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Science & Engineering Building 2 (0206)
Signage Bid Package
UNIVERSITY OF CALIFORNIA, MERCED
MERCED, CALIFORNIA

PROJECT NO.: 900020

ADVERTISEMENT FOR BIDS

**Science & Engineering Building 2 (0206)
Signage Bid Package
PROJECT NO.: 900020
UNIVERSITY OF CALIFORNIA, MERCED**

Subject to conditions prescribed by the University of California, Merced, sealed bids for a Lump Sum contract are invited for the following work: Sciences & Engineering Building 2, Project Number: 900020, Signage Bid Package.

Description of Work: Building Signage; Interior & Exterior per the 2007 Building Code. The successful Bidder will be required to have the C45 Electrical Sign current licenses issued by the State of California Contractors State License Board for the work to be performed.

Estimated construction cost: \$115,000

Procedures: Bidding Documents will be made available on **Monday, October 28, 2013**. One complete set of bidding documents will be available free of charge. Contact BrightDart at www.ucmercedplanroom.com to order plans or call them at (209) 385-3800. Additional sets may be purchased at cost. Electronic documents will be available through the University's website at <http://www.ucmerced.edu/community/rfprfq.asp>.

Results will be available on University website <http://www.ucmerced.edu/community/rfprfq.asp>.

A MANDATORY Pre-Bid Conference will be conducted on **Tuesday, November 5, 2013**, beginning promptly at **10:00 AM**. Participants shall meet at Design and Construction, at 767 E. Yosemite Avenue, Merced, CA 95340. If you need accommodations related to disabilities, please call Fran Telechea (209) 228-4479 at least 3 working days prior to Pre-Bid Conference/Project Site Visit or Bid Opening.

Requests for clarification or interpretation of the Bidding Documents must be in writing and received by **Wednesday, November 6, 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:

Fran Telchea – University of California, Merced
Fax: (209) 228-4468
Email: ftelchea@ucmerced.edu

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

Science & Engineering Building 2 (0206)
Signage Bid Package
UNIVERSITY OF CALIFORNIA, MERCED
MERCED, CALIFORNIA

PROJECT NO.: 900020

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

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

Or by US Mail at:

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

Bids must be received before:

2:00 PM
Thursday, November 14, 2013

Bid Security in the amount of 10% of the Anticipated Contract Amount shall accompany each Bid. The surety issuing the Bid Bond shall be, on the Bid Deadline, an admitted surety insurer (as defined in California Code of Civil Procedure Section 995.120)."

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.

Every effort will be made to ensure that all persons have equal access to contracts and other business opportunities with the University within the limits imposed by law or University policy. Each Bidder may be required to show evidence of its equal employment opportunity policy. 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 at the location of the work.

The work described in the contract is a public work subject to section 1771 of the California Labor Code.

THE REGENTS OF THE UNIVERSITY OF CALIFORNIA
University of California, Merced
March 1, 2013

INSTRUCTIONS TO BIDDERS

(Multiple Prime Trade Contract – With UCIP Coverage)

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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 issuing office 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 the 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.

2.1.9 Bidder meets the following minimum occupational safety and health qualifications:

- A. Bidder has had no serious and willful violations of Part 1 (commencing with Section 6300) of Division 5 of the Labor Code during the five-year period prior to bid opening.
- B. Bidder has maintained a workers' compensation Experience Modification Rate (EMR) that averages below 1.25 for the past three years. (If Bidder has been in business for less than three years, and is not otherwise prohibited from bidding by the terms of other Bid qualification documents, then Bidder must have maintained a workers' compensation Experience Modification Rate (EMR) that averages below 1.25 for all years Bidder has been in business.)
- C. Bidder has instituted an injury prevention program pursuant to Section 3201.5 or 6401.7 of the Labor Code.

After contract award, Bidder will verify that each of its Subcontractors at all tiers meet the requirements in 2.1.9 above by furnishing a fully executed "*Declaration of Contractor or Subcontractor Minimum Occupational Safety and Health Qualifications*" form (Exhibit 1B to the bid documents) prior to each Subcontractor's commencement of 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 other 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

3.1.1 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."

3.4.3 All Subcontractors of all tiers must meet the following minimum occupational safety and health qualifications:

- A. Each Subcontractor must have had no serious and willful violations of Part 1 (commencing with Section 6300) of Division 5 of the Labor Code during the five-year period prior to bid opening.
- B. Each Subcontractor must have maintained a workers' compensation Experience Modification Rate (EMR) that averages below 1.25 for the past three years. (If Subcontractor has been in business for less than three years, then Subcontractor must have maintained a workers' compensation Experience Modification Rate (EMR) that averages below 1.25 for all years Subcontractor has been in business.)
- C. Each Subcontractor must have instituted an injury prevention program pursuant to Section 3201.5 or 6401.7 of the Labor Code.

After contract award, Bidder will require each of its Subcontractors at all tiers to furnish the *Declaration of Contractor or Subcontractor Minimum Occupational Safety and Health Qualifications* form prior to Subcontractor's commencement of Work.

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 AND UNIVERSITY CONTROLLED INSURANCE PROGRAM

3.6.1 University will provide builder's risk property insurance, with a \$25,000 deductible as required by the General Conditions if 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.

3.6.2 As further defined and limited by Article 11.1 of the General Conditions:

- .1 The University shall pay for, obtain and maintain a University Controlled Insurance Program (“UCIP”) providing workers’ compensation and employer’s liability insurance coverage, commercial general liability insurance coverage, and excess liability insurance coverage, to persons and entities enrolled in the UCIP, for Work performed on or at the Project site (“UCIP Coverages”). For purposes of the UCIP, Work (as defined in Article 1.1.42 of the General Conditions) that is performed at an off site location will be treated as on site Work, provided that at the time of enrollment, the off site location is identified to the UCIP Administrator and scheduled on the UCIP policies. A summary of the UCIP Coverages is included as an Exhibit to the Contract. The summary descriptions of the UCIP Coverages in the Exhibit, the General Conditions, or elsewhere, are not intended to be complete or to alter or amend any provision of the actual UCIP Coverages. In the event that any provision of this Article, the Contract Documents, or elsewhere, conflicts with the UCIP insurance policies, the provisions of the actual UCIP insurance policies shall govern. The University’s provision of its standard UCIP insurance policies meets the University’s obligation to provide UCIP insurance under the Contract and, in the event of a conflict between the provisions of the policies 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 UCIP insurance.
- .2 Parties eligible to participate in the UCIP (generally Contractor and all Subcontractors of all tiers who perform Work at the Project site, unless excluded under General Conditions Article 11.1.5) shall not include in their bids for any Work to be performed at the Project site any projected or actual cost to provide the workers’ compensation and employer’s liability insurance, commercial general liability insurance, and excess liability insurance that is being provided under the UCIP. The University may reduce the Contract Sum by an amount commensurate with any projected or actual costs included contrary to the requirements of this Article 3.6.2.2.
- .3 Notwithstanding the UCIP, Contractor and all Subcontractors are required to provide insurance as set forth in General Conditions Article 11.1.10 (including certificates of insurance evidencing the required coverages).
- .4 Off site Work will not be treated as on site Work under Article 11.1.1 of the General Conditions for subcontractors who do not perform operations at the project site.
- .5 UCIP Workers’ Compensation Insurance will be primary for all covered occurrences within the 50 United States, except that this insurance does not apply in any monopolistic workers’ compensation state.

ARTICLE 4
PRE-BID CONFERENCE

4.1 Bidder may 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.

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. 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 security is in the form of a Bid Bond, the 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 materially 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 50 days (unless 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 Subcontractors 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 Prime Trade Contractor 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 and 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.
- .10 Fully executed "Declaration of Contractor or Subcontractor Minimum Occupational Safety and Health Qualifications" form (Exhibit 1B) completed by Bidder and each listed Subcontractor.

