joint Sealants."
  10. Glass and glazing as required for exterior enclosure system components as specified in Division 08, Section "Glazing."
  11. Composite exterior enclosure assembly mockups as specified in Division 01, Section "Mockups."
  12. On site performance testing of composite mockups as specified in Division 01, Section "Mockups."
- B. Contractor's Qualifications: Approval by University's Representative is required of proposed manufacturers and will be based upon submission by General Contractor of certification that:
1. General Contractor shall have responsibility for coordination of the Exterior Enclosure System with the work of Subcontractors including Aluminum Curtainwall, Aluminum Storefronts, Metal Stud Framing, Plaster, Decorative Metal and Metal Wall Panels..
- C. Exterior Enclosure System Component Manufacturer's Qualifications:
1. Approval by University's Representative is required of proposed manufacturers and will be based upon submission by General Contractor of certification that:
    - a. Manufacturers shall have a minimum of 10 years experience in the manufacturing of Exterior Enclosure System components similar to those specified, for use as an exterior architectural cladding.

- b. Manufacturers shall provide a list of 5 similar completed projects with addresses of location, architect, and owner.
  - c. Manufacturers must have single source capability to perform in- house all drafting, fabricating, welding, and assembly.
- 2. Manufacturer's qualifications do not need to be submitted, as long as suppliers and product to be installed are exactly as specified.
- D. Glass Manufacturer's Review: Glass manufacturer shall review shop drawings and verify that proper glass usages and installations are being used.
- E. Organic Coating Applicator's Qualifications: Approval by University's Representative is required of proposed organic coating applicators for each Exterior Enclosure System component, and will be based upon submission by General Contractor of certification that:
  - 1. Applicator has had a minimum of five years successful experience in the coating of window wall components of scope and type similar to requirements of this project.
  - 2. Applicator has been approved by coating formulator.
  - 3. Applicator has in house quality control program.
- F. Composite Exterior Enclosure Assembly Mockup: Provide exterior enclosure system component elements as required for the construction and testing of composite exterior wall mockups specified in Division 01, Section "Mockups."
- G. Composite Exterior Enclosure Assembly Mockup Testing: Perform testing for composite exterior wall mockups as specified in Division 01, Section "Mockups."
- H. Required Conferences:
  - 1. Conferences: General Contractor to attend weekly meetings to be held at University's Representative's office.
  - 2. General Contractor-Manufacturer Review: General Contractor shall review the drawings and specifications with agent of sheet membrane underlayment materials manufacturer and obtain manufacture's agreement that selected systems are proper, compatible, and adequate for application shown and that conditions and details do not conflict with a manufacturer's warranty/guaranty.
  - 3. Pre-Erection Conference:
    - a. General Contractor shall arrange conference to review Exterior Enclosure System work prior to actual installation.
    - b. Conference to be attended by University's Representative, University's Inspection Agency, Exterior Enclosure System component Subcontractors, and manufacturer glass and glazing materials manufacturer, and others whose work may be affected by Exterior Enclosure System work.
    - c. General Contractor to provide at least one week's advance notice of conference date and time.
    - d. The conference shall be held at the job site.
    - e. The following major considerations shall be reviewed at the conference:

- 1) Review in detail the Contract specifications, details, and other related work.
- 2) Review in detail job conditions, schedule, construction sequence, erection requirements, and quality of completed installation.
- 3) Review methods for delivering, storing and handling glass.
- 4) Review methods for installing glass and glazing materials.
- 5) Review in detail the means of protecting completed work during remainder of construction period.
- 6) Chemical compatibility of all glazing materials and framing sealant with each other and with like materials used in glass fabrications shall be established.
- 7) Record discussions of conference and any conflict, incompatibility, or inadequacy, and furnish a copy of record to each participant.

#### 1.8 DELIVERY, STORAGE, AND HANDLING

- A. Deliver, storage, and handling requirements are specified in Exterior Enclosure System component sections.

#### 1.9 PROJECT CONDITIONS

- A. Project condition requirements are specified in Exterior Enclosure System component sections.

#### 1.10 SEQUENCING

- A. Coordinate installation with that of adjacent work to ensure watertightness, proper attachment, sealed joints, and clean junctions.

#### 1.11 WARRANTIES

- A. Manufacturer Warranty: Provide manufacturer's 10 year warranty for design integrity, weatherability, and durability of their Exterior Enclosure System components. Warranty must cover all aspects of system including engineering, glass, and fittings.
- B. Installer Warranty: warrant installation for a period of five years for installation and repairs of failures. Provide written requirements for notification of installer and terms for maintaining warranty provisions. Do not contradict requirements of Contract Documents.
- C. Warranties submitted under this Section shall not deprive University of other rights or remedies that University may have under other provisions of Contract Documents and laws of governing jurisdictions and is in addition to and runs concurrently with other warranties made by General Contractor under requirements of Contract Documents.

### PART 2 - PRODUCTS

#### 2.1 PRODUCT OPTIONS AND SUBSTITUTIONS

- A. Refer to Division 01 Section "Product Options and Substitutions."

## 2.2 EXTERIOR ENCLOSURE SYSTEM COMPONENTS

- A. Refer to individual exterior enclosure system component technical specification sections.

## 2.3 MATERIALS

- A. Refer to individual exterior enclosure system component technical specification sections.

## 2.4 FABRICATION

- A. Refer to individual exterior enclosure system component technical specification sections.

## 2.5 FINISHES

- A. Refer to individual exterior enclosure system component technical specification sections.

## 2.6 SOURCE QUALITY CONTROL

- A. University's Representative may spot check Exterior Enclosure Systems components at any time during their fabrication. Inspection of Exterior Enclosure Systems components during fabrication does not imply University's Representative's approval and does not relieve General Contractor of providing Exterior Enclosure Systems components complying with specification requirements. Final approval will not be considered until after erection and cleaning of Exterior Enclosure Systems components.

# PART 3 - EXECUTION

## 3.1 EXAMINATION

- A. General Contractor must examine substrates, adjoining construction, and conditions under which work is to be installed. Examine openings to Exterior Enclosure System and verify that openings are plumb, level, clean, in full accord with Contract Documents and provide solid anchoring surface.
- B. Do not proceed with the Work until unsatisfactory conditions detrimental to the proper and timely completion of the Work have been corrected in a manner acceptable to General Contractor.

## 3.2 PREPARATION

- A. Make certain supporting structural work is secure and properly aligns and prepared to receive exterior enclosure system. Correct any deficiencies prior to installation panels.
- B. Verify dimensions of supporting structure by accurate field measurements so that Exterior Enclosure System work will be accurately designed, fabricated, and fitted to the structure. Tolerances for supporting structure are specified in other sections. Verify any dimensions found to be different than shown, including specified tolerances. Use benchmarks as basis of measurements.

- C. Coordinate exterior enclosure system work with the work of other trades and provide items to be placed during the installation of other work at the proper time to avoid delays in the work. Place such items, including inserts and anchor, accurately in relation to the final location of curtain wall components.
- D. Inspect each unit of glass immediately before installation. Glass which had significant impact damage at edges, scratches, or abrasion of faces, or any other evidences of damage shall not be installed.
- E. Provide templates for inserts and other devices to the work of other trades, in sufficient time to be built into adjoining construction.

### 3.3 INSTALLATION

- A. Refer to individual exterior enclosure system component technical specification sections.

### 3.4 FIELD QUALITY CONTROL

- A. Water Penetration Tests:
  - 1. After completion of the installation and nominal curing of sealants and glazing compound, and before installation of interior trim members and heating unit covers, test for water leaks in accordance with AAMA 501.2.
  - 2. Conduct tests in the presence of University's Representative, who will determine the actual percentage of wall area to be tested based upon any indication of leakage (or lack thereof).
  - 3. Repair or replace any components, including joints and sealants, which leak or are observed to be defective in any way, and retest as directed.

### 3.5 PROTECTION AND CLEANING

- A. After completion of glazing and finish painting of surrounding surfaces clean exterior enclosure system as recommended by manufacturer and for aluminum work.
- B. In addition to specific protection and cleaning methods recommended by manufacturers of each component part, maintain the exterior enclosure system and components throughout the construction period in a clean and properly protected condition so that it will be without any indication of use or damage at the time of Substantial Completion.
- C. Cleaning and protective methods shall be carefully selected, applied and maintained so that finishes will not become uneven or otherwise impaired as a result of unequal exposure to light and weathering conditions.
- D. Provide board protection at ground level work and near construction chutes and lifts.
- E. Temporary coverings, provided at General Contractor's option to protect the work during erection and construction, shall avoid development of non-uniformity or other deleterious effects in the work.

- F. Remove protection when requested by University's Representative for inspection of finishes, and replace.
- G. Remove protection when no longer required.
- H. Remove mastic smears, mortar, plaster, fireproofing, and any other deleterious material from surfaces of aluminum immediately.

### 3.6 DEFECTIVE WORK

- A. Remove exterior enclosure system work deemed defective by University's Representative and replace with new components.
- B. Restore to original condition work of other sections damaged in repair or replacement of defective work.

### 3.7 INSTRUCTION

- A. Instruct University's personnel who will be responsible for window washing after the time of final acceptance. Demonstrate and train University's personnel, for a period of not less than two working days, in the proper methods of cleaning and maintaining the entire glazed aluminum curtain wall.

END OF SECTION 01 43 40

**SECTION 01 45 00  
QUALITY CONTROL**

**PART 1 - GENERAL**

**1.1 DEFINITIONS**

- A. The term "University's Testing Laboratory" means a testing laboratory retained and paid for by University for the purpose of reviewing material and product reports and performing other services as determined by the University.
- B. The term "General Contractor's Testing Laboratory" means a testing laboratory retained and paid for by General Contractor to perform the testing services required by the Contract Documents. General Contractor's Testing Laboratory shall be an organization other than University's Testing Laboratory and shall be acceptable to the University's Representative. It may be a commercial testing organization, the testing laboratory of a trade association, the certified laboratory of a supplier or manufacturer, General Contractor's own forces, or other organization. General Contractor's Testing Laboratory shall have performed testing of the type specified for at least 5 years.
- C. The term "Geotechnical Engineer" means an engineer retained and paid for by the University for the purpose of performing geotechnical inspection, testing, and observation functions specified by the University.

**1.2 GENERAL CONTRACTOR'S RESPONSIBILITIES REGARDING UNIVERSITY'S TESTING LABORATORY**

- A. Secure and deliver to University's Testing Laboratory adequate quantities of representative samples of materials proposed for use as specified.
- B. Submit a copy of the preliminary design mixes proposed to be used for concrete and other materials that require review by University's Testing Laboratory to the University Representative. University Representative will submit the copy to the University's Testing Laboratory for review.
- C. Submit copies of product test reports as specified.
- D. Furnish incidental labor and facilities:
  - 1. To provide University's Testing Laboratory access to the Work to be tested.
  - 2. To obtain and handle samples at the Project site or at the source of the product to be tested.
  - 3. To facilitate inspections and tests.
  - 4. For storage and curing of test samples.
- E. Provide a minimum of forty-eight hours notice to University's Representative to allow for University's Testing Laboratory assignment of personnel and scheduling of tests.
- F. When material or work to be tested or inspected is not available for testing or inspection, even though notice has been given under Subsection 1.2.E above, General Contractor

shall reimburse University for University's Testing Laboratory personnel and travel expenses incurred.

### 1.3 TESTS AND INSPECTIONS

- A. Tests, inspections, and acceptance of portions of the Work required by the Contract Documents or by Applicable Code Requirements shall be made at the appropriate times. Except as otherwise provided, General Contractor shall make arrangements for such tests, inspections, and acceptances with General Contractor's Testing Laboratory. General Contractor shall give the University's Representative a minimum of twenty-four hours written notice of when and where tests and inspections are to be made.
- B. If such procedures for testing, inspection, or acceptance reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, General Contractor shall bear all costs made necessary by such failure including those of repeated procedures and compensation for the University's Representative's services and expenses.
- C. If the University's Representative is to observe tests, inspections, or make acceptances required by the Contract Documents, University's Representative will do so promptly and, where practicable, at the normal place of testing.
- D. Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work.
- E. Certain portions of the Work will be tested and/or inspected at various stages. Nothing in any prior acceptance or satisfactory test result shall govern, if at any subsequent time the Work, or portion thereof, is found not to conform to the requirements of the Contract Documents.

### 1.4 ADDITIONAL TESTING AND INSPECTION

- A. If initial tests or inspections made by University's Testing Laboratory or Geotechnical Engineer reveal that any portion of the Work does not comply with the Contract Documents, or if the University's Representative determines that any portion of the Work requires additional testing or inspection, additional tests and inspections shall be made as directed.
  - 1. If such additional tests or inspections establish that such portion of the Work complies with the Contract Documents, all costs of such additional tests or inspections shall be paid by the University.
  - 2. If such additional tests or inspections establish that such portion of the Work fails to comply with the Contract Documents, all costs of such additional tests and inspections, and all other costs resulting from such failure, including compensation for the University's Representative and the University's consultants, shall be deducted from the Contract Sum.



1.5 TEST REPORTS

- A. University's Testing Laboratory and General Contractor's Testing Laboratory shall submit 1 copy of all reports to University's Representative, indicating observations and results of tests and indicating compliance or non-compliance with the Contract Documents.
- B. The University's Representative shall distribute to the General Contractor one copy of the reports from the University's Testing Laboratory.
- C. The number of copies for the General Contractor and supplier being tested will be determined upon commencement of the Contract.

1.6 CLOSING IN UNINSPECTED WORK

- A. Do not allow or cause Work to be covered or enclosed before it has been inspected and approved by the University's Representative. Should any Work be enclosed or covered before it has been approved, it shall be uncovered, inspected, approved or repaired, and covered. Make all repairs necessary to restore Work of others to the condition in which it was found at time of cutting, at no additional cost to the University.

1.7 GEOTECHNICAL ENGINEER

- A. All excavation, filling, and compaction shall be subject to inspection, observation, and testing by Geotechnical Engineer. The University will retain and pay expenses of the Geotechnical Engineer to perform the inspection, testing, and observation functions described in this Section, except that the costs of any additional testing or inspection made necessary by inadequate compaction, replacement of unacceptable material or other Work not complying with the Contract Documents shall be borne by the General Contractor and may be deducted from the Contract Sum. The Geotechnical Engineer shall communicate with the University's Representative who will relay any appropriate instructions to the General Contractor.
- B. Source Quality Control: Geotechnical Engineer will sample and test fill material from the source designated by the General Contractor. General Contractor shall pay for the Geotechnical Engineer's transportation expenses, if the source is more than 50 miles from the Project site.

1.8 JOB CONDITIONS

- A. General Contractor shall visit the Project site to determine the existing conditions, nature of materials to be encountered and other facts concerning or affecting the Work to be performed under this Contract.
- B. The records of investigation of soil or subsurface conditions and logs of test borings that are made available by the University are not part of the Contract and are solely for the convenience of the Bidder or General Contractor. It is expressly understood and agreed that the University assumes no responsibility whatsoever in respect to the sufficiency or accuracy of the investigation thus made, the records thereof, or of the interpretations set forth therein, and there is no warranty or guaranty, either express or implied, that the conditions indicated by such investigations or records are representative of those existing throughout such areas or any part thereof, or that unanticipated for developments may not

occur, or that materials other than, or in proportions different from those indicated, may not be encountered.

- C. The availability or use of the records of investigations of soil or subsurface conditions and/or logs of test borings shall not be construed as a waiver of the General Contractor's duty to examine the Project site of the Work contemplated. General Contractor is cautioned to make such independent investigations and examinations as necessary to satisfy the General Contractor of subsurface conditions to be encountered in the performance of the Work.
- D. The records of investigations will not relieve General Contractor from the risk of unanticipated soil or subsurface conditions or from properly fulfilling the terms of the Contract at the Contract Sum.
- E. General Contractor shall promptly, and before such condition is disturbed, notify the University's Representative in writing if soil or subsurface conditions are encountered which require, in the opinion of the University's Representative, design details which differ from those design details shown in the Contract Documents and the University's Representative finds that such revised, design details will cause an increase or decrease in the cost of, or the time required for performance of the Contract, the University's Representative will, after approval by the University, modify the Contract terms in writing to provide for the change in design details and to provide for an adjustment in cost and/or time of performance as permitted in the General Conditions.

#### 1.9 RESPONSIBILITY FOR ACCURACY OF SITE DATA

- A. Upon application to the University to do so, the General Contractor will be permitted to enter the Project site to put down test holes or trenches to determine the conditions for construction prior to bidding, and subject to compliance with the requirements of Division 1. Such test holes or trenches shall be located at least 10 feet clear of any existing foundations, and/or any existing trees, utilities, or other improvements. Test holes shall be backfilled with granular backfill as specified. The test holes shall be kept full of water during backfilling; the backfill shall be hand shoveled into the hole so that it is completely dispersed and "puddled" as placed. Drill cuttings shall be neatly piled over the hole after backfilling. Material to be excavated is assumed to be earth or other materials that can be removed by power earth moving equipment, including rippers.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01 45 00

**SECTION 01 51 00  
TEMPORARY UTILITIES**

**PART 1 - GENERAL**

**1.1 REQUIREMENTS**

- A. General Contractor shall provide and maintain temporary utilities for construction operations and related necessary temporary structures. Remove them when they are no longer needed.
- B. General Contractor shall pay for connections/disconnections of all temporary utilities; e.g., gas, water, power, and telephone.
- C. General Contractor shall pay for connections for water and electricity to Project site sources.
- D. University does not guarantee amounts of water and electricity available from existing University's sources, nor will the University be responsible for interruptions in service.
- E. General Contractor shall maintain and operate systems to provide continuous service.
- F. General Contractor shall modify and extend systems as required.
- G. Materials may be new or used, but shall be adequate for the required purposes. Their use and methods of installation shall not create unsafe conditions or violate requirements of Applicable Codes Requirements.

**1.2 REMOVAL AND RECONDITIONING**

- A. General Contractor shall remove all temporary services installed as a requirement of these Contract Documents. Restore utilities to their original condition at the completion of Work.
- B. General Contractor shall legally and properly dispose of all debris resulting from removal and reconditioning operations.
- C. General Contractor shall direct Concrete, Drywall and Painting Subcontractors to patch and repair building elements as required by temporary utility removals.

**1.3 REQUIREMENTS OF REGULATORY AGENCIES**

- A. General Contractor shall install and use temporary utilities in accordance with latest version of the following:
  - 1. California Electrical Code.
  - 2. Federal, State, and local codes and regulations.
  - 3. Utility company requirements.

1.4 TEMPORARY ELECTRICITY

- A. University will not provide electricity free of charge. General Contractor shall make connections to temporary power as described on Drawing C1.1, and make account arrangements directly with PG&E for that temporary power service. When the temporary power connection is switched over to the University's electrical service the General Contractor shall meter their temporary electricity use and will be charged based on average UC Merced rates.
- B. Refer to Instructions to Bidders for temporary electrical scope of work and General Contractor's responsibility.

1.5 TEMPORARY FIRE PROTECTION

- A. General Contractors shall conform to the rules, regulations, and instructions of the University and the Merced County Fire Department and such agencies having jurisdiction or identified by the University's Representative. The General Contractor shall:
  - 1. Ensure that no burning shall be done on Project site.
  - 2. Provide and maintain fire protection equipment including extinguishers, fire hoses, and other equipment as necessary for proper fire protection during the course of the Work.
  - 3. Use fire protection equipment only for extinguishing fires.
  - 4. Locate fire extinguishers in field offices, storage sheds, tool houses, other temporary buildings, and throughout the Project site.
- B. In the area under construction demolition, the General Contractor will provide at least 1 multi-purpose dry chemical fire extinguisher for each 3,000-square feet of building floor area. Locate fire extinguishers so that a person never has to walk more than 75 feet to obtain one. Fire extinguisher minimum size must be 4A:20BC (10 pound ABC). Use fire protection equipment only for fighting fires. Any additional fire extinguishers required for the scope of work are to be provided by the General Contractor.
- C. General Contractor shall assigned a qualified person with authority to maintain fire protection equipment, institute fire prevention measures, be a liaison with the University's Representative, Merced County Fire Department and such agencies having jurisdiction or identified by the University's Representative, and direct the prompt removal of combustible and waste materials from the Project site. Prior to start of Work, the General Contractor shall organize a mandatory safety meeting. The attendees at this meeting shall at a minimum include the University's Representative, a representative of the Merced County Fire Department, the General Contractor's Project Site Superintendent and the General Contractor's Fire Liaison.
- D. General Contractors shall instruct all subcontractors in the site fire prevention measures, the location of fire extinguishers and the procedures for dealing with fire on site.
- E. Call 9-1-1 and pull fire alarm box when applicable, for any emergency. Report the exact location (building name and street intersection) and nature of the emergency. The General Contractor is responsible for and will be billed for fire response charges (actual cost of personnel and equipment) for any false alarm and needless call.

- F. Refer to Section 01 41 00 Regulatory Requirements for permits required.
- G. Vehicles or storage of materials on Project site must not obstruct, block or damage or render useless any fire hydrants, fire department connection, fire alarm box or fire access roadway. Any necessary road closures or disruption to utilities shall be requested through the University's Representative as stated in Section 01 35 00 Special Requirements.
- H. Do not tamper with or work on any fire alarm or fire protection system without first gaining authorization from the University's Representative. System shutdown requests shall require a minimum of 48 hours advance notice. Contact University's Representative for any such requests.

#### 1.6 TEMPORARY HEAT, VENTILATION AND AIR CONDITIONING

- A. General Contractor shall provide temporary heat and ventilation as required by the Instructions to Bidders and as required to maintain adequate environmental conditions to meet specified minimum conditions for installation of materials; and to protect equipment, materials, and finishes from damage due to temperature or humidity for all work. The use of temporary heating appliances will require a Hazardous Condition Permit as specified in Section 01 41 00 Regulatory Requirements.
- B. General Contractor shall provide adequate forced ventilation of enclosed areas to cure installed materials, to prevent excessive humidity, and to prevent hazardous accumulations of dust, fumes, vapors, or gases for their own work.

#### 1.7 TEMPORARY SANITARY FACILITIES

- A. Portable Chemical Toilets and maintenance will be provided by the General Contractor.
- B. Permanent toilet facilities within an existing building shall not be used without written authorization of the University.

#### 1.8 TEMPORARY TELEPHONE SERVICE

- A. The General Contractor shall provide a mobile radio system on-site at all times for effective University's Representative communications with the General Contractor's field personnel. A radio will be provided to the University's Representative.

#### 1.9 TEMPORARY WATER

- A. University will not provide water free of charge. Contractor shall meter temporary water and will be charged based on average UC Merced rates.
- B. Water may be taken from University's systems in such quantities and at such times as they are available. If this is done, the General Contractor using the water source shall provide all equipment, including metering, connections, and other materials necessary for extending the utility lines to where they will be used. Coordinate the installation with University's Representative. The General Contractor shall pay for connections and removal of connections to the local water and power mains.

- C. If water is obtained from a campus fire hydrant, the hydrant valve shall not be used as a control valve. Use hydrant wrench; do not use pipe wrench. The General Contractor using water source shall provide all valving necessary to control the flow of water.
- D. The General Contractor shall:
  - 1. Use a reduced pressure backflow preventer shall be used at any connection to University's system, including fire hydrants.
  - 2. Install according to California Administrative Code, Title 17, Section 7603(c), and test immediately after installation by a certified tester in accordance with Title 17, CAC, Section 7605(d).
  - 3. Install piping with taps located so that water is available throughout the Project site by the use of hoses. Protect piping and fittings against freezing.
  - 4. Provide water for human consumption in accordance with the regulatory requirements for potable water.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01 51 00

**SECTION 01 56 00**  
**TEMPORARY BARRIERS AND ENCLOSURES**

**PART 1 - GENERAL**

**1.1 TEMPORARY FACILITIES**

- A. General Contractor shall provide and maintain the following temporary facilities as required for prosecution of the Contract:
  - 1. All scaffolding, staging, runways, and similar equipment necessary to complete own work is to be provided by the responsible General Contractor installing the said work.
  - 2. Temporary rigging, rubbish chutes, ladders between floors and similar equipment shall be provided by the General Contractor requiring said work
  - 3. Barricades, lights and similar safety precautions shall be provided by the General Contractor requiring said work.
  - 4. OSHA compliant guardrails at floor openings and building perimeter shall be provided as well as toe guards upon placement of concrete slabs, and the General Contractor shall maintain the guardrails until they are no longer required at which time they will be removed from the project site.
  - 6. The General Contractor shall erect and maintain a temporary OHSA compliant guardrail system around the storm drain and sanitary sewer excavations and shall remove it when directed by the University's Representative.
  - 7. All materials and equipment required to safely accomplish Work under this Section shall be in conformance with requirements of California Occupational Safety and Health act (COSHA), Chapter 5 of CalTrans Traffic Manual and other State and Federal Codes and regulations where applicable.
- B. Codes: All temporary Work and facilities shall conform to the above requirements that pertain to operation, safety and fire hazard.
- C. Removal: Upon completion of the Work, and before the final payment, the responsible General Contractor shall remove all temporary Work and facilities to put the Project site in the condition required by the Contract Documents with no additional cost to the University.

**1.2 TEMPORARY PROJECT CONSTRUCTION FENCE**

- A. The General Contractor shall not place any signs, advertisements, notices, or graphic materials on construction fencing that have not been approved in advance by University's Representative.
- B. Fencing shall be provided and maintained by General Contractor.
- C. General Contractor is responsible for any damage caused by General Contractor's Operations.

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MERCED, CALIFORNIA

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PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01 56 00



**SECTION 01 56 39**  
**TREE AND PLANT PROTECTION**

**PART 1 - GENERAL**

**1.1 WORK INCLUDED**

- A. The General Contractor shall provide and maintain temporary fencing around all trees shown to be protected on the contract drawings. The General Contractor shall assume responsibility for watering and maintaining these trees throughout the construction duration. The General Contractor shall perform all work necessary and required to protect and maintain all trees, shrubs and turf within the limits of the Work in healthy growing condition at all times during the Project where own work is adjacent to trees, shrubs and turf. If during the course of construction, any adjacent trees or shrubs are damaged due to own work performed in said area, penalties will be assigned for tree injury which results in the decline or death of trees. The preservation of existing trees to remain is of great importance.
- B. Limit of Work: Refer to Drawings for limits of Work.
- C. Definitions
  - 1. "Injury" is defined, without limitation, as any bruising, scarring, tearing, or breaking of roots, branches, or trunk.
  - 2. "Tree protection zone" is defined for each species. Species tolerance to construction impacts and the tree's age determine the radius of the tree protection zone. The tree protection zone shall be 1.5 feet per inch trunk diameter unless otherwise noted by the University's Representative.
  - 3. "Existing tree" is defined as any or all of the existing trees to be preserved, as designated on the Drawings.
  - 4. "Consulting Arborist" is a certified arborist registered by the International Society of Arboriculture (ISA). The General Contractor shall submit Arborist's credentials for review by the University's Representative 14 calendar days prior to the Preconstruction Conference defined in Subsection 1.5. Consulting Arborist shall be supplied at the expense of the General Contractor.

**1.2 STANDARDS**

- A. Published specifications, standards, tests, or recommended methods of trades, industry, or governmental organizations apply to the Work of this Section. In addition, General Contractor shall conduct operations in accordance with: Cabling, Bracing and Guying Standards for Shade Trees, latest revision, as published by the National Arborist Association (NAA), 174 RT 101, Bedford, New Hampshire 03102.

**1.3 QUALITY ASSURANCE**

- A. General Responsibility: The General Contractor shall be directly responsible for protection and welfare of all existing trees within the limits of own Work area. This responsibility shall continue until the entire Project is completed and accepted by the University and through maintenance period.

#### 1.4 SITE CONDITIONS

- A. Protection: The General Contractor shall become acquainted with all site conditions, and shall take necessary precautions to protect site conditions and permanent improvements. Damage caused by the General Contractor shall be repaired or replaced to its original condition to the satisfaction of the University's Representative. Should utilities, grade changes, or other conditions not shown on the Drawings be found within the tree protection zone during the course of the Work, report to the University's Representative in writing, and obtain instruction prior to proceeding with the Work affected.
- B. Field-verify all dimensions, grades, and coordinates, which affect existing trees and plants. Indicate elevations at the base of all trees within the limits of the work on the grading plan. Report discrepancies to the University's Representative in writing, and obtain the University's Representative's instructions prior to proceeding with the Work affected.

#### 1.5 PRECONSTRUCTION CONFERENCE

- A. It shall be the responsibility of the General Contractor to call for a meeting at the Project site with the University's Representative. Meeting attendees shall include the General Contractor, University's Representative, Consulting Arborist, Engineers, and Architects. This meeting shall occur prior to start of construction of any nature within the protection zone of the trees.
- B. The purpose of the meeting shall be to establish the conditions of all existing trees upon receipt of the Project site by the General Contractor. Failure to call for said meeting implies acceptance by the General Contractor of existing trees in their existing condition.
- C. The University's Representative shall document the condition of the trees prior to this meeting. The purpose of the meeting shall be to confirm what work is to occur near the trees and to discuss mitigation of the potential impacts on trees to be preserved if necessary.

#### 1.6 REPAIR AND COMPENSATION

- A. Any damage to existing tree trunks, limbs or roots over 2 inches in diameter shall be immediately reported in writing to the University's Representative and, at the direction of the University's Representative, repaired immediately at the General Contractor's expense by the approved Consulting Arborist.
- B. The Consulting Arborist shall direct repair of trees damaged by construction operations. Repairs shall be made promptly after damage occurs to prevent progressive deterioration of damaged trees.
- C. The General Contractor shall compensate the University for any tree or shrub to remain which is damaged or destroyed owing to the General Contractor's failure to provide adequate protection. Said compensation will be assessed by the University's Representative using the following schedule of values using the "tree caliper" method (greatest trunk diameter, measured 30 inches above ground):

1. For trees and shrubs with diameters up to and including 4 inches, compensation shall be the actual cost of replacement with item similar in species, size, and shape, including:
    - a. Actual cost of item boxed out of ground.
    - b. Transportation and delivery of boxed item to Project site.
    - c. Planting and staking.
    - d. Maintenance, including watering, fertilizing, pruning, pest control, and other care for a period of 90 calendar days to the satisfaction of the University's Representative.
  2. For trunks up to:
    - a. Twelve inches - \$7,200
    - b. Thirteen inches - \$8,200
    - c. Fourteen inches - \$9,200
    - d. Fifteen inches - \$10,000
    - e. Sixteen inches - \$11,500
    - f. Seventeen inches - \$12,000
    - g. Add \$1,200 for each caliper inch or partial caliper inch over seventeen inches.
  3. A penalty shall be assessed for limb damage of \$200 per inch of limb diameter for any limb greater than 2 inches in diameter, measured where the limb should be pruned in order to make a proper thinning cut.
  4. A penalty will be assessed of \$20 per square inch of tree trunk area damaged. This penalty shall be assessed when it is determined that the General Contractor is responsible for damage to a tree trunk, but the tree is still healthy enough to remain at the site. An example of this kind of damage would be the collision of a tractor with the trunk of a mature tree where the bark is peeled back, and the damaged area will require repair and healing.
- D. Damaged tree limbs or trees that have died as a result of injury during construction shall remain the property of the University and shall remain or be removed by the General Contractor as directed by the University's Representative.

#### 1.7 WARRANTY OF REPLACEMENT PLANT MATERIAL

- A. General Contractor shall warrant that all plants covered by the provisions of this Section will be healthy and in flourishing condition of active growth 1 year from the date of Final Acceptance.

#### 1.8 MAINTENANCE DURING CONSTRUCTION

- A. Maintenance includes, but is not limited to mitigation of damage due to storm drainage, or any condition, which requires immediate attention, and proper placement & maintenance of Tree Protection Fencing. Unauthorized moving of fencing which leads to damage of plant material may be subject to charges incurred by the General Contractor. If the General Contractor fails to perform routine maintenance, the cost of labor or a maintenance crew shall be paid by the General Contractor.
- B. The General Contractor shall perform periodic inspections of existing trees to be preserved and submit written proposals to the University's Representative for additional maintenance Work as may be required to ensure the health and general well being of the

plant material. The General Contractor shall retain, at the direction of the University's Representative, additional specialists as may be required to perform this Work.

- C. Irrigation: Following co-ordination with the University's Representative, existing trees to be preserved shall be given water to saturate the top 3 to 4 feet (as demonstrated by the soil probe) of the soil within the tree protection zone and 2 to 3 feet extending from the tree protection zone. Quantities, frequencies, and lengths of watering time are variable and shall depend upon seasonal rainfall. Irrigation recommendations of the University's Representative shall be followed.

#### 1.9 TREE PROTECTION FENCING

- A. Tree protection fencing shall be chain-link fencing (minimum 6-feet) on concrete anchor blocks unless otherwise noted.
- B. The General Contractor shall install tree protection fencing around trees to be preserved at a distance required from the base of the trunk to the protection zone. All fencing shall remain until Project completion, and it shall then be removed only as directed by the University's Representative.
- C. During the course of construction, General Contractor shall relocate the fence if required to facilitate construction only after notifying University's Representative, to avoid compaction or other injury of tree roots.
- D. The General Contractor shall relocate the fence if required to facilitate construction to avoid compaction or other injury of tree roots only after notifying University's Representative.
- E. The General Contractor shall protect the fencing and shall be responsible for any damage incurred to the fences requiring replacement or reinstallation.
- F. Approval of the University's Representative for Work within the fenced area shall not release General Contractor from any of the provisions specified herein for the protection of existing trees.

#### 1.10 PLANT LIFE PROTECTION

- A. Protection: All trees, shrubs and turf not marked for removal shall be protected against damage from construction operations.
- B. Tree Protection:
  - 1. Where necessary in the opinion of the University's Representative, trees within the limits of the Work shall be protected with tree protection fencing. No trees shall be cut or felled without specific permission from the University's Representative. Trees cut or damaged without written permission of the University's Representative shall be subject to provisions of Repair and Compensation.
  - 2. Cutting and Pruning: Cutting and pruning of trees as required to accommodate construction shall be done only with the specific permission and direction of the University's Representative. Except as required by excavation or trenching shown on the Drawings, soil within the tree protection zone shall not be

disturbed. University's Representative shall be notified immediately if roots of a diameter greater than 2 inches must be cut. Where trenching or excavation for utilities or new construction is required within tree protection zones, tunneling under and around roots shall be done by hand digging line-boring or vacuuming to minimize damage to the root systems.

3. Tree Protection Zone: Do not permit the following within the tree protection zone of an existing tree, except as specified in this Section:
  - a. Storage or parking automobiles or other vehicles.
  - b. Stockpiling of building material, refuse, or excavated materials.
  - c. Skinning or bruising of bark.
- C. Shrub and Turf Protection: Keep damage to shrubs, turf and other plant materials to a minimum and restore to original condition. Turf to be restored with sod lawn unless otherwise approved by the University's Representative.
- D. Maintenance: It shall be the responsibility of the General Contractor to maintain all plant materials and turf within the Project site in a healthy, thriving condition during the life of the Contract.

#### 1.11 GENERAL PROTECTION

- A. During the course of construction, take all necessary precautions to protect the existing trees from injury or death. Protection shall be given to the roots, trunk, limbs and foliage of all existing trees.
- B. Approval by the University's Representative for Work within the tree protection zone shall not waive the General Contractor's responsibility for complying with the requirements of this Section.
- C. During the course of construction of approved Work within the tree protection zone, no roots larger than 2 inches in diameter shall be cut without prior written approval by the University's Representative.
- D. Do not permit the following within the tree protection zone of an existing tree, except as specified in this Section:
  1. Storage or parking automobiles or other vehicles.
  2. Stockpiling of building material, refuse, or excavated materials.
  3. Skinning or bruising of bark.
  4. Use of trees as support posts, power poles, or signposts; anchorage for ropes, guy wires, or power lines; or other similar functions.
  5. Dumping of poisonous materials on or around trees and roots. Such materials include but are not limited to paint, petroleum products, contaminated water, or other deleterious materials.
  6. Cutting of tree roots by utility trenching, foundation digging, placement of curbs and trenches, and other miscellaneous excavation without prior written approval by the University's Representative.
  7. Damage to trunk, limbs, or foliage caused by maneuvering vehicles or stacking material or equipment too close to the tree.
  8. Compaction of the root area by movement of trucks or grading machines, storage of equipment, gravel, earth fill, or construction supplies, etc.

9. Excessive water or heat from equipment, utility line construction, or burning of trash under or near shrubs or trees.
  10. Damage to root system from flooding, erosion, and excessive wetting and drying resulting from dewatering and other operations.
  11. Do not permit the use of herbicide, within the area of the tree protection zone without prior written approval from the University's Representative. The application of herbicides anywhere on the Project site to which can be attributed the decline or death of existing trees shall constitute negligence on the part of the General Contractor. General Contractor shall be liable for damages.
  12. During construction the existing site surface drainage patterns shall not be altered within the area of the tree protection zone, except as shown on the Drawings.
  13. General Contractor shall not alter the existing water table within the area of the tree protection zone.
  14. Grading is to be avoided within the tree protection zone unless absolutely necessary. Grading techniques and mitigation procedures are to be specified by the University's Representative.
- E. All necessary measures shall be taken to maintain healthy living conditions for existing trees to be preserved. Such measures shall include but not be limited to periodic washing of leaves for the removal of dust, irrigation, etc.
- F. Excavation Around Trees
1. Excavation within tree protection zone of trees shall be done only where absolutely necessary and by, or at the direction and with approval from the University's Representative.
  2. Where trenching for utilities is required within tree protection zones, tunneling under and around roots shall be by hand digging. Main lateral roots, and taproots shall not be cut. Smaller roots that interfere with installation of new Work may be cut. Where appropriate, an underground method of pipe installation referred to as "line-boring", around sensitive roots, sidewalks and roads. Determination would be by the University's Representative as to when it would be appropriate to use this method.
  3. Where excavation for new construction is required within tree protection zone of trees, hand excavation and tunneling shall be employed to minimize damage to root systems. If large, main lateral roots are encountered, they shall be exposed beyond excavation limits. If encountered immediately adjacent to location of new construction and relocation is not practical, roots shall be cut approximately 6 inches back from new construction. Obtain approval from the University's Representative before cutting.
  4. Prior to excavation for drain line along existing sidewalk, tree roots shall be cut with a mechanical root-cutter rather than typical trenching to minimize root wrenching.
  5. Exposed roots shall not be allowed to dry out before permanent backfill is placed. Temporary earth cover shall be provided, or roots shall be packed with wet peat moss or 4 layers of wet, untreated burlap and temporarily supported and protected from damage until permanently relocated and covered with backfill. The cover over the roots shall be wetted to the point of runoff so roots stay moist. This should be done at least daily during most seasons, but may required more frequent watering during the summer months. Excavations shall be closed within 24 hours; and, where this is not possible, the side of the excavation adjacent to

the tree shall be kept shaded with burlap or canvas. No excavation shall occur within 10 feet of the trunk of any tree. Excavations within 20 feet of any tree shall be limited to that which is absolutely necessary for building construction under the supervision of the University's Representative.

6. Branching structure shall be thinned in accordance with NAA "Pruning Standards and Practices" to balance structural or weight balance problems in the crown of the tree that might lead to further damage. Thinning shall not exceed 30 percent of existing branching structure.

G. Backfilling

1. Approved excavations shall be carefully backfilled with the excavated materials approved for backfilling. Backfill shall conform to adjacent grades without dips, sunken areas, humps, or other surface irregularities. Jet backfill when trench has been backfilled to half its depth and again when fully backfilled, making certain no air pockets exist around roots.
2. Do not use mechanical equipment to compact backfill. There shall be no air tamping used to avoid compaction of tree root systems. Tamp carefully using hand tools, refilling and retamping until Final Acceptance as necessary to offset settlement.

1.12 TRIMMING OF TREES

- A. In company with the University's Representative ascertain the limbs and roots, which are to be trimmed, and clearly mark them to designate the approved point of cutting.
- B. A Consulting Arborist, certified by the International Society of Arboriculture (ISA), may be engaged to direct removal of branches from trees and large shrubs that are to remain if required to clear for new construction.
- C. Dead and damaged trees that are determined by the University's Representative to be incapable of restoration to normal growth pattern shall be removed at no additional cost to the University.
- D. Pruning operations shall be extended to restore the natural shape of entire tree where directed by the University's Representative and as noted on the Drawings.
- E. Cut evenly, using proper tools and skilled workers, to achieve neat severance with the least possible damage to the tree. Follow ISA Pruning Guidelines.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01 56 39

**SECTION 01 57 23**  
**STORM WATER POLLUTION PREVENTION**

**PART 1 - GENERAL**

**1.1 SCOPE**

- A. Discharge of pollutants (any substance, material, or waste other than clear, uncontaminated storm water) from the project into the storm drain system is strictly prohibited by the Central Valley Regional Water Quality Control Board's (CVRWQCB) Water Quality Control Plan (Basin Plan).
- B. General Contractor to provide all material, labor, and equipment for installation, implementation, and maintenance of all surface-water pollution prevention measures. This work includes the following:
  - 1. Furnishing, placing, and installing effective measures for preventing runoff of soil, silts, gravel, hazardous chemicals or other materials prohibited by the CVRWQCB from entering the storm water drainage system.
  - 2. Management of on-site construction materials in such a manner as to prevent said materials from contacting storm water or wash water and running off into the storm drain system.
  - 3. Complying with applicable standards and regulations specified herein.
  - 4. Maintain 1 copy of the most current revised Storm Water Pollution Protection Plan (SWPPP) at the Contractor's work site.
  - 5. Review any changes in the SWPPP plan each week at the weekly meetings with University's Representative and others. At each weekly meeting, the Contractor shall submit a numbered checklist of the current status of each prevention measure on the job site.
- C. In this section, the term "storm drain system" shall include storm water conduits, storm drain inlets and other storm drain structures, street gutters, channels, ditches, and the Fairfield Canal and Little Lake.
- D. Sanitary sewer discharge regulations are intended to provide protection of the sanitary sewer system and the University's or local Waste Water Treatment Plant (WWTP). In this section, "sanitary sewer" shall include any sanitary sewer manhole, clean out, sewer laterals or other connection to the WWTP.
- E. General Contractor shall have storm water pollution prevention measures in place and conduct inspections year-round. It is the responsibility of the General Contractor to be prepared for a rain event in the non-rainy season, and to be aware of weather predictions. The University is not responsible for informing the General Contractor of rain predictions.
- F. Sanitary sewer blockages can result in a back-up and discharge to the storm drain system. General Contractor shall immediately notify the University's Representative if they become aware of a clogged sanitary sewer associated with the Project.



- G. General Contractor shall not allow any non-storm water from the Project to enter the storm drain system. Examples of non-storm water include water used for dust suppression, pipe flushing and testing, and domestic supply water used to wash streets, painting and drywall equipment, vehicles, or other uses.
- H. Water resulting from de-watering an excavation may be discharged to a storm drain only if it is free of pollutants, including sediment. General Contractor shall use methods such as a settling basin or filter to ensure that dewatering discharges are free of pollutants.

## 1.2 REGULATIONS AND STANDARDS

- A. General Contractor shall comply with the following applicable regulations, including all applicable amendments:
  - 1. Clean Water Act, United States Environmental Protection Agency, and Porter-Cologne Water Quality Act, State of California.
  - 2. Central Valley Regional Water Quality Control Board's Basin Plan, 1998 Edition.
  - 3. Waste Discharge Requirements Order No. 2010-0014-DWQ (National Pollutant Discharge Elimination System (NPDES) Permit No. CAS000002) These Orders are referred to as the General Permit.
  - 4. NPDES Phase II General Municipal Permit requirements.
- B. General Contractor shall comply with the following standards and guidelines on storm drain pollution prevention:
  - 1. California Stormwater Quality Association Handbooks – Construction, Municipal, Industrial and Commercial, and New Development and Redevelopment. These documents can be viewed and downloaded from the Association's website at <http://www.cabmphandbooks.org>.

## 1.3 SUBMITTALS

- A. Submittals shall comply with requirements specified in Section 01 33 23 Shop Drawings, Product Data and Samples.
- B. Submit a New Construction Project Information Form (Exhibit 19) to University's Representative. This form is required for compliance with the campus-wide permit with the CVRWQCB for discharges of storm water associated with construction activities.
- C. Review the University's Storm Water Pollution Prevention Plan (SWPPP) prior to ground breaking. The SWPPP contains all required elements specified in the General Permit using the SWPPP Template in Appendix B of the California Stormwater Quality Association – Stormwater Best Management Practice Handbook for Construction. This template can be downloaded from the California Stormwater Quality Association website at <http://www.cabmphandbooks.org/Construction.asp>. The SWPPP has been developed and revised as necessary to meet the following objectives:
  - 1. To identify pollutant sources that may affect the quality of storm water discharges associated with construction activity from the construction site.

2. To identify non-storm water discharges.
  3. To identify, construct, and implement storm water pollution prevention measures (Best Management Practices, or BMPs) to reduce or eliminate pollutants in storm water discharges from the construction site, both during construction and after construction is completed.
  4. To develop a maintenance schedule for BMPs installed during construction designed to reduce or eliminate pollutants after construction is completed (post-construction BMPs).
  5. General Contractor shall notify the University whenever there is a change in construction, operations or site conditions that may affect the discharge of pollutants to surface waters so that the SWPPP can be amended. All amendments should be dated and directly attached to the SWPPP.
  6. The SWPPP shall include a site map and site-specific written plans that describes pollution sources for the construction activity and the methods that will be used for erosion and sediment control, hazardous materials management, and any other construction activity that are sources of pollution. The list of topics to be covered in the plan are included in Part 3 Execution of this Section.
- D. Site work shall not commence until the SWPPP has been reviewed and accepted by the University's Representative.

## PART 2 - PRODUCTS

### 2.1 MATERIALS

- A. General: Provide materials as required for execution of the Work.

## PART 3 - EXECUTION

### 3.1 GENERAL

- A. The General Contractor shall provide qualified personnel that will implement the University's SWPPP. The General Contractor will choose the best available performance-based technology and methods to prevent storm water pollution for construction site activity. The method(s) chosen shall be appropriate for each specific site condition.
- B. The University will provide a Qualified SWPPP Practitioner (QSP) to make all required inspections and complete inspection checklist, using a form provided by the State Water Board or Regional Water Board. General Contractor shall make all necessary corrections or changes noted on the inspection checklist.

### 3.2 SWPPP TOPICS

- A. Following are topics addressed in the SWPPP:
1. Introduction/Site Description:

- a. The SWPPP shall include basic information about the project including: size of site, type of construction, location of site, project start date and estimated completion date. The site description shall be updated to reflect changes in conditions which may reflect.
2. Maps:
  - a. The General Permit has specific map requirements, including a topographic map showing the location of nearby surface water bodies and the discharge location(s) for the site. A detailed site map is also required, which shall identify areas of soil disturbance, location of surface water bodies, areas of existing surface vegetation, location of sediment or pollutant control measures, site drainage patterns, areas used for storage of soils, waste, or materials, vehicle and equipment parking or service areas, existing paved areas and location of post-construction controls. The maps shall be updated as needed to reflect changes as the project progresses. The approved map and plan shall be kept onsite for reference by the Contractor, University's Representative or governmental agencies.
3. Description of Site and Soil Types:
  - a. Include the following estimates:
    - 1) The size of the construction site (in acres) ;
    - 2) The runoff coefficient of the site before and after construction;
    - 3) The percentage of the area of construction that is impervious before and after construction) .
4. Pollutant Sources:
  - a. List and describe pollutants that are likely to be present in storm water discharges from the site, such as sediment, waste materials, concrete, etc. Describe the locations of storage or use of such materials and the measures to prevent pollution.
5. Toxic Materials:
  - a. Describe all toxic materials that will be used during construction, such as adhesives, paint, petroleum products, pesticides, and vehicle fluids. Describe the locations of storage or use of such materials and the measures to prevent pollution.
6. Erosion and Sediment Control:
  - a. Provide a description of erosion and sediment control measures that will be used on the site, and correlate the description with the site map. Areas requiring erosion control measures are exposed soil, such as stockpiles, bare soil, sloped soil, and any area of disturbed soil. Erosion control measures include paving, tarp placement, soil blankets, mulching, seeding, hydro-mulching, and spreading straw. Sediment control measures include drain inlet protection, filter fabric, geo-textile silt fencing, gravel placement, gravel or sand bag placement, and straw wattle placement. This list is not all inclusive and the General Contractor should refer to the resources listed in this section to identify the best measures for the project. Describe measures to reduce the tracking of sediment from the site. Describe waste disposal practices and methods to prevent waste materials from polluting storm water. Indicate the location of concrete washout areas. Both erosion and sediment control practices are designed to be implemented as an integrated system of pollution control. Without

erosion controls, sediment controls are easily overwhelmed and will not prevent pollution.

7. Non-Storm Water Management:
  - a. Describe all non-storm water discharges that may occur on site. Examples of non-storm water discharges include irrigation runoff, street cleaning, spills, or leakage from storage tanks. Non-storm water discharges should be eliminated or reduced to the extent feasible. Discharges from dewatering are allowed only if they are free of pollutants, including sediment.
8. Maintenance, Inspection and Repair of Controls:
  - a. Structural pollution controls require ongoing inspection, maintenance and repair. General Contractor shall maintain all pollution control measures to achieve compliance with the SWPPP and General Permit. Describe procedures for responding to failure of any structural controls and indicate the persons responsible for inspection, maintenance and repair.
9. Spill Prevention and Control:
  - a. Measures to prevent, control and respond to spills shall be described in the SWPPP. General Contractor shall take precautions to prevent accidental spills of pollutants, including hazardous materials brought onsite by the Contractor. However, in the event of a spill, the General Contractor shall be responsible for the following:
    - 1) Immediately contain and prevent leaks and spills of prohibited pollutants from entering the storm drain system. Clean up the spill and label the contained material. Store the container in a safe place and contact the University's Representative prior to disposal of the waste by the General Contractor. General Contractor shall keep a spill kit on site at all times for this purpose. The General Contractor shall also keep a sampling kit, with the spill kit. At a minimum, three appropriate vials for sampling.
    - 2) General Contractor shall comply with all federal, state, and local hazardous waste requirements. Ensure that no spilled materials are washed into the streets, gutters, storm drains, or creeks.
    - 3) Report any hazardous or unknown material spills immediately to the University's Representative and the University of California, Merced Office of Environment, Health and Safety. If a spill occurs after hours or on a weekend, call (209) 658-8487 and Merced County Department of Public Health, Division of Environmental Health at (209) 381-1090.
10. Post-Construction Stormwater Management
  - a. Describe all the control practices to reduce pollutants in storm water discharges after the construction activities are completed at the site. Post construction BMPs include: minimizing land disturbance, minimizing impervious surfaces, treatment of storm water runoff using filtration, use of efficient irrigation systems, and planting to reduce erodable surfaces.
11. Personnel:
  - a. Identify and describe the training of the personnel responsible for the implementation and monitoring of the SWPPP and BMPs. Documentation of

training shall be available upon the request of the University's Representative or a regulatory agency.

12. Notification List:

- a. Provide the company's name, address and telephone number, along with a contact person's name and telephone number for everyone responsible for implementation of the SWPPP. The General Contractor shall inform all subcontractors (if any) of the water pollution prevention requirements contained in this specification and the site-specific SWPPP and include appropriate subcontract provisions to ensure that these requirements are met.

13. Monitoring and Reporting:

- a. The SWPPP shall describe the monitoring program to ensure compliance with the General Permit. The monitoring plan shall include site inspections and the University's QSP shall conduct inspections of the construction site weekly, prior to anticipated storm events, during extended storm events, and after actual storm events to identify areas contributing to a discharge of storm water associated with construction activity. The name(s) and contact number(s) of the assigned QSP inspection personnel shall be listed in the SWPPP. Weekly and pre-storm inspections are to ensure that BMPs are properly installed and maintained; post-storm inspections are to assure that the BMPs have functioned adequately. The General Contractor should also be inspecting BMPs regularly, prior to and after storm events to insure they are installed and maintained. During extended storm events, inspections by the QSP shall be required each 24-hour period. BMPs shall be evaluated for adequacy and proper implementation and whether additional BMPs are required in accordance with the terms of the General Permit.
- b. Inspections by the QSP must be documented and the records maintained onsite for review by the University's Representative or regulatory agencies. If instances of non-compliance with the General Permit are identified, the General Contractor shall notify the University's Representative immediately. Corrective measures should be implemented immediately following discovery of an exceedance of water quality standards or other instance of non-compliance.

3.3 ENVIRONMENTAL ENFORCEMENT

- A. The CVRWQCB has authority to enforce, through codified regulations, any portions of this Section that may violate applicable regulations. Agency enforcement may include but is not limited to: citations, orders to abate, bills for cleanup costs and administration, civil suits, and/or criminal charges. Contract compliance action by the University shall not be construed to void or suspend any enforcement actions by these or other regulatory agencies.
- B. General Contractor shall notify the University's Representative within 24 hours after issuance of any citation(s) issued by any regulatory agency and shall be responsible for all fines and costs necessary to correct the conditions listed in the citation(s) to include all legal fees and University expenses.

END OF SECTION 01351

**SECTION 01 60 00**  
**PRODUCT REQUIREMENTS**

**PART 1 - GENERAL**

**1.1 REQUIREMENTS**

- A. All material and equipment incorporated in the Work shall be:
  - 1. New.
  - 2. In a condition acceptable to the University's Representative.
  - 3. Suitable for intended use.
  - 4. Clean, dry, and undamaged.

**1.2 TRANSPORTATION AND HANDLING**

- A. Arrange for delivery of materials and equipment to minimize length of on site storage prior to installation.
- B. All common carrier deliveries shall be marked for the General Contractor. Identify location of Project site by Project name, street address, etc.
- C. University will not receive deliveries on behalf of the General Contractor.
- D. Deliver manufactured products and materials in their original unbroken containers or bundles, clearly labeled with manufacturer's name, brand, and grade seal or model number and labels intact until time of use.
- E. Handle materials and equipment in a manner to avoid damage to products and their finishes.
- F. Promptly remove damaged or defective products from the Project site and replace at no additional cost to the University.

**1.3 STORAGE AND PROTECTION**

- A. Other than Project site, storage space may not be available.
- B. Store manufactured products in accordance with manufacturers' instructions and with seals and labels intact and legible.
  - 1. Store products subject to damage by the elements in weather tight enclosures.
  - 2. Maintain temperature and humidity in accordance with manufacturers' recommendations.
- C. Exterior Storage
  - 1. Store materials and equipment above ground on blocking or skids to prevent soiling, staining, and damage.
  - 2. Cover products that are subject to damage by the elements with impervious protective sheet coverings. Provide adequate ventilation to prevent condensation.

3. Store sand, rock, or aggregate material in a well-drained area on solid surfaces to prevent mixing with foreign matter.
- D. Arrange storage to allow adequate inspection.
- E. Periodically inspect stored products to assure that products are maintained under specified conditions and are free from damage and deterioration.
- F. Protection After Installation
  1. Prevent damage to materials and equipment.
  2. Use whatever protective materials or methods are necessary to prevent damage to installed products from traffic, construction operations, and weather. Remove protection when no longer required.
  3. Maintain temperature and humidity conditions in interior spaces for the Work in accordance with manufacturers' instructions for the materials and equipment being protected.

#### 1.4 UNDERWRITERS' LABORATORIES LABEL

- A. Materials and equipment, for which Underwriters' Laboratories, Inc. (UL) standards have been established and their label service is available, shall bear the appropriate UL Label.

#### 1.5 MANUFACTURERS' TRADE MARKS AND NAMES

- A. University's Representative reserves the right to review and request the removal or redesign of manufacturers' trade marks and names on items of materials and equipment which will be exposed to view in the completed Work. Such removal or redesign shall be with no adjustment of the Contract Sum.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01 60 00

**SECTION 01 71 23  
FIELD ENGINEERING**

**PART 1 - GENERAL**

**1.1 PREPARATION**

- A. Lay out and install all Work to lines and grades in accordance with Contract Documents.

**1.2 LAYOUTS AND MEASUREMENTS**

- A. General Contractor shall provide all survey Work required for horizontal and vertical location of all Work in this Project as applies to their scope of work.
- B. General Contractor shall be responsible for paying for the replacement and reestablishment of control stakes, monuments, and lines furnished by the University that are destroyed or disturbed by General Contractor's construction activities. The University shall provide the following
  1. Establish site benchmarks
  2. Provide pad certification
  3. Establish all building corners, 6 column lines in the north-south direction, 2 column lines in the east-west and 4 elevation benchmarks at locations directed by the University's Representative prior to excavation
  4. Reestablish the above following excavation and prior to the start of foundations.
  5. Establish the same column lines on each floor and roof following placement of concrete slabs plus provide 2 elevation benchmarks at each floor (inside the building) as directed by the University's Representative.
  6. Reestablish building column line locations and benchmarks prior to start of site hardscape work as directed by the University's Representative.
- C. General Contractor shall furnish the University's Representative, prior to Project acceptance, 2 complete sets of the field notes for the survey Work and cut sheets in addition to 2 sets of drawings marked showing all deviations from Project alignment and grades as applies to their scope of work.
- D. Generally, grades shall match adjacent surfaces, and existing flow lines shall be maintained.

**1.3 SURVEY REFERENCE POINTS**

- A. General Contractor shall locate and protect control points prior to beginning the Work, and preserve all permanent reference points throughout construction operations. The General Contractor shall:
  1. Not change reference points without prior approval of the University's Representative.
  2. Report to the University's Representative when any reference point is lost, destroyed, or requires relocation due to necessary changes in grades or locations.



1.4 PROJECT SURVEY REQUIREMENTS

- A. General Contractor shall establish lines and levels, locate, and lay out for own work.
- B. General Contractor shall provide layouts as Work proceeds to assure compliance with required schedules, lines, levels, and tolerances for own work.

1.5 RECORDS

- A. General Contractor are required to maintain a complete and accurate log of all control and survey Work as it progresses for own work.

1.6 SUBMITTALS

- A. Upon request by the University's Representative, the General Contractor shall submit documentation to verify accuracy of field engineering Work.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01 71 23

**SECTION 01 73 23**  
**SUPPORTING FROM BUILDING STRUCTURE**

**PART 1 - GENERAL**

**1.1 DESCRIPTION**

- A. This Section provides guidelines and limitations all bracing, anchorage and seismic restraints for supporting all mechanical, electrical, plumbing, audio-visual or architectural items from the building structure.
- B. The General Contractor shall design and install all support and bracing systems except as noted. The General Contractor shall provide for attachment to portions of the building structure capable of bearing the loads imposed and shall design systems to not over stress the building structure.
- C. The General Contractor is not required to design support and bracing for items that the Contract Documents provide specific attachment, support, and bracing.
- D. Seismic bracing is not required for the following items:
  - 1. Gas piping less than 1 inch inside diameter.
  - 2. Piping in boiler and mechanical equipment rooms less than 1.25 inches inside diameter.
  - 3. All other piping less than 2.5 inch inside diameter, unless racked together.
  - 4. All piping and duct suspended by individual hangers 12 inches or less in length.
  - 5. All rectangular air handling ducts less than 6 square feet in cross sectional area.
  - 6. All round air handling ducts less than 28 inches in diameter.
  - 7. All electrical conduits less than 2.5 inches inside diameter, unless racked together.

**1.2 QUALITY ASSURANCE**

- A. Design and install all support systems to comply with the Seismic Design Category D requirements of the 2007 California Building Code (CBC), Chapter 16 and ASCE 7-05, Chapter 13.
- B. For seismic bracing design use the services of a structural engineer licensed in California.
- C. For seismic bracing for mechanical, electrical and plumbing systems, refer to the Sheet Metal and Air Conditioning Contractors National Association, Inc. (SMACNA), "Guidelines for Seismic Restraints of Mechanical Systems and Plumbing Piping Systems" for guidelines.

**1.3 SUBMITTALS**

- A. Submit Shop Drawings for all substructures and attachment methods in accordance with Section 01 33 23 Shop Drawings, Product Data and Samples.
- B. Submit proposed alternative methods of attachment for review and approval by the University's Representative prior to deviating from the requirements given below.

- C. For all seismic bracing systems, submit structural calculations and details prepared and signed by the General Contractor's licensed engineer that include all resultant forces applied to the building structure. Do not over stress building structure. Calculations will be reviewed for compliance with design criteria, not for arithmetic.

## PART 2 - PRODUCTS

### 2.1 MATERIALS

- A. Furnish all substructures and fasteners required to comply with the limitations given below. Use materials as specified in the various Sections and as appropriate to the use.
- B. Channel framing systems: as required to meet Project design.
- C. All exterior materials: hot-dipped galvanized or stainless steel.

## PART 3 - EXECUTION

### 3.1 SEISMIC BRACING

- A. In applying formulae (13.3-1), (13.3-2), (13.3-3) or (13.3-4) from Chapter 13 of ASCE 7-05 the following minimum values, unless otherwise required by ASCE 7-05, shall apply:

$$I_p = 1.0$$

$$S_{DS} = 0.48$$

- B. Design and install seismic bracing so as not to defeat the operation on any required vibration isolation or sound isolation devices.

END OF SECTION 01 73 23

**SECTION 01 73 29**  
**CUTTING, PATCHING AND MATCHING**

**PART 1 - SUMMARY**

**1.1 DESCRIPTION**

**A. Work Included**

1. Patching and matching existing Work altered or disturbed to accommodate new construction.
2. Patching and matching existing Work damaged or defaced during new construction as required to restore to condition at time of award of Contract.
3. Matching of new Work in existing construction to adjacent existing Work unless otherwise noted.
4. Execute cutting, patching and matching in a manner to prevent damage to other Work and to provide proper surfaces for the installation of repairs, penetrations through surfaces, equipment, or other items.

**1.2 SUBMITTALS**

- A.** Submit in accordance with Section 01 33 23 Shop Drawings, Product Data and Samples.
- B.** Product Literature and Shop Drawings: Submit for review materials, methods, or systems different from existing Work to be matched.
- C.** Samples as requested by the University's Representative.

**1.3 QUALITY ASSURANCE**

**A. Design Criteria**

1. Patching shall achieve security and protection where exposed to weather, and shall preserve the continuity of existing fire ratings.
2. Cutting, patching and matching shall successfully duplicate the undisturbed adjacent finishes, colors, textures, and profiles. Where there is dispute over whether the duplication is successful or has been achieved to a reasonable degree, the judgment of the University's Representative shall be final.

**1.4 DELIVERY, STORAGE, AND HANDLING**

- A.** Deliver materials in the original packages, containers or bundles with seals unbroken and labels intact until time of use.

**1.5 PROJECT CONDITIONS**

- A.** Environmental Requirements: Follow the manufacturer's recommendations.

## PART 2 - PRODUCTS

### 2.1 MATERIALS

- A. Materials shall be as required to match the appearance, quality and performance of the existing finishes to be duplicated.
- B. Where the existing finish to be duplicated was achieved with materials now out of production or otherwise unavailable, obtain review and acceptance by the University's Representative of substitutions.
- C. Provide primers, sealers, underlayments, backing, blocking, furring, suspension systems, and related items required for any purpose in patching existing Work.
- D. Materials shall be subject to the review of and acceptance by the University's Representative.

## PART 3 - EXECUTION

### 3.1 GENERAL REQUIREMENTS

- A. Perform Work in accordance with the manufacturer's recommendations, deviating only as directed by the University's Representative to achieve a good match.
- B. For the following items, the General Contractor shall employ the installer or fabricator to perform any cutting, patching or matching of such items:
  - 1. Weather-exposed or moisture-resistance elements.
  - 2. Fireproofing.
  - 3. Finishes surfaces exposed to view.
- C. Adjust and fit products to provide a neat installation.
- D. Inform the University's Representative of locations where Work will be noisy, and obtain the University's Representative approval of the times during which such Work will be done; otherwise keep noise to a minimum.
- E. Finish or refinish surfaces as required to match adjacent finishes. Refinish to nearest intersection or refinish entire assembly.
- F. Patching of ceramic tile surfaces in buildings:
  - 1. Restore to pre-existing new condition, using specified materials.