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

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 Contract.

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 who 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
Oakland, California 94607
Attention: Assistant Director, Design and 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 appeal 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.

[End]

PROJECT DIRECTORY

Project Name: Science and Engineering Building 2

Project No: 900020

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: Michael Chow
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: Andrew Boyd
Physical Planning Design & Construction
5200 North Lake Road
Merced CA 95343
(209) 228-4321 Fax (209) 228-4468

Design Professional Consultants: Roxanne Malek
SmithGroup
301 Battery Sheet, 7th Floor
San Francisco, CA 94111
(415) 365-3470 Fax (734) 780-8347

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, 2nd Floor
Fresno CA 93704

PROJECT DIRECTORY

A copy of the Demand for Arbitration must be sent to:

University of California
Office of the General Counsel
1111 Franklin Street, 8th Floor
Oakland, CA 94607-5200

SUPPLEMENTARY INSTRUCTIONS TO BIDDERS

1. The 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 Project 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 Project Schedule and the calendar date specified in the bidding documents for the completion of the entire Project.
2. Total Scope of Work duration shall be as specified.
3. Estimated construction cost: \$115,000.
4. Requests for clarification or interpretation of the Bidding Documents must be in **writing** and received by **November 6, 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:**

Fran Telechea – University of California, Merced
email: ftelechea@ucmerced.edu
FAX: 209-228-4468

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

5. A **MANDATORY** Pre-Bid Conference will be conducted on **Tuesday, November 5, 2013** beginning promptly at **10:00 am**. Participants shall meet at Design and Construction, at 767 E. Yosemite Avenue, Merced, CA 95340.

If you need accommodations related to disabilities, please call **Fran Telechea** at **(209) 228-4479** at least 3 working days prior to Pre-Bid Conference/Project Site Visit or Bid Opening.

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

Overnight delivery only:

University of California, Merced
767 E. Yosemite Ave., Bldg. B, Ste. C
Merced California 95340
(209) 228-4479

University of California, Merced
Physical Planning, Design and Construction
5200 Lake Road
Merced California 95343

7. Bids will be opened at: **2:00 PM**

Thursday, November 14, 2013
767 E. Yosemite Ave.
Merced California 95340

8. Contractor will be assessed as liquidated damages the sum of **\$500.00** for each day the Work remains incomplete beyond the expiration of the Contract Time. After Substantial completion, the rate for liquidated damages shall be reduced to the sum of **\$250.00** per day. See Article 5 of the Agreement for detailed requirements.
9. 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 or email to Planholders who have provided a facsimile number or an email address for receipt of Addenda.

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
 - 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 Friday

2

SCIENCE AND ENGINEERING BUILDING 2
UNIVERSITY OF CALIFORNIA, MERCED
MERCED, CALIFORNIA

PROJECT NO.: 900020

BID FORM

PROJECT NO. 900020
Science and Engineering Building 2

FOR: **Interior & Exterior Building Signage**

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) 228-0402

BID FROM: _____
(Name of Firm Submitting Bid)

(Address)

(City) (State) (Zip Code)

(Telephone Number) (Fax 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) Bidder and all Subcontractors, regardless of tier, has 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.

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

\$, , .

(Place figures in appropriate boxes.)

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 in the space 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)

\$, . x 10 multiplier

(Place figures in appropriate boxes.)

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 (including, without limitation, compensation for all extended home office overhead and extended general conditions), of the Contractor

and all subcontractors, suppliers, persons, and entities under or claiming through Contractor on the Project. 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 - NONE

11.0 BIDDER INFORMATION

TYPE OF ORGANIZATION:

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

If a corporation, corporation is organized under the laws of:
the State of. _____

NAME OF PRESIDENT OF THE CORPORATION:

NAME OF SECRETARY OF THE CORPORATION:

IF A PARTNERSHIP, NAMES OF ALL GENERAL PARTNERS:

CALIFORNIA CONTRACTORS LICENSE(S):

(Name of Licensee)

(Classification)

(License Number)

(Expiration Date)

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

12.0 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)

13.0 DECLARATION

I, _____ (Printed name), hereby declare that I am the _____ (Title) of _____ (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 bidders 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 an advantage against the public body awarding the contract of anyone interested in the proposed contract' that all statements contained in the bid are true; an, 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 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 subscribed at: _____ (Name of City if within a City, otherwise Name of County), in the State of _____, on _____ (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 amount 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:

**SCIENCE AND ENGINEERING BUILDING 2 NO.: 900020 – Interior & Exterior Building Signage
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 the 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 _____, 2013.

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.

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
PO Box 2039
Merced, California 95344

and Contractor:
whose address for notices is:

for the Project: Science and Engineering Building 2 Interior &
Exterior Building Signage
Project No. 900020
University of California
Merced Campus, Merced County
Merced, California

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

University's Representative is: Michael Chow

whose address for notices is: Physical Planning, Design & Construction
University of California
PO Box 2039
Merced, California 95344

Contract Documents for the
Work Prepared by: Roxanne Malek
SmithGroup
301 Battery Sheet, 7th Floor
San Francisco, CA 94111
(415) 365-3470 Fax (734) 780-8347

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".

ARTICLE 4 CONTRACT TIME - Contractor shall commence the Work on the date specified in the Notice to Proceed and fully complete the work within the specified time, 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 complete the Work within the Contract Time, Contractor shall pay to University, as liquidated damages and not as a penalty, the sum of **\$500.00** for each day after the expiration of the Contract Time that the Work remains incomplete. After Substantial Completion, the rate for liquidated damages shall be reduced to the sum of **\$250.00** per day. University and Contractor agree that if the Work is not completed within the Contract Time, University's damages would be extremely difficult or impracticable to determine and that the aforesaid amount is a reasonable estimate of and reasonable sums for such damages. University may deduct any liquidated damages due from Contractor from any amounts otherwise due to Contractor under the Contract Documents. This provision shall not limit any right or remedy of University in the event of any other default of Contractor other than failing to complete the Work within the Contract Time.

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 **\$-0-** 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)

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)

California Contractor's License(s):

(Name of Licensee)

(Classification and License Number)

(Expiration Date)

Employer Identification Number

(EIN NUMBER)

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 of the General Conditions.

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 of the General Conditions.

1.1.3 BENEFICIAL OCCUPANCY

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

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 of the General Conditions.

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" means the written Agreement between Contractor and University set forth in the Contract Documents.

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 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.

1.1.12 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 full completion of the Work.

1.1.13 COST OF EXTRA WORK

See Article 7.3 of the General Conditions.

1.1.14 DAY

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

1.1.15 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.

1.1.16 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.

1.1.17 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.

1.1.18 EXTRA WORK

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

1.1.19 FIELD ORDER

See Article 7.2 of the General Conditions.

1.1.20 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.

1.1.21 GUARANTEE TO REPAIR PERIOD

See Article 12.2 of the General Conditions.

1.1.22 MASTER PROJECT SCHEDULE

The term “Master Project Schedule” means the graphical representation of a practical plan, in accordance with Article 3 of the General Conditions and the Specifications, to perform and complete the Project within the Project Time.

1.1.23 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.

1.1.24 CONTRACTOR FEE

See Article 7.3 of the General Conditions.

1.1.25 CONTRACTOR SCHEDULE

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

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 construction of the improvement of which the Work is a part. The Project will include construction by Separate Contractors.