### 3.2 PAINTING

- A. Extent of Painting
  - 1. Paint over the entire surface plane, unless otherwise noted.
  - 2. Over patched wall, soffit, or ceiling surfaces, paint to the nearest cut-off line for the entire surface, such as the intersection with the adjacent wall or ceiling, a

beam, a pilaster, or to nearest opening frame where a total cut-off does not occur within 10 feet of the patch, unless otherwise noted.

- B. Ensure painted surfaces do not present a spotty, touched-up appearance.
- C. Provide a smooth continuous surface in texture, coverage, and color.

### 3.3 PAVEMENT

- A. Asphaltic and Portland Cement concrete shall be patched to match adjacent surfaces and thickness, with similar material; e.g., exposed aggregate concrete, colored concrete, etc.
- B. All damaged concrete shall be removed and replaced to the nearest existing expansion or control joint, where joints were constructed to the full depth of the slab, not at surface scribed or sawn joints unless specifically approved by the University's Representative
- C. Restore pavement markings.
- D. Other paving materials and systems such as decomposed granite; stone pavers, etc. shall be replaced or restored in kind. Replace or restore an entire panel or area to present a uniform appearance to the satisfaction of the University's Representative.
- E. All new surfaces shall be within 1/4-inch elevation of adjacent surfaces. All slopes to adjacent surfaces shall be less than 1 in 20, unless approved by University's Representative.

### 3.4 LANDSCAPING AND IRRIGATION

- A. Restore to pre-existing condition, using similar materials.

END OF SECTION 01 73 29

**SECTION 01 73 35**  
**SELECTIVE DEMOLITION**

**PART 1 - GENERAL**

**1.1 SECTION REQUIREMENTS**

- A. Extent of demolition will be shown on Drawings.
- B. No demolition shall commence until prior written approval is obtained from the University's Representative.
- C. Unless otherwise indicated, demolished materials become General Contractor's property. Remove from Project site.
- D. Items indicated to be removed and salvaged remain University's property. Remove, clean, and deliver to University's designated storage area.
- E. Comply with Environmental Protection Agency (EPA) regulations and disposal regulations of authorities having jurisdiction.
- F. Prior to starting demolition of any building or structure, comply with requirements listed in Section 01 41 00 Regulatory Requirements.

**PART 2 - PRODUCTS (NOT USED)**

**PART 3 - EXECUTION**

**3.1 DEMOLITION**

- A. Maintain and protect existing utilities to remain in service before proceeding with demolition, providing bypass connections to other buildings on the system.
- B. Locate, identify, shut off, disconnect, and cap off utility services to be demolished.
- C. Conduct demolition operations and remove debris to prevent injury to people and damage to adjacent buildings and site improvements.
- D. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction.
- E. Promptly patch and repair holes and damaged surfaces of building caused by demolition. Restore ex-posed finishes of patched areas and extend finish restoration into remaining adjoining construction.
- F. Promptly remove demolished materials from University's property and legally dispose of them. Do not burn demolished materials.

END OF SECTION 01 73 35

**SECTION 01 74 19**  
**SITE WASTE MANAGEMENT PROGRAM**

**PART 1 - GENERAL**

**1.1 SUMMARY**

- A. The University of California Merced is committed to a triple zero policy of zero waste, zero emissions and zero energy by 2020. Site Waste Management is designed to enforce the triple zero policy. The General Contractor is required to follow the requirements of this specification section and LEED Green Building Design and Construction, latest edition, Waste Management Credit 2.
- B. Environmental Issues: Project requires a special Site Waste Management Program:
  - 1. Divert a minimum of 95 percent of project waste from landfill (weight basis).
  - 2. Extract and re-cycle materials from the waste stream.
  - 3. Effect optimum control of solid wastes.
  - 4. Prevent environmental pollution and damage.
- C. Related Work:
  - 1. Section 01 35 00 Special Requirements
  - 2. Section 01 35 43 Hazardous Materials Procedures.
  - 3. Section 01 73 35 Selective Demolition
  - 4. Section 01 81 13 LEED® Requirements.
  - 5. All specification sections or scope of work which has construction waste as defined in this section.

**1.2 DEFINITIONS**

- A. Inert Fill: A permitted facility that accepts inert waste such as asphalt and concrete exclusively.
- B. Class III Landfill: A landfill that accepts non-hazardous waste such as household, commercial, and industrial waste, including construction, remodeling, repair, and demolition operations.
- C. Clean: Untreated and unpainted; not contaminated with oils, solvents, caulk, or the like.
- D. Construction and Demolition Waste: Includes solid wastes, such as building materials, packaging, trash, debris, and rubble resulting from land-clearing, construction, remodeling, repair, and demolition operations and other similar materials.
  - 1. Rubbish: Includes both combustible and noncombustible wastes, such as paper, boxes, glass, crockery, metal and lumber scrap, tin cans, and bones, and other similar materials.



2. Debris: Includes both combustible and noncombustible wastes, such as leaves and tree trimmings that result from construction or maintenance and repair work, and other similar materials.
  - E. Chemical Waste: Includes petroleum products, bituminous materials, salts, acids, alkalis, herbicides, pesticides, organic chemicals and inorganic wastes, and other similar materials.
  - F. Sanitary Wastes:
    1. Garbage: Refuse and scraps resulting from preparation, cooking, distribution, or consumption of food, or other similar materials.
  - G. Sewage: Domestic sanitary sewage.
- 1.3 GENERAL REQUIREMENTS
- A. The General Contractor shall furnish labor, containers, transportation and payment of any disposal fees for construction waste generated by all new construction work. Removal of waste generated by selective demolition and removal of hazardous waste shall be the responsibility of the General Contractor.. Paperwork demonstrating that Selective Demolition waste has been recycled shall be provided by the General Contractor.
  - B. The General Contractor shall prepare and submit the following documentation.
    1. Monthly report showing total tonnage of construction waste, tonnage diverted, each type of diverted material, diversion percentages and all weight tickets as required by LEED Credit MR 2.
    2. Final report when all construction activities are completed showing total tonnage of construction waste, tonnage diverted, each type of diverted material, diversion percentages and all weight tickets as required by LEED Credit MR 2.
    3. All LEED documentation as required by LEED Credit MR 2.
- 1.4 HAZARDOUS MATERIALS
- A. The University has identified all known hazardous substances on this project. Comply with requirements listed in the following Sections:
    1. Section 01 35 43 Hazardous Materials Procedures.
- 1.5 REQUIREMENTS
- A. Recycling: Implemented by General Contractor is a recycling program that includes separate collection of waste materials of following types as applicable to Project:
    1. Debris for lunch trash.
    2. Asphalt
    3. Concrete and concrete blocks.
    4. Brick and masonry materials.
    5. Untreated lumber.

6. Clean dimensional wood and palette wood.
  7. Plywood, oriented strand board, and medium density fiberboard.
  8. Paper – bond.
  9. Paper (e.g. newsprint).
  10. Cardboard and paper packaging materials.
  11. Plastics.
  12. Rigid foam.
  13. Insulation.
  14. Ferrous metal.
  15. Non-ferrous metals (e.g. copper, aluminum, etc.).
  16. Glass.
  17. Gypsum board (unpainted).
  18. Carpet and pad.
  19. Beverage containers.
  20. Plumbing fixtures.
  21. Electrical fixtures and wires.
  22. Others as noted on the Waste Management Plan, required by LEED Green Building Design and Construction reference guide 2009 edition and that has been approved by the University.
- B. Separation of Waste: General Contractor shall coordinate deposit of contractors waste into the appropriate recycling and waste bins. Recycling and waste bin area shall be kept neat, clean and marked.. A list of acceptable and unacceptable materials, in order to avoid contamination of materials, will be posted on each waste and recycling bin by the General Contractor.
- C. Handling: General Contractor shall keep materials free of dirt, adhesives, solvents, petroleum contamination, and other substances deleterious to recycling process:
1. Clean materials that are contaminated prior to placing in collection containers.
  2. The General Contractor shall arrange for collection by or delivery to appropriate recycling center or transfer station that accepts construction and demolition waste for purpose of recycling.

END OF SECTION 01 74 19

**SECTION 01 77 00**  
**CLOSEOUT PROCEDURES, FINAL CLEANING, AND EXTRA MATERIAL**

**PART 1 - GENERAL**

**1.1 FINAL COMPLETION**

- A. When Work is complete, submit written certification to University's Representative that:
  - 1. Work has been inspected by the General Contractor for compliance with the Contract Documents.
  - 2. Work has been completed in accordance with the Contract Documents.
  - 3. Equipment and systems have been tested in presence of the University's Representative and are operational.
  - 4. Work is complete and ready for final inspection.

**1.2 PREPARATION FOR FINAL INSPECTION**

- A. Perform final cleaning as specified below.
- B. In accordance with Section 01 78 36 Guarantees, Warranties, Bonds, Service & Maintenance Contracts, assemble guarantees/warranties with service and maintenance contracts, operating and maintenance instructions, and other items as specified, and submit to the University's Representative.

**1.3 FINAL CLEANING**

- A. Upon completion of the Work, the General Contractor shall promptly remove from the Project site and Project site vicinity (including roofs):
  - 1. All of General Contractor's equipment
  - 2. All temporary structures
  - 3. All surplus material, including construction debris, lumber, etc.
  - 4. Remove waste, surplus materials and rubbish from Project site, including roof areas.
- B. The entire Project site shall be left in a neat and clean condition to the satisfaction of the University's Representative.
- C. The General Contractor shall execute final cleaning prior to final inspection. Cleaning shall be by experienced professional cleaners.
- D. The General Contractor shall:
  - 1. Clean interior and exterior surfaces exposed to view; remove temporary labels, stains and foreign substances, polish glass and glossy surfaces, vacuum carpeted and soft surfaces, broom clean other interior spaces.

2. Clean equipment and fixtures to a sanitary condition, clean permanent filters and replace disposable filters of mechanical equipment operated during construction.
3. Clean ducts, blowers and coils if units were operated without filters during construction.
4. Vacuum and wipe sides of electrical panels and cabinetwork.
5. Comply with manufacturer's instructions for cleaning.
6. Clean each surface or unit to condition expected from normal, commercial building cleaning and maintenance program.
7. Clean Project site, sweep paved areas, rake clean ground surfaces.
8. Remove stains, dirt, finger marks, etc., from wall and ceiling surfaces and trim.
9. Disinfect, clean and polish all plumbing fixtures.
10. Use cleaning materials and methods that will not create hazards to health or property or cause damage to products or Work.
11. Remove temporary tapes, wrapping, coatings, paper labels, and similar items. Dust, mop, wash or wipe exposed and semi-exposed surfaces as necessary to leave work in new, clean condition.

#### 1.4 RESTORATION OF DAMAGED WORK

- A. Restore or replace, as specified or directed by the University's Representative, materials and finishes damaged from movement of equipment or other operations by General Contractor at no additional cost to the University.
- B. Restoration shall be equal to original Work, and finishes shall match appearance of existing adjacent Work.

#### 1.5 REMEDIAL WORK

- A. Remedial Work necessary owing to faulty workmanship or materials shall be performed by the General Contractor at no additional cost to the University.
- B. Work shall be coordinated with University's Representative and performed at such time and in such manner to cause minimal interruption and inconvenience to University's operations.

#### 1.6 EXTRA MATERIAL

- A. In the various Sections, where additional or extra material is required to be delivered to the University, obtain from the University's Representative, to whom the material is to be delivered, a signed receipt stating the nature of the material, the quantity, and the place and date. Deliver such receipts to the University's Representative upon completion of the Work.
- B. In addition to required parts listed in other Sections of the Specification, provide any special programming software and database tools necessary to operate systems.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01 77 00

**SECTION 01 78 36**  
**GUARANTEES, WARRANTIES, BONDS, SERVICE & MAINTENANCE CONTRACTS**

**PART 1 - GENERAL**

**1.1 GUARANTEES**

- A. Guarantees from Subcontractors shall not limit General Contractor's warranties and guarantees to the University. The General Contractor shall cause warranties of Subcontractors to be made directly to the University. If such warranties are made to the General Contractor, General Contractor shall assign such warranties to the University prior to final payment.
- B. At a minimum, the General Contractor shall warrant that all work installed under this Contract is free of defect and will remain in good working order for a period of one year for all surface improvements and five years for all underground work. If warranties specified elsewhere in these documents are for a longer period of time than that specified in this section, the longer warranties shall apply.

**1.2 FORM OF GUARANTEE**

- A. Submit written guarantees, in the form of Guarantee/Warranty Form (Exhibit 16) in accordance with Section 01 33 23 Shop Drawings, Product Data and Samples.

**1.3 SUBMITTAL REQUIREMENTS**

- A. Assemble required guarantees, bonds, and service and maintenance contracts.
- B. Number: 1 signed original and 2 copies.
- C. Table of Contents: Neatly typed and in orderly sequence. Provide complete information for each item as follows:
  - 1. Product or Work item.
  - 2. Firm name, address, telephone number and name of principal.
  - 3. Scope.
  - 4. Identifying name, serial number or part number.
  - 5. Proper procedure in case of failure.
  - 6. Circumstances that might affect the validity of guarantee or bond.

**1.4 FORM OF SUBMITTAL**

- A. Prepare in duplicate packets.
- B. Format
  - 1. On sheets 8-1/2 by 11 inches punched for 3-ring binder. Fold larger sheets to fit into binders.
  - 2. Identify each packet on the cover with typed or printed title, "Guarantees and Bonds", and the following:

- a. Project No.
  - b. Title of Project.
  - c. Name of General Contractor.
- C. Binders: Commercial quality, 3-ring, with durable and cleanable plastic covers.
- D. Time of Submittals
  - 1. Within 10 days after date of Substantial Completion, prior to request for final payment.
  - 2. For Work activities, where Final Completion is delayed beyond the date of Substantial Completion, provide updated submittal within 10 calendar days after Final Completion, listing the date of Final Completion as the start of the Guarantee To Repair Period.

#### 1.5 SUBMITTALS REQUIRED

- A. Submit guarantees, bonds, and service and maintenance contracts specified in the individual Specification Sections.
- B. Compile all warranties from the specified individual Specification Sections. Submit those in a commercial, 3-ring binder with durable and cleanable plastic covers.

#### 1.6 SPARE PARTS AND MAINTENANCE MATERIAL

- A. Provide products, spare parts, maintenance and extra materials in quantities specified in individual Specification Sections.
- B. Deliver to Project site and place in location as directed by the University's Representative and obtain receipt prior to final payment.

#### PART 2 - PRODUCTS (NOT USED)

#### PART 3 - EXECUTION (NOT USED)

END OF SECTION 01 78 36

**SECTION 01 78 39**  
**PROJECT AS-BUILT DOCUMENTS**

**PART 1 - GENERAL**

**1.1 MAINTENANCE OF DOCUMENTS AND SAMPLES**

- A. Store Project as-built documents and samples in the General Contractor's office in a location completely separate from documents used for construction. The location shall be approved by the University's Representative.
- B. Maintain as-built documents in order and in a clean, dry, legible condition.
- C. Do not use as-built documents for construction.

**1.2 AS-BUILT DOCUMENTS**

- A. As-built Drawings
  - 1. The General Contractor shall maintain on the Project site at all times in a clean, dry legible condition, 1 set of all Drawings and 1 set of all Shop Drawings. These Drawings shall be used to record as-built conditions on a day-to-day basis, and shall be kept current, and shall be available for inspection by the University's Representative during normal working hours.
  - 2. The General Contractor shall obtain weekly written confirmation from the University's Representative that the as-built conditions are adequately represented in the As-built Drawings.
  - 3. On three (3) occasions to be determined by the University's Representative, the General Contractor shall prepare in both AUTOCAD® format (latest version available at date of bid) and PDF Format on CD-ROM digital images of the current As-built Drawings. The image files shall be in format ORIGINAL.DWG and DRAWING NUMBER.PDF. The General Contractor may scan the As-built Drawings or use a digital camera or any other appropriate means so long as the resulting image is legible when viewed from the CD-ROM using a computer. All cross references within the same AUTOCAD® drawing must be bound.
  - 4. Record the following types of information on As-built Drawings
    - a. Location of Work buried under or outside the building, such as plumbing and electrical lines and conduits. Provide horizontal and vertical dimensions from fixed points. Record all locations of underground Work, points of connection, valves, manholes, catch basins, capped stub outs, invert elevations, etc.
    - b. Locations of all significant Work concealed inside the building, the locations of which were changed by the General Contractor from those shown on the Drawings.
    - c. Locations of all items, not necessarily concealed but varying from the locations shown on the Drawings.
    - d. All changes in size, location, and other features of installation not shown on Drawings.
    - e. Sufficient information such that Work concealed in the building may be located with reasonable ease and accuracy. This may be accomplished by dimension or by stating the relationship to the spaces in the building



near which the Work was installed. The University's Representative's decision on what constitutes sufficient information shall be final.

- f. All electrical and control installations to indicate terminal points, wire numbers/circuit numbers, panel designations, device identification, and/or sequence of operations.
  - g. Record existing below-grade utilities if they are exposed by the project or are located within the Project boundary on the as-built drawings.
  - h. Provide dimension from a designated reference point for all below-grade utilities, provide and record on the as-built drawing the exact dimension from an existing designated reference point relative to the campus bench mark elevation.
- 5. Additional drawings shall be provided as required to properly describe changes.
  - 6. Upon completion of the Work, the As-built Drawings shall be certified by the General Contractor to represent the true, as-built conditions and shall be given to the University's Representative as described in Subsection 1.3.

B. Specifications and Addenda

- 1. Record the following:
  - a. Manufacturer, trade name, catalog number, and supplier of each product and item of equipment actually installed.
  - b. Changes made by Addenda, Change Order (Exhibit 9), or Field Order (Exhibit 8), and clarifications and interpretations made by Letter of Instruction (Exhibit 26).
  - c. Provide two (2) hard copies of the specifications and addenda ten (10) days after Final Completion.

C. Large-Scale Layout Drawings

- 1. Division 22 -Plumbing, Division 23-Heating,m Ventilating, and Air-Conditioning (HVAC) and Division 26-Electrical of the Specifications require the preparation of large-scale, detailed Layout Drawings of the Work of those Divisions. These Layout Drawings are not Shop Drawings as defined by the General Conditions, but, together with Shop Drawings or Layout Drawings of all other affected Sections, are used to check, coordinate, and integrate the Work of the various Sections.

D. Project Photographs

- 1. At appropriate intervals but not less than once a month, the General Contractor shall submit digital site photographs on CD-ROM to the University's Representative. These photographs shall:
  - a. Use format NAME.JPG
  - b. Show the completed installation of all pipes, ducts, cable trays and other mechanical, electrical and plumbing services before they are covered and hidden from view. This shall include, but not be limited to, services cast into concrete elements; buried services covered by ground slabs; services in walls hidden by sheetrock, tile, or plaster; services above ceilings.

2. The CD-ROM containing the photographs shall also contain an electronic file with enough information to identify the exact location of the element shown in each photograph. The electronic file shall:
  - a. Be in Microsoft Word or Excel format.
  - b. Cross reference to the name of each photograph.
  - c. Identify the location and direction of each photograph. As a minimum, this shall include element identification, grid reference, floor number if applicable and cardinal direction photographer was facing when photograph was taken.
  - d. Identify the date of the photograph.

### 1.3 PROJECT LEGACY DOCUMENTS

#### A. AS-BUILT DRAWINGS

1. The General Contractor shall submit to the University's Representative, 10 calendar days after Final Completion, fully updated As-built Drawings and Shop Drawings. These Drawings shall be prepared from the As-built Drawings.
2. The As-Built Drawings shall be in electronic format, AUTOCAD® latest version available at date of bid. File shall be ORIGINAL.DWG format and PDF format. Electronic media shall be CD-ROM. The General Contractor shall provide two (2) hard copies of the drawings on 24 pound 96 Bright Bond paper or better quality and two (2) copies on CD-ROMs. Each CD-ROM shall contain all of the electronic Drawing files.
3. The General Contractor's AUTOCAD® As-Built Drawings may be based on AUTOCAD® Design Drawings provided by the University or the University's Design Professional so long as for each drawing:
  - a. Any lines added to the Design Drawing in model space by the General Contractor shall be in AUTOCAD® layers not currently used by the Design Drawings. The General Contractor shall not use more than five (5) layers for added lines.
  - b. Any lines deleted from the Design Drawing in model space by the General Contractor shall be copied into a single layer not currently used by the Design Drawings.
  - c. The General Contractor's As-Built Drawings based on the Design Drawings shall therefore contain:
    - (1) The lines on the Design Drawings in the same AUTOCAD® layers as the Design Drawings (not changed by the General Contractor).
    - (2) A single AUTOCAD® layer containing the lines on Design Drawings deleted by the General Contractor.
    - (3) Not more than five (5) AUTOCAD® layers containing the lines added by the General Contractor to the Design Drawing.
4. AUTOCAD® As-Built Drawings not based on AUTOCAD® Design Drawings provided by the University or the University's Design Professional, shall be configured as follows:
  - a. Title block and plot set-up shall be in Paper space.
  - b. All other drawing data shall be in Model space.

- c. Each drawing shall contain a title block and orientation/north arrow approved by the University's Representative.

B. SHOP DRAWINGS

- 1. The General Contractor shall submit to the University's Representative, 10 calendar days after Final Completion, fully updated Shop Drawings.  
General Contractor shall:
  - a. Provide 2 hard copies of the Shop Drawings on 24 pound, 96 Bright Bond paper.
  - b. Provide 2 CD-ROMs, each of which contains all drawing data if the General Contractor used Computer Aided Drafting software to prepare the Shop Drawings.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01 78 39

**SECTION 01 79 00  
TRAINING**

**PART 1 - GENERAL**

**1.1 DESCRIPTION**

- A. This section contains requirements for training the University's personnel, by persons retained by the General Contractor specifically for the purpose of providing training in the proper operation and maintenance of the equipment and systems installed under this contract.

**1.2 RELATED WORK AND DOCUMENTS**

- A. Section 01 91 00 Commissioning
- B. Division 14 Conveying Systems
- C. Division 21 Fire Suppression
- D. Division 22 Plumbing
- E. Division 23 Heating, Ventilating and Air-Conditioning (HVAC)
- F. Division 26 Electrical
- G. Division 27 Communications
- H. Division 28 Electronic Safety and Security

**1.3 QUALITY ASSURANCE**

- A. When required by the Contract documents, the General Contractor shall provide on-the-job training of the University's personnel. The training sessions shall be conducted by qualified, experienced, factory-trained representatives of the various equipment manufacturers. Training shall include instruction in both operation and maintenance of the subject equipment.

**1.4 SUBMITTALS**

- A. The following information shall be submitted to the University's Representative in accordance with the provisions of Section 01 33 23 Shop Drawings, Product Data and Samples. The material shall be reviewed and accepted by the University's Representative as a condition precedent to receiving progress payments in excess of 50 percent of the contract amount and not less than 3 weeks prior to the provision of training:
- B. Lesson plans for each training session to be conducted by the manufacturer's representatives. In addition, training manuals, handouts, visual aids, and other reference materials shall be included.

- C. Subject of each training session, identity and qualifications of individuals to be conducting the training, and tentative date and time of each training session.
- D. CD recordings shall be taken by a professional photographer, of all training sessions and field instructions shall be submitted to the University at conclusion of training.

## PART 2 - PRODUCTS

### 2.1 GENERAL

- A. Where specified, the General Contractor shall conduct training sessions for the University's personnel to instruct the staff on the proper operation, care, and maintenance of the equipment and systems installed under this Contract. Training shall take place at the site of the Work and under the conditions specified in the following paragraphs. Approved operation and maintenance manuals shall be available at least 30 calendar days prior to the date scheduled for the individual training session. General Contractor shall ensure that Operation and Maintenance manuals have approved by the Design Team and the required number of O&M manuals have been provided to the University's Representative at least 2 weeks in advance of training.

### 2.2 LOCATION

- A. Training sessions shall take place at the Project Site.

### 2.3 LESSON PLANS

- A. Formal written lesson plans shall be prepared for each training session. Lesson plans shall contain an outline of the material to be presented along with a description of visual aids to be utilized during the session. Each plan shall contain a time allocation for each subject.
- B. One complete set of originals of the lesson plans, training manuals, handouts, visual aids and reference material shall be presented to the University and shall be suitably bound for proper organization and easy reproduction. The General Contractor shall furnish at least 10 copies of necessary training manuals, handouts, visual aids and reference materials at least 1 week prior to each training session.

### 2.4 FORMAT AND CONTENT

- A. Each training session shall be comprised of time spent both in the classroom and at the specific location of the subject equipment or system. As a minimum, the training session shall cover the following subjects for each item of equipment or system:
  - 1. Familiarization
    - a. Review catalog, parts lists, drawings, etc., which have been previously provided for the plant files and operation and maintenance manuals.
    - b. Check out the installation of the specific items.
    - c. Demonstrate the unit and indicate how all parts of the specifications are met.
    - d. Answer questions.
  - 2. Safety

- a. Using material previously provided, review safety references.
  - b. Discuss proper precautions around equipment.
3. Operation
  - a. Using material previously provided, review reference literature.
  - b. Explain all modes of operation (including emergency).
  - c. Check out University's personnel on proper use of the equipment.
4. Preventative Maintenance
  - a. Using material previously provided, review preventive maintenance (PM) lists including
    - (1) Reference material.
    - (2) Daily, weekly, monthly, quarterly, semiannual and annual jobs.
  - b. Show how to perform PM jobs.
  - c. Show University's personnel what to look for as indicators of equipment problems.
5. Corrective Maintenance
  - a. List possible problems.
  - b. Discuss repairs – point out special problems.
  - c. Open up equipment and demonstrate procedures, where practical.
6. Parts
  - a. Show how to use previously provided parts list and order parts.
  - b. Check over spare parts on hand. Make recommendations regarding additional parts that should be available.
7. Local Representatives
  - a. Describe where to order parts: Name, address, telephone and Email address.
  - b. Describe service problems:
    - (1) Who to call.
    - (2) How to get emergency help.
8. Operation and Maintenance Manuals
  - a. Review any other material submitted.
  - b. Update material, as required.

## PART 3 - EXECUTION

### 3.1 TRAINING

- A. Training shall be conducted in conjunction with the operational testing and commissioning periods. Classes shall be scheduled such that classroom sessions are interspersed with field instruction in logical sequence. The General Contractor shall arrange to have the training conducted on consecutive days, with no more than 6 hours of classes scheduled for any one day. Concurrent classes shall not be allowed. Training shall be certified by listing attendees and subjects covered.
- B. Acceptable operation and maintenance manuals for the specific equipment shall be provided to the University prior to the start of any training. Videotaping shall take place concurrently with all training sessions. All training sessions and field instruction shall be videotaped by the General Contractor and tapes of all classes submitted to the University.

- C. The following services shall be provided for each item of equipment or system as required in individual specification sections. Additional services shall be provided, where specifically required in individual specification sections.
1. As a minimum, classroom equipment training for operations personnel shall include:
    - a. Using slides and drawings, discuss the equipment's specific location in the plant and an operational overview.
    - b. Purpose and plant function of the equipment.
    - c. A working knowledge of the operating theory of the equipment.
    - d. Startup, shutdown, normal operation, and emergency operating procedures, including a discussion on system integration and electrical interlocks, if any.
    - e. Identify and discuss safety items and procedures.
    - f. Routine preventative maintenance, including specific details on lubrication and maintenance of corrosion protection of the equipment and ancillary components.
    - g. Operator detection, without test instruments, of specific equipment trouble symptoms.
    - h. Required equipment exercise procedures and intervals.
    - i. Routine disassembly and assembly of equipment if applicable (as judged by the University on a case-by-case basis) for purposes such as operator inspection of equipment.
  2. As a minimum, hands-on equipment training for operations personnel shall include:
    - a. Identify location of equipment and review the purpose.
    - b. Identifying piping and flow options.
    - c. Identifying valves and their purpose.
    - d. Identifying instrumentation:
      - (1) Location of primary element
      - (2) Location of instrument readout.
    - e. Discuss purpose, basic operation, and information interpretation.
    - f. Discuss, demonstrate, and perform standard operating procedures and round checks.
    - g. Discuss and perform the preventative maintenance activities.
    - h. Discuss and perform startup and shutdown procedures.
    - i. Perform the required equipment exercise procedures.
    - j. Perform routine disassembly and assembly of equipment if applicable.
    - k. Identify and review safety items and perform safety procedures, if feasible.
  3. As a minimum, classroom equipment training for the maintenance and repair personnel shall include:
    - a. Theory of operation.
    - b. Description and function of equipment.
    - c. Startup and shutdown procedures.
    - d. Normal and major repair procedures.
    - e. Equipment inspection and troubleshooting procedures including the use of applicable test instruments and the "pass" and "no pass" test instrument readings.
    - f. Routine and long-term calibration procedures.

- g. Safety procedures.
  - h. Preventative maintenance such as lubrication; normal maintenance such as belt, seal, and bearing replacement; and up to major repairs such as replacement of major equipment part(s) with the use of special tools, bridge cranes, welding jigs, etc.
4. As a minimum, hands-on equipment training for maintenance and repair personnel shall include:
- a. Locate and identify of equipment components.
  - b. Review the equipment function and theory of operation.
  - c. Review normal repair procedures.
  - d. Perform startup and shutdown procedures.
  - e. Review and perform the safety procedures.
  - f. Perform University approved practice maintenance and repair job(s) including mechanical and electrical adjustments and calibration and troubleshooting equipment problems.

END OF SECTION 01 79 00



**SECTION 01 81 13**  
**LEED® REQUIREMENTS**

**PART 1 - GENERAL**

**1.1 SUMMARY**

- A. This Section includes general requirements and procedures for compliance with certain U.S. Green Building Council's (USGBC) Leadership in Energy and Environmental Design (LEED®) New Construction (NC) v3.0 prerequisites and credits needed for the Project to obtain a minimum of LEED® Gold certification & a preferred LEED® Platinum certification.
- B. LEED® NC 3.0 requirements shall be followed in conjunction with requirements specified in all other Sections. Any discrepancies shall be referred to the University's Representative for clarification.
  - 1. Other LEED® prerequisites and credits needed to obtain LEED® certification are dependent on material selections and may not be specifically identified as LEED® requirements. Compliance with requirements needed to obtain LEED® prerequisites and credits may be used as one criterion to evaluate substitution requests.
  - 2. Additional LEED® prerequisites and credits needed to obtain the indicated LEED® certification are dependent on the Architect's design and other aspects of the Project that are not part of the Work of the Contract.
  - 3. The General Contractor shall designate an onsite field staff person contact for all LEED® prerequisites and credit documentation, subcontractor supervision and submittal coordination.
    - a. The University's Representative will coordinate all General Contractor LEED® on-site field staff person for LEED® requirements.
  - 4. Documentation for LEED® prerequisites and credits must be submitted in the format required by the USGBC for review using LEED®-Letter Templates. Including all required credit audit documentation, completion of LEED® calculators, and LEED® credit templates. Refer to 1.6 of this section for a more detailed explanation of the LEED®-Online process and LEED® Construction Submittal.
  - 5. A copy of the LEED®-NC v3.0 reference guide should be purchased by the General Contractor and available on site at all times to accompany this specification. Additional information on LEED® and how to purchase copies of the LEED®-NC v3.0 reference guide and how to use LEED®-Letter Templates can be found at [www.usgbcv.org](http://www.usgbcv.org) and <https://leedonline.usgbc.org>
- C. Related Work:
  - 1. All other sections where indicated.
  - 2. LEED® submittal status matrix
  - 3. This project shall incorporate prototype campus-wide credits that were approved by the USGBC in March of 2007. The General Contractor shall be required to provide full credit

documentation and back-up for each Prototype Credit, as required, as part of their Construction Submittal.