1.1.27 PROJECT SUBSTANTIAL COMPLETION

The term “Project Substantial Completion” means the stage in the progress of the Project, as determined by University's Representative, when all work of the Project is complete and in accordance with the Contract Documents and Substantial Completion of all Prime Trade Contracts have occurred except only for completion of minor items which do not impair University's ability to occupy and fully utilize all work of the Project for its intended purpose and a Certificate of Occupancy for the Project has been issued by the University's Building Official.

1.1.28 PROJECT TIME

The term “Project Time” means the number of days from the first Notice to Proceed issued to a Contractor to the date for completion of the Project.

1.1.29 SEPARATE CONTRACTOR

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

1.1.30 SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES

See Article 3.12 of the General Conditions.

1.1.31 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.

1.1.32 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.

1.1.33 SUBSTANTIAL COMPLETION

See Article 9.7 of the General Conditions.

1.1.34 SUPERINTENDENT

The term “Superintendent” means the person designated by Contractor to represent Contractor at the Project site in accordance with Article 3 of the General Conditions.

1.1.35 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.

1.1.36 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.

1.1.37 UNILATERAL CHANGE ORDER

See Article 7.2 of the General Conditions.

1.1.38 UNIVERSITY

The term “University” means The Regents of the University of California.

1.1.39 UNIVERSITY BUILDING OFFICIAL

The term “University’s Building Official” shall mean 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 all work of the Project complies with Applicable Code Requirements and will determine whether and when it is appropriate to issue a Certificate of Occupancy.

1.1.40 UNIVERSITY'S REPRESENTATIVE

The term “University’s Representative” means the person or firm identified as such in the Agreement.

1.1.41 UNIVERSITY’S RESPONSIBLE ADMINISTRATOR

The term “University’s Responsible Administrator” means the person, or his or her authorized designee, who is authorized to sign the Agreement and other applicable contract Documents on behalf of the University.

1.1.42 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 will constitute 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 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.

1.3.4 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.

1.3.5 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.

1.3.6 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 earliest start date for the Contractor as shown in the Master Project Schedule, 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 of the General Conditions 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

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 Master Project Schedule, fails to start any activity by its start date as directed by the University Representative which will be no earlier than the early start date nor later than the late start date reflected in the Master Project Schedule, fails to complete any activity by its completion date as directed by the University Representative which will be no earlier than the early completion date nor later than the late completion date as reflected in the Master Project 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 and thereafter diligently continue to completion, University may, without prejudice to other remedies University may have:

.1 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 compensation for the additional services and expenses of University's Representative and 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 supply additional workers to the Contractor in such quantity and for such period as deemed necessary by the University's Representative, all at the Contractor's expense. In such case, University will be entitled to deduct from payments then or thereafter due Contractor the cost of such additional workers, including compensation for the additional services and expenses of University's Representative

and 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.

2.6 UNIVERSITY'S RIGHT TO ACCELERATE THE WORK

2.6.1 University may direct the acceleration of the Work by Contractor to meet schedule requirements when the Work has been delayed by one or more Separate Contractors and such delay would otherwise give rise to a time extension. The University will compensate the Contractor for the additional costs incurred by such acceleration to the extent that such costs are directly attributable to the acceleration and are incurred through no fault or negligence of the Contractor.

2.6.2 Any acceleration directed by University pursuant to the foregoing provision will be by a Change Order. The University will not be obligated, under any circumstances, to direct such acceleration and may elect, at its option, not to accelerate the Work of the Contractor.

2.6.3 University may accelerate the work of one or more Separate Contractors to meet schedule requirements when the Work of Contractor does not adhere to the Master Project Schedule and said failure to adhere causes, in whole or in part, a delay in the work of such Separate Contractors and if such delay would otherwise give rise to a time extension. The University may reduce the Contract Sum by the amounts incurred due to the acceleration.

ARTICLE 3

CONTRACTOR

3.1 REVIEW OF CONTRACT DOCUMENTS AND FIELD CONDITIONS BY CONTRACTOR

3.1.1 Contractor shall carefully study and compare each of the Contract Documents with the others and with information furnished 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.

3.1.2 Contractor 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 performs any construction activity which it knows or should know involves an error, inconsistency, or omission referred to in Articles 3.1.1 and 3.1.2 above, without notifying 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. Except as otherwise reserved to the University, 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 Documents 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 Documents, 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 Documents. 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 of the General Conditions, 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 of the General Conditions.

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 that 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, the Project is not completed within the Contract 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 The University's Representative has developed an overall "Preliminary Master Project Schedule" indicating major milestones and construction sequences for the Project, showing the general timing for the work of Contractor. This Preliminary Master Project Schedule is for Bidder information and guidance only, and is not intended to serve as the Master Project Schedule that will be utilized for construction. However, the construction milestones and sequences shall be the basis for the Master Project Schedule, unless the University's Representative modifies them to improve the overall progress and completion by utilizing revised logic and revised schedule.

3.9.2 Using the Prime Trade Contract Schedules submitted by each of the Contractors, the University's Representative will develop and issue the Master Project Schedule showing completion of the Project within the Project Time. University Representative may require additional information from the Contractor during development of the Master Project Schedule.

3.9.3 The University Representative may impose upon the Contractor, in the initial Master Project Schedule, whatever scheduling requirements are deemed appropriate, consistent with the Preliminary Master Project Schedule, and the Contractor shall comply with any such requirements, at no additional cost to University.

3.9.4 The Contractor shall submit updated schedule information to University's Representative within the time limits required by the Specifications and acceptable to University's Representative. The University Representative may, at any time, make reasonable adjustments, at no cost to the University, to the Master Project Schedule so that the Project may be completed within the Contract Time, or if completion within the Contract Time is impracticable, to mitigate damages to the University resulting from late completion of the Project.

3.9.5 The Master Project Schedule shall represent a practical plan to complete the Work so that the entire Project can be fully completed within the Project Time.

3.9.6 The Contractor shall prepare and keep current, to the 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 Master Project Schedule.

3.9.7 Contractor shall plan, develop, supervise, control, and coordinate the performance of the Work so that its progress and the sequence and timing of Work activities conform to the current Master Project Schedule. Contractor shall continuously obtain from Subcontractors updated information and data about the planning for and progress of the Work and the delivery of equipment, shall coordinate, and monitor the progress of the Work and the delivery of equipment. 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. Contractor shall cooperate with University's Representative in the development of the Prime Trade Contract Schedule, the Master Project Schedule, and their updates.

University's Representative's acceptance of or its review comments about Contractor Schedule or scheduling data provided by Contractor shall not relieve Contractor of its sole responsibility to plan for, perform, and fully complete its Work within the Contract Time. Acceptance of or review comments about the Contractor Schedule shall not imply the University's agreement with (1) any assumption upon which such Contractor Schedule is based, or (2) any matter underlying or contained in such Contractor Schedule.

Failure of University's Representative to discover errors or omissions in the Contractor Schedules that it has reviewed, or to inform Contractor that Contractor is behind schedule, or to direct or enforce procedures for complying with the Master Project Schedule shall not relieve Contractor from its sole responsibility to perform and complete the Work and shall not be a cause for an adjustment of the Contract Time or the Contract Sum.

3.9.8 The Work may require performance in several areas of the project simultaneously in order to fully complete the Project within the Project Time. As each area becomes available, Contractor shall begin work in those respective areas with additional crews if necessary to avoid a reduction of effort in other areas already under construction.

3.9.9 Subject to University's rights under the Prime Trade Contract or at law, time is of the essence in the Contractor's performance of this Contract. Contractor agrees to promptly commence work when directed by University's Representative.

3.9.10 In addition to any completion dates required under the Prime Trade Contract, the Contractor agrees to perform the work in accordance with University's Representative's Master Project Schedule, including all subsequent modifications to the Master Project Schedule by University's Representative. Contractor agrees to perform the work in a way that will not delay University, University's Representative, or the progress of the Project, all at Contractor's cost and without additional cost or liability to University.