## 1.2 REFERENCE STANDARDS

- A. ASHRAE Guideline 0-2005 – The Commissioning Process
- B. ASHRAE Guideline 1-1996 -The HVAC Commissioning Process.
- C. ASHRAE Standard 90.1-2007 - Energy Standard for Buildings Except Low-Rise Residential Buildings.
- D. ASHRAE Guideline 4-1993 - The Preparation of Operations and Maintenance Documentation for Building systems.
- E. ASHRAE Standard 62.1-2007 - Ventilation for Acceptable Indoor Air Quality.
- F. CRI - Carpet and Rug Institute Indoor Air Quality Green Label Testing Program.
- G. CARB - California Air Resources Board Suggested Control Measures for Architectural Coatings
- H. EPA Energy Star - Program Requirements for Roof Products.
- I. EPACT – Energy Policy Act of 1992
- J. FSC - Forest Stewardship Council (FSC) Guidelines for Certified Wood.
- K. GS 11 – Green Seal (VOC) Guidelines for Paints.
- L. SCAQMD Rule # 1168 –South Coast Air Quality Management District Adhesive and Sealant Applications.
- M. USGBC LEED® United States Green Building Council (USGBC) Leadership in Energy and Environmental Design Reference Guide.
- N. USGBC LEED® United States Green Building Council (USGBC) Leadership in Energy and Environmental Design Rating System for New Construction version 3.0.

## 1.3 DEFINITIONS

- A. Agrifiber Product: Products consisting of fibrous material derived from the agricultural industry and typically characterized by rapidly renewable characteristics. Such products may consist of wheat straw, sugar cane, and other agricultural crops.
- B. Adequate Ventilation: Ventilation, including air circulation and air changes, required to cure materials, dissipate humidity, and prevent accumulation of dust, fumes, vapors and gases.
- C. Certificates of Chain-of-Custody: Certificates signed by manufacturers certifying that wood used to make products was obtained from forests certified by a Forest Stewardship Council (FSC) - accredited certification body to comply with FSC 1.2, "Principles and Criteria." Certificates

shall include evidence that mill is certified for chain-of-custody by an FSC-accredited certification body. For more information go to [www.fscus.org](http://www.fscus.org).

- D. Chain of Custody: A tracking procedure to document the status of a product from the point of harvest, extraction, or recovery to the point of ultimate end use.
- E. Chemical Waste: Includes paints, adhesives, sealants, coatings, petroleum products, bituminous materials, salts, acids, alkalis, herbicides, pesticides, organic chemicals, and inorganic wastes.
- F. Chlorofluorocarbons (CFCs): Any of various halocarbon compounds consisting of carbon, hydrogen, chlorine, and fluorine, once used widely as aerosol propellants and refrigerants. Chlorofluorocarbons have been identified to cause depletion of the atmospheric ozone layer.
- G. Construction and Demolition Waste: Includes solid wastes, such as building materials, packaging, rubbish, debris, and rubble resulting from construction, remodeling, repair and demolition operations.
- H. Construction IAQ Management Plan: A document that outlines measures to minimize contamination in a building during construction and to flush the building of contaminants prior to occupancy.
- I. Cost Basis: A basis of calculation wherein the input values are in terms of monetary cost (US Dollar).
- J. Environmental Pollution and Damage: The presence of chemical, physical, or biological elements or agents that adversely affect human health or welfare; unfavorably alter ecological balances or the environment of neighboring buildings and environmental areas; or degrade the utility of the environment for aesthetic, cultural or historical purposes.
- K. Hazardous Materials: Includes pesticides, biocides, carcinogens, and “wet products” as listed by recognized authorities, such as the Environmental Protection Agency (EPA), International Agency for Research on Cancer (IARC), the State of California, and any special local requirements.
- L. Heat Island Effect: A condition wherein elevated temperatures are experienced in urban landscapes as a result of solar energy retention within constructed bodies. Principal bodies that contribute to the heat island effect include streets, sidewalks, parking lots, and buildings.
- M. Infrared Emittance: Parameter between 0 and 1 that indicates the ability of a material to shed infrared radiation.
- N. Interior Final Finishes: Materials and products that will be exposed at interior occupied spaces, including flooring, wall covering, finish carpentry, and ceilings.
- O. LEED®: Leadership in Energy & Environmental Design, version 2.2 Green Building Rating System for New Construction.
- P. Life Cycle Analysis (LCA): An informed decision making process that can be applied to building components, design strategies, and other measures associated with building alternatives. The

LCA process considers all costs and benefits (economic, social, and environmental) over the course of the building's life.

- Q. Life Cycle Costing (LCC): A sub-component of the more general Life Cycle Analysis (LCA), LCC considers only economic costs over the course of the building's life. LCC is used to determine the best choice among mutually exclusive alternatives by summing the present value of all costs over the life of the alternative.
- R. Municipal Solid Waste Landfill: A permitted facility that accepts solid, non-hazardous waste such as household, commercial, and industrial waste, including construction and demolition waste.
- S. Packaged Dry Products: Materials and products that are installed in dry form and delivered to the site in the manufacturer's packaging, including carpets, resilient flooring, ceiling tiles, and insulation.
- T. Point of Extraction, Harvest, or Recovery: The geographic location where the material was extracted, harvested, or recovered.
- U. Point of Final Assembly: The geographic location where individual components are assembled into the product that is furnished and Installed by the tradesmen.
- V. Post-Consumer Material: Material generated by households or by commercial, industrial and institutional facilities in their role as end-users of products, which can no longer be used for its intended purpose.
- W. Pre-Consumer Material: Material diverted from the waste stream during the manufacturing process (can also be considered post-industrial). Excluded is reutilization of materials such as rework, re-grind or scrape generated in a process and capable of being reclaimed within the same process that generated it.
- X. Post-Consumer Recycled Content: The percentage content of waste material to total material (weight basis) when waste material is derived from products or packaging which has been discarded by an individual, commercial enterprise, or other public or private entity after having fulfilled its intended application or use.
- Y. Post-Industrial Recycled Content: The percentage content of waste material to total material (weight basis) when waste material is generated as a by-product of an industrial process and which has properties significantly different than those of the original material and therefore, in its current form, cannot be recycled back through the same general process.
- Z. Recycled Content: The percentage by weight of constituents that have been recovered or otherwise diverted from the solid waste stream, either during the manufacturing process (pre-consumer or post-industrial), or after consumer use (post-consumer).
  - 1. Spills and scraps from the original manufacturing process that are combined with other constituents after a minimal amount of reprocessing for use in further production of the same product are not recycled materials.

- 2. Discarded materials from one manufacturing process that are used as constituents in another manufacturing process are pre-consumer or post industrial
- AA. Recycling: The collection, reprocessing, marketing and use of materials that were diverted from the solid waste stream.
- BB. Regionally Manufactured Materials: Materials that are manufactured within a radius of 500 miles from the Project location. Manufacturing refers to the final assembly of components into the building product that is installed at the Project site.
- CC. Regionally Extracted, Harvested, or Recovered Materials: Materials that are extracted, harvested, or recovered and manufactured within a radius of 500 miles from the Project site.
- DD. Sediment: Soil and other debris that has been eroded and transported by storm or well production run-off water.
- EE. Volatile Organic Compounds (VOCs): Carbon compounds emitted by materials that participate in atmospheric photochemical reactions. VOC's are common in building products and are emitted over time through outgassing. Sources of VOC's may include solvents in paints and other coatings; wood preservatives; strippers and household cleaners; adhesives in particleboard, fiberboard, and some plywoods; and foam insulation. When released, VOCs can contribute to the formation of smog and can cause respiratory tract problems, headaches, eye irritations, nausea, and damage to the liver, kidneys, and central nervous system, and possibly cancer.
- FF. Waste Management Plan: A Project-related plan for the collection, transportation, and disposal of the waste generated at the construction site. The purpose of the plan is to ultimately reduce the amount of material being landfilled.
- GG. Weight Basis: A basis of calculation wherein the input values are in terms of weight (US Pound).
- HH. Wet Products: Materials and products installed in wet form, including paints, sealants, adhesives, and special coatings.

#### 1.4 GENERAL REQUIREMENTS

- A. General Contractor shall designate a LEED® Representative, for the approval of the University's Representative. General Contractor's LEED® Representative shall be an individual responsible for implementation, coordination, and documentation of LEED® Credit Requirements specified herein. General Contractor's LEED® Representative shall attend all LEED® Certification meetings as stipulated in Part 1.5.A & B and shall be present on site at all times when work is in progress.
- B. The following table summarizes the credits that need full documentation from each General Contractor as noted in this LEED® specification, 1.6 Submittals.

<b>LEED® Certification</b>	
<b>LEED® Reference</b>	<b>Point Description</b>
MR Credit 2	Construction Waste Management
MR Credit 4: PTC	Recycled Content Material
MR Credit 5: PTC	Local/Regional Materials
MR Credit 6: PTC	Rapidly Renewable Materials
MR Credit 7: PTC	Certified Wood
IEQ Credit 3.1 – 3.2: PTC	Construction IAQ Management Plan
IEQ Credit 4.1 – 4.4: PTC	Low-Emitting Materials

## 1.5 MEETINGS

- A. General Contractor shall conduct LEED® Certification meetings as required with all subcontractors, in addition to those meetings outlined in Section 01311 Project Meetings.
1. General Contractor's Project Manager
  2. University's Representative & or University's LEED® Coordinator
  3. General Contractor's LEED® Representative
  4. All other attendees designated by University's Representative
  5. Subcontractor Representatives as appropriate to stage of work
- B. At a minimum, LEED® certification goals and issues shall be discussed at the following meetings:
1. Preconstruction Meetings
  2. Progress Meetings
  3. General Contractor Meetings
  4. Monthly Project LEED® Meetings. Meeting should be scheduled as a part of regularly scheduled job meetings on site.

## 1.6 SUBMITTALS

- A. Submittal Requirements for LEED® compliance are in addition to those submittal requirements specified elsewhere in the Specifications. Any discrepancies shall be referred to the University's Representative for clarification. Submit LEED® Product Submittal Data Form with the following information.
1. Provide actual material costs, excluding labor and equipment, for each material supplied for divisions 3-10. Specific Material cost data for individual components and materials (not including labor) will be required to be provided as part of some LEED® pre-requisite and credit requirements submittals.

2. Consistent numbers must be applied to various LEED® credits submittals requiring similar material cost data.
  3. If applicable, fill out MR Credit 4: Recycled Content information and attach documentation confirming post consumer and pre consumer recycled content.
  4. If applicable, fill out MR Credit 5: Regional Materials content information and attach documentation confirming location of product extracted, harvested or recovered, as well as manufactured within 500 mile of project site. Also provide map quest confirming distances.
  5. If applicable, fill out MR Credit 6: Rapidly Renewable Materials content information and attached documentation confirming its rapidly renewable content.
  6. If applicable, fill out MR Credit 7: Certified Wood Materials content information. Track certified wood purchases and retain associated COC (Chain of Custody) documentation. Collect copies of vendor invoices for each certified wood product. Maintain a list that identifies the percentage of certified wood in each purchase.
  7. If applicable, fill out IEQ Credit 4.1 through 4.4 Low Emitting Materials information and attach documentation confirming VOC limit, CRI Green Label Plus Certification No., Floor Score Certification, No added urea-formaldehyde resins or no urea-formaldehyde.
- B. Complete and submit all required support documentation to the university in format(s) required by the USGBC. Use Exhibit 30 of the contract documents, LEED Product Submittal Data Form, for all LEED submittals.
- C. With final project submittals provide the following:
1. All approved Substitution Request Forms related to this section.
- D. LEED® Action Plans: Provide preliminary submittals within 30 days of date established for the Notice to Proceed indicating how the following requirements will be met.
1. MR Credit 2: Comply with University's Waste Management Plan.
  2. MR Credit 4: List of proposed materials with recycled content.
    - a. Indicate cost, post-consumer recycled content, and pre-consumer recycled content for each product having recycled content.
    - b. Indicate cost of all products and materials used regardless of recycled content for the purpose of comparison so as to ultimately derive a cost-based percentage of recycled content.
  3. MR Credit 5: List of proposed regionally extracted, processed, and manufactured materials.
    - a. Identify each regionally extracted, processed, and manufactured material, its source, and cost.
  4. MR Credit 6: List of proposed rapidly renewable materials:
    - a. Include statement, indicating costs for each product containing rapidly renewable materials.
  5. MR Credit 7.0: List of proposed certified wood products.

- a. Include statement, indicating costs for each product containing certified wood.
    - b. Include statement indicating total cost for wood-based materials used for Project, including non-rented temporary construction.
  6. IEQ Credit 3.1: Construction indoor air quality management plan, during construction
  7. IEQ Credit 3.2: Construction indoor air quality manage plan, before occupancy
  8. IEQ Credits 4.1, 4.2, 4.3 & 4.4: Low Emitting Materials
- E. LEED® Progress Reports(Monthly):
1. Written narrative describing progress to date. If progress to date deviates from Plan, General Contractor shall describe deviation and summarize proposed actions to be undertaken in order to meet LEED® Certification goal. Concurrent with each Application for Payment, submit reports and or calculations, per credit requirements, demonstrating compliance :
    - a. MR Credit 4: Recycled content.
    - b. MR Credit 5: Regionally manufactured materials and regionally extracted, harvested, or recovered materials.
    - c. MR Credit 6 Rapidly Renewable Materials.
    - d. MR Credit 7 Certified wood products.
    - e. IEQ Credits 3.1 and 3.2: Construction Indoor Air Quality Management (IAQ) plan: During Construction and Before Occupancy
    - f. IEQ Credit 4.1, 4.2, 4.3 & 4.4: Low Emitting Materials
  2. Within 14 calendar days of Project Completion, General Contractor shall provide to University's Representative 2 copies of all LEED® required documentation demonstrating compliance with LEED® Certification requirements, including but not limited to, documentation provided during the submittal process.
- F. LEED® Documentation Submittals:
1. SS Credit 7.1: Product data showing the measured reflectance and emittance of each paving material installed on site to calculate Solar Reflectance Index (SRI), or the actual SRI for each paving material installed on site, or the default SRI from LEED® Reference Guide.
  2. SS Credit 7.2: Product data and manufacturer's catalog cuts highlighting that the roofing material complies with LEED® Solar Reflectance Index requirements.
  3. SS Credit 8: Product Data for interior and exterior lighting fixtures that stop direct-beam illumination from leaving the building site.
  4. WE Credit 3: Product Data for plumbing fixtures indicating water consumption. Specify plumbing fixtures, controlled by the Energy Policy Act of 1992, which reduce water use by (20 percent). Controlled fixtures include toilets, showerheads, lavatory faucets, kitchen faucets, and urinals. Include water use calculations equivalents for all the following abbreviations used:
    - a. gpf = gallons per flush
    - b. gpm = gallons per minute



- c. gal/cycle = gallons per cycle
- d. psig = pounds per square inch of gauge
- 5. EA Prerequisite 3: Product Data for new HVAC equipment indicating absence of CFC refrigerants and phase-out plan to replace CFC refrigerants in HVAC&R systems with CFC-free refrigerants within the Construction Period.
- 6. EA Credit 4: Product Data for new HVAC equipment indicating absence of HCFC refrigerants, and for clean-agent fire-extinguishing systems indicating absence of HCFC and Halon.
- 7. MR Credit 2: Comply with University's Waste Management Plan.
- 8. MR Credit 4: Product Data and certification letter indicating percentages by weight of post-consumer and pre-consumer recycled content for products having recycled content. Include statement indicating costs for each product having recycled content.
  - a. List total cost of all materials for the projects.
  - b. Submit required audit documentation:
    - 1) Manufacturer cut sheets, literature or letters highlighting the overall post-consumer and/or post-industrial recycled content percentages (by weight) of each product listed on the template.
    - 2) Materials invoices (showing costs) for each product listed on the template.
- 9. MR Credit 5: Product Data indicating location of materials extracted, processed & manufactured regionally.
  - a. Statement indicating cost and distance from manufacturer to Project for each regionally manufactured material.
  - b. Statement indicating cost and distance from point of extraction, harvest, or recovery to Project for each raw material used in regionally manufactured materials.
  - c. Calculations demonstrating that the project incorporates the required percentage of regional materials/products and showing their cost, and the total cost of all materials for the project [estimate can be generated by providing the total project value].
  - d. Submit required audit documentation:
    - 1) Manufacturer or vendor literature, cut sheets, letter stating address location of each material's final assembly site.
    - 2) Map (Yahoo Maps or equivalent) indicating distances from each location to the project site.
    - 3) Documentation of the cost/value of each material.
- 10. MR Credit 6: Provide a list, product data, and cost for each of the rapidly renewable materials on the project.
- 11. MR Credit 7: Provide a list, product data, and cost for each of the certified wood product materials on the project.
- 12. IEQ Credit 3.1:
  - a. Provide letter listing each air filter used during construction and at the end of construction. Include the MERV value, manufacturer name, and model number.

- b. Construction indoor air quality management plan.
  - c. Product Data for temporary filtration media.
  - d. Product Data for filtration media used during occupancy.
  - e. Construction Documentation: Six photographs at three different occasions during construction along with a brief description of the SMACNA approach employed, documenting implementation of the IAQ management measures, such as protection of ducts and on-site stored or installed absorptive materials.
  - f. Required audit documentation:
    - 1) Construction IAQ Management Plan addressing the SMACNA/ LEED® requirements.
    - 2) Manufacturer literature, cut sheets, or letters showing the MERV values of filtration media used (during construction and immediately before occupancy).
13. IEQ Credit 3.2: Provide requirements for items Option 1 or 2.
- a. Provide letter template confirming the building air flush-out procedures including the dates when flush-out was begun and completed and statement that filtration media was replaced after flush-out..
  - b. Product Data for filtration media used during flush-out and during occupancy.
  - c. Report from testing and inspecting agency indicating results of IAQ testing and documentation showing conformance with IAQ testing procedures and requirements.
14. IEQ Credit 4.1: Product Data and material safety data sheets (MSDS) for adhesives and sealants used on the interior of the building indicating VOC content of each product used. Indicate VOC content in g/L calculated according to 40 CFR 59, Subpart D (EPA method 24).
- a. Provide letter or matrix listing the adhesives and sealants used in the building and declaring that they meet the noted requirements.
  - b. Provide required audit documentation:
    - 1) Cut sheets and Materials Safety Data Sheet (MSDS), or letter from the manufacturer for each adhesive/sealant used on the interior, with the VOC content (g/L) circled and indicating VOC content of each product used and indicate VOC content in g/L calculated according to 40 CFR 59, Subpart D (EPA method 24).
    - 2) Summary table comparing credit VOC requirements and actual VOC levels for each product.
15. IEQ Credit 4.2:
- a. Provide letter or matrix listing all the paints and coatings used in the building and stating that they comply with the VOC and chemical component limits of Green Seal's GS-11 requirements.
  - b. Provide required audit documentation:
    - 1) Cut sheets, MSDS, or letter from the manufacturer for each interior paint, with the VOC content (g/L) circled. Indicate VOC content in g/L calculated according to 40 CFR 59, Subpart D (EPA method 24).

- 2) Summary table comparing credit VOC requirements and actual VOC levels for each product.
16. IEQ Credit 4.3:
- a. Carpet: Provide letter or matrix listing all the carpet systems used in the building and stating that they comply with the VOC limits of the Carpet and Rug Institute's Green Label Indoor Air Quality Test Program.
    - 1) Provide required audit documentation:
      - a) Cut sheets, manufacturer literature or letter, or CRI Green Label literature stating that the carpet(s) meets the CRI Green Label IAQ test program criteria.
      - b) Documentation for installation adhesive, including printed statement of VOC content.
  - b. Hard Surface Flooring Products (resilient flooring, wood flooring, tile flooring, etc.): Provide letter or matrix listing all hard surface flooring products used in the building and stating that they comply with FloorScore standard and certified by an independent third-party. As an alternative, provide letter or matrix listing stating that at least 25 percent of non-carpet finished flooring is FloorScore-certified.
    - 1) Provide required audit documentation:
      - a) Cut sheets, manufacturer literature or letter, or FloorScore certification indicating compliance with FloorScore standard.
      - b) Documentation for installation adhesive, including printed statement of VOC content.
17. IEQ Credit 4.4:
- a. Provide letter or matrix listing all the composite wood and agrifiber products used in the building and stating that they contain no added urea-formaldehyde resins.
  - b. Provide required audit documentation
    - 1) Cut sheets or manufacturer literature or letters indicating the bonding agents for each composite wood and agrifiber material used in the project, showing that no added urea-formaldehyde resins were used in these products.
- G. All material submittals must include the following information on the cover of the submittal:
1. LEED® cover sheet see EXHIBIT 30 in division 1.
- H. Water Efficiency Product Data: Where the Specifications require data relating to water efficiency, submit:
1. Cut sheet or written affidavit from the manufacturer which shall include, but is not limited to, the following:
    - a. Conservation Specifications.
    - b. Demonstration that fixture complies with all applicable fixture performance requirements of the Energy Policy Act of 1992.
- I. Adhesives – For each adhesive applied on the interior of the Project, General Contractor shall submit:

1. Cut Sheet.
  2. Material Safety Data Sheet (MSDS) highlighting compliance with VOC limits stipulated in Part 2 of this Section.
  3. An updated list of all adhesives applied on the interior of the Project.
- J. Ducts and HVAC Equipment – General Contractor shall submit:
1. Construction Photographs demonstrating conformance with IAQ Construction Management Plan measures to insure protection of materials from moisture while stored on site. Construction photographs shall be time stamped and labeled with location by room number, and shall be taken weekly throughout those periods said materials are stored on site and installed.
- K. Sealants – For each sealant or sealant primer applied on the interior of the Project, General Contractor shall submit:
1. Cut Sheet.
  2. Material Safety Data Sheet (MSDS) highlighting compliance with VOC limits stipulated in Part 2 of this Section.
  3. An updated list of all sealants and sealant primers applied on the interior of the Project
- L. Paints – For each paint product applied on the interior of the Project, General Contractor shall submit:
1. Cut Sheet.
  2. Material Safety Data Sheet (MSDS) highlighting compliance with VOC limits and chemical component limits stipulated in Part 2 of this Section.
  3. An updated list of all paints applied on the interior of the Project
- M. Architectural Coatings – For each architectural coating applied on the interior of the Project, General Contractor shall submit:
1. Cut Sheet.
  2. Material Safety Data Sheet (MSDS) highlighting compliance with VOC limits and chemical component limits stipulated in Part 2 of this Section.
  3. An updated list of all architectural coatings applied on interior of the Project
- N. Carpets - For each carpet product used on the interior of the Project, General Contractor shall submit:
1. Cut sheet highlighting compliance with VOC requirements stipulated in Part 2 of this Section, or a letter from the manufacturer declaring compliance with VOC requirements stipulated in Part 2 of this Section.
  2. An updated list of all carpet products applied on the interior of the Project
- O. Agrifiber Products - For each agrifiber product used on the interior of the Project, General Contractor shall submit:

1. Cut Sheet highlighted to show the non-urea formaldehyde resin or binder used in the products.
  2. An updated list of all agrifiber products applied on the interior of the Project
- P. Composite Wood Products - For each composite wood product used on the interior of the Project, General Contractor shall submit:
1. Cut Sheet highlighted to show the non-urea formaldehyde resin or binder used in the products.
  2. An updated list of all composite wood products applied on the interior of the Project.
- Q. Filtration Media - For each air-handling unit used on the Project, General Contractor shall submit a cut sheet highlighting the Minimum Efficiency Reporting Value (MERV) of the installed filter. The installed filter MERV shall be in compliance with the approved Construction Indoor Air Quality Management Plan measures.

#### 1.7 SUBSTITUTIONS

- A. Requests for substitutions shall comply with the provisions of Section 01630 Product Options and Substitutions, with the following additional information required where LEED® requirements are specified.
1. No substitutions shall be submitted without the full projected LEED® impact documented.
- B. Where LEED® material emission limits are specified, the University shall reject proposed substitutions where:
1. Data for VOC's is not provided
  2. Emissions of VOC's exceed the material's specified VOC limit
  3. There is negative impact on overall system efficiency.
  4. The total number of LEED® credits will be compromised.
  5. The intent of the LEED® credits are compromised
- C. Substitutions that may affect LEED® certification requirements must be clearly stated as such.
- D. Comply with the requirements of Section 01630 Product Options and Substitutions except as follows:
1. Only (1) one request for substitution for each product will be considered. When substitution is not accepted, provide specified product.
  2. Prior to submitting detailed information required under Section 01630 Product Options and Substitutions, submit the following for initial review by the University's Representative.
    - a. Product data including manufactures names, address, and phone number.
    - b. Description of the differences of the proposed substitution from specified product. Include description of environmental advantages of proposed substitution over specified product.

- c. Substituted products shall not be ordered or installed without written acceptance by the University's Representative.
3. Requests for Substitutions
  - a. Submit a separate request for each LEED® related product substitution.
  - b. Identify product by Specification Section and LEED® credit or credits, if applicable.
  - c. List similar projects using product, dates of installation, and names of General Contractor and Owner.
  - d. Give itemized comparison of proposed substitution with specified product, listing variations, and reference Specification section and Article number.
  - e. Include copy of Material Safety Data Sheet (MSDS) if applicable.
  - f. Give cost data comparing proposed substitution with specified product and amount of net change to Contract Sum. The cost data should be based on life cycle analysis for each affected product including annual energy consumption and maintenance costs.
  - g. State effect of substitution on construction schedule and changes required in other work of products.

#### 1.8 CREDIT REQUIREMENTS

- A. The following is a list of Credit Requirements for which the General Contractor shall contribute LEED® certification documentation demonstrating compliance with the corresponding LEED® Credit Requirements.
- B. The following Credit Requirements for LEED® compliance are in addition to those requirements specified elsewhere in the Specifications.
- C. Erosion and Sedimentation Control: General Contractor shall prevent loss of soil during construction.
  1. General Contractor shall comply with the Universities Erosion Control Plan
- D. Reduced Site Disturbance: General Contractor shall limit site disturbance including earthwork and clearing of vegetation to 40 feet beyond the building perimeter, 5 feet beyond primary roadway curbs, walkways, and main utility branch trenches, and 25 feet beyond previous paving areas that require additional staging areas in order to limit compaction in the paved area.
- E. Water Use Reduction: General Contractor shall provide water fixtures, excluding those for irrigation, which use, in aggregate 40 percent less water than the water use baseline calculated for the Project by the design team.
  1. Throughout the work, General Contractor shall comply with applicable submittal requirements stipulated in 1.6 of this specification.
  2. Within 14 calendar days of Project Completion, General Contractor shall provide to University's Representative 2 copies of all LEED® required documentation demonstrating compliance with LEED® Certification requirements, including but not limited to, documentation provided during the submittal process.

- F. Building Systems Commissioning: General Contractor shall comply with the following requirements of LEED® Energy and Atmosphere Prerequisite 1 – Fundamental Building Systems Commissioning:
  - 1. Refer to Section 01 91 00 Commissioning.
  - 2. University's Commissioning Plan.
- G. Additional Commissioning: General Contractor shall comply with the following requirements of LEED® Energy and Atmosphere Credit 3 – Additional Commissioning:
  - 1. Refer to Section 01 91 00 Commissioning.
- H. Ozone Depletion: General Contractor shall meet the intent to reduce ozone depletion potential through the following.
  - 1. General Contractor shall provide refrigeration equipment that does not contain or make use of hydrochlorofluorocarbons (HCFC's).
  - 2. General Contractor shall provide fire suppression systems that do not contain or make use of Halon.
- I. Construction Waste Management: General Contractor shall comply with University's Site Waste Management Plan.
- J. Recycled Content: General Contractor shall use materials with recycled-content so that the sum of post-consumer recycled content plus one-half of the post-industrial content constitutes at least 20 percent of the total value of the materials in the project. (Mechanical and electrical components shall not be included in this calculation).
- K. Local and Regional Materials - Manufacturing: General Contractor shall provide a minimum of 20 percent (cost basis) of project materials that are extracted, processed, and manufactured within a radius of 500 miles of the project.
- L. Rapidly Renewable Materials: General Contractor shall provide a minimum of 2.5% (cost basis) of rapidly renewable materials or products harvested within a ten-year cycle or shorter.
- M. Certified Wood: General Contractor shall provide a minimum of 50% (cost basis) of all new non-salvaged wood-based materials that are certified in accordance with the Forest Stewardship Council (FSC) guidelines for wood building components. Certified wood-based components may include those stipulated in Part 2.
- N. Construction Indoor Air Quality Management Plan: General Contractor shall develop and implement an Indoor Air Quality (IAQ) Management Plan for the construction and preoccupancy phases of Project buildings.
  - 1. General Contractor shall submit to University's Representative 2 copies of a Construction IAQ Management Plan within 14 calendar days of Notice to Proceed. Plan shall include, but not be limited to, the following:
    - a. Provision to meet the five requirements of SMACNA IAQ Guideline for Occupied Buildings Under Construction, 2<sup>nd</sup> Edition 2007, ANSI/SMACNA 008-2008.

- b. Provision to protect stored on-site or installed absorptive materials from moisture damage. This shall include a description of:
    - 1) Storage of materials on elevated platforms, under cover, and in a dry location
    - 2) Secure coverage of the tops and sides of material with waterproof sheeting if materials are not stored in an enclosed location.
  - c. Provision to protect HVAC equipment during construction. This shall include a description and commitment to:
    - 1) Shut down the return side of the HVAC system during heavy construction or demolition and cover return air openings air tight to prevent introduction of contaminants.
    - 2) Provide temporary filters that shall be replaced with new media prior to occupancy if the HVAC system is operated during heavy construction.
  - d. Provision to take Construction Photographs demonstrating conformance with the approved Construction Indoor Air Quality Management Plan measures to insure protection of materials and air-handling equipment from moisture while stored on site.
    - 1) A minimum of 6 Construction Photographs shall be taken on three different occasions during Construction for a total minimum of 18. Construction photographs shall be time stamped and shall be taken during those periods' absorptive materials and HVAC equipment is stored on site. Refer to Part 2 for a list of absorptive materials.
    - 2) Construction Photographs shall include identification of the SMACNA approach featured by each photograph.
    - 3) General Contractor shall submit Construction Photographs to the University's Representative for approval.
  - e. Provision to utilize outdoor air filtration media with a minimum MERV of 13 throughout the construction and preoccupancy phases of Project.
  - f. For air handlers, filtration media with a Minimum Efficiency Reporting Value (MERV) of 8 must be used at each return air grill, as determined by ASHRAE 52.2-1999.
  - g. Provision to replace all filtration media immediately prior to occupancy. Conduct flush-out with new MERV 13 filtration media, and after flush-out, replace with new MERV 13 filtration media, except the filters solely processing outside air.
  - h. Provision to conduct a minimum two-week building flush-out with new filtration media at 100 percent outside air after construction ends and prior to occupancy.
- OR**
- i. Provision to conduct a baseline indoor air quality testing procedure consistent with current EPA protocol for Environmental Requirements, Baseline IAQ and Materials.
2. Within 14 calendar days of Project Completion, General Contractor shall submit to University's Representative a letter template, which shall include, but not be limited to:
- a. A listing of filtration media and corresponding MERV used during construction and installed at the end of construction.



- b. A minimum of 18 Construction photographs as per the specified Construction IAQ Management Plan requirements.
  - c. A written narrative describing the building flush out procedures implemented (if applicable).
  - d. Flush-out Start Date for each building (if applicable).
  - e. Flush-out End Date for each building (if applicable).
- O. Low –Emitting Materials – Adhesives and sealants, paint, carpet systems, composite wood and agrifiber products applied on the interior of the building shall comply with the product requirements stipulated in Part 2 and applicable submittal requirements stipulated in Part 1.
  - 1. General Contractor shall submit to University’s Representative 2 copies of a LEED® Certification Progress Report each month throughout the work. Report shall include, but not be limited to, the following:
    - a. Requirement in 1.6.F of this section.
- P. Low –Emitting Materials – Adhesives and Sealants: Interior adhesives and sealants shall comply with the VOC limits of SCAQMD Rule #1168.
- Q. Low –Emitting Materials - Paint: Interior paints and coatings shall comply with the VOC and chemical component limits of Green Seal GS-11.
- R. Low –Emitting Materials - Carpet: Interior carpet products shall comply with the CRI Green Label Indoor Air Quality Test Program
- S. Low –Emitting Materials - Wood: Interior Composite wood and interior agrifiber products shall contain no added urea-formaldehyde resins.
- T. The following table lists all of the LEED® credits that shall be implemented and documented for the project to achieve a LEED® Gold certification & preferably Platinum. The list notes where the General Contractor must track and submit full documentation per LEED®-NC Certification Requirements. These credits are designated “PTC”.