3.9.11 If, at any time during Contractor's performance of the work, the actual progress of the Contractor's Work falls behind the Master Project Schedule, then Contractor agrees to immediately take any steps necessary per University's Representative's sole discretion to improve progress in the Work or the Project. All these steps will be taken at Contractor's cost and without additional cost or liability to the University. If for any reason the Contractor's progress is not in accord with University's Representative's current Master Project Schedule, including remedial schedules, or any dates or intervals required elsewhere by the Prime

Trade Contract, University's Representative may require Contractor to increase its labor force, its supervision force, the number of work shifts, overtime, work on weekends and holidays, the equipment on the Project, revise or modify its construction procedures and sequences and any other measures which University's Representative considers necessary, all without additional cost or liability to University. Neither notice by University's Representative nor the failure to issue notice that Contractor's progress is inadequate shall relieve Contractor from its obligation to achieve the quality of work and rate of progress required by University's Representative.

If University incurs expense or loss or it appears that University may sustain expense or loss due to Contractor's failure to comply with the above provisions, University or University's Representative may either deduct that amount from any progress payment or retention payable to Contractor and/or delay payment of any sums otherwise owing to Contractor until the situation is remedied or adjusted to University's or University's Representative's satisfaction.

3.9.12 The University Representative will schedule and coordinate the activities of the Contractor in accordance with the latest approved Master Project Schedule. The Contractor shall cooperate with the University Representative in the reasonable determinations of scheduling and performing the Contractor's work to avoid conflict, delay in or interference with the Work or other Contractors, or Separate Contractors, regardless of their float shown on the Master Project Schedule.

3.9.13 University's Representative may, at any time, update, supplement or revise its Master Project Schedule and/or require Contractor to suspend, delay or re-sequence its work. Such updates, supplements, revisions, suspensions, delays or re-sequencing shall be without additional cost or liability to University except to the extent they result in Contractor working beyond the Contract Time, through no fault of the Contractor. To the extent such updates, supplements, revisions, suspensions, delays or re-sequencing result in Contractor working beyond the Contract Time, through no fault of the Contractor, the Prime Trade Contract shall be subject to adjustment provided the Contractor complies with the requirements of the Prime Trade Contract for seeking an adjustment, including without limitation, the requirements set forth in Articles 4, 7 and 8 of the General Conditions. Notwithstanding the foregoing, the University may elect to accelerate the work of one or more Separate Contractors to reduce or eliminate the delay and require the Contractor to complete its Work within the Contract Time.

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 Master Project Schedule and Contractor 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 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 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 above; and
- .2 Contractor fully complies with Article 4 of the General Conditions (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 of the General Conditions.

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 and 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 and events, Contractor understands that, except and only to the extent provided otherwise in Articles 3.17, 7 and 8 of the General Conditions, concealed, unforeseen or unknown conditions and events shall not excuse Contractor from its

obligation to achieve full 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 or unknown conditions that differ materially from those anticipated or expected, Contractor shall immediately notify University's Representative in writing such that University's Representative can determine if such conditions require design details which differ from those design details shown in the Contract Documents. 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 concealed or unknown conditions are encountered which require, in the opinion of 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, and if University agrees with the University's Representative's determinations, University will issue a Change Order modifying the Contract Terms to provide for the change in design details and to provide for an adjustment in the Contract Sum and/or Contract Time pursuant to Articles 7 and 8 of the General Conditions.

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

3.19 INFORMATION AVAILABLE TO BIDDERS

3.19.1 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.

3.20 LIABILITY FOR AND REPAIR OF DAMAGED WORK

3.20.1 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:

- .1 Losses covered by the builder's risk property insurance provided by University pursuant to Article 11 of the General Conditions, except that the Contractor shall be liable for any deductible(s) and any amounts exceeding policy limits.
- .2 Earthquake, tidal wave, or flood, provided that the loss was 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.

3.20.2 Contractor shall promptly repair and replace any Work or materials damaged or destroyed for which the Contractor is liable under Article 3.20.1 above.

3.21 INDEMNIFICATION

3.21.1 Contractor shall Indemnify University, University's consultants, University's Representative, University's Representative's consultants, and their respective directors, officers, agents, and employees from and against losses 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 or Separate Contractor 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.

3.21.2 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. 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 in the event of the sole negligence of University, its officers, agents, or employees.

3.21.3 In claims against any person or entity indemnified under this Article 3.21 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 3.21 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.

3.21.4 The indemnification obligations under this Article 3.21 shall not be limited by any assertion or finding that the person or entity indemnified is liable by reason of a non-delegable duty.

3.21.5 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.

3.21.6 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 Except as otherwise reserved to the University, 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, coordination 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. 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, Project 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 below; and

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

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.

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 of the General Conditions; 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 of the General Conditions, which shall be submitted within 15 days of the date requested.
- .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 of the General Conditions, 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. 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, the Contractor may contest the decision by filing a timely Claim under the procedures specified in Article 4.3 below.

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 above; 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 of the General Conditions.
- .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 above.

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 of the General Conditions.
- .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. Exhibit.
- .5 A statement demonstrating that a Change Order Request was timely submitted as required by Article 4.2.3 above.
- .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 of the General Conditions. The cost breakdown 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 week during any periods costs are incurred. A cost record will be considered current if submitted within 7 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, serial number, hours of use, dates of use and equipment rental rates of any rented equipment
Contract
 - .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 of the General Conditions, including the specific dates for which a time extension is sought and the specific reasons for entitlement of a time extension. The Master Project Schedule must demonstrate Contractor's entitlement to an adjustment of Contract Time under Article 8.4.
 - .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 of the General Conditions, including but not limited to, a detailed time impact analysis of the Master Project Schedule. The Master Project 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 the supporting data specified in Article 4.3.3 above, 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 above.

4.4.4 Strict compliance with the requirements of Articles 4.2, 4.3, and 4.4 of the General Conditions 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 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 below.

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 within 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 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 above 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 below. 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 American Arbitration Association ("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 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 above shall include a copy of the Claim presented to University's Representative pursuant to Article 4.4 above 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 commended 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 of the General Conditions 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 above 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 of the General Conditions.
- .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, below 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 below.

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.

6.1.3 The Project, of which this Contract is a part, will include other contracts for work to be performed and work to be performed by the University on the same site. By entering into this Contract, Contractor acknowledges that University has the right to enter into such other contracts and to perform work, and that the work of said contracts and University may (i) be in close proximity to and/or performed contemporaneously with the work of this Contract, and (ii) result in delays in or disruptions to Contractor's Work. Contractor further agrees as follows:

- .1 The University shall afford Contractor, Separate Contractors or University forces reasonable opportunity for the introduction and storage of their materials and the execution of their work. Contractor shall properly connect and coordinate its construction and operations with the construction and operations of Separate Contractors and University forces, as required by the Contract Documents.
- .2 Contractor shall cooperate with Separate Contractors and University on the project site and will do nothing to delay, hinder, disrupt, or interfere with the work of Separate Contractors, or University. Contractor shall coordinate its work with the work of any Separate Contractor and agrees to attend any coordination meetings scheduled for this purpose by the University Representative. Any dispute between the Contractor and any Separate Contractor over how the work of the various trades should be coordinated, shall be promptly submitted by Contractor to the University Representative. Contractor agrees to cooperate with the development of, and to be bound by, any reasonable coordination plan directed by University Representative to address the dispute, even if Contractor does not agree with the coordination plan so developed. Contractor agrees that if its work is delayed, hindered, disrupted or interfered with by a Separate Contractor to the extent such delays, hindrances, disruptions, and interferences result in Contractor working beyond the Contract Time, through no fault of the Contractor, the Prime Trade Contract shall be subject to a time extension, but no compensation from the University, provided the Contractor complies with the requirements of the Prime Trade Contract for seeking a time extension, including without limitation, the requirements set forth in Articles 4, 7 and 8 of the General Conditions.
- .3 Contractor agrees that its sole remedy for damage or loss, including delay damages, suffered as a result of actions by a Separate Contractor, other than that specified in Article 6.1.3.2 above, shall be against such Separate Contractor, their officers, agents, employees, consultants, subcontractors and, if available, surety bonds. Prime Contractor further agrees to indemnify University, University Representative, their officers, agents, employees, consultants, or subcontractors for any damage or loss by a Separate Contractor allegedly

caused by with the work of the Prime Contractor or Separate Contractor except as provided in Article 6.1.3.2 above.

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 of the General Conditions.

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 upon all of 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 Contractor's 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 of the General Conditions. 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, and shall be limited to the following (to the extent the Contractor demonstrates that the costs were 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, in the direct 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, in the direct 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, in the direct 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, in the direct 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 U. S. Army Corp of Engineers scheduled charges for the area in which the work is performed. 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 of the General Conditions. 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 Drafting or Detailing.
- .8 Small tools (Replacement value does not exceed \$300).
- .9 Office expenses including staff, materials and supplies.
- .10 On-site or off-site trailer and storage rental and expenses.
- .11 Site fencing.
- .12 Utilities including gas, electric, sewer, water, telephone, facsimile, copier equipment.
- .13 Data processing personnel and equipment.
- .14 Federal, state, or local business income and franchise taxes.
- .15 Overhead and Profit.
- .16 Costs and expenses of any kind or item not specifically and expressly included in Article 7.3.2 above.

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 above. 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 stated in the Contract Documents 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 above, 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 and approved by 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 above, supported by a Cost Proposal pursuant to Article 7.3.1 above.

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 five conditions are met:

- .1 Condition Number One: The delay results in an extension of the Contract Time pursuant to Article 8.4.1 of the General Conditions.
- .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 or the University's Representative to timely perform any contract obligation where the failure to so perform is not the result of any default or misconduct of the Contractor; or

- .5 A materially differing site condition pursuant to Article 3.17 of the General Conditions.
- .3 Condition Number Three: The delay is not concurrent with a delay that is:
 - .1 Critical under Article 8.4.1.2 of the General Conditions; and
 - .2 Caused by an event not listed in Article 7.3.9.2 above.
- .4 Condition Number Four: The delay is not caused, in whole or in part, by an event not listed in Article 7.3.9.2 above.
- .5 Condition Number Five: The delay is not caused, in whole or in part, by the default or misconduct of a Separate Contractor.

7.3.10 For each day of delay that meets all five conditions prescribed in above 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 of the General Conditions, said daily rate shall not apply to delays occurring after Substantial Completion.

7.3.11 Except as provided in Articles 7 and 8 of the General Conditions, 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 above 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 above.

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 of the General Conditions, 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 of the General Conditions.

- .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 written authorization by 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 of the General Conditions, 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 above 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 represents to the University that the time for completion of the Project as shown in the Preliminary Master Project Schedule is reasonable.
- .3 Contractor agrees that University is purchasing the right to have the Contractor fully mobilized on the site from the earliest date for commencement of the Work shown on the Preliminary Master Project Schedule to the date shown for full completion of the Project as shown in the bidding documents.
- .4 Contractor agrees that the University is purchasing the right to have Contractor work on the Project site shared by the Contractor and Separate Contractors. Contractor recognizes that as a result of working at a shared Project site there will be a loss of productivity and disruption commensurate with a project of the type, size and complexity of the Project. Contractor agrees that the Contract Sum includes full compensation for such loss of productivity and disruption.

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 of the General Conditions to be furnished by Contractor. The dates of commencement and 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 entire Project is 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 of the General Conditions, 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 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 below, the Contract Time will be extended for each day of delay for which Contractor demonstrates that all of the following seven 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 seven conditions:

- .1 Condition Number One: At the time that the event causing the delay commences, the Contractor has complied with all Contract requirements for maintaining, submitting, and updating schedule information as required by the Contract Documents.
- .2 Condition Number Two: 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 completion of the entire Project beyond the Contract Time. Under this Article 8.4.1.2, if the Master Project Schedule shows completion of the entire Project before expiration of the Contract Time, a delay is critical if and only to the extent the delay pushes completion of the entire Project to a date that is beyond the Contract Time.
- .3 Condition Number Three: The delay is supported by the Master Project Schedule current at the commencement of the event giving rise to the delay. A delay is supported only to the extent the Master Project Schedule corroborates that it causes a delay to completion of the entire Project beyond the contractually specified date for full completion because of its effect on the operation referred to in Article 8.4.1.2 above. The requirement that a delay be supported will be excused if the event causing the delay commences before approval of the Contractor Schedule, provided that the absence of an approved Contractor Schedule is not due to the Contractor's failure to timely submit an acceptable Contractor Schedule.
- .4 Condition Number Four: Within 7 days of the date the Contractor discovers or reasonably should discover an act, error, omission or unforeseen condition causing the delay, (even if the Contractor has not been delayed when the Contractor discovers or reasonably should discover 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 of the General Conditions.
- .5 Condition Number Five: 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 of the General Conditions; or
- .2 The financial inability, misconduct or default of the Contractor, a Subcontractor or supplier; or
- .3 The unavailability of materials or parts.
- .6 Condition Number Six: 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 of the General Conditions; or
 - .5 An error or omission in the Contract Documents; 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 or the University's representative to timely perform any Contract obligation unless such failure is due to Contractor's default or misconduct; or
 - .9 The failure of a Separate Contractor to adhere to the Master Project Schedule; or
 - .10 The failure of a Separate Contractor to timely perform any contract obligation due to its default or misconduct or
 - .11 "Rainy weather," but only for such days of rain 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 rainy 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 rain, no critical path work is performed by Contractor or a Separate Contractor; and
 - .2 the day must be identified in the Master Project Schedule as a scheduled work day.

- .7 Condition Number Seven: Contractor has taken all reasonable measures to avoid and minimize the delay and, notwithstanding such measures, the delay occurred.

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

- .1 When two or more delays (each of which meet all seven 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 this 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 seven requirements of Article 8.4.1 if the delay is concurrent with a delay that does not meet all seven conditions of Article 8.4.1.

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 of the General Conditions.

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 above, 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 below, 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 below.
- .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 below, 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 below, 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 above, 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 above, 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 an 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 Anticipated liquidated damages commensurate with the number of days the Contractor fails to complete a critical activity by the date shown on the Master Project Schedule.
- .13 Anticipated costs for acceleration under Article 2.6.3 of the General Conditions.
- .14 Liquidated damages assessed in accordance with Article 5 of the Agreement.
- .15 Failure to provide updated Reports of Subcontractor Information and Self-Certifications, as applicable.

.16 Failure to provide a Final Distribution of Contract Dollars with final Application for Payment.

.17 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 above, 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 of the General Conditions 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 below until final payment is due in accordance with Article 9.8 of the General Conditions. 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 above, 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.

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 Project 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 of the General Conditions, will commence upon the first dates of actual occupancy or use of portions of the Work actually occupied and equipment or systems fully utilized. Equipment or systems shall not be considered fully utilized until all parts of the Project served by the equipment or systems are actually occupied and used.

.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..

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, and 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. University's Representative will make an inspection to determine whether the Work is substantially complete. If University's Representative's inspection discloses any item, whether or not included on the list, which must be completed or corrected before Substantial Completion, Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item. Contractor shall then submit a request for another inspection by University's Representative to determine Substantial Completion. 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 prepare a Certificate of Substantial Completion for the Work on University's form as contained in the Exhibits, which, when signed by University, shall establish the date of Substantial Completion.