<b>LEED® Certification</b>	
<b>LEED® Reference</b>	<b>Point Description</b>
*SS Prerequisite: PTC	Construction Activity Pollution Prevention
*SS Credit 4.1	Alternative Transportation
SS Credit 4.2	Bike Security Changing/Shower Facilities
SS Credit 4.3	Alternative Transportation - Low-Emitting and Vehicles
*SS Credit 4.4	Carpool/Parking Capacity
*SS Credit 5.2	Reduce Site Disturbance

<b>LEED® Certification</b>	
<b>LEED® Reference</b>	<b>Point Description</b>
*SS Credit 6.1	Storm Water Management
*SS Credit 6.2	Storm Water Management Treatment
SS Credit 7.2: PTC	Heat Island Effect, Roof
*SS Credit 8:PTC	Light Pollution Reduction
*WE Credit 1:PTC	Water Efficient Landscaping
WE Credit 3:PTC	Water Efficiency
EA Prerequisite 1 – 3:PTC	Energy Design
EA Credit 1:PTC	Optimize Building Energy Performance
EA Credit 3:PTC	Additional Commissioning
EA Credit 4:PTC	Elimination of HCFC's & Halon
EA Credit 5:PTC	Measurement and Verification
MR Prerequisite 1:PTC	Storage and Collection of Recyclables
MR Credit 2: PTC	Waste Management Plan
MR Credit 4: PTC	Recycled Content Material
MR Credit 5: PTC	Local/Regional Materials
MR Credit 7: PTC	Certified Wood
IEQ Prerequisite 1	Minimum IAQ Performance
*IEQ Prerequisite 2	Environmental Tobacco Smoke Control
IEQ Credit 1	Carbon Dioxide Monitoring
IEQ Credit 2	Increased Ventilation
IEQ Credit 3.1 – 3.2: PTC	Construction IAQ Management Plan
IEQ Credit 4.1 – 4.4: PTC	Low-Emitting Materials
IEQ Credit 5:PTC	Indoor Chemical & Pollutant Source Control
IEQCredit 6.1	Controllability of Systems, Lighting
IEQ Credit 6.2	Controllability of Systems, Thermal Comfort
IEQ Credit 7.1 – 7.2	Thermal Comfort
*ID Credit 1.1	Exhibit
*ID Credit 1.2	Open Space
ID Credit 1.3	Green Cleaning
ID Credit 1.4:PTC	Exceptional Water Savings

<b>LEED® Certification</b>	
<b>LEED® Reference</b>	<b>Point Description</b>
*ID Credit 2.0	LEED® Accredited Professional
RP Credit SSc4.1	Regional Priority Credit
RP Credit WEc1.1	Regional Priority Credit
RP Credit WEc3 (40%)	Regional Priority Credit
RP Credit EAe2 (1%)	Regional Priority Credit

\* Prototype Credits that are part of UC Merced's campus wide sustainability plan.

## PART 2 - PRODUCTS

### 2.1 UNAUTHORIZED MATERIALS

- A. Materials and products required for work of this section shall not contain unauthorized materials including, but not limited to, the following:
1. Asbestos
  2. Polychlorinated biphenyls (PCB)
  3. Other hazardous materials identified by the University.
  4. Urea formaldehyde

### 2.2 LOW-EMITTING MATERIALS

- A. Credit IEQ 4.1: Adhesives, Sealants and Sealant Primers must comply with South Coast Air Quality Management District (SCAQMD) Rule #1168. Volatile organic compound (VOC) limits listed in the table below correspond to an effective date of July 1, 2005 and rule amendment date of January 7, 2005.
1. Wood Glues: 30 g/L.
  2. Metal to Metal Adhesives: 30 g/L.
  3. Adhesives for Porous Materials (Except Wood): 50 g/L.
  4. Subfloor Adhesives: 50 g/L.
  5. Plastic Foam Adhesives: 50 g/L.
  6. Carpet Adhesives: 50 g/L.
  7. Carpet Pad Adhesives: 50 g/L.
  8. VCT and Asphalt Tile Adhesives: 50 g/L.
  9. Cove Base Adhesives: 50 g/L.

10. Gypsum Board and Panel Adhesives: 50 g/L.
11. Rubber Floor Adhesives: 60 g/L.
12. Ceramic Tile Adhesives: 65 g/L.
13. Multipurpose Construction Adhesives: 70 g/L.
14. Fiberglass Adhesives: 80 g/L.
15. Structural Glazing Adhesives: 100 g/L.
16. Wood Flooring Adhesive: 100 g/L.
17. Contact Adhesive: 80 g/L.
18. Special Purpose Contact Adhesive: 250 g/L.
19. Structural Wood Member Adhesive: 140 g/L.
20. Sheet Applied Rubber Lining Operations: 850g/L.
21. Plastic Cement Welding Compounds: 50 g/L.
22. ABS Welding Compounds: 4325 g/L.
23. CPVC Welding Compounds: 490 g/L.
24. PVC Welding Compounds: 510 g/L.
25. Adhesive Primer for Plastic: 550 g/L.
26. Architectural Sealants: 250 g/L.
27. Nonmembrane Roof Sealants: 300 g/L.
28. Roadway Sealants: 250 g/L.
29. Single-ply Roof Membrane Sealants: 450 g/L.
30. Other Sealants: 420 g/L.
31. Sealant Primers for Nonporous Substrates: 250 g/L.
32. Sealant Primers for Porous Substrates: 775 g/L.
33. Other Sealants Primers: 750 g/L.

B. Credit IEQ 4.2: Paints and coatings used on the interior of the building (i.e., inside of the weatherproofing system and applied on-site) must comply with the following criteria as applicable to the project scope.

1. Architectural paints and coatings applied to interior walls and ceilings must not exceed the volatile organic compound (VOC) content limits established in Green Seal Standard GS-11, Paints, 1st Edition, May 20, 1993.
2. Anti-corrosive and anti-rust paints applied to interior ferrous metal substrates must not exceed the VOC content limit of 250 g/L established in Green Seal Standard GC-03, Anti-Corrosive Paints, 2nd Edition, January 7, 1997.
3. Clear wood finishes, floor coatings, stains, primers, and shellacs applied to interior elements must not exceed the VOC content limits established in South Coast Air Quality

Management District (SCAQMD) Rule 1113, Architectural Coatings, rules in effect on January 1, 2004.

4. Flat Paints and Coatings: VOC not more than 250 g/L.
5. Non-Flat Paints and Coatings: VOC not more than 250 g/L.
6. Aromatic Compounds: Paints and coatings shall not contain more than 1.0 percent by weight total aromatic compounds (hydrocarbon compounds containing one or more benzene rings).
7. Restricted Components: Paints and coatings shall not contain any of the following:
  - a. Acrolein.
  - b. Acrylonitrile.
  - c. Antimony.
  - d. Benzene.
  - e. Butyl benzyl phthalate.
  - f. Cadmium.
  - g. Di (2-ethylhexyl) phthalate.
  - h. Di-n-butyl phthalate.
  - i. Di-n-octyl phthalate.
  - j. 1,2-dichlorobenzene.
  - k. Diethyl phthalate.
  - l. Dimethyl phthalate.
  - m. Ethylbenzene.
  - n. Formaldehyde.
  - o. Hexavalent chromium.
  - p. Isophorone.
  - q. Lead.
  - r. Mercury.
  - s. Methyl ethyl ketone.
  - t. Methyl isobutyl ketone.
  - u. Methylene chloride.
  - v. Naphthalene.
  - w. Toluene (methylbenzene).
  - x. 1,1,1-trichloroethane.
  - y. Vinyl chloride.

Coating	Ceiling Limit*	Current Limit	Effective Date					
			1/1/03	1/1/04	1/1/05	7/1/06	7/1/07	7/1/08
Bond breakers	350							
clear Wood finishes	350					275		
– Varnish	350					275		
– sanding	350					275		
sealers	680	550			275			
– Lacquer								
clear brushing lacquer	680				275			

STUDENT SERVICES BUILDING  
UNIVERSITY OF CALIFORNIA, MERCED  
MERCED, CALIFORNIA

PROJECT NO.: 900120

concrete-curing compounds	350						100	
concrete-curing compounds for roadways and bridges**	350							
Dry-fog coatings	400						150	
fire-proofing exterior coatings	450	350						
fire-retardant coatings*** – clear – Pigmented	650 350							
flats	250	100						50
floor coatings	420		100					50
Graphic arts (sign) coatings	500							
industrial maintenance (im) coatings High temperature im coatings Zinc-rich im primers	420 420		420 340	250		100 100		
Japans/faux finishing coatings	700	350						
Magnesite cement coatings	600	450						
Mastic coatings	300							
Metallic Pigmented coatings	500							
Multicolor coatings	420	250						
nonflat coatings	250	150				50		
nonflat high gloss	250		150				50	
Pigmented lacquer	680	550			275			
Pretreatment wash primers	780		420					
Primers, sealers, undercoaters	350		200			100		
Primers, sealers, undercoaters	350		200			100		
Quick-dry enamels	400		250			150	50	
Quick-dry primers, sealers, undercoaters	350		200			100		
Recycled coatings			250					
Roof coatings aluminum roof coatings	300 500		250		50 100			
Roof primers, bituminous	350		350					
Rust: preventive coatings	420		400			100		
shellac – clear – Pigmented	730 550							
specialty primers	350					250	100	
stains – interior	350 250		250				100	
swimming pool coatings – Repair – other	650 340		340					
traffic coatings	250	150					100	
Waterproofing sealers	400		250			100		
Waterproofing concrete, masonry sealers	400					100		
Wood preservatives – Below-ground	350							
other	350							
* the specified limits remain in effect until revised.								
** Does not include compounds used for curbs and gutters, sidewalks, islands, driveways, and other miscellaneous concrete areas.								
*** the fire-retardant coating category was eliminated on January 1, 2007, and subsumed by the coating category for which it was formulated.								

- C. Credit IEQ 4.3: All carpet installed in the building interior must meet the testing and product requirements of the Carpet and Rug Institute Green Label Plus program. All carpet cushion installed in the building interior must meet the requirements of the Carpet and Rug Institute Green Label1 program. All hard surface flooring must be certified as compliant with the FloorScore2 standard (current as of the date of this rating system, or more stringent version) by an independent third-party. Flooring products covered by FloorScore include vinyl, linoleum, laminate flooring, wood flooring, ceramic flooring, rubber flooring and wall base.

- D. Credit IEQ 4.4: Composite wood and agrifiber products used on the interior of the building (i.e., inside the weatherproofing system) must contain no added urea-formaldehyde resins. Laminating adhesives used to fabricate on-site and shop-applied composite wood and agrifiber assemblies must not contain added urea-formaldehyde resins.

## 2.3 SEALANTS

- A. All interior sealants and sealant primers shall comply with the VOC limits established by South Coast Air Quality Management District (SCAQMD) Rule 1168, effective July 1, 2005 and amended January 7, 2005.

## 2.4 PAINTS

- A. All interior paints shall comply with the VOC and chemical component limits established by Green Seal GS-11, Paints, 1st Edition, May 20, 1993; Green Seal Standard GC-03, Anti-Corrosive Paints, 2nd Edition, January 7, 1997; and South Coast Air Quality Management District (SCAQMD) Rule 1113, Architectural Coatings, rules in effect on January 1, 2004.

## 2.5 ARCHITECTURAL COATINGS

- A. All site-applied interior architectural coatings shall comply with the VOC and chemical component limits of CARB Suggested Control Measure for Architectural Coatings.

## 2.6 CARPET SYSTEMS

- A. All carpet products applied on the interior of the Project shall comply with the VOC limit established by the Carpet and Rug Institute (CRI) Green Label Indoor Air Quality Test Program.

## 2.7 WOOD AND WOOD PRODUCT

- A. Certified wood products may include framing, flooring finishes, furnishings, veneers and non-rented temporary construction applications such as bracing, concrete formwork, and pedestrian barriers.

## 2.8 COMPOSITE WOOD PRODUCTS

- A. Composite wood products shall contain no added urea-formaldehyde resins.

## 2.9 AGRIFIBER PRODUCTS

- A. Agrifiber products shall contain no added urea-formaldehyde resins.

## 2.10 ABSORPTIVE MATERIALS

- A. Absorptive Materials shall include, but not be limited to:
  - 1. Filtration media
  - 2. Acoustical and thermal insulation
  - 3. Lined ductwork

4. Masonry units
5. Lumber
6. Finished architectural woodwork
7. Acoustical Ceiling Tiles

### PART 3 - EXECUTION

#### 3.1 CONSTRUCTION VENTILATION AND PRECONDITIONING

- A. General Contractor shall execute the approved Construction IAQ Management Plan as specified in this Section.
- B. During construction General Contractor shall meet or exceed the minimum requirements of the Sheet Metal and Air Conditioning National Contractors Association (SMACNA) IAQ Guidelines For Occupied Buildings Under Construction, 2nd Edition 2007, ANSI/ SMACNA 008-2008 (Chapter 3).
- C. Temporary Construction Ventilation: General Contractor shall Maintain sufficient temporary ventilation of areas where materials are being used that emit VOC's, and maintain ventilation continuously during installation, and until emissions dissipate after installation. If continuous ventilation is not possible via the building's HVAC system(s) then ventilation shall be supplied via open windows and temporary fans, sufficient to provide no less than three air changes per hour. General Contractor shall ensure that:
  1. The period after installation shall be sufficient to dissipate odors and elevated concentrations of VOCs. Where no specific period is stated in these Specifications, a time period of 72 hours shall be used.
  2. All areas shall be vented directly to outside. Areas shall not be vented to other enclosed areas.
- D. During dust producing activities (e.g. drywall installation and finishing) ventilation system shall be off, and openings in supply and return HVAC system shall be protected from dust infiltration. Provide temporary ventilation as required.
- E. Preconditioning: Prior to installation, General Contractor shall allow products which have odors and VOC emissions to off-gas in dry, well-ventilated space outside of building for 14 calendar days, in order to allow for reasonable dissipation of odors and emissions.

#### 3.2 SEQUENCING

- A. Environmental Issues: General Contractor shall complete all interior finish material installation no less than 14 days prior to Substantial Completion to allow for building flush out. Submit notification to University's Representative when all interior finish material installation is complete, highlighting the date of completion.



### 3.3 FIELD QUALITY CONTROL

- A. A. Building Flush Out: Prior to Substantial Completion, General Contractor shall flush out building continuously (i.e. 24 hours per day, 7 days per week) using 100 percent outside air at standard operational set-point temperatures for at least 14 calendar days. Conduct flush-out with new MERV 13 filtration media, and after flush-out, replace with new MERV 13 filtration media, except the filters solely processing outside air. For air handlers, filtration media with a Minimum Efficiency Reporting Value (MERV) of 8 must be used at each return air grill, as determined by ASHRAE 52.2-1999. If interruptions of more than 4 hours are required for testing and balancing purposes, extend flush out period by a minimum of 1 day.
1. When touch-up work is performed, General Contractor shall provide temporary construction ventilation during installation and extend building flush out by a minimum of 4 days after touch-up installation is complete.
  2. Return ventilation system to normal operation following flush-out period to minimize energy consumption.
  3. Replace all outside air filtration media prior to occupancy. Filtration media shall have a MERV of 13 as determined by ASHRAE 52.2-1999.
- B. IAQ Testing: If Building Flush Out is not undertaken, General Contractor shall conduct a baseline indoor air quality testing procedure consistent with current EPA protocol for Environmental Requirements, Baseline IAQ and Materials.

### 3.4 PROTECTION

- A. Protect stored on-site and installed absorptive materials from moisture damage. Where absorptive materials not intended for wet applications are exposed to moisture, immediately remove from site and dispose of properly.
- B. Protect installed materials using methods that do not support growth of molds and mildews.
1. Immediately remove from site and properly dispose of materials showing signs of mold and signs of mildew, including materials with moisture stains.
  2. Replace materials showing signs of mold and mildew with new, undamaged materials.
  3. Ducts: Seal ducts during transportation, delivery, and construction to prevent accumulation of construction dust and construction debris inside ducts.
- C. Ducts: Seal ducts during transportation, delivery, and construction to prevent accumulation of construction dust and construction debris inside ducts.

END OF SECTION 01 81 13



## Platinum Scorecard

Project Name: Student Services Building

Project #: 900120

Yes ? No

19			Sustainable Sites	26 Points
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Y			Prereq 1	Construction Activity Pollution Prevention	Required
			Credit 1	Site Selection	1
			Credit 2	Development Density & Community Connectivity	5
			Credit 3	Brownfield Redevelopment	1
6			Credit 4.1	Alternative Transportation, Public Transportation Access	6
Y			Credit 4.2	Alternative Transportation, Bicycle Storage & Changing Rooms	1
3			Credit 4.3	Alternative Transportation, Low-Emitting and Fuel-Efficient Vehicles	3
2			Credit 4.4	Alternative Transportation, Parking Capacity	2
1			Credit 5.1	Site Development, Protect or Restore Habitat	1
Y			Credit 5.2	Site Development, Maximize Open Space	1
Y			Credit 6.1	Stormwater Design, Quantity Control	1
Y			Credit 6.2	Stormwater Design, Quality Control	1
Y			Credit 7.1	Heat Island Effect, Non-Roof	1
Y			Credit 7.2	Heat Island Effect, Roof	1
Y			Credit 8	Light Pollution Reduction	1

Yes ? No

6			Water Efficiency	10 Points
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Y			Prereq 1	Water Use Reduction, 20% Reduction	Required
2			Credit 1.1	Water Efficient Landscaping, Reduce by 50%	2
			Credit 1.2	Water Efficient Landscaping, No Potable Water Use or No Irrigation	2
			Credit 2	Innovative Wastewater Technologies	2
4			Credit 3	Water Use Reduction	2 to 4
				30% Reduction	2
				35% Reduction	3
				40% Reduction	4

Yes ? No

33			Energy & Atmosphere	35 Points
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Y			Prereq 1	Fundamental Commissioning of the Building Energy Systems	Required
Y			Prereq 2	Minimum Energy Performance: 10% New Bldgs or 5% Existing Bldg Reno	Required
Y			Prereq 3	Fundamental Refrigerant Management	Required
19			Credit 1	Optimize Energy Performance	1 to 19
				12% New Buildings or 8% Existing Building Renovations	1
				14% New Buildings or 10% Existing Building Renovations	2
				16% New Buildings or 12% Existing Building Renovations	3
				18% New Buildings or 14% Existing Building Renovations	4
				20% New Buildings or 16% Existing Building Renovations	5
				22% New Buildings or 18% Existing Building Renovations	6
				24% New Buildings or 20% Existing Building Renovations	7
				26% New Buildings or 22% Existing Building Renovations	8
				28% New Buildings or 24% Existing Building Renovations	9
				30% New Buildings or 26% Existing Building Renovations	10
				32% New Buildings or 28% Existing Building Renovations	11
				34% New Buildings or 30% Existing Building Renovations	12
				36% New Buildings or 32% Existing Building Renovations	13
				38% New Buildings or 34% Existing Building Renovations	14
				40% New Buildings or 36% Existing Building Renovations	15
				42% New Buildings or 38% Existing Building Renovations	16
				44% New Buildings or 40% Existing Building Renovations	17
				46% New Buildings or 42% Existing Building Renovations	18
				48% New Buildings or 44% Existing Building Renovations	19
7			Credit 2	On-Site Renewable Energy	1 to 7
				1% Renewable Energy	1
				3% Renewable Energy	2
				5% Renewable Energy	3
				7% Renewable Energy	4

			9% Renewable Energy	5
			11% Renewable Energy	6
			13% Renewable Energy	7
2			Credit 3 <b>Enhanced Commissioning</b>	2
2			Credit 4 <b>Enhanced Refrigerant Management</b>	2
3			Credit 5 <b>Measurement &amp; Verification</b>	3
			Credit 6 <b>Green Power</b>	2
Yes	?	No		

6			<b>Materials &amp; Resources</b>	14 Points
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Y			Prereq 1 <b>Storage &amp; Collection of Recyclables</b>	Required
			Credit 1 <b>Building Reuse</b>	1 to 3
			1.1 Maintain 55% of Existing Walls, Floors & Roof	1
			1.2 Maintain 75% of Existing Walls, Floors & Roof	2
			1.3 Maintain 95% of Existing Walls, Floors & Roof	3
			Credit 1.4 <b>Building Reuse, Maintain 50% of Interior Non-Structural Elements</b>	1
Y			Credit 2.1 <b>Construction Waste Management, Divert 50% from Disposal</b>	1
Y			Credit 2.2 <b>Construction Waste Management, Divert 75% from Disposal</b>	1
			Credit 3.1 <b>Materials Reuse, 5%</b>	1
			Credit 3.2 <b>Materials Reuse, 10%</b>	1
Y			Credit 4.1 <b>Recycled Content, 10% (post-consumer + ½ pre-consumer)</b>	1
Y			Credit 4.2 <b>Recycled Content, 20% (post-consumer + ½ pre-consumer)</b>	1
Y			Credit 5.1 <b>Regional Materials, 10% Extracted, Processed &amp; Manufactured Regionally</b>	1
			Credit 5.2 <b>Regional Materials, 20% Extracted, Processed &amp; Manufactured Regionally</b>	1
			Credit 6 <b>Rapidly Renewable Materials</b>	1
Y			Credit 7 <b>Certified Wood</b>	1
Yes	?	No		

15			<b>Indoor Environmental Quality</b>	15 Points
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Y			Prereq 1 <b>Minimum IAQ Performance</b>	Required
Y			Prereq 2 <b>Environmental Tobacco Smoke (ETS) Control</b>	Required
Y			Credit 1 <b>Outdoor Air Delivery Monitoring</b>	1
Y			Credit 2 <b>Increased Ventilation</b>	1
Y			Credit 3.1 <b>Construction IAQ Management Plan, During Construction</b>	1
Y			Credit 3.2 <b>Construction IAQ Management Plan, Before Occupancy</b>	1
Y			Credit 4.1 <b>Low-Emitting Materials, Adhesives &amp; Sealants</b>	1
Y			Credit 4.2 <b>Low-Emitting Materials, Paints &amp; Coatings</b>	1
Y			Credit 4.3 <b>Low-Emitting Materials, Carpet Systems</b>	1
Y			Credit 4.4 <b>Low-Emitting Materials, Composite Wood &amp; Agrifiber Products</b>	1
Y			Credit 5 <b>Indoor Chemical &amp; Pollutant Source Control</b>	1
Y			Credit 6.1 <b>Controllability of Systems, Lighting</b>	1
Y			Credit 6.2 <b>Controllability of Systems, Thermal Comfort</b>	1
Y			Credit 7.1 <b>Thermal Comfort, Design</b>	1
Y			Credit 7.2 <b>Thermal Comfort, Verification</b>	1
Y			Credit 8.1 <b>Daylight &amp; Views, Daylight 75% of Spaces</b>	1
Y			Credit 8.2 <b>Daylight &amp; Views, Views for 90% of Spaces</b>	1
Yes	?	No		

6			<b>Innovation &amp; Design Process</b>	6 Points
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Y			Credit 1.1 <b>Innovation in Design: Campus as a Teaching Tool AGMBC Prototype Credit</b>	1
Y			Credit 1.2 <b>Innovation in Design: Exemplary Perform. Max.Open Space AGMBC Prototype</b>	1
Y			Credit 1.3 <b>Innovation in Design: Green Cleaning and Custodial Care Program</b>	1
Y			Credit 1.4 <b>Innovation in Design: Provide Specific Title</b>	1
Y			Credit 1.5 <b>Innovation in Design: Provide Specific Title</b>	1
Y			Credit 2 <b>LEED® Accredited Professional</b>	1
Yes	?	No		

4			<b>Regional Priority Credits</b>	4 Points
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Y			Credit 1.1 <b>Regional Priority Credit: SSc4.1</b>	1
Y			Credit 1.2 <b>Regional Priority Credit: WEc1.1</b>	1
Y			Credit 1.3 <b>Regional Priority Credit: WEc3 (40%)</b>	1
Y			Credit 1.4 <b>Regional Priority Credit: EAc2 (1%)</b>	1
Yes	?	No		

89			<b>Project Totals (Certification Estimates)</b>	110 Points
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Certified 40-49 points Silver 50-59 points Gold 60-79 points Platinum 80+ points

**SECTION 01 91 00  
COMMISSIONING**

**PART 1 GENERAL**

**1.1 WORK INCLUDED**

- A. Work included in this section: Oversight, coordination, and documentation of the following:
1. Commissioning of selected systems and equipment specified under Division 13 Special Construction.
  2. Commissioning of selected systems and equipment specified under Division 14 Conveying Systems
  3. Commissioning of selected systems and equipment specified under Division 21 Fire Suppression
  4. Commissioning of systems and equipment specified under Division 22 Plumbing
  5. Commissioning of systems and equipment specified under Division 23 Heating, Ventilating, and Air-Conditioning (HVAC)
  6. Commissioning of systems and equipment specified under Division 26 Electrical
  7. Commissioning of systems and equipment specified under Division 27 Communications
  8. Commissioning of systems and equipment specified under Division 28 Electronic Safety and Security

**1.2 RELATED SECTIONS AND REQUIREMENTS**

- A. Requirements of Division 1 General Requirements apply to all work in this section.
- B. Related Sections:
1. Section 01 79 00 Training.
  2. Section 14 24 00 Hydraulic Elevators
  3. Section 21 12 00 Standpipes and Hose Valves
  4. Section 21 13 00 Fire Sprinklers
  5. Section 22 11 16 Domestic Water Piping
  6. Section 22 13 16 Sanitary Waste and Vent Piping
  7. Section 22 14 16 Storm Drainage Piping
  8. Section 22 16 00 Plumbing Specialties
  9. Section 22 35 00 Domestic Water Heat Exchangers
  10. Section 22 35 01 Domestic Water Heat Exchangers
  11. Section 22 40 00 Plumbing Fixtures
  12. Section 22 47 00 Drinking Fountains and Water Coolers
  13. Section 23 05 13 Motors and Controllers
  14. Section 23 05 16 Piping Specialties

15. Section 23 05 23 Valves
16. Section 23 21 12 Heating and Cooling Piping
17. 23 21 13 Exposed Hydronic Piping, Valves and Accessories (Utilities)
18. Section 23 21 23 Pumps
19. Section 23 31 13 Ducts
20. Section 23 34 00 Fans
21. Section 23 33 00 Duct Accessories
22. Section 23 34 00 Fans
23. Section 23 36 00 Air Terminal Units
24. Section 23 37 00 Air Outlets and Inlets
25. Section 23 40 00 Air Cleaning Devices
26. Section 23 73 23 Air Handling Units and Coils
27. Section 23 97 00 Mechanical Commissioning
28. Section 26 08 00 Commissioning of Electrical Systems ( Utilities)
29. Section 26 97 00 Electrical System Commissioning.
30. Section 23 90 33 EMCS Commissioning.

### 1.3 GENERAL

- A. Building Commissioning is a quality assurance process that has as its goal that all systems perform interactively and according to design intent under the full range of expected operating conditions. The General Contractor shall ensure that all systems are fully commissioned and that commissioning is fully documented as specified in this Section.
- B. Commissioning Team. The Commissioning Team for the construction and post-construction period shall include:
  1. General Contractor Members:
    - a. Commissioning Coordinator (see paragraph 1.3C).
    - b. Division 13, Division 14, Division 21, Division 22, Division 23, Division 26, Division 27 and Division 28 project managers plus key subcontractors where appropriate, including the Test & Balance Subcontractor.
  2. University Members:
    - a. University's Representative.
    - b. University plant operator/engineer (during the functional testing and training phases only).
    - c. University's Design Professional.
- C. Commissioning Coordinator:
  1. The General Contractor shall procure and provide the services of the Commissioning Coordinator.
  2. Qualifications:
    - a. Cumulative of eight or more years experience in one or more of the following for projects of similar size and complexity:
      - 1) Building mechanical or electrical system commissioning.
      - 2) Building mechanical or electrical system construction project management.

- 3) Building mechanical or electrical system coordination services for a general General Contractor.
- 4) Building mechanical system test & balance project management.
- b. Five or more years of experience with project management software such as MS Project or equal.
- c. Either an employee of or direct subcontractor to the General Contractor.
3. Services to be provided: See paragraph 3.1.

#### 1.4 SUBMITTALS

- A. See Section 01 33 23 Shop Drawings, product Data and Samples.
- B. Commissioning Coordinator Qualifications. Prior to any commissioning work taking place, submit Commissioning Coordinator's resume listing applicable experience for review and approval by the University's Representative.
- C. Equipment submittals and shop drawings:
  1. See Divisions 13, 14, 21, 22, 23, 26, 27 and 28
- D. Commissioning Reports:
  1. Start-up and Factory Tests.
    - a. See Divisions 13, 14, 21, 22, 23, 26, 27 and 28 for requirements.
    - b. Compile after all equipment has been started and submit five copies to University's Representative for review and approval.
  2. Pre-functional Tests:
    - a. See Divisions 13, 14, 21, 22, 23, 26, 27 and 28 for checklists.
    - b. Compile after all equipment pre-functional forms have been completed and submit five copies to University's Representative for review and approval.
  3. Test and Balance Reports.
    - a. See Section 15950 Testing, Adjusting and Balancing for content and quantity of reports.
    - b. Include only those reports developed after spot checks and associated rebalancing have been completed.
  4. Functional Tests:
    - a. See Division 22,23, 26 and 28 for forms.
    - b. Compile after all tests have been completed and submit five copies to University's Representative for review and approval.
  5. Demonstration Tests:
    - a. Tests will be a subset of Functional Tests and will be identified one day prior to the Tests by the University's Representative. See Divisions 22,23, 26 and 28 for expected time required.
    - b. Compile after all tests have been completed and submit five copies to University's Representative for review and approval.
  6. Trend Reviews:
    - a. Data to be provided to University's Representative in electronic format specified in Division 22,23, 26 and 28.
  7. Final Report:

- a. Include the following completed documentation:
    - 1) System/Equipment Matrix (see Paragraph 3.1A.2).
    - 2) Start-up and Factory Tests.
    - 3) Test and Balance Reports.
    - 4) Pre-functional test documentation.
    - 5) Functional test documentation.
  - b. Format and Procedure:
    - 1) Submit two draft copies for review and comment by University's Representative, who will return one copy.
    - 2) Make changes noted on returned copy and compile final draft.
    - 3) Submit Final Report in the following format:
      - a) Five bound copies.
      - b) One electronic copy on CD in format readable by software on Operator's Workstation, as specified in Division 22,23, 26 and 28. Reports may be scanned from paper copies but word-searchable electronic versions preferred.
      - c) One electronic copy as above copied onto the Operator's Workstation server.
8. Operations and Maintenance Manuals: See Divisions 13, 14, 21, 22, 23, 26, 27 and 28.
  9. Training manuals: See Section 01664 Training and Divisions 13, 14, 21, 22, 23, 26, 27 and 28.
  10. Re-commissioning Management Manual
    - a. Prepare and submit 1 copy of a Re-commissioning Management Manual containing the following information organized into a 3-ring binder with tabbed sections as listed.
      - 1) Design Intent. (Material provided by the University's Representative)
        - a) Final version of the owner's requirements and design basis narratives, including brief descriptions of each system.
      - 2) Controls. (Material provided by Division 17 General Contractor.)
        - a) As-built sequences of operation for all equipment.
        - b) Controls drawings
        - c) A list of time of day schedules and a schedule to review them for relevance and efficiency.
        - d) A list of all user adjustable setpoints and reset schedules with rationale for their selection and range.
      - 3) Energy and Water Efficiency Measures. (Material provided by University Representative.)
        - a) A description and rationale for all energy and water saving features and strategies with operating and instructions.
        - b) Guidelines for establishing and tracking benchmarks for whole building energy use and equipment efficiencies of cooling, heating, and service hot water equipment.
      - 4) Seasonal Issues. Not applicable to UC Merced projects.

- 5) Calibration. (Material provided by Division 22,23, 26 and 28 )
  - a) Recommendations for recalibration frequency of sensors and devices by type and use.
- 6) Continuing Commissioning Plan (Material provided by University Representative.)
  - a) Recommended frequency for re-commissioning by equipment type or system, with reference to tests conducted during initial commissioning.