9.7.4 When University's Representative determines that all work of the Project 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 for the Project on University's form as contained in the Exhibits, which, when signed by University, shall establish the date of Project Substantial Completion and the responsibilities of University and Contractor for security, maintenance, utilities, insurance, and damage to the Work.

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

- .1 Are not fully operational (equipment or systems shall not be considered fully operational if they are intended to provide service to any portion of the building which the University has neither Beneficially Occupied nor accepted as Substantially Complete); or
- .2 Are not accepted by the University.

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

9.7.6 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 Substantial Completion.

9.8 FINAL COMPLETION AND FINAL PAYMENT

9.8.1 Final Completion of this Prime Trade Contract shall be when University's Representative determines that (i) the Work of this Prime Contract is fully completed in accordance with the requirements of the Contract Documents, (ii) the work of all Contractors is fully completed in accordance with the terms of their respective contracts for the Project and (iii) a Certificate of Occupancy has been issued by the University's Building Official. Only one Final Inspection will occur for the Project; this single Final Inspection will be for all of the Work of Contractor as well as for all of the work of other Contractors. The Final Inspection will be scheduled by University's Representative at such time as University's Representative is in receipt of written notifications from Contractor and all other Separate Contractors that the full completion of the Work and work (respectively) has been achieved. University will file a Notice of Completion within ten (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 Neither final payment nor any retention shall become due until Contractor submits the following items to University's Representative:

.1 The final Application For Payment and all submittals required in accordance with Article 9.3 of the General Conditions.

.2 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 The final Distribution of Contract Dollars in the form contained in the Exhibits.

9.8.3 The final payment shall be made, subject to the satisfaction of all other conditions to final payment, 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 those 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 3.20 of the General Conditions regarding the scope and extent of Contractor's liability for 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 30 days (10 days for non payment of premium) prior written notice to University.

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 above, 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 for and relating to the Work to be performed by Contractor and Subcontractors. This requirement 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 Contractor and Subcontractors. 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 above.

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 above 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 11 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 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 agents, employees.

11.2.3 Builder's Risk insurance coverage under this Article 11.2 will end on the earliest of the following:

- .1 sixty (60) days after the date a Certificate of Occupancy for the entire Project is issued by the University; or
- .2 sixty (60) days after the date a Certificate of Occupancy for a part of the Project is issued by the University, but coverage will end only for the part of the Project covered by such Certificate of Occupancy ; or
- .3 the date of Final Completion established by the University in any Notice of Completion issued by the University.

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 of the Project not described as incomplete in the Certificate of Substantial Completion for the Project, on the date of Project Substantial Completion.
- .2 For space beneficially occupied or for separate systems fully utilized prior to Project Substantial Completion pursuant to Article 9.6 of the General Conditions, from the first date of such Beneficial Occupancy or actual use, as established in a Certificate of Beneficial Occupancy.
- .3 For all work of the Project 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 above 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 of the General Conditions 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 below, 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 Documents 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.

.3 Repeated suspensions by University, other than such suspensions as are agreed to by Contractor under Article 13.3 below, 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 above, 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 of the General Conditions. 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 this 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 is 14 days or more behind the date set forth in the Master Project Schedule for such Work activity, and which results in an Unexcusable Delay.
- .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 above, 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 below.

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 above, 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 this 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 NOT USED

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 not willfully discriminate against any employee or applicant for employment because of race, color, religion, sex, age, ancestry, national origin, sexual orientation, handicap, veteran's status, medical condition (as defined in Section 12926 of the State of California Government Code), marital status, or citizenship (within the limits imposed by law or University's policy) because of habit, local custom, or otherwise. All applicants for employment and employees are to be treated without regard to their race, color, religion, sex, age, ancestry, national origin, sexual orientation, handicap, veteran's status, medical condition (as defined in Section 12926 of the State of California Government Code), marital status, or citizenship (within the limits imposed by law or University's policy). Such equal treatment shall apply, but not be limited to, employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship.

.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 below 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, non-minority 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 14.2.3.1 through 14.2.3.6 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 journeyworkers 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 journeyworkers 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 journeyworker trainees who may receive on-the-job training to enable them to achieve journeyworker 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 of the General Conditions.

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 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 above 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.

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 Construction Manager.

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 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:

Minimum Requirement

11.1.2.1 Commercial Form General Liability Insurance-
Limits of Liability

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>
Each Occurrence-Combined Single Limit for Bodily Injury and Property	\$1,000,000
Products-Completed Operations Aggregate	\$5,000,000
Personal and Advertising Injury	\$1,000,000
General Aggregate	\$5,000,000
11.1.2.2 Business Automobile Liability Insurance-Limits of Liability	
Each Accident-Combined Single Limit for Bodily Injury and Property Damage	\$1,000,000

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	COMPANIES AFFORDING COVERAGE		
	COMPANY A		
NAMED INSURED	COMPANY B		
	COMPANY C		
	COMPANY D		

COVERAGES

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.

CO LTR	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFF. DATE (M/D/Y)	POLICY EXP. DATE (M/D/Y)		LIMITS	DEDUCTIBLE
	GENERAL LIABILITY <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)	\$ \$ \$ \$ \$ \$	\$
	AUTOMOBILE LIABILITY <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	\$ \$ \$ \$	\$
	EXCESS LIABILITY <input type="checkbox"/> UMBRELLA FORM <input type="checkbox"/> OTHER <input type="checkbox"/> CLAIMS MADE <input type="checkbox"/> OCCURRENCE				EACH OCCURRENCE \$	AGGREGATE \$	
	PROFESSIONAL LIABILITY* <input type="checkbox"/> CLAIMS MADE <input type="checkbox"/> OCCURRENCE				EACH OCCURRENCE \$	AGGREGATE \$	
	WORKERS' COMPENSATION AND EMPLOYERS' LIABILITY*				AS REQUIRED BY FEDERAL AND CALIFORNIA LAW		

SPECIAL PROVISIONS:
 *Special Provision #1 and #2 below do not apply to this coverage.

- THE REGENTS OF THE UNIVERSITY OF CALIFORNIA, ITS OFFICERS, AGENTS, EMPLOYEES, CONSULTANTS, REPRESENTATIVES, AND REPRESENTATIVE'S CONSULTANTS ARE INCLUDED AS ADDITIONAL INSURED BUT ONLY IN CONNECTION WITH **900020 Science and Engineering Building 2**
- 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.
- THE PROVISIONS UNDER PARAGRAPHS (1&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.
- 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.

CERTIFICATE HOLDER: THE REGENTS OF THE UNIVERSITY OF CALIFORNIA.
 FORWARD TO: _____
 Physical Planning Design & Construction
 UNIVERSITY OF CALIFORNIA, MERCED
 PO BOX 2039
 MERCED CA 95344

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 _____, 2013, (the "Contract") for the work described as follows:

**SCIENCE AND ENGINEERING BUILDING 2 – Interior & Exterior Building Signage
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 _____, 2013.

Principal: _____
(Name of Firm)

Surety: _____
(Name of Firm)

By: _____
Title: _____

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 _____, _____, (the "Contract"), which Contract is by this reference made a part hereof, for the work described as follows:

**SCIENCE AND ENGINEERING BUILDING 2 – Interior & Exterior Building Signage
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 _____, _____.

Principal:	_____	Surety:	_____
	(Name of Firm)		(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, PO BOX 2039, MERCED, CA 95344 AND UNIVERSITY'S REPRESENTATIVE:

FROM CONTRACTOR: _____
ADDRESS: _____
PROJECT NAME: SCIENCE AND ENGINEERING BUILDING 2
NUMBER: 900020
FACILITY: _____
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)

SCIENCE AND ENGINEERING BUILDING 2
 UNIVERSITY OF CALIFORNIA, MERCED
 MERCED, CALIFORNIA

PROJECT NO.: 900020

PROJECT NAME: SCIENCE AND ENGINEERING BUILDING 2

APPLICATION NUMBER: _____

PROJECT NUMBER: 900020

APPLICATION DATE: _____

FACILITY: _____

PERIOD TO: _____

CONTRACT DATE: _____

CONTRACTOR: _____

SCHEDULE 1
 TO
 APPLICATION FOR PAYMENT
 COST BREAKDOWN

<u>A</u> ITEM NO.	<u>B</u> DESCRIPTION OF WORK ACTIVITY OR OTHER ITEM	<u>C</u> SCHEDULED VALUE	<u>D</u> % COMPLETE TO DATE	<u>E</u> TOTAL AMOUNT COMPLETED TO DATE (C x D)	<u>F</u> TOTAL AMOUNT COMPLETED ON PRIOR APPLICATION FOR PAYMENT	<u>G</u> AMOUNT OF THIS APPLICATION (E - F)	<u>H</u> RETENTION (5% x E)

PROJECT NAME: SCIENCE AND ENGINEERING BUILDING 2
CONTRACTOR: _____
PROJECT NUMBER: 900020
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)

By: _____
(Name)

(Title)

Date: _____

(Contractor)

By: _____
(Name)

(Title)

Date: _____

NOTE: Notary acknowledgment for Contractor and Escrow Agent must be attached.

PROJECT NAME: SCIENCE AND ENGINEERING BUILDING 2
CONTRACTOR: _____
PROJECT NUMBER: 900020
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)

Date: _____

PROJECT NAME: SCIENCE AND ENGINEERING BUILDING 2

CONTRACTOR: _____

PROJECT NUMBER: 900020

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): _____
(Prime Trade 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 Prime Trade 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: 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, P.O. BOX
2039, MERCED CA 95344.

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 **SCIENCE AND ENGINEERING BUILDING 2** 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. Thomas E. Lollini, FAIA

(Name)

(Signature)
(209) 228-4475

(Telephone Number)

2.

(Name)

(Signature)

(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)
Thomas E. Lollini, FAIA

(Printed Name)
Associate Vice Chancellor Design &
Construction

(Title)

(Telephone Number)

(Signature)

(Printed Name)

(Title)

(Telephone Number)

By

By

(Signature)

(Printed Name)

(Title)

(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: SCIENCE AND ENGINEERING BUILDING 2
 UNIVERSITY OF CALIFORNIA, MERCED
 MERCED CALIFORNIA

PROJECT NO: 900020

FACILITY: PHYSICAL PLANNING, DESIGN & CONSTRUCTION,
 UNIVERSITY OF CALIFORNIA, MERCED CAMPUS

CONTRACT DATE: _____

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: SCIENCE AND ENGINEERING BUILDING 2
UNIVERSITY OF CALIFORNIA, MERCED
MERCED, CALIFORNIA

Project No: 900020

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)

Received: _____
(University's Representative)

By: _____

By: _____

Title: _____

Title: _____

Date: _____

Date: _____

COST PROPOSAL SUMMARY

Project Name: SCIENCE AND ENGINEERING 2
 UNIVERSITY OF CALIFORNIA, MERCED
 MERCED, CALIFORNIA

Project No.: 900020

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.: 906540

COST ITEM		COST ⁽¹⁾
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) ⁽²⁾

 (Title)

 (Date)

 (Company Name)

 (Signature) ⁽³⁾

 (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

University of California, Merced Campus

FIELD ORDER NO. 001

PROJECT NAME: SCIENCE AND ENGINEERING BUILDING 2
UNIVERSITY OF CALIFORNIA, MERCED
MERCED, CALIFORNIA

PROJECT NO: 900020 Contract Date:

TO CONTRACTOR:

ADDRESS:

DESCRIPTION OF CHANGE:

Estimated Adjustment
of Contract Sum: _____

Estimated Adjustment
of Contract Time: _____ 0

(University's Representative)

By: _____
(Name)

(Title)

Date: _____

(University Project Manager)

(Name)

(Title)

Date: _____

(Contractor)

(Name)

(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.

CHANGE ORDER

University of California Facility: Merced Campus

Change Order No. _____

Reference Field Order No. _____

PROJECT NAME:	SCIENCE AND ENGINEERING BUILDING 2		
PROJECT LOCATION:	UNIVERSITY OF CALIFORNIA MERCED, MERCED CALIFORNIA		
PROJECT NO:	900020	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: _____

**SUBCONTRACTOR'S 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:

SCIENCE AND ENGINEERING BUILDING 2
UNIVERSITY OF CALIFORNIA, MERCED
MERCED, CALIFORNIA
PROJECT #: 900020

(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.

Dated: _____

(Company Name)

By:

(Name)

(Title)

**SUBCONTRACTOR'S 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:

SCIENCE AND ENGINEERING BUILDING 2
UNIVERSITY OF CALIFORNIA, MERCED
MERCED, CALIFORNIA
PROJECT NO.: 900020

(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)

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 Full Name of Business	2A Portion of the Work	2B Dollar Amt	3 Street Address City, State & ZIP	4 Tel No / FAX No	5 Contact Name	6 Type of Owner- ship	7 License Info**		8 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.

EXHIBIT 13B
 EXHIBIT
FINAL DISTRIBUTION OF CONTRACT DOLLARS

Provide the following information for each contracting party including the Contractor and each Subcontractor regardless of tier.* Attach additional sheets if necessary.

1 Full Name of Business	2 Street Address, City, State and ZIP	3 Tel No / FAX No	4 Contact Name	5 Business categories					6 Contract Dollars	
				SBE*	DBE*	WBE*	DVBE*	N/A	Amount (\$)	Percent (%)
(GC)				0	0	0	0	0		0%
(Sub 1)				0	0	0	0	0		0%
(Sub 2)				0	0	0	0	0		0%
(Sub 3)				0	0	0	0	0		0%
				0	0	0	0	0		0%
				0	0	0	0	0		0%
				0	0	0	0	0		0%
				0	0	0	0	0		0%
				0	0	0	0	0		0%
				0	0	0	0	0		0%
				0	0	0	0	0		0%
				0	0	0	0	0		0%
				0	0	0	0	0		0%
Total Contract Amount = { \$1,000.00 }				Column 6 - Business Categories					SUBTOTALS	
				SBE = Small Business Enterprise					\$0	
				DBE = Disadvantaged Business Enterprise					\$0	
				WBE = Woman Business Enterprise					\$0	
				DVBE = Disabled Veteran Business Enterprise					\$0	

*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.

EXHIBIT14

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):

 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. 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.

(Initial, if applicable)

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 www.sba.gov/size

 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.