## PART 2 PRODUCTS (NOT USED)

## PART 3 EXECUTION

### 3.1 COMMISSIONING COORDINATION

#### A. Commissioning Coordinator shall:

- 1. Prepare schedule of commissioning activities specified in Divisions 13, 14, 21, 22, 23, 26, 27 and 28 including:
  - a. Submission of equipment submittals and shop drawings
  - b. Equipment start-up and pre-functional tests
  - c. Factory start-up and inspection of equipment
  - d. Test and balance
  - e. EMCS calibration and start-up
  - f. Electrical system functional testing
  - g. EMCS system functional testing
  - h. EMCS demonstration tests (to University's Representative)
  - i. EMCS trending initiation
  - j. EMCS trend review data distribution (to University's Representative)
  - k. Submission of operations and maintenance manuals
  - l. Development and submission of record drawings
  - m. Training of University personnel
  - n. Preparation of Final Commissioning Report
- 2. Prepare a system and equipment commissioning matrix with a line item for each piece of equipment and each subsystem specified to be commissioned under Division 13, 14, 21, 22, 23, 26, 27 and 28. The System/Equipment matrix shall include for each line item:
  - a. Equipment tag or name.
  - b. Service.
  - c. Location.
  - d. Responsible subcontractor.
  - e. The due date and actual completion date for the following (where applicable):
    - 1) Submittals.
    - 2) Shop drawings.
    - 3) Factory test.
    - 4) Equipment set.
    - 5) Preliminary operations and maintenance manuals indicating start-up procedures.
    - 6) Pre-start verification.



- 7) Equipment start-up.
  - 8) Pre-functional test.
  - 9) Test and balance.
  - 10) Functional performance test.
  - 11) Operations and maintenance manuals.
  - 12) Record drawings.
  - 13) Training.
3. Complete the commissioning matrix as activities are completed, and distribute to Commissioning Team at least one day prior to each Team meeting or when requested by University's Representative.
4. Schedule and chair meetings of Commissioning Team:
  - a. Commissioning Team shall be notified of all meeting times and locations at least two weeks prior to the meeting.
  - b. General Contractor Members of Commissioning Team shall attend all scheduled meetings; University Members of Commissioning Team shall be invited to all meetings and attend where they feel their attendance is beneficial or where required to witness demonstration tests and training.
  - c. Prior to start of construction until 30 days prior to start-up of any equipment:
    - 1) One scoping meeting shall occur prior to any Division 13, 14, 21, 22, 23, 26, 27 and 28 submissions of equipment submittals or shop drawings. Meeting shall include a discussion of preliminary commissioning schedule and roles of each Team member.
    - 2) Bi-monthly progress meetings (more frequent if required in the judgment of the Commissioning Coordinator; less frequent if requested by the Commissioning Coordinator and approved by the University's Representative).
  - d. 30 days prior to start-up of any equipment through start of functional testing: Bi-weekly progress meetings (more frequent if required in the judgment of the Commissioning Coordinator; less frequent if requested by the Commissioning Coordinator and approved by the University's Representative).
  - e. During functional testing until their completion: Weekly progress meetings (more frequent if required in the judgment of the Commissioning Coordinator; less frequent if requested by the Commissioning Coordinator and approved by the University's Representative).
  - f. After functional testing until all commissioning documentation is complete: Meetings as required in the judgment of the Commissioning Coordinator.
5. Supervise pre-functional and functional testing performed by General Contractor's Members of Commissioning Team:
  - a. Coordinate tests among Team Members and schedule tests so that required work for each trade is complete prior to tests being performed.
  - b. Ensure that tests are successfully completed by reviewing test forms for completeness and positive response, and ensuring forms have been signed by the Team Member who performed the work. (The

- Commissioning Coordinator is not required to perform or witness any pre-functional or functional tests.)
- c. Compile test documentation and submit to the University's Representative for review and approval.
  - d. Coordinate and ensure resolution of punchlists from University's Representative.
6. Supervise and witness demonstration tests performed by General Contractor's Members of Commissioning Team, also witnessed by the University's Members of the Commissioning Team:
- a. Compile test documentation and submit to the University's Representative for review and approval.
  - b. Coordinate and ensure resolution of punchlists from the University's Representative.
  - c. Coordinate retesting where required until tests are successfully completed.
7. Coordinate EMCS post-construction and post-occupancy trend reviews with Division 22,23, 26 and 28:
- a. Ensure trends are initiated as specified in Division 17. The post-construction review will occur directly after functional testing is complete (see Division 17 for exact time period). Two post-occupancy reviews will occur, one after approximately 6 months of operation, and one approximately two months prior to the end of the warranty period.
  - b. Ensure data is transmitted in required format to University's Representative.
  - c. Coordinate and ensure resolution of trend review punchlists from the University's Representative.
  - d. Coordinate retesting where required until tests are successfully completed.
8. Maintain a master deficiency and resolution log developed from punchlists, including status and date of resolution of each deficiency. Provide the University's Representative with regular progress reports.
9. Coordinate and confirm completion of training of University personnel as specified under Divisions 13, 14, 21, 22, 23, 26, 27 and 28.
10. Compile and submit Final Commissioning Report.
11. Compile and submit the Re-commissioning Management Manual.

### 3.2 REMEDIAL WORK

- A. Remedial work shall be performed at no additional cost to the University.
- B. Remedial work shall include re-performing any commissioning or other tests related to remedial work once remediation is complete at no additional cost to the University.

### 3.3 SYSTEM ACCEPTANCE

- A. Specified Division 13, 14, 21, 22, 23, 26, 27 and 28 systems shall be considered commissioned and substantially complete when the following have been submitted and approved by University Representative:
  1. Final Commissioning Report.

2. Post-construction trend review.
  3. Other completion documentation as defined in Divisions 22,23, 26 and 28, including University sign-off that training has been completed.
  4. All remedial action associated with punchlists developed by the University's Representative.
- B. Remedial action required to address deficiencies identified by post-occupancy trend reviews shall be covered by the system warranty at no additional cost to the University.

END OF SECTION 01 91 00

**SECTION 01 92 00**  
**OPERATING AND MAINTENANCE**

**PART 1 - GENERAL**

**1.1 WORK INCLUDED**

- A. Compile Product Data and related information appropriate for University's maintenance and operation of products provided under this Contract.
- B. Prepare operating and maintenance data as specified herein and as specified in individual Specification Sections.
- C. Instruct University's personnel in the maintenance and operation of equipment and systems.

**1.2 FORM OF SUBMITTAL**

- A. Prepare data in the form of an instructional manual for use by University's personnel in both electronic and hard copy formats.
  - 1. Electronic Format
    - a. The General Contractor may scan the documents using word searchable software or any other appropriate means so long as the resulting image is legible and word searchable when viewed from the provided CD-ROM using a computer.
  - 2. Hard Copy Format
    - a. Size: 8-1/2 by 11 inches.
    - b. Paper: 20 lb minimum, white, for typed pages.
    - c. Text: Manufacturers' printed or neatly typewritten data.
    - d. Drawings
      - (1) Provide reinforced punched binder tab that is bound with the text.
      - (2) Fold larger drawings to the size of the text pages.
    - e. Provide flyleaf for each separate product or each piece of operating equipment.
      - (1) Provide typed description of products and major component parts of equipment.
      - (2) Provide indexed tabs.
    - f. Cover: Identify each volume with typed or printed title "Operating and Maintenance Instructions". List the following:
      - (1) Project No.
      - (2) Title of Project.
      - (3) Identify general subject matter covered in the volume.
    - g. Binders
      - (1) Commercial quality three-ring binders with durable and cleanable plastic covers.
      - (2) When multiple binders are used, correlate the data into related groups.

3. Submit Operations and Maintenance manual on or before 75 percent progress payment submittal.

### 1.3 CONTENT OF MANUAL

#### A. Table of Contents: Include in each volume, neatly typewritten.

1. Identify General Contractor, name of responsible principal, address, and phone number.
2. List each product included, indexed to the content of the volume.
3. List, with each product, the name, address, and telephone number of:
  - a. Subcontractor or installer.
  - b. Maintenance contractor, as appropriate.
  - c. Identify area of responsibility of each of the previously mentioned parties.
  - d. Nearest source of supply for parts and replacement.
4. Identify each product by product name, serial number, part number and any other identifying symbols necessary.
5. Identify the location of the installed product.

#### B. Product Data

1. Include only those sheets that are pertinent to the specific product.
2. Annotate each sheet to:
  - a. Clearly identify the specific product or part installed.
  - b. Clearly identify the data applicable to the installation.
  - c. Delete references to inapplicable information.

#### C. Drawings

1. Supplement Product Data with drawings as necessary to clearly illustrate:
  - a. Relations of component parts of equipment and systems.
  - b. Control and flow diagrams.
2. Coordinate drawings with information in Project record documents to assure correct illustration of completed installation.
3. Do not use Project record documents as maintenance drawings.

#### D. Written text: As required to supplement Product Data for the particular installation.

1. Organize in a consistent format under separate headings for different procedures.
2. Provide a logical sequence of instructions for each procedure.

#### E. Copy of each warranty, bond, and service contract issued

1. Provide information sheet for the University's personnel, giving
  - a. Proper procedures in the event of failure.
  - b. Circumstances that might affect the validity of warranties or bonds.

### 1.4 MANUAL FOR EQUIPMENT AND SYSTEMS

#### A. Submit 2 copies of the complete manual in its final form.

- B. Content, for each unit of mechanical equipment and each mechanical system, shall be as follows:
1. Description of unit or system, and component parts
    - a. Function, normal operating characteristics, and limiting conditions.
    - b. Performance curves, engineering data, and tests.
    - c. Complete nomenclature and commercial numbers of replaceable parts.
  2. Operating procedures
    - a. Start-up, break-in, and normal operating instructions.
    - b. Regulation, control, stopping, shutdown, and emergency instructions.
    - c. Summer and winter operating instructions.
    - d. Special operating instructions.
  3. Systems Demonstration
    - a. Prior to final inspection, demonstrate operation of each system to University's Representative and University personnel. All work, required for each system to be fully functional, shall be complete and the system shall be fully operational prior to the demonstration.
    - b. Instruct designated personnel in operation, adjustment, and maintenance of equipment and systems, using operation and maintenance data as basis of instruction.
  4. Maintenance procedures
    - a. Routine operations.
    - b. Guide to "trouble-shooting".
    - c. Disassembly, repair, and reassembly.
    - d. Aligning, adjusting, and checking
  5. Preventative Maintenance (PM) Schedule
    - a. A tabular listing of all systems and equipment within the facility which require preventative maintenance, to include:
      - (1) System or equipment name.
      - (2) System or equipment number.
      - (3) PM activity to be performed on that system or piece of equipment.
      - (4) Consumable materials required for performance of the PM activity, such as lubricants, including the specification and quantity needed.
      - (5) Frequency of performance of PM activity.
      - (6) Date of performance of first round of each PM activity relative to facility commissioning and acceptance by the University.
    - b. The requirements of this section cannot be met merely by the supply of Operating & Maintenance manuals from equipment vendors. The extraction of recommended preventative maintenance activities from vendor manuals for all equipment and incorporation onto a summary table as described above is required.
  6. Servicing and lubricating schedule, with list of lubricants required.
  7. Manufacturer's printed operating and maintenance instructions.
  8. Description of sequence of operation by control manufacturer.
  9. Original manufacturer's parts list, illustrations, current prices, recommended quantities to be maintained in storage, assembly drawings, and diagrams required for maintenance.
    - a. Predicted life of parts subject to wear.

- b. Items recommended to be stocked as spare parts.
  - 10. As-installed control diagrams by controls manufacturer.
  - 11. General Contractor and Subcontractors' coordination drawings and as-built color-coded piping diagrams.
  - 12. Charts of valve tag numbers, with the location and function of each valve.
  - 13. Other data as required in the various Specification Sections.
- C. Content, for each electrical and electronic system, as appropriate
  - 1. Description of system and component parts.
    - a. Function, normal operating characteristics, and limiting conditions.
    - b. Performance curves, engineering data, and tests.
    - c. Complete nomenclature and commercial numbers of replaceable parts.
  - 2. Circuit directories of panel boards.
    - a. Electrical service.
    - b. Controls.
    - c. Communications.
  - 3. As-built color-coded wiring diagrams.
  - 4. Operating procedures
    - a. Routine and normal operating instructions.
    - b. Sequences required.
    - c. Special operating instructions.
  - 5. Maintenance procedures
    - a. Routine operations.
    - b. Guide to "trouble-shooting".
    - c. Disassembly, repair, and reassembly.
    - d. Adjustment and checking.
  - 6. Manufacturer's printed operating and maintenance instructions.
  - 7. Original manufacturer's parts list, illustrations, current prices, recommended quantities to be maintained in storage, assembly drawings, and diagrams required for maintenance.
    - a. Predicted life of parts subject to wear.
    - b. Items recommended to be stocked as spare parts.
  - 8. Other data as required in the individual Specification Sections.
- D. Prepare and include additional data as may be required for instruction of the University's personnel.
- E. Additional requirements for operating and maintenance data as specified in the individual Specification Sections.
- F. Provide complete information for products specified in the individual Specification Sections.

## 1.5 SUBMITTAL REQUIREMENTS

- A. Submit 2 copies of the preliminary draft of proposed formats and outlines of content prior to preparation of data, 75 days prior to final inspection. University's Representative will review the draft and return 1 copy with comments.

- B. Submit 1 copy of the completed data in final form 45 days prior to final inspection. A copy will be returned with comments after final inspection. No final inspection will be made until the required data has been submitted and found to be satisfactory.
- C. Submit specified number of copies of approved data in final form 10 calendar days after final inspection but not later than 10 days prior to Owner Training.

1.6 INSTRUCTIONS OF UNIVERSITY'S PERSONNEL

- A. Work requiring instruction of the University's personnel is specified in the individual Specification Sections.
- B. Schedule the instructional meeting or meetings 2 weeks after instructional manuals have been submitted, reviewed, and accepted by the University's Representative.
- C. Upon the University's taking Beneficial Occupancy or after Final Completion (whichever is earlier), fully qualified representatives of the manufacturers shall fully instruct the University's Representative and University personnel in the operation, adjustment, and maintenance of all equipment and systems.
- D. Basis of Instruction: Operating and maintenance manual. Review contents of manual with University personnel in full detail to explain all aspects of operations and maintenance.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01 92 00



## SECTION 10 1400 –SIGNAGE

### PART 1 - GENERAL

#### 1.1 SUMMARY

A. Section Includes:

1. Interior room Identification Signs
2. Illuminated Exterior Building Monument Sign (AA2 Primary Building ID)
3. Interior Wall-Mounted LEED Display Sign
4. Project Schedule:

1. Pavilion Interior Room Identification Signs must be fabricated and ready for installation by Thursday June 13, 2013. The installation date may be varied and needs to be coordinated with University Representative.
2. Illuminated Exterior Building Monument Sign must be fabricated and ready for installation by Friday July 12, 2013. The installation date may be varied and needs to be coordinated with University Representative.
3. 3-Story Building: All Interior Room Identification signs and Interior Wall-Mounted LEED Display Sign must be fabricated and ready for installation by Sunday September 15, 2013. The installation date may be varied and needs to be coordinated with University Representative.

#### 1.2 SUBMITTALS

- A. Procedures: In accordance with signage schedule “0228-Student Services Building-Signage20130311-Revised.pdf” and summary of interior signage types in “0228-Student Services Building-Signage20130311-Revised-Sort.pdf”, building floor plans “0228-SSB-Floor Plans20130313-First Floor.pdf”, “0228-SSB-Floor Plans20130313-Second Floor.pdf”, “0228-SSB-Floor Plans20130313-Third Floor.pdf”, “0228-SSB-Floor Plans20130313-Roof.pdf”, and signage graphics in “Student Services-Sign Bid Package Graphics-20130311.pdf”, Product Data and Samples.
- B. Shop Drawings: scale drawings for each sign indicating materials, attachments, lettering layout, and colors.
1. Show details of fabrication and installation including foundations, and mounting details, elevations, and relationship to adjacent improvements. . Shop Drawing size: 17”Lx11”H.
  2. Show all material dimensions, finishes, hardware, and anchorage.
  3. For monument sign, including the following:
    - a. Setting drawings, templates, and direction for installation of anchor bolts and other anchors to be installed under other Sections.
    - b. Wiring diagrams for electrical components.
    - c. Access panels for service and replacement of lamps and other components in addition to those shown on the Drawings.
    - d. Structural calculations for monument sign in sufficient detail to meet requirements of governing authorities and confirm intended performance. Calculations shall be signed

and stamped by an engineer registered in the State of California. Contractor is responsible for the cost for the engineering while there is no need for permits. All information shall submit to University for approval.

C. Product Data:

1. Manufacturer's specifications, recommendations, and installation instructions.
  - a. Electrical light fixtures, lamps, fittings, and components. LED lights are acceptable.
  - b. Surface preparation and coatings for exposed metal surfaces. Include manufacturer's data sheet for each applied coating.

D. Samples:

1. One partial sign sample showing each sign type, minimum 12 inches square or larger as appropriate for sign configuration. Submit for each required color.
2. Dimensional Characters: Full-size of each type of dimensional character required. Show character style, material, finish, and method of attachment.
3. Complete typeface fonts including upper and lower case letters, numbers, and punctuation as applicable to text shown or provided by University's Representative.
4. Samples of letter and word spacing for each letter size.
5. Other Exposed Components: As specified under other Sections.

E. Quality Control:

1. Manufacturer/fabricator qualifications.
2. Installer qualifications.
3. Verification of adequacy of power feed for monument sign.

F. Closeout:

1. Spare parts for electronic components.
2. Extended warranty.

### 1.3 QUALITY ASSURANCE

A. Qualifications: Successful bidder will be required to have to have the C45 Electrical Sign Contractors License from the State of California, current at the time of submission of the bid.

1. Manufacturer/Fabricator Qualifications:
  - a. Firm with three documented experiences in the successful, on-time completion of signs within the last three years similar to those required for this Project.
  - b. Firm must have been in business over 10 years.
  - c. Firm must have in-house fabricator and painters for the Interior Room Identification Signs and the Illuminated Exterior Building Monument Sign.
  - d. Capable of manufacturing UL listed products for illuminated monument sign.
  - e. ISO 9001 approved or capable of submitting equivalent information documenting an in-place quality control program to assure conformance with the performance requirements of these Specifications during design, production, installation, and servicing of the work of this Project.

2. Installer:
  - a. Firm with three documented experiences in the successful, on-time completion of signs within the last three years similar to those required for this Project.
  - b. The installer is required to be employee(s) of the manufacturer/fabricator.
  - c. Installer shall maintain a full-time supervisor at the jobsite during times that sign work is in progress. Supervisor shall have a minimum of 5 years' experience in work similar in nature and scope to work of this Project.
- B. The Drawings and Specifications represent the design intent only.
- C. Contractor shall be responsible for the structural engineering of monument sign, internal illumination, and methods for fastening and installation.
- D. Applicable Standards and Publications: Unless otherwise specified or shown, signage shall conform to the following standards and publications:
  1. ANSI A-117.1 and the Americans with Disabilities Act (ADA).
  2. ATBCB Design Guidelines for Signage in relation to the Americans with Disabilities Act.
  3. California Code of Regulations, Titles 19 and 24. California Grade 2 Braille shall be used whenever Braille symbols are specifically required. Refer to CBC Section 1117B.5.2. All signage shall conform to CBC Sections 1003, 1103.2.4, and 1117B.5.
  4. Uniform Sign Code.
- E. Vendor shall be responsible for the quality of materials and workmanship of any firm acting as the vendor's subcontractor.
- F. Welding, where required, shall be in accordance with procedures specified in American Welding Society Standards using procedures, materials, and equipment of the type required for the work.

#### 1.4 PROJECT CONDITION

- A. Field Measurements: Where sizes of signs are determined by dimensions of surfaces on which they are installed, verify dimensions by field measurement before fabrication and indicate measurements on shop drawings.

#### 1.5 GUARANTEE

- A. At a minimum, the Contractor shall warrant that all work installed under this Contract is free of defect and will remain in good working order for a period of one year for all surface improvements and five years for all underground work. If warranties specified elsewhere in these documents are for a longer period of time than that specified in this section, the longer warranties shall apply.
- B. Manufacturer's Standard Product Warranties:
  1. Plastic Elements: Manufacturer's warranty against yellowing, cracking, crazing, or other visible and performance defects for a period of 5 years from the date of installation.
  2. Paint Coating: Acrylic polyurethane coating manufacturer's 5-year warranty against defects in materials.

3. Firm shall guarantee the approved signs installed on Project are available for minimum of 5 years from date of installation.
- C. Time of Guarantees Submittals:
1. For Work activities, provide updated submittal within 10 calendar days after Final Completion, listing the date of Final Completion as the start of the Guarantee to Repair Period.
  2. For Work activities, where Final Completion is delayed beyond the date of Substantial Completion, provide updated submittal within 10 calendar days after Final Completion, listing the date of Final Completion as the start of the Guarantee to Repair Period.

## PART 2 - PRODUCTS

### 2.1 SIGNAGE

- A. Signage Furnished and Installed Under this Contract:
- a. Interior Room Identification Signs: Must match the current existing Interior signs on campus.
    - 1) All interior signs shall be manufactured using a ¼" Photopolymer Process. All exterior signs shall be manufactured using a ¼" exterior Photopolymer Process.
    - 2) Tactile characters shall be raised the required 1/32" inches from sign face. Glue - on letters or etched backgrounds are not acceptable.
    - 3) All text shall be accompanied by Grade 2 Braille. Braille shall be separated ½" from the corresponding raised characters or symbols. Grade 2 Braille translation to be provided by signage manufacturer.
    - 4) All letters, numbers and/or symbols shall contrast with their background, either light characters on a dark background or dark characters on a light background. Characters and background shall have a non-glare finish.
    - 5) In the cases when Braille is not specified in the written specification, use ¼" acrylic using subsurface vinyl graphics and paint.
    - 6) Background Color: Dark Rhein Silver. All sides of the background must consist of the same color as selected.
    - 7) Graphic Color: Benjamin/Moore-Branchport Brown.
    - 8) Letterform shall be: Universe 57 Condense.
    - 9) Signage Installation and Locations: Signs shall be mounted using double sided vinyl tape and silicone adhesive. Mounting shall be weather proof in exterior applications. All signs shall be mounted 60" from the floor to the center of the sign on the latch side. The distance between the doorframe and sign shall be 2". Installer assumes responsibility for suitable installation of the signs. Signs shall be level within one quarter of degree. Locations to be verified by University's Representative before installation.
    - 10) Signage mounted on glass shall have backers matching "Dark Rhein Silver" background color.
  - b. Illuminated Exterior Building Monument Sign (AA2 Primary Building ID): Must match the current existing exterior building monument signs on campus (for example: Kolligian Library). Final copy layout and size will be determined during shop drawing submittal period.

- 1) Copy: Student Services (final copy to be determined)
  - 2) Signage Location: In hardscape at Southeast corner of building, exact location to be determined by University's Representative.
  - 3) Quantity Required: One (1)
- c. Interior Wall-Mounted LEED Display Sign: Must match the current existing LEED Display signs on campus.
- 1) University will provide the LEED Medallion and the graphics/information for the contractor to insert at a later date to be determined.
  - 2) For the 21"x21" LEED Medallion Support, the contractor shall provide a set of the four corner clips in both gold and silver color.
  - 3) Material: Maple Hardwood.
  - 4) Signage Location: To be determined by University's Representative.
  - 5) Quantity Required: One (1).

## 2.2 MATERIALS AND COMPONENTS

- A. Aluminum Sheet and Plate: ASTM B209, alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated, and with at least the strength and durability properties of Alloy 5005-H32 and as specified in Section 05 7000 Decorative Metal.
- B. Acrylic Sheet: Cast methyl methacrylate monomer plastic conforming to ASTM D788, Sign Grade; "Plexiglas SQ" by Altuglas or equal, unless otherwise recommended by fabricator.
  1. Color: White.
- C. Hardwood: As shown on Drawings.
- D. Paint Coatings: Matthews Acrylic Polyurethane ("MAP") by Matthews Paint Company (MPC), or equal. Provide primer as recommended by coating manufacturer for each type of substrate.
  1. Colors: To match Pantone colors noted on the Drawings.
- E. Vinyl: Opaque non-reflective film with pressure-sensitive adhesive backing, suitable for exterior applications.
- F. Attachments: As shown on drawings and as approved by University's Representative.
- G. Sealant: As required to prevent light and water leakage at monument sign. No exposed sealant shall be allowed except as indicated on the reviewed shop drawings.

## 2.3 FABRICATION

- A. Fabricate signage and mountings according to details on Drawings and shop drawings.
- B. Fabricate signage to remain flat under installed conditions with smooth, mechanically finished edges. Ease corners slightly for plastic signs.

- C. Shop-assemble wherever practicable and ready for installation at project site. If not shop assembled, pre-fit in shop to assure proper and expeditious field assembly.
- D. Graphic Elements: All text and symbols shall be sharply distinct and clear.
- E. Attachment Method: Concealed fasteners or mounting tape as recommended by sign manufacturer for mounting signs on substrates involved. Do not use exposed fasteners except where shown, or accepted by the University's Representative.
- F. Tolerances for Flat Metal Components, unless Otherwise Approved.

### PART 3 - EXECUTION

#### 3.1 PREPARATION OF CUSTOM SIGNAGE

- A. Prior to installation, inspect site to confirm that all sign locations are as specified, and signs have been received and are ready for installation.
- B. Foundation for Monument Signs: Install concrete footings and aluminum tube posts according to approved shop drawings.
  - 1. Provide asphaltic coating on aluminum to prevent contact with concrete.

#### 3.2 INSTALLATION OF CUSTOM SIGNAGE

- A. General:
  - 1. Use concealed mounting in compliance with manufacturer's instructions.
  - 2. Install signs true, level and plumb at height indicated, with sign surfaces free from distortion or other defects in appearance.
  - 3. Locate signage where shown or as directed by the University's Representative, and as required by code.
  - 4. Install monument signs according to approved shop drawings.
- B. Erection Tolerances:
  - 1. Maximum Offset from True Alignment with Abutting Materials: 1/32 inch.
  - 2. Variation from True Position: 1/16 inch.

#### 3.3 CLEANING, ADJUSTING AND PROTECTION

- A. Inspect installed work. Correct deficiencies.
- B. Restore finishes damaged during installation and construction period so that no evidence of correction work remains.
- C. Return items that cannot be refinished in the field to the shop. Make required alterations and refinish entire unit, or provide new units.

- D. Verify gaskets and flanges interface properly to provide a lightproof installation at monument sign.
- E. After installation, clean soiled signs surfaces according to manufacturer's instructions. Protect from damage until acceptance by Owner.

### 3.4 RECORD DOUCMENTS

#### A. AS-BUILT DRAWINGS

- 1. The Contractor shall submit to the University's Representative, 10 calendar days after Final Completion, fully updated As-built Drawings and Shop Drawings for review.
- 2. The As-Built Drawings and Shop Drawings shall be in PDF format. Email is acceptable.

#### B. RECORD DRAWINGS

- 1. The Contractor shall submit to the University's Representative, 10 calendar days after review and approval by the University, fully updated As-Built Drawings and Shop Drawings.

Contractor shall:

- a. Provide two (2) hard copies of the Shop Drawings in size 17"Lx11"H paper.
- b. Provide two (2) CD-ROMs, each of which contains all electronic drawing files. File shall be in RIGINAL format of the graphic program and PDF format.

END OF SECTION 10 1440

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Student Services Building (0228)-Interior Signage Schedule

March 11, 2013

**Project Schedule:**      **Pavilion:** All Interior Room Identification Signs must be fabricated and ready for installation by Thursday June 13, 2013. The Installation date may be varied and needs to be coordinated.  
Illuminated Exterior Building Monument Sign must be fabricated and ready for installation by Friday July 12, 2013. The installation date may be varied and needs to be coordinated.  
**3-Story Building:** All Interior Room Identification Signs must be fabricated and ready for installation by Sunday September 15, 2013. The Installation date may be varied and needs to be coordinated.

**Note 1:** IF INSTALLER IS NOT SURE OF THE PLACEMENT FOR THE SIGNAGE, PLEASE CHECK WITH UNIVERSITY REPRESENTATIVE.  
**Note 2:** Interior Signage color is to match the Campus Standard Interior Signage Color: Signage Copy Color is Benjamin Moore, branchport brown, Background Color is Silver/Dark Rehein.

**Note 3:** For Interior Signage Installation, all signs shall be mounted using double sided vinyl tape and silicone adhesive.

						Building # (CANN)	SFX	Room	SFX	New Room #	Assignable Area (ASF)	Non-Assignable Area (NASF)	Door Number	New Door Number	Signage Reference # On Drawing	Signage Type	Signage Text	# Of Signage	Backer	# Of Signage (sort)	Total # Of Signage Type (sort)	Room Description	UCM Note
First Floor:																							
/				10	00	0228		110			371		110		15	15 (EXTERIOR)	110	1	1	1		ACTIVE STORAGE	
/				10	00	0228		110					110			7	ASSISTIVE LISTENING SYSTEM AVAILABLE	1		1		ACTIVE STORAGE	
/				10	00	0228		120			2041		120A		1	21 (EXTERIOR)	120	1	1	1		STUDENT SERVICES SUITE	
/				10	00	0228		120					120A		12	12 (EXTERIOR)	ISA symbol	1	1	1		STUDENT SERVICES SUITE	
/				10	00	0228		120					120A		40	40 (EXTERIOR)	NO SMOKING	1	1	1		STUDENT SERVICES SUITE	Final location to be determined.
/				10	00	0228		120					120A		8	8	EXIT	1	1	1		STUDENT SERVICES SUITE	
/				10	00	0228		120					120A			9A		1		1		STUDENT SERVICES SUITE	Frame for evacuation plan.
/				10	00	0228		120					120B		1	21 (EXTERIOR)	120	1	1	1		STUDENT SERVICES SUITE	
/				10	00	0228		120					120B		12	12 (EXTERIOR)	ISA symbol	1	1	1		STUDENT SERVICES SUITE	
/				10	00	0228		120					120B		40	40 (EXTERIOR)	NO SMOKING	1	1	1		STUDENT SERVICES SUITE	Final location to be determined.
/				10	00	0228		120					120B		8	8	EXIT	1	1	1		STUDENT SERVICES SUITE	
/				10	00	0228		120					120B		19	19	MAXIMUM OCCUPANCY...142	1		1		STUDENT SERVICES SUITE	
/				10	00	0228		120					120B		7	7	ASSISTIVE LISTENING SYSTEM AVAILABLE	1		1		STUDENT SERVICES SUITE	
/				10	00	0228		120					120B			9A		1		1		STUDENT SERVICES SUITE	Frame for evacuation plan.
/				10	00	0228		130			2196		130A		1	21 (EXTERIOR)	130	1	1	1		STUDENT SERVICES SUITE	
/				10	00	0228		130					130A		12	12 (EXTERIOR)	ISA symbol	1	1	1		STUDENT SERVICES SUITE	
/				10	00	0228		130					130A		40	40 (EXTERIOR)	NO SMOKING	1	1	1		STUDENT SERVICES SUITE	Final location to be determined.
/				10	00	0228		130					130A		8	8	EXIT	1	1	1		STUDENT SERVICES SUITE	
/				10	00	0228		130					130A			9A		1		1		STUDENT SERVICES SUITE	Frame for evacuation plan.
/				10	00	0228		130					130B		1	21 (EXTERIOR)	130	1	1	1		STUDENT SERVICES SUITE	
/				10	00	0228		130					130B		12	12 (EXTERIOR)	ISA symbol	1	1	1		STUDENT SERVICES SUITE	
/				10	00	0228		130					130B		40	40 (EXTERIOR)	NO SMOKING	1	1	1		STUDENT SERVICES SUITE	Final location to be determined.
/				10	00	0228		130					130B		8	8	EXIT	1	1	1		STUDENT SERVICES SUITE	
/				10	00	0228		130					130B		19	19	MAXIMUM OCCUPANCY...145	1		1		STUDENT SERVICES SUITE	
/				10	00	0228		130					130B		7	7	ASSISTIVE LISTENING SYSTEM AVAILABLE	1		1		STUDENT SERVICES SUITE	
/				10	00	0228		130					130B			9A		1		1		STUDENT SERVICES SUITE	Frame for evacuation plan.
/				10	00	0228		150			524		150		15	15	150	1		1		ACTIVE STORAGE	
/				10	00	0228		150					150		12	12 (EXTERIOR)	ISA symbol	1	1	1		ACTIVE STORAGE	
/				10	00	0228		155			235		155		15 & 50	1A	155...FIRE SPRINKLER...RISER INSIDE	1		1		JANITOR STORAGE	Combine the 2 signs.
/				10	00	0228		155					155			22C		4		4		JANITOR STORAGE	8.5"Wx11"H insert for Annunciation Maps.
/				10	00	0228		160			2921		160 A		1	21 (EXTERIOR)	160	1	1	1		GENERAL ASSEMBLY	
/				10	00	0228		160					160 A		12	12 (EXTERIOR)	ISA symbol	1	1	1		GENERAL ASSEMBLY	
/				10	00	0228		160					160 A		40	40 (EXTERIOR)						GENERAL ASSEMBLY	Final location to be determined.
/				10	00	0228		160					160 A		8	8	EXIT	1	1	1		GENERAL ASSEMBLY	
/				10	00	0228		160					160 A			9A		1	1	1		GENERAL ASSEMBLY	Frame for evacuation plan.
/				10	00	0228		160					160B		1	21 (EXTERIOR)	160	1	1	1		GENERAL ASSEMBLY	
/				10	00	0228		160					160B		12	12 (EXTERIOR)	ISA symbol	1	1	1		GENERAL ASSEMBLY	
/				10	00	0228		160					160B		40	40 (EXTERIOR)						GENERAL ASSEMBLY	Final location to be determined.
/				10	00	0228		160					160B		8	8	EXIT	1	1	1		GENERAL ASSEMBLY	
/				10	00	0228		160					160B		19	19	MAXIMUM OCCUPANCY...160	1		1		GENERAL ASSEMBLY	
/				10	00	0228		160					160B		7	7	ASSISTIVE LISTENING SYSTEM AVAILABLE	1		1		GENERAL ASSEMBLY	
/				10	00	0228		160					160B			9A		1	1	1		GENERAL ASSEMBLY	Frame for evacuation plan.



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Student Services Building (0228)-Interior Signage Schedule

March 11, 2013

Project Schedule: Pavilion: All Interior Room Identification Signs must be fabricated and ready for installation by Thursday June 13, 2013. The Installation date may be varied and needs to be coordinated.  
Illuminated Exterior Building Monument Sign must be fabricated and ready for installation by Friday July 12, 2013. The installation date may be varied and needs to be coordinated.  
3-Story Building: All Interior Room Identification Signs must be fabricated and ready for installation by Sunday September 15, 2013. The Installation date may be varied and needs to be coordinated.

Note 1: IF INSTALLER IS NOT SURE OF THE PLACEMENT FOR THE SIGNAGE, PLEASE CHECK WITH UNIVERSITY REPRESENTATIVE.  
Note 2: Interior Signage color is to match the Campus Standard Interior Signage Color: Signage Copy Color is Benjamin Moore, branchport brown, Background Color is Silver/Dark Rehein.

Note 3: For Interior Signage Installation, all signs shall be mounted using double sided vinyl tape and silicone adhesive.

					Building # (CANN)	SFX	Room	SFX	New Room #	Assignable Area (ASF)	Non-Assignable Area (NASF)	Door Number	New Door Number	Signage Reference # On Drawing	Signage Type	Signage Text	# Of Signage	Backer	# Of Signage (sort)	Total # Of Signage Type (sort)	Room Description	UCM Note
I				10	00	0228	170			2921		170 A		1	21 (EXTERIOR)	170	1	1	1		GENERAL ASSEMBLY	
I				10	00	0228	170					170 A		12	12 (EXTERIOR)	ISA symbol	1	1	1		GENERAL ASSEMBLY	
I				10	00	0228	170					170 A		40							GENERAL ASSEMBLY	No Sign here.
I				10	00	0228	170					170 A		8	8	EXIT	1	1	1		GENERAL ASSEMBLY	
I				10	00	0228	170					170 A		19	19	MAXIMUM OCCUPANCY...160	1		1		GENERAL ASSEMBLY	
I				10	00	0228	170					170 A		7	7	ASSISTIVE LISTENING SYSTEM AVAILABLE	1		1		GENERAL ASSEMBLY	
I				10	00	0228	170					170 A			9A		1	1	1		GENERAL ASSEMBLY	Frame for evacuation plan.
I				10	00	0228	170					170B		1	21 (EXTERIOR)	170	1	1	1		GENERAL ASSEMBLY	
I				10	00	0228	170					170B		12	12 (EXTERIOR)	ISA symbol	1	1	1		GENERAL ASSEMBLY	
I				10	00	0228	170					170B		40							GENERAL ASSEMBLY	No Sign here.
I				10	00	0228	170					170B		8	8	EXIT	1	1	1		GENERAL ASSEMBLY	
I				10	00	0228	170					170B			9A		1	1	1		GENERAL ASSEMBLY	Frame for evacuation plan.
I				10	00	0228	1C2				30										HALLWAY	
I				10	00	0228	1C3				89	1C3		15	3 (EXTERIOR)	ROOM 1M1 & 1U1...INSIDE	1		1		VEST	
I				10	00	0228	1C3					1C3			8	EXIT	1		1		VEST	
I				10	00	0228	1C4				129	1C4		1	3 (EXTERIOR)	ROOM 150 & 155... INSIDE	1		1		VEST	
I				10	00	0228	1C4					1C4			8	EXIT	1		1		VEST	
I				10	00	0228	1C4					1C4		12	12 (EXTERIOR)	ISA symbol	1		1		VEST	
I				10	00	0228	1E1					1E1			1	1E1...ELEVATOR 1	1		1		ELEVATOR-1	
I				10	00	0228	1E1					1E1		9	9A		1		1		ELEVATOR-1	Frame for evacuation plan.
I				10	00	0228	1E1					1E1		10	10 (EXTERIOR)	IN CASE OF FIRE, USE STAIRWAY	1		1		ELEVATOR-1	
I				10	00	0228	1M1				209	1M1		15	15	1M1	1		1		ELECTRICAL RM	
I				10	00	0228	1M2				66	1M2		15	15 (EXTERIOR)	1M2	1		1		ELEV RM	
I				10	00	0228	1M3				26	160C		15	15	1M3	1		1		ELEC CLOSET	
I				10	00	0228	1M3					160C		8A	8A	EXIT ROUTE	1		1		ELEC CLOSET	
I				10	00	0228	1S1					1S1		13	13B (EXTERIOR)	STAIR 1...NO ROOF ACCESS...1...1 THROUGH 3	1		1		STAIR-1	The overall size for the sign needs to be 12"Wx18"H. Needs to include the "Star" in the sign.
I				10	00	0228	1S1					1S1			9A		1		1		STAIR-1	Frame for evacuation plan.
I				10	00	0228	1S2					1S2		13	13B (EXTERIOR)	STAIR 2...NO ROOF ACCESS...1...1 THROUGH 3	1		1		STAIR-2	The overall size for the sign needs to be 12"Wx18"H. Needs to include the "Star" in the sign.
I				10	00	0228	1S2					1S2			9A		1		1		STAIR-2	Frame for evacuation plan.
I				10	00	0228	1T1				286	1T1		6	6 (WOMEN)	WOMEN	1		1		WOMEN'S RESTRM	Sign on wall, install with silicon and double side tape.
I				10	00	0228	1T1					1T1		4	4 (WOMEN)	WOMEN	1		1		WOMEN'S RESTRM	Sign on door, install with silicon and double side tape.
I				10	00	0228	1T1					1T1			15A (EXTERIOR)	1T1	1		1		WOMEN'S RESTRM	Make this sign to be 8"Lx4"H, only show room number and Braille.
I				10	00	0228	1T2				282	1T2		6	6 (MEN)	MEN	1		1		MEN'S RESTRM	Sign on wall, install with silicon and double side tape.
I				10	00	0228	1T2					1T2		4	4 (MEN)	MEN	1		1		MEN'S RESTRM	Sign on door, install with silicon and double side tape.
I				10	00	0228	1T2					1T2			15A (EXTERIOR)	1T2	1		1		MEN'S RESTRM	Make this sign to be 8"Lx4"H, only show room number and Braille.
I				10	00	0228	1U1				117	1U1		15	15	1U1	1		1		TELECOM RM	
I				10	00	0228	1U2				30	120C		15	15	1U2	1		1		AV CABINET	
I				10	00	0228	1U2					120C		8A	8A	EXIT ROUTE	1		1		AV CABINET	
I				10	00	0228	1U3				40	130C		15	15	1U3	1		1		AV CABINET	
I				10	00	0228	1U3					130C		8A	8A	EXIT ROUTE	1		1		AV CABINET	
I				10	00	0228	1U4				41	160D		15	15	1U4	1		1		A.V. CABINET	
I				10	00	0228	1U5				41	170D		15	15	1U5	1		1		TELECOM. & SECURITY	
I				10	00	0228	1U5					170D		8A	8A	EXIT ROUTE	1		1		TELECOM. & SECURITY	

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Student Services Building (0228)-Interior Signage Schedule

March 11, 2013

Project Schedule: Pavilion: All Interior Room Identification Signs must be fabricated and ready for installation by Thursday June 13, 2013. The Installation date may be varied and needs to be coordinated.  
Illuminated Exterior Building Monument Sign must be fabricated and ready for installation by Friday July 12, 2013. The installation date may be varied and needs to be coordinated.  
3-Story Building: All Interior Room Identification Signs must be fabricated and ready for installation by Sunday September 15, 2013. The Installation date may be varied and needs to be coordinated.

Note 1: IF INSTALLER IS NOT SURE OF THE PLACEMENT FOR THE SIGNAGE, PLEASE CHECK WITH UNIVERSITY REPRESENTATIVE.  
Note 2: Interior Signage color is to match the Campus Standard Interior Signage Color: Signage Copy Color is Benjamin Moore, branchport brown, Background Color is Silver/Dark Rehein.

Note 3: For Interior Signage Installation, all signs shall be mounted using double sided vinyl tape and silicone adhesive.

					Building # (CANN)	SFX	Room	SFX	New Room #	Assignable Area (ASF)	Non-Assignable Area (NASF)	Door Number	New Door Number	Signage Reference # On Drawing	Signage Type	Signage Text	# Of Signage	Backer	# Of Signage (sort)	Total # Of Signage Type (sort)	Room Description	UCM Note
/			10	00	0228		1U6				25	170C		15	15	1U6	1		1		A.V. CABINET	
/			10	00	0228		1U7				15	160E		15 & 50	1A	1U7...FIRE SPRINKLER...RISER INSIDE	1		1		FIRE SPRINKLER CLOSET	
/			10	00	0228		1U7					160E			22C		4		4		FIRE SPRINKLER CLOSET	8.5"Wx11"H insert for Annunciation Maps.
											Add Restroom Directional signs:				5 (EXTERIOR)	ACCESSIBLE RESTROOMS (left arrow)	5		5			
															5 (EXTERIOR)	ACCESSIBLE RESTROOMS (right arrow)	5		5			
Second Floor:																						
/			10	00	0228		211			118		214 to 2C6	211	2	2 (EXTERIOR)	211	1		1		OFFICE	Door location was moved. Door number was given as 2C6 but need to be changed to 211.
/			10	00	0228		211					214	211	2	2 (EXTERIOR)	211	1		1		OFFICE	A new door entrance was created between room 211 and 213, door number was given as 211 but need to be changed to 211A.
/			10	00	0228		212			123		212		2	2	212	1	1	1		OFFICE	
/			10	00	0228		213			119		213		2	15	213	1	1	1		OFFICE	
/			10	00	0228		213					214	211A		2	213	1		1		OFFICE	A new door entrance was created between room 211 and 213, door number was given as 211 but need to be changed to 211A.
/			10	00	0228		214			120		214		2	2	214	1	1	1		OFFICE	
/			10	00	0228		215			120		215		2	2	215	1	1	1		OFFICE	
/			10	00	0228		216			120		216		2	2	216	1	1	1		OFFICE	
/			10	00	0228		217			303		217		2	1	217...CONFERENCE ROOM	1	1	1		CONFERENCE RM	
/			10	00	0228		217					217		19							CONFERENCE RM	No Sign here.
/			10	00	0228		217					217		7	7	ASSISTIVE LISTENING SYSTEM AVAILABLE	1		1		CONFERENCE RM	
/			10	00	0228		220			100		220		1	2	220	1	1	1		WORK RM	
/			10	00	0228		221			119		221		2	2	221	1	1	1		OFFICE	
/			10	00	0228		222			105		222		2	2	222	1	1	1		OFFICE	
/			10	00	0228		223			105		223		2	2	223	1	1	1		OFFICE	
/			10	00	0228		224			105		224		2	2	224	1	1	1		OFFICE	
/			10	00	0228		225			105		225		2	2	225	1	1	1		OFFICE	
/			10	00	0228		226			103		226		2	2	226	1	1	1		OFFICE	
/			10	00	0228		230			222		230A		1	2 (EXTERIOR)	230	1	1	1		RECEPTION / ADMIN	
/			10	00	0228		230					230A		8A	8A	EXIT ROUTE	1		1		RECEPTION / ADMIN	
/			10	00	0228		230					230A			9A		1		1		RECEPTION / ADMIN	Frame for evacuation plan.
/			10	00	0228		230					230B		1	2 (EXTERIOR)	230	1	1	1		RECEPTION / ADMIN	
/			10	00	0228		230					230B		8A	8A	EXIT ROUTE	1		1		RECEPTION / ADMIN	
/			10	00	0228		230					230B			9A		1		1		RECEPTION / ADMIN	Frame for evacuation plan.
/			10	00	0228		231			123		231		2	2	231	1	1	1		OFFICE	
/			10	00	0228		233			120		233		2	2	233	1	1	1		OFFICE	
/			10	00	0228		234			120		234		2	2	234	1	1	1		OFFICE	
/			10	00	0228		235			120		235		2	2	235	1	1	1		OFFICE	
/			10	00	0228		236			120		236		2	2	236	1	1	1		OFFICE	
/			10	00	0228		237			120		237		2	2	237	1	1	1		OFFICE	
/			10	00	0228		238			434		238		2	1	238...CONFERENCE ROOM	1	1	1		CONFERENCE ROOM	
/			10	00	0228		238					238		19							CONFERENCE ROOM	No Sign here.

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Student Services Building (0228)-Interior Signage Schedule

March 11, 2013

**Project Schedule:**      **Pavilion:** All Interior Room Identification Signs must be fabricated and ready for installation by Thursday June 13, 2013. The Installation date may be varied and needs to be coordinated.  
Illuminated Exterior Building Monument Sign must be fabricated and ready for installation by Friday July 12, 2013. The installation date may be varied and needs to be coordinated.  
**3-Story Building:** All Interior Room Identification Signs must be fabricated and ready for installation by Sunday September 15, 2013. The Installation date may be varied and needs to be coordinated.

**Note 1:** IF INSTALLER IS NOT SURE OF THE PLACEMENT FOR THE SIGNAGE, PLEASE CHECK WITH UNIVERSITY REPRESENTATIVE.  
**Note 2:** Interior Signage color is to match the Campus Standard Interior Signage Color: Signage Copy Color is Benjamin Moore, branchport brown, Background Color is Silver/Dark Rehein.

**Note 3:** For Interior Signage Installation, all signs shall be mounted using double sided vinyl tape and silicone adhesive.

					Building # (CANN)	SFX	Room	SFX	New Room #	Assignable Area (ASF)	Non-Assignable Area (NASF)	Door Number	New Door Number	Signage Reference # On Drawing	Signage Type	Signage Text	# Of Signage	Backer	# Of Signage (sort)	Total # Of Signage Type (sort)	Room Description	UCM Note
/			10	00	0228		238					238		7	7	ASSISTIVE LISTENING SYSTEM AVAILABLE	1		1		CONFERENCE ROOM	
/			10	00	0228		239			120		239		2	2	239	1	1	1		OFFICE	
/			10	00	0228		240			120		240		2	2	240	1	1	1		OFFICE	
/			10	00	0228		242			100		242		1	2	242	1	1	1		COPY RM	
/			10	00	0228		250			522		250-to-2C4	250	1	2 (EXTERIOR)	250	1	1	1		ACADEMIC SUPPORT	After the Bulletin 017, the door number become 2C4 but it needs to become back to door number 250.
/			10	00	0228		250					250		8A							ACADEMIC SUPPORT	No Sign here.
/			10	00	0228		250					250		19							ACADEMIC SUPPORT	No Sign here.
/			10	00	0228		250					250		7	7	ASSISTIVE LISTENING SYSTEM AVAILABLE	1		1		ACADEMIC SUPPORT	
/			10	00	0228		255			270		255-to-2-C7	255		2 (EXTERIOR)	255	1	1	1		GROUP STUDY-/TUTORIAL-REFLECTION ROOM	After the Bulletin 017, the door number become 2C7 but it needs to become back to door number 255.
/			10	00	0228		255					255		19							GROUP STUDY-/TUTORIAL-REFLECTION ROOM	No Sign here.
/			10	00	0228		255					255		7	7	ASSISTIVE LISTENING SYSTEM AVAILABLE	1		1		GROUP STUDY-/TUTORIAL-REFLECTION ROOM	
/			10	00	0228		2C2				97	2C2		1	3 (EXTERIOR)	RESTROOM 2T1 & 2T2... AND 2J1 & 2T3 INSIDE	1	1	1		HALLWAY	
/			10	00	0228		2C2					2C2			8A	EXIT ROUTE	1		1		HALLWAY	
/			10	00	0228		2C3				89	2C3		15	3 (EXTERIOR)	ROOM 2M1 & 2U1...INSIDE	1	1	1		VEST	
/			10	00	0228		2C3					2C3			8A	EXIT ROUTE	1		1		VEST	
/			10	00	0228		2C4				92	2C4	250								VEST	After the Bulletin 017, the door number become 2C4 but it needs to become back to door number 250.
/			10	00	0228		2C5				169	2C5		1	16 (EXTERIOR)	PLEASE USE...MAIN ENTRANCE...AT ROOM 230	1	1	1		HALLWAY	
/			10	00	0228		2C5					2C5		8A	8A	EXIT ROUTE	1		1		HALLWAY	
/			10	00	0228		2C6				115										HALLWAY	
/			10	00	0228		2C7				115	2C7	255								HALLWAY	After the Bulletin 017, the door number become 2C7 but it needs to become back to door number 255.
/			10	00	0228		2C8				364										HALLWAY	
/			10	00	0228		2E1					2E1			1	2E1...ELEVATOR 1	1		1		ELEVATOR-1	
/			10	00	0228		2E1					2E1		9	9A		1		1		ELEVATOR-1	Frame for evacuation plan.
/			10	00	0228		2E1					2E1		10	10 (EXTERIOR)	IN CASE OF FIRE, USE STAIRWAY	1		1		ELEVATOR-1	
/			10	00	0228		2J1				51	2J1		15	1	2J1...CUSTODIAN	1		1		JC	
/			10	00	0228		2M1				61	2M1		15	15	2M1	1		1		ELEC RM	
/			10	00	0228		2S1					2S1		13	13B (EXTERIOR)	STAIR 1...NO ROOF ACCESS...2...1 THROUGH 3	1		1		STAIR-1	The overall size for the sign needs to be 12"Wx18"H. Do not include the "Star" in the sign.
/			10	00	0228		2S1					2S1			9A		1		1		STAIR-1	Frame for evacuation plan.
/			10	00	0228		2S1					2S1			3 (EXTERIOR)	STAIR 1...EXIT STAIR DOWN	1		1		STAIR-1	
/			10	00	0228		2S2					2S2		13	13B (EXTERIOR)	STAIR 2...NO ROOF ACCESS...2...1 THROUGH 3	1		1		STAIR-2	The overall size for the sign needs to be 12"Wx18"H. Do not include the "Star" in the sign.
/			10	00	0228		2S2					2S2			9A		1		1		STAIR-2	Frame for evacuation plan.
/			10	00	0228		2S2					2S2			3 (EXTERIOR)	STAIR 2...EXIT STAIR DOWN	1		1		STAIR-2	
/			10	00	0228		2T1				194	2T1		6	6 (WOMEN)	WOMEN	1		1		WOMEN'S RESTRM	Sign on wall, install with silicon and double side tape.
/			10	00	0228		2T1					2T1		4	4 (WOMEN)	WOMEN	1		1		WOMEN'S RESTRM	Sign on door, install with silicon and double side tape.
/			10	00	0228		2T1					2T1			15A	2T1	1		1		WOMEN'S RESTRM	Make this sign to be 8"Lx4"H, only show room number and Braille.
/			10	00	0228		2T2				194	2T2		6	6 (MEN)	MEN	1		1		MEN'S RESTRM	Sign on wall, install with silicon and double side tape.
/			10	00	0228		2T2					2T2		4	4 (MEN)	MEN	1		1		MEN'S RESTRM	Sign on door, install with silicon and double side tape.

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Student Services Building (0228)-Interior Signage Schedule

March 11, 2013

Project Schedule: Pavilion: All Interior Room Identification Signs must be fabricated and ready for installation by Thursday June 13, 2013. The Installation date may be varied and needs to be coordinated.  
Illuminated Exterior Building Monument Sign must be fabricated and ready for installation by Friday July 12, 2013. The installation date may be varied and needs to be coordinated.  
3-Story Building: All Interior Room Identification Signs must be fabricated and ready for installation by Sunday September 15, 2013. The Installation date may be varied and needs to be coordinated.

Note 1: IF INSTALLER IS NOT SURE OF THE PLACEMENT FOR THE SIGNAGE, PLEASE CHECK WITH UNIVERSITY REPRESENTATIVE.  
Note 2: Interior Signage color is to match the Campus Standard Interior Signage Color: Signage Copy Color is Benjamin Moore, branchport brown, Background Color is Silver/Dark Rehein.

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					Building # (CANN)	SFX	Room	SFX	New Room #	Assignable Area (ASF)	Non-Assignable Area (NASF)	Door Number	New Door Number	Signage Reference # On Drawing	Signage Type	Signage Text	# Of Signage	Backer	# Of Signage (sort)	Total # Of Signage Type (sort)	Room Description	UCM Note
/				10	00	0228	2T2					2T2			15A	2T2	1		1		MEN'S RESTRM	Make this sign to be 8"Lx4"H, only show room number and Braille.
/				10	00	0228	2T3				76	2T3		6	1	2T3...LACTATION ROOM	1		1		LAC RM	
/				10	00	0228	2T3					2T3			41	BABY CHANGING...TABLE INSIDE	1		1		LAC RM	See graphic.
/				10	00	0228	2U1				115	2U1		15	15	2U1	1		1		TELECOM RM	
/				10	00	0228																
Third Floor:																						
/				10	00	0228	310			3191		3C5		1	2 (EXTERIOR)	310	1	1	1		STUDENT SERVICES SUITE	
/				10	00	0228	310					3C5		8A	8A	EXIT ROUTE	1		1		STUDENT SERVICES SUITE	
/				10	00	0228	310					3C5			9A		1		1		STUDENT SERVICES SUITE	Frame for evacuation plan.
/				10	00	0228	310					3C7		1	2 (EXTERIOR)	310	1	1	1		STUDENT SERVICES SUITE	
/				10	00	0228	310					3C7		8A	8A	EXIT ROUTE	1		1		STUDENT SERVICES SUITE	
/				10	00	0228	310					3C7			9A		1		1		STUDENT SERVICES SUITE	Frame for evacuation plan.
/				10	00	0228	320			483		320		1	2 (EXTERIOR)	320	1	1	1		ACADEMIC SUPPORT	
/				10	00	0228	320					320		8A	8A	EXIT ROUTE	1		1		ACADEMIC SUPPORT	
/				10	00	0228	320					320		19							ACADEMIC SUPPORT	No Sign here.
/				10	00	0228	320					320		7	7	ASSISTIVE LISTENING SYSTEM AVAILABLE	1		1		ACADEMIC SUPPORT	
/				10	00	0228	330			484		330		1	2 (EXTERIOR)	330	1	1	1		ACADEMIC SUPPORT	
/				10	00	0228	330					330		8A	8A	EXIT ROUTE	1		1		ACADEMIC SUPPORT	
/				10	00	0228	330					330		19							ACADEMIC SUPPORT	No Sign here.
/				10	00	0228	330					330		7	7	ASSISTIVE LISTENING SYSTEM AVAILABLE	1		1		ACADEMIC SUPPORT	
/				10	00	0228	340			484		340		1	2 (EXTERIOR)	340	1	1	1		ACADEMIC SUPPORT	
/				10	00	0228	340					340		8A	8A	EXIT ROUTE	1		1		ACADEMIC SUPPORT	
/				10	00	0228	340					340		19							ACADEMIC SUPPORT	No Sign here.
/				10	00	0228	340					340		7	7	ASSISTIVE LISTENING SYSTEM AVAILABLE	1		1		ACADEMIC SUPPORT	
/				10	00	0228	350			547		350A		1	2 (EXTERIOR)	350	1	1	1		GRADUATE STUDENT SERVICES	
/				10	00	0228	350					350A		8A	8A	EXIT ROUTE	1		1		GRADUATE STUDENT SERVICES	
/				10	00	0228	350A			117											KITCHENETTE	
/				10	00	0228	350B			128		350B		2	2	350B	1	1	1		OFFICE	
/				10	00	0228	3C2				97	3C2		1	3 (EXTERIOR)	RESTROOM 3T1 & 3T2... AND 3J1 & 3T3 INSIDE	1	1	1		HALLWAY	
/				10	00	0228	3C2					3C2			8A	EXIT ROUTE	1		1		HALLWAY	
/				10	00	0228	3C7				113	3C7									HALLWAY	
/				10	00	0228	3E1					3E1			1	3E1...ELEVATOR 1	1		1		ELEVATOR-1	
/				10	00	0228	3E1					3E1		9	9A		1		1		ELEVATOR-1	Frame for evacuation plan.
/				10	00	0228	3E1					3E1		10	10 (EXTERIOR)	IN CASE OF FIRE, USE STAIRWAY	1		1		ELEVATOR-1	
/				10	00	0228	3J1				51	3J1		15	1	3J1...CUSTODIAN	1		1		JC	
/				10	00	0228	3M1				21	3M1		15	15	3M1	1		1		ELEC. CL.	
/				10	00	0228	3S1					3S1		13	13B (EXTERIOR)	STAIR 1...NO ROOF ACCESS...3...1 THROUGH 3	1		1		STAIR-1	The overall size for the sign needs to be 12"Wx18"H. Do not include the "Star" in the sign.
/				10	00	0228	3S1					3S1			9A		1		1		STAIR-1	Frame for evacuation plan.
/				10	00	0228	3S1					3S1			3 (EXTERIOR)	STAIR 1...EXIT STAIR DOWN	1		1		STAIR-1	
/				10	00	0228	3S2					3S2		13	13B (EXTERIOR)	STAIR 2...NO ROOF ACCESS...3...1 THROUGH 3	1		1		STAIR-2	The overall size for the sign needs to be 12"Wx18"H. Do not include the "Star" in the sign.
/				10	00	0228	3S2					3S2			9A		1		1		STAIR-2	Frame for evacuation plan.

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Student Services Building (0228)-Interior Signage Schedule

March 11, 2013

Project Schedule: Pavilion: All Interior Room Identification Signs must be fabricated and ready for installation by Thursday June 13, 2013. The Installation date may be varied and needs to be coordinated.  
Illuminated Exterior Building Monument Sign must be fabricated and ready for installation by Friday July 12, 2013. The installation date may be varied and needs to be coordinated.  
3-Story Building: All Interior Room Identification Signs must be fabricated and ready for installation by Sunday September 15, 2013. The Installation date may be varied and needs to be coordinated.

Note 1: IF INSTALLER IS NOT SURE OF THE PLACEMENT FOR THE SIGNAGE, PLEASE CHECK WITH UNIVERSITY REPRESENTATIVE.  
Note 2: Interior Signage color is to match the Campus Standard Interior Signage Color: Signage Copy Color is Benjamin Moore, branchport brown, Background Color is Silver/Dark Rehein.

Note 3: For Interior Signage Installation, all signs shall be mounted using double sided vinyl tape and silicone adhesive.

						Building # (CANN)	SFX	Room	SFX	New Room #	Assignable Area (ASF)	Non-Assignable Area (NASF)	Door Number	New Door Number	Signage Reference # On Drawing	Signage Type	Signage Text	# Of Signage	Backer	# Of Signage (sort)	Total # Of Signage Type (sort)	Room Description	UCM Note
/				10	00	0228		3S2					3S2			3 (EXTERIOR)	STAIR 2...EXIT STAIR DOWN	1		1		STAIR-2	
/				10	00	0228		3S3					3S3		1	1 (EXTERIOR)	3S3...STAIR 3	1		1		STAIR-3	
/				10	00	0228		3S3					3S3			9A		1		1		STAIR-3	Frame for evacuation plan.
/				10	00	0228		3S3					3S3		13A	13B	STAIR 3...ROOF ACCESS...3...3 THROUGH ROOF	1		1		STAIR-3	The overall size for the sign needs to be 12"Wx18"H. Do not include the "Star" in the sign.
/				10	00	0228		3S3					3S3			8A	EXIT ROUTE	1		1		STAIR-3	
/				10	00	0228		3T1				194	3T1		6	6 (WOMEN)	WOMEN	1		1		WOMEN'S RESTRM	Sign on wall, install with silicon and double side tape.
/				10	00	0228		3T1					3T1		4	4 (WOMEN)	WOMEN	1		1		WOMEN'S RESTRM	Sign on door, install with silicon and double side tape.
/				10	00	0228		3T1					3T1			15A	3T1	1		1		WOMEN'S RESTRM	Make this sign to be 8"Lx4"H, only show room number and Braille.
/				10	00	0228		3T2				194	3T2		6	6 (MEN)	MEN	1		1		MEN'S RESTRM	Sign on wall, install with silicon and double side tape.
/				10	00	0228		3T2					3T2		4	4 (MEN)	MEN	1		1		MEN'S RESTRM	Sign on door, install with silicon and double side tape.
/				10	00	0228		3T2					3T2			15A	3T2	1		1		MEN'S RESTRM	Make this sign to be 8"Lx4"H, only show room number and Braille.
/				10	00	0228		3T3				71	3T3			6 (SHOWER)	SHOWER	1		1		SHOWER	
/				10	00	0228		3T3					3T3			4 (SHOWER)	SHOWER	1		1		SHOWER	
/				10	00	0228		3T3					3T3			15A	3T3	1		1		SHOWER	Make this sign to be 8"Lx4"H, only show room number and Braille.
/				10	00	0228																	
Roof:																							
/				10	00	0228		4M2				47	4M2		15	15 (EXTERIOR)	4M2	1		1		MECH. RM.	
/				10	00	0228		4S3				162	4S3		1	1 (EXTERIOR)	4S3...STAIR 3	1		1		STAIR-3	
/				10	00	0228		4S3					4S3			13B	STAIR 3...ROOF ACCESS...ROOF...3 THROUGH ROOF	1		1		STAIR-3	The overall size for the sign needs to be 12"Wx18"H. Do not include the "Star" in the sign.
/				10	00	0228		4S3					4S3			9A		1		1		STAIR-3	Frame for evacuation plan.
/				10	00	0228		4S3					4S3			3 (EXTERIOR)	STAIR 3...EXIT STAIR DOWN	1		1		STAIR-3	
																9A	Evacuation Map holder (17"X11" Landscape insert)	3		3			Frame for evacuation plan.
Total:											20,919 (ASF)	4,108 (NASF)						215	72	215			

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Student Services Building (0228)-Interior Signage Schedule

March 11, 2013

**Project Schedule:**      **Pavilion:** All Interior Room Identification Signs must be fabricated and ready for installation by Thursday June 13, 2013. The Installation date may be varied and needs to be coordinated.

**Illuminated Exterior Building Monument Sign** must be fabricated and ready for installation by Friday July 12, 2013. The installation date may be varied and needs to be coordinated.

**3-Story Building:** All Interior Room Identification Signs must be fabricated and ready for installation by Sunday September 15, 2013. The Installation date may be varied and needs to be coordinated.

**Note 1:** IF INSTALLER IS NOT SURE OF THE PLACEMENT FOR THE SIGNAGE, PLEASE CHECK WITH UNIVERSITY REPRESENTATIVE.

**Note 2:** Interior Signage color is to match the Campus Standard Interior Signage Color: Signage Copy Color is Benjamin Moore, branchport brown, Background Color is Silver/Dark Rehein.

**Note 3:** For Interior Signage Installation, all signs shall be mounted using double sided vinyl tape and silicone adhesive.

						Building # (CANN)	SFX	Room	SFX	New Room #	Assignable Area (ASF)	Non-Assignable Area (NASF)	Door Number	New Door Number	Signage Reference # On Drawing	Signage Type	Signage Text	# Of Signage	Backer	# Of Signage (sort)	Total # Of Signage Type (sort)	Room Description	UCM Note
/			10	00	0228			1E1					1E1			1	1E1...ELEVATOR 1	1		1		ELEVATOR-1	
/			10	00	0228			217			303		217		2	1	217...CONFERENCE ROOM	1	1	1		CONFERENCE RM	
/			10	00	0228			238			434		238		2	1	238...CONFERENCE ROOM	1	1	1		CONFERENCE ROOM	
/			10	00	0228			2E1					2E1			1	2E1...ELEVATOR 1	1		1		ELEVATOR-1	
/			10	00	0228			2J1				51	2J1		15	1	2J1...CUSTODIAN	1		1		JC	
/			10	00	0228			2T3				76	2T3		6	1	2T3...LACTATION ROOM	1		1		LAC RM	
/			10	00	0228			3E1					3E1			1	3E1...ELEVATOR 1	1		1		ELEVATOR-1	
/			10	00	0228			3J1				51	3J1		15	1	3J1...CUSTODIAN	1		1	8	JC	
/			10	00	0228			3S3					3S3		1	1 (EXTERIOR)	3S3...STAIR 3	1		1		STAIR-3	
/			10	00	0228			4S3				162	4S3		1	1 (EXTERIOR)	4S3...STAIR 3	1		1	2	STAIR-3	
/			10	00	0228			155			235		155		15 & 50	1A	155...FIRE SPRINKLER...RISER INSIDE	1		1		JANITOR STORAGE	Combine the 2 signs.
/			10	00	0228			1U7				15	160E		15 & 50	1A	1U7...FIRE SPRINKLER...RISER INSIDE	1		1	2	FIRE SPRINKLER CLOSET	
/			10	00	0228			212			123		212		2	2	212	1	1	1		OFFICE	
/			10	00	0228			213					214	211A		2	213	1		1		OFFICE	A new door entrance was created between room 211 and 213, door number was given as 211 but need to be changed to 211A.
/			10	00	0228			214			120		214		2	2	214	1	1	1		OFFICE	
/			10	00	0228			215			120		215		2	2	215	1	1	1		OFFICE	
/			10	00	0228			216			120		216		2	2	216	1	1	1		OFFICE	
/			10	00	0228			220			100		220		1	2	220	1	1	1		WORK RM	
/			10	00	0228			221			119		221		2	2	221	1	1	1		OFFICE	
/			10	00	0228			222			105		222		2	2	222	1	1	1		OFFICE	
/			10	00	0228			223			105		223		2	2	223	1	1	1		OFFICE	
/			10	00	0228			224			105		224		2	2	224	1	1	1		OFFICE	
/			10	00	0228			225			105		225		2	2	225	1	1	1		OFFICE	
/			10	00	0228			226			103		226		2	2	226	1	1	1		OFFICE	
/			10	00	0228			231			123		231		2	2	231	1	1	1		OFFICE	
/			10	00	0228			233			120		233		2	2	233	1	1	1		OFFICE	
/			10	00	0228			234			120		234		2	2	234	1	1	1		OFFICE	
/			10	00	0228			235			120		235		2	2	235	1	1	1		OFFICE	
/			10	00	0228			236			120		236		2	2	236	1	1	1		OFFICE	
/			10	00	0228			237			120		237		2	2	237	1	1	1		OFFICE	
/			10	00	0228			239			120		239		2	2	239	1	1	1		OFFICE	
/			10	00	0228			240			120		240		2	2	240	1	1	1		OFFICE	
/			10	00	0228			242			100		242		1	2	242	1	1	1		COPY RM	
/			10	00	0228			350B			128		350B		2	2	350B	1	1	1	22	OFFICE	
/			10	00	0228			211			118		211 to 2C6	211	2	2 (EXTERIOR)	211	1		1		OFFICE	Door location was moved. Door number was given as 2C6 but need to be changed to 211.
/			10	00	0228			211					211	211	2	2 (EXTERIOR)	211	1		1		OFFICE	A new door entrance was created between room 211 and 213, door number was given as 211 but need to be changed to 211A.
/			10	00	0228			230			222		230A		1	2 (EXTERIOR)	230	1	1	1		RECEPTION / ADMIN	
/			10	00	0228			230					230B		1	2 (EXTERIOR)	230	1	1	1		RECEPTION / ADMIN	
/			10	00	0228			250			522		250 to 2C4	250	1	2 (EXTERIOR)	250	1	1	1		ACADEMIC SUPPORT	After the Bulletin 017, the door number become 2C4 but it needs to become back to door number 250.
/			10	00	0228			255			270		255 to 2 C7	255		2 (EXTERIOR)	255	1	1	1		GROUP STUDY / TUTORIAL- REFLECTION ROOM	After the Bulletin 017, the door number become 2C7 but it needs to become back to door number 255.



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Student Services Building (0228)-Interior Signage Schedule

March 11, 2013

**Project Schedule:**      **Pavilion:** All Interior Room Identification Signs must be fabricated and ready for installation by Thursday June 13, 2013. The Installation date may be varied and needs to be coordinated.

**Illuminated Exterior Building Monument Sign** must be fabricated and ready for installation by Friday July 12, 2013. The installation date may be varied and needs to be coordinated.

**3-Story Building:** All Interior Room Identification Signs must be fabricated and ready for installation by Sunday September 15, 2013. The Installation date may be varied and needs to be coordinated.

**Note 1:** IF INSTALLER IS NOT SURE OF THE PLACEMENT FOR THE SIGNAGE, PLEASE CHECK WITH UNIVERSITY REPRESENTATIVE.

**Note 2:** Interior Signage color is to match the Campus Standard Interior Signage Color: Signage Copy Color is Benjamin Moore, branchport brown, Background Color is Silver/Dark Rehein.

**Note 3:** For Interior Signage Installation, all signs shall be mounted using double sided vinyl tape and silicone adhesive.

					Building # (CANN)	SFX	Room	SFX	New Room #	Assignable Area (ASF)	Non-Assignable Area (NASF)	Door Number	New Door Number	Signage Reference # On Drawing	Signage Type	Signage Text	# Of Signage	Backer	# Of Signage (sort)	Total # Of Signage Type (sort)	Room Description	UCM Note
/			10	00	0228		310			3191		3C5		1	2 (EXTERIOR)	310	1	1	1		STUDENT SERVICES SUITE	
/			10	00	0228		310					3C7		1	2 (EXTERIOR)	310	1	1	1		STUDENT SERVICES SUITE	
/			10	00	0228		320			483		320		1	2 (EXTERIOR)	320	1	1	1		ACADEMIC SUPPORT	
/			10	00	0228		330			484		330		1	2 (EXTERIOR)	330	1	1	1		ACADEMIC SUPPORT	
/			10	00	0228		340			484		340		1	2 (EXTERIOR)	340	1	1	1		ACADEMIC SUPPORT	
/			10	00	0228		350			547		350A		1	2 (EXTERIOR)	350	1	1	1	12	GRADUATE STUDENT SERVICES	
/			10	00	0228		1C3				89	1C3		15	3 (EXTERIOR)	ROOM 1M1 & 1U1...INSIDE	1		1		VEST	
/			10	00	0228		1C4				129	1C4		1	3 (EXTERIOR)	ROOM 150 & 155... INSIDE	1		1		VEST	
/			10	00	0228		2C2				97	2C2		1	3 (EXTERIOR)	RESTROOM 2T1 & 2T2... AND 2J1 & 2T3 INSIDE	1	1	1		HALLWAY	
/			10	00	0228		2C3				89	2C3		15	3 (EXTERIOR)	ROOM 2M1 & 2U1...INSIDE	1	1	1		VEST	
/			10	00	0228		2S1					2S1			3 (EXTERIOR)	STAIR 1...EXIT STAIR DOWN	1		1		STAIR-1	
/			10	00	0228		2S2					2S2			3 (EXTERIOR)	STAIR 2...EXIT STAIR DOWN	1		1		STAIR-2	
/			10	00	0228		3C2				97	3C2		1	3 (EXTERIOR)	RESTROOM 3T1 & 3T2... AND 3J1 & 3T3 INSIDE	1	1	1		HALLWAY	
/			10	00	0228		3S1					3S1			3 (EXTERIOR)	STAIR 1...EXIT STAIR DOWN	1		1		STAIR-1	
/			10	00	0228		3S2					3S2			3 (EXTERIOR)	STAIR 2...EXIT STAIR DOWN	1		1		STAIR-2	
/			10	00	0228		4S3					4S3			3 (EXTERIOR)	STAIR 3...EXIT STAIR DOWN	1		1	10	STAIR-3	
/			10	00	0228		1T2					1T2		4	4 (MEN)	MEN	1		1		MEN'S RESTRM	Sign on door, install with silicon and double side tape.
/			10	00	0228		2T2					2T2		4	4 (MEN)	MEN	1		1		MEN'S RESTRM	Sign on door, install with silicon and double side tape.
/			10	00	0228		3T2					3T2		4	4 (MEN)	MEN	1		1	3	MEN'S RESTRM	Sign on door, install with silicon and double side tape.
/			10	00	0228		3T3					3T3			4 (SHOWER)	SHOWER	1		1	1	SHOWER	
/			10	00	0228		1T1					1T1		4	4 (WOMEN)	WOMEN	1		1		WOMEN'S RESTRM	Sign on door, install with silicon and double side tape.
/			10	00	0228		2T1					2T1		4	4 (WOMEN)	WOMEN	1		1		WOMEN'S RESTRM	Sign on door, install with silicon and double side tape.
/			10	00	0228		3T1					3T1		4	4 (WOMEN)	WOMEN	1		1	3	WOMEN'S RESTRM	Sign on door, install with silicon and double side tape.
											Add Restroom Directional signs:				5 (EXTERIOR)	ACCESSIBLE RESTROOMS (left arrow)	5		5	5		
															5 (EXTERIOR)	ACCESSIBLE RESTROOMS (right arrow)	5		5	5		
/			10	00	0228		1T2				282	1T2		6	6 (MEN)	MEN	1		1		MEN'S RESTRM	Sign on wall, install with silicon and double side tape.
/			10	00	0228		2T2				194	2T2		6	6 (MEN)	MEN	1		1		MEN'S RESTRM	Sign on wall, install with silicon and double side tape.
/			10	00	0228		3T2				194	3T2		6	6 (MEN)	MEN	1		1	3	MEN'S RESTRM	Sign on wall, install with silicon and double side tape.
/			10	00	0228		3T3				71	3T3			6 (SHOWER)	SHOWER	1		1	1	SHOWER	
/			10	00	0228		1T1				286	1T1		6	6 (WOMEN)	WOMEN	1		1		WOMEN'S RESTRM	Sign on wall, install with silicon and double side tape.
/			10	00	0228		2T1				194	2T1		6	6 (WOMEN)	WOMEN	1		1		WOMEN'S RESTRM	Sign on wall, install with silicon and double side tape.
/			10	00	0228		3T1				194	3T1		6	6 (WOMEN)	WOMEN	1		1	3	WOMEN'S RESTRM	Sign on wall, install with silicon and double side tape.
/			10	00	0228		110					110			7	ASSISTIVE LISTENING SYSTEM AVAILABLE	1		1		ACTIVE STORAGE	
/			10	00	0228		120					120B		7	7	ASSISTIVE LISTENING SYSTEM AVAILABLE	1		1		STUDENT SERVICES SUITE	
/			10	00	0228		130					130B		7	7	ASSISTIVE LISTENING SYSTEM AVAILABLE	1		1		STUDENT SERVICES SUITE	
/			10	00	0228		160					160B		7	7	ASSISTIVE LISTENING SYSTEM AVAILABLE	1		1		GENERAL ASSEMBLY	
/			10	00	0228		170					170 A		7	7	ASSISTIVE LISTENING SYSTEM AVAILABLE	1		1		GENERAL ASSEMBLY	
/			10	00	0228		217					217		7	7	ASSISTIVE LISTENING SYSTEM AVAILABLE	1		1		CONFERENCE RM	

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/			10	00	0228		238					238		7	7	ASSISTIVE LISTENING SYSTEM AVAILABLE	1		1		CONFERENCE ROOM	
/			10	00	0228		250					250		7	7	ASSISTIVE LISTENING SYSTEM AVAILABLE	1		1		ACADEMIC SUPPORT	
/			10	00	0228		255					255		7	7	ASSISTIVE LISTENING SYSTEM AVAILABLE	1		1		<del>GROUP STUDY / TUTORIAL- REFLECTION ROOM</del>	
/			10	00	0228		320					320		7	7	ASSISTIVE LISTENING SYSTEM AVAILABLE	1		1		ACADEMIC SUPPORT	
/			10	00	0228		330					330		7	7	ASSISTIVE LISTENING SYSTEM AVAILABLE	1		1		ACADEMIC SUPPORT	
/			10	00	0228		340					340		7	7	ASSISTIVE LISTENING SYSTEM AVAILABLE	1		1	12	ACADEMIC SUPPORT	
/			10	00	0228		120					120A		8	8	EXIT	1	1	1		STUDENT SERVICES SUITE	
/			10	00	0228		120					120B		8	8	EXIT	1	1	1		STUDENT SERVICES SUITE	
/			10	00	0228		130					130A		8	8	EXIT	1	1	1		STUDENT SERVICES SUITE	
/			10	00	0228		130					130B		8	8	EXIT	1	1	1		STUDENT SERVICES SUITE	
/			10	00	0228		160					160 A		8	8	EXIT	1	1	1		GENERAL ASSEMBLY	
/			10	00	0228		160					160B		8	8	EXIT	1	1	1		GENERAL ASSEMBLY	
/			10	00	0228		170					170 A		8	8	EXIT	1	1	1		GENERAL ASSEMBLY	
/			10	00	0228		170					170B		8	8	EXIT	1	1	1		GENERAL ASSEMBLY	
/			10	00	0228		1C3					1C3			8	EXIT	1		1		VEST	
/			10	00	0228		1C4					1C4			8	EXIT	1		1	10	VEST	
/			10	00	0228		1M3					160C		8A	8A	EXIT ROUTE	1		1		ELEC CLOSET	
/			10	00	0228		1U2					120C		8A	8A	EXIT ROUTE	1		1		AV CABINET	
/			10	00	0228		1U3					130C		8A	8A	EXIT ROUTE	1		1		AV CABINET	
/			10	00	0228		1U5					170D		8A	8A	EXIT ROUTE	1		1		TELECOM. & SECURITY	
/			10	00	0228		230					230A		8A	8A	EXIT ROUTE	1		1		RECEPTION / ADMIN	
/			10	00	0228		230					230B		8A	8A	EXIT ROUTE	1		1		RECEPTION / ADMIN	
/			10	00	0228		2C2					2C2			8A	EXIT ROUTE	1		1		HALLWAY	
/			10	00	0228		2C3					2C3			8A	EXIT ROUTE	1		1		VEST	
/			10	00	0228		2C5					2C5		8A	8A	EXIT ROUTE	1		1		HALLWAY	
/			10	00	0228		310					3C5		8A	8A	EXIT ROUTE	1		1		STUDENT SERVICES SUITE	
/			10	00	0228		310					3C7		8A	8A	EXIT ROUTE	1		1		STUDENT SERVICES SUITE	
/			10	00	0228		320					320		8A	8A	EXIT ROUTE	1		1		ACADEMIC SUPPORT	
/			10	00	0228		330					330		8A	8A	EXIT ROUTE	1		1		ACADEMIC SUPPORT	
/			10	00	0228		340					340		8A	8A	EXIT ROUTE	1		1		ACADEMIC SUPPORT	
/			10	00	0228		350					350A		8A	8A	EXIT ROUTE	1		1		GRADUATE STUDENT SERVICES	
/			10	00	0228		3C2					3C2			8A	EXIT ROUTE	1		1		HALLWAY	
/			10	00	0228		3S3					3S3			8A	EXIT ROUTE	1		1	17	STAIR-3	
/			10	00	0228		120					120A			9A		1		1		STUDENT SERVICES SUITE	Frame for evacuation plan.
/			10	00	0228		120					120B			9A		1		1		STUDENT SERVICES SUITE	Frame for evacuation plan.
/			10	00	0228		130					130A			9A		1		1		STUDENT SERVICES SUITE	Frame for evacuation plan.
/			10	00	0228		130					130B			9A		1		1		STUDENT SERVICES SUITE	Frame for evacuation plan.
/			10	00	0228		160					160 A			9A		1	1	1		GENERAL ASSEMBLY	Frame for evacuation plan.
/			10	00	0228		160					160B			9A		1	1	1		GENERAL ASSEMBLY	Frame for evacuation plan.
/			10	00	0228		170					170 A			9A		1	1	1		GENERAL ASSEMBLY	Frame for evacuation plan.
/			10	00	0228		170					170B			9A		1	1	1		GENERAL ASSEMBLY	Frame for evacuation plan.
/			10	00	0228		1E1					1E1		9	9A		1		1		ELEVATOR-1	Frame for evacuation plan.
/			10	00	0228		1S1					1S1			9A		1		1		STAIR-1	Frame for evacuation plan.



UC MERCED

Student Services Building (0228)-Interior Signage Schedule

March 11, 2013

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/			10	00	0228		1S2					1S2			9A		1		1		STAIR-2	Frame for evacuation plan.
/			10	00	0228		230					230A			9A		1		1		RECEPTION / ADMIN	Frame for evacuation plan.
/			10	00	0228		230					230B			9A		1		1		RECEPTION / ADMIN	Frame for evacuation plan.
/			10	00	0228		2E1					2E1		9	9A		1		1		ELEVATOR-1	Frame for evacuation plan.
/			10	00	0228		2S1					2S1			9A		1		1		STAIR-1	Frame for evacuation plan.
/			10	00	0228		2S2					2S2			9A		1		1		STAIR-2	Frame for evacuation plan.
/			10	00	0228		310					3C5			9A		1		1		STUDENT SERVICES SUITE	Frame for evacuation plan.
/			10	00	0228		310					3C7			9A		1		1		STUDENT SERVICES SUITE	Frame for evacuation plan.
/			10	00	0228		3E1					3E1		9	9A		1		1		ELEVATOR-1	Frame for evacuation plan.
/			10	00	0228		3S1					3S1			9A		1		1		STAIR-1	Frame for evacuation plan.
/			10	00	0228		3S2					3S2			9A		1		1		STAIR-2	Frame for evacuation plan.
/			10	00	0228		3S3					3S3			9A		1		1		STAIR-3	Frame for evacuation plan.
/			10	00	0228		4S3					4S3			9A		1		1		STAIR-3	Frame for evacuation plan.
										Add Restroom Directional signs:					9A	Evacuation Map holder (17"X11" Landscape insert)	3		3	26		Frame for evacuation plan.
/			10	00	0228		1E1					1E1		10	10 (EXTERIOR)	IN CASE OF FIRE, USE STAIRWAY	1		1		ELEVATOR-1	
/			10	00	0228		2E1					2E1		10	10 (EXTERIOR)	IN CASE OF FIRE, USE STAIRWAY	1		1		ELEVATOR-1	
/			10	00	0228		3E1					3E1		10	10 (EXTERIOR)	IN CASE OF FIRE, USE STAIRWAY	1		1	3	ELEVATOR-1	
/			10	00	0228		120					120A		12	12 (EXTERIOR)	ISA symbol	1	1	1		STUDENT SERVICES SUITE	
/			10	00	0228		120					120B		12	12 (EXTERIOR)	ISA symbol	1	1	1		STUDENT SERVICES SUITE	
/			10	00	0228		130					130A		12	12 (EXTERIOR)	ISA symbol	1	1	1		STUDENT SERVICES SUITE	
/			10	00	0228		130					130B		12	12 (EXTERIOR)	ISA symbol	1	1	1		STUDENT SERVICES SUITE	
/			10	00	0228		150					150		12	12 (EXTERIOR)	ISA symbol	1	1	1		ACTIVE STORAGE	
/			10	00	0228		160					160 A		12	12 (EXTERIOR)	ISA symbol	1	1	1		GENERAL ASSEMBLY	
/			10	00	0228		160					160B		12	12 (EXTERIOR)	ISA symbol	1	1	1		GENERAL ASSEMBLY	
/			10	00	0228		170					170 A		12	12 (EXTERIOR)	ISA symbol	1	1	1		GENERAL ASSEMBLY	
/			10	00	0228		170					170B		12	12 (EXTERIOR)	ISA symbol	1	1	1		GENERAL ASSEMBLY	
/			10	00	0228		1C4					1C4		12	12 (EXTERIOR)	ISA symbol	1		1	10	VEST	
/			10	00	0228		1S1					1S1		13	13B (EXTERIOR)	STAIR 1...NO ROOF ACCESS...1...1 THROUGH 3	1		1		STAIR-1	The overall size for the sign needs to be 12"Wx18"H. Needs to include the "Star" in the sign.
/			10	00	0228		1S2					1S2		13	13B (EXTERIOR)	STAIR 2...NO ROOF ACCESS...1...1 THROUGH 3	1		1	2	STAIR-2	The overall size for the sign needs to be 12"Wx18"H. Needs to include the "Star" in the sign.
/			10	00	0228		3S3					3S3		13A	13B	STAIR 3...ROOF ACCESS...3...3 THROUGH ROOF	1		1		STAIR-3	The overall size for the sign needs to be 12"Wx18"H. Do not include the "Star" in the sign.
/			10	00	0228		4S3					4S3			13B	STAIR 3...ROOF ACCESS...ROOF...3 THROUGH ROOF	1		1	2	STAIR-3	The overall size for the sign needs to be 12"Wx18"H. Do not include the "Star" in the sign.
/			10	00	0228		2S1					2S1		13	13B (EXTERIOR)	STAIR 1...NO ROOF ACCESS...2...1 THROUGH 3	1		1		STAIR-1	The overall size for the sign needs to be 12"Wx18"H. Do not include the "Star" in the sign.
/			10	00	0228		3S1					3S1		13	13B (EXTERIOR)	STAIR 1...NO ROOF ACCESS...3...1 THROUGH 3	1		1		STAIR-1	The overall size for the sign needs to be 12"Wx18"H. Do not include the "Star" in the sign.
/			10	00	0228		2S2					2S2		13	13B (EXTERIOR)	STAIR 2...NO ROOF ACCESS...2...1 THROUGH 3	1		1		STAIR-2	The overall size for the sign needs to be 12"Wx18"H. Do not include the "Star" in the sign.

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Student Services Building (0228)-Interior Signage Schedule

March 11, 2013

**Project Schedule:**      **Pavilion:** All Interior Room Identification Signs must be fabricated and ready for installation by Thursday June 13, 2013. The Installation date may be varied and needs to be coordinated.

**Illuminated Exterior Building Monument Sign** must be fabricated and ready for installation by Friday July 12, 2013. The installation date may be varied and needs to be coordinated.

**3-Story Building:** All Interior Room Identification Signs must be fabricated and ready for installation by Sunday September 15, 2013. The Installation date may be varied and needs to be coordinated.

**Note 1:** IF INSTALLER IS NOT SURE OF THE PLACEMENT FOR THE SIGNAGE, PLEASE CHECK WITH UNIVERSITY REPRESENTATIVE.

**Note 2:** Interior Signage color is to match the Campus Standard Interior Signage Color: Signage Copy Color is Benjamin Moore, branchport brown, Background Color is Silver/Dark Rehein.

**Note 3:** For Interior Signage Installation, all signs shall be mounted using double sided vinyl tape and silicone adhesive.

					Building # (CANN)	SFX	Room	SFX	New Room #	Assignable Area (ASF)	Non-Assignable Area (NASF)	Door Number	New Door Number	Signage Reference # On Drawing	Signage Type	Signage Text	# Of Signage	Backer	# Of Signage (sort)	Total # Of Signage Type (sort)	Room Description	UCM Note
/			10	00	0228		3S2					3S2		13	13B (EXTERIOR)	STAIR 2...NO ROOF ACCESS...3...1 THROUGH 3	1		1	4	STAIR-2	The overall size for the sign needs to be 12"Wx18"H. Do not include the "Star" in the sign.
/			10	00	0228		150			524		150		15	15	150	1		1		ACTIVE STORAGE	
/			10	00	0228		1M1				209	1M1		15	15	1M1	1		1		ELECTRICAL RM	
/			10	00	0228		1M3				26	160C		15	15	1M3	1		1		ELEC CLOSET	
/			10	00	0228		1U1				117	1U1		15	15	1U1	1		1		TELECOM RM	
/			10	00	0228		1U2				30	120C		15	15	1U2	1		1		AV CABINET	
/			10	00	0228		1U3				40	130C		15	15	1U3	1		1		AV CABINET	
/			10	00	0228		1U4				41	160D		15	15	1U4	1		1		A.V. CABINET	
/			10	00	0228		1U5				41	170D		15	15	1U5	1		1		TELECOM. & SECURITY	
/			10	00	0228		1U6				25	170C		15	15	1U6	1		1		A.V. CABINET	
/			10	00	0228		213			119		213		2	15	213	1	1	1		OFFICE	
/			10	00	0228		2M1				61	2M1		15	15	2M1	1		1		ELEC RM	
/			10	00	0228		2U1				115	2U1		15	15	2U1	1		1		TELECOM RM	
/			10	00	0228		3M1				21	3M1		15	15	3M1	1		1	13	ELEC. CL.	
/			10	00	0228		110			371		110		15	15 (EXTERIOR)	110	1	1	1		ACTIVE STORAGE	
/			10	00	0228		1M2				66	1M2		15	15 (EXTERIOR)	1M2	1		1		ELEV RM	
/			10	00	0228		4M2				47	4M2		15	15 (EXTERIOR)	4M2	1		1	3	MECH. RM.	
/			10	00	0228		2T1					2T1			15A	2T1	1		1		WOMEN'S RESTRM	Make this sign to be 8"Lx4"H, only show room number and Braille.
/			10	00	0228		2T2					2T2			15A	2T2	1		1		MEN'S RESTRM	Make this sign to be 8"Lx4"H, only show room number and Braille.
/			10	00	0228		3T1					3T1			15A	3T1	1		1		WOMEN'S RESTRM	Make this sign to be 8"Lx4"H, only show room number and Braille.
/			10	00	0228		3T2					3T2			15A	3T2	1		1		MEN'S RESTRM	Make this sign to be 8"Lx4"H, only show room number and Braille.
/			10	00	0228		3T3					3T3			15A	3T3	1		1	5	SHOWER	Make this sign to be 8"Lx4"H, only show room number and Braille.
/			10	00	0228		1T1					1T1			15A (EXTERIOR)	1T1	1		1		WOMEN'S RESTRM	Make this sign to be 8"Lx4"H, only show room number and Braille.
/			10	00	0228		1T2					1T2			15A (EXTERIOR)	1T2	1		1	2	MEN'S RESTRM	Make this sign to be 8"Lx4"H, only show room number and Braille.
/			10	00	0228		2C5				169	2C5		1	16 (EXTERIOR)	PLEASE USE...MAIN ENTRANCE...AT ROOM 230	1	1	1	1	HALLWAY	
/			10	00	0228		120					120B		19	19	MAXIMUM OCCUPANCY...142	1		1		STUDENT SERVICES SUITE	
/			10	00	0228		130					130B		19	19	MAXIMUM OCCUPANCY...145	1		1		STUDENT SERVICES SUITE	
/			10	00	0228		160					160B		19	19	MAXIMUM OCCUPANCY...160	1		1		GENERAL ASSEMBLY	
/			10	00	0228		170					170 A		19	19	MAXIMUM OCCUPANCY...160	1		1	4	GENERAL ASSEMBLY	
/			10	00	0228		120			2041		120A		1	21 (EXTERIOR)	120	1	1	1		STUDENT SERVICES SUITE	
/			10	00	0228		120					120B		1	21 (EXTERIOR)	120	1	1	1		STUDENT SERVICES SUITE	
/			10	00	0228		130			2196		130A		1	21 (EXTERIOR)	130	1	1	1		STUDENT SERVICES SUITE	
/			10	00	0228		130					130B		1	21 (EXTERIOR)	130	1	1	1		STUDENT SERVICES SUITE	
/			10	00	0228		160			2921		160 A		1	21 (EXTERIOR)	160	1	1	1		GENERAL ASSEMBLY	
/			10	00	0228		160					160B		1	21 (EXTERIOR)	160	1	1	1		GENERAL ASSEMBLY	
/			10	00	0228		170			2921		170 A		1	21 (EXTERIOR)	170	1	1	1		GENERAL ASSEMBLY	
/			10	00	0228		170					170B		1	21 (EXTERIOR)	170	1	1	1	8	GENERAL ASSEMBLY	
/			10	00	0228		155					155			22C		4		4		JANITOR STORAGE	8.5"Wx11"H insert for Annunciation Maps.
/			10	00	0228		1U7					160E			22C		4		4	8	FIRE SPRINKLER CLOSET	8.5"Wx11"H insert for Annunciation Maps.
/			10	00	0228		120					120A		40	40 (EXTERIOR)	NO SMOKING	1	1	1		STUDENT SERVICES SUITE	Final location to be determined.
/			10	00	0228		120					120B		40	40 (EXTERIOR)	NO SMOKING	1	1	1		STUDENT SERVICES SUITE	Final location to be determined.

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Student Services Building (0228)-Interior Signage Schedule

March 11, 2013

**Project Schedule:**      **Pavilion:** All Interior Room Identification Signs must be fabricated and ready for installation by Thursday June 13, 2013. The Installation date may be varied and needs to be coordinated.

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/			10	00	0228			130					130A		40	40 (EXTERIOR)	NO SMOKING	1	1	1		STUDENT SERVICES SUITE	Final location to be determined.
/			10	00	0228			130					130B		40	40 (EXTERIOR)	NO SMOKING	1	1	1	4	STUDENT SERVICES SUITE	Final location to be determined.
/			10	00	0228			2T3					2T3			41	BABY CHANGING...TABLE INSIDE	1		1	1	LAC RM	See graphic.
/			10	00	0228			160					160 A		40							GENERAL ASSEMBLY	Final location to be determined.
/			10	00	0228			160					160B		40							GENERAL ASSEMBLY	Final location to be determined.
/			10	00	0228			170					170 A		40							GENERAL ASSEMBLY	No Sign here.
/			10	00	0228			170					170B		40							GENERAL ASSEMBLY	No Sign here.
/			10	00	0228			1C2				30										HALLWAY	
/			10	00	0228			250					250		8A							ACADEMIC SUPPORT	No Sign here.
/			10	00	0228			2C4				92	2C4	250								VEST	After the Bulletin 017, the door number become 2C4 but it needs to become back to door number 250.
/			10	00	0228			2C6				115										HALLWAY	
/			10	00	0228			2C7				115	2C7	255								HALLWAY	After the Bulletin 017, the door number become 2C7 but it needs to become back to door number 255.
/			10	00	0228			2C8				364										HALLWAY	
/			10	00	0228			217					217		19							CONFERENCE RM	No Sign here.
/			10	00	0228			238					238		19							CONFERENCE ROOM	No Sign here.
/			10	00	0228			250					250		19							ACADEMIC SUPPORT	No Sign here.
/			10	00	0228			255					255		19							<del>GROUP STUDY / TUTORIAL</del> REFLECTION ROOM	No Sign here.
/			10	00	0228			320					320		19							ACADEMIC SUPPORT	No Sign here.
/			10	00	0228			330					330		19							ACADEMIC SUPPORT	No Sign here.
/			10	00	0228			340					340		19							ACADEMIC SUPPORT	No Sign here.
/			10	00	0228			350A			117											KITCHENETTE	
/			10	00	0228			3C7				113	3C7									HALLWAY	
/			10	00	0228																		
Total:												20,919 (ASF)	4,108 (NASF)					215	72	215	215		