(Initial, if applicable)

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/sbdmgr.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 16
GUARANTEE/WARRANTY FORM**

Date: _____
Project Name: _____
SCIENCE AND ENGINEERING BUILDING 2
UNIVERSITY OF CALIFORNIA, MERCED
Project Location: _____
Merced County, Merced, California
Project Number: _____
900020
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: _____

EXHIBIT 17 REQUEST FOR INFORMATION			
Contractor Code		Contract	
Project Name	SCIENCE AND ENGINEERING BUILDING 2		
Project No(s).	900020	RFI No.	
University's Representative		Date	
Drawing/Sheet Number		Printed	
Initiated By		Specification Section	
Date Response Needed		Reference	
Subject			

TRANSMITTAL RECORD			
TRANSMISSION	ATTENTION	SENT	RECEIVED
CONTRACTOR TO CONSULTANT			
COPY TO UNIVERSITY'S REPRESENTATIVE			
CONSULTANT TO SUB-CONSULTANT			
UNIVERSITY'S REPRESENTATIVE TO UCM DEPT.			
UCM DEPT. TO UNIVERSITY'S REPRESENTATIVE			
SUB-CONSULTANT TO CONSULTANT			
CONSULTANT TO CONTRACTOR			
COPY TO UNIVERSITY'S REPRESENTATIVE			
CONTRACTOR TO SUB-CONTRACTOR			
REVIEW COPY TO INSPECTOR		BY	DATE
FILE			
FIRE DEPT./ STATE FIRE MARSHAL			

QUESTION			
COST IMPACT	TIME IMPACT	SOLUTION ATTACHED	ATTACHMENTS
<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No

RESPONSE			
COST IMPACT	TIME IMPACT	SOLUTION ATTACHED	ATTACHMENTS
<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No

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: 900020 _____

Project Name: SCIENCE AND ENGINEERING BUILDING 2

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: _____

EXHIBIT 18

UTILITY SERVICE INTERRUPTION/SHUT DOWN REQUEST

The above shut down HAS / HAS NOT been scheduled as requested.

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

UNIVERSITY OF CALIFORNIA, MERCED CAMPUS	WDID#	5F24S319219
--	--------------	--------------------

II. PROPERTY OWNER

Name UNIVERSITY OF CALIFORNIA	Contact Person Gary Knox		
Mailing Address 5200 N LAKE ROAD	Title DIRECTOR OF CONSTRUCTION SERVICES		
City MERCED	State CA	Zip 95343	Phone (209) 228-4404

III. CONTRACTOR INFORMATION

Contractor	Contact Person		
Mailing Address	Title		
City	State	Zip	Phone () -

IV. NEW CONSTRUCTION PROJECT INFORMATION

Project No 906520			
Project Name MAMMOTH LAKES ROAD IMPROVEMENTS, LOT H	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: UNIVERSITY OF CALIFORNIA, MERCED CAMPUS	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 26

LETTER OF INSTRUCTION NO. _____

University of California Facility: MERCED

PROJECT NAME:	SCIENCE AND ENGINEERING BUILDING 2		
PROJECT LOCATION:	UNIVERSITY OF CALIFORNIA, MERCED CAMPUS, MERCED COUNTY, MERCED CALIFORNIA		
PROJECT NO:	900020	CONTRACT DATE:	
TO CONTRACTOR:			
ADDRESS:			
UNIVERSITY'S REPRESENTATIVE:			
SUBJECT:			

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.

DESCRIPTION:

University's Representative

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 Contractor are accurate and complete. Supporting data for amounts incurred by 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 Contractor on behalf of any and all subcontractors or suppliers, of all tiers, or any person or entity under Contractor, are accurate and complete. 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 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 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 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)

**THE REGENTS OF THE UNIVERSITY OF CALIFORNIA
MASTER BUILDERS RISK PROGRAM**

COVERAGE SUMMARY

This document summarizes the Builder's Risk policy and is not intended to reflect all the terms and 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 listed policy is subject to all the terms, exclusions and conditions of such policy.

INSURANCE COMPANY: Lexington Insurance Company

BEST'S RATING: A+ XV

NAMED INSURED: The Regents of the University of California

INSURING AGREEMENT

1. This Policy, subject to the terms, exclusions, limitations and conditions; insures against all risk of direct physical loss or damage to property insured while at the location of the Insured Project (as fully described in the contract documents), while in offsite storage or while in transit, all within the policy territory and occurring during the term of this policy.

LIMITS OF LIABILITY

1. **SCHEDULE OF LIMITS**

This Company shall be liable for the actual contract value, as specified in the Project Certificate (sample attached) of all individual Insured Projects insured hereunder, but not exceeding the limits and sublimits set forth below:

A. Limit of Liability:

- \$100,000,000 physical damage or loss to covered property at the site of each individual Insured Project.
- \$25,000,000 Joisted Masonry. Projects exceeding \$25,000,000 require advance approval.
- \$10,000,000 Wood Frame. Projects exceeding \$10,000,000 require advance approval.

NOTE: This limit of liability will correspond with the estimated total construction cost as indicated on the original application. The limit of liability will not be increased until the University's Representative has notified Aon Risk Services of any increase in the total construction cost.

B. Sublimits of Liability:

1. \$ 250,000 Decontamination and Clean-up Expense
2. \$1,000,000 Demolition and Increased Cost of Construction
3. \$1,000,000 Expediting Expense any one location
4. \$2,500,000 Off-site Storage at any one location
5. \$2,500,000 Property in Transit on any one conveyance
6. \$ 250,000 Valuable Papers and Records including Plans, Blueprints, Drawings, Renderings, Specifications or Other Contract Documents, Models, EDP Media, EDP Systems,
7. \$10,000,000 Interior Water Damage in any one occurrence

TERMS AND CONDITIONS

1. **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. In respect to Joint Ventures, the Named Insured's percentage interest is included. If the Named Insured is responsible for such insurance as provided herein, and to the extent the full contract value is declared, then this policy will include the interests of Joint Venture partners for their respective percentage share(s).

2. **ADDITIONAL INSUREDS**

To the extent required by any contract or subcontract for the 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.

3. **ATTACHMENT/TERMINATION**

Applicable to the Master Policy in effect from 12:01 AM, September 1, 2005 until 12:01 AM, September 1, 2008, Insured Project coverage will apply at the Project start date noted in the Project Certificate issued and continuing in full force and effect as specified by the estimated Completion Date in the Project Certificate and/or the contract.

NOTIFICATION OF COVERAGE/TERMINATION: *If construction is not completed on time and coverage beyond the original expiration date is required, prior notification must be given by the University Representative to Aon Risk Services.*

4. **DEDUCTIBLE**

\$25,000 each OCCURRENCE for ALL OTHER PERILS (AOP)
\$100,000 each OCCURRENCE for INTERIOR WATER DAMAGE

NOTE: *The contractor shall be responsible for the deductible amount.*

EXCLUSIONS

PROPERTY EXCLUDED

This Policy does not insure:

1. Land and land values and the value of cut, fill and backfill materials existing at the project site prior to project commencement. To the extent included estimated total contract value declared for premium purposes, the value of fill and backfill materials purchased for use in the completion of the project is not excluded. Notwithstanding the foregoing, labor and material charges incurred to move, remove, place or otherwise handle cut, fill and backfill materials, whether insured or uninsured in the foregoing, are covered to the extent such charges are included in the estimated total contract value declared for premium purposes.
2. Contractor's tools machinery, plant and equipment, including spare parts and accessories, whether owned, loaned, borrowed, hired or leased, and property of a similar nature not destined to become a permanent part of the completed Insured Project unless the value of the same is declared under a Project Certificate and additional premium is paid at rates, terms and conditions to be agreed; construction plant, tools and equipment, unless the value of same is reported to the Company, endorsed hereon and additional premium is paid at a rate to be agreed;
3. Vehicles or equipment licensed for highway use, watercraft or aircraft;
4. Water, animals of any kind, standing timber, and growing crops.
5. Accounts, bills, currency, stamps, deeds, evidence of debt, checks, money, securities, precious metals, precious stones or other property of a similar nature;
6. EXISTING PROPERTY at the site of the Insured Project;
7. Property located at other than the location of the Insured Project, except that which is in-transit or temporary storage.
8. Prototype, developmental or used machinery and equipment but only as to damage while undergoing any form of Hot Testing, commissioning or startup unless specifically endorsed to the policy.
9. Transmission and distribution lines upon energization at the completion of testing;
10. Any property located at a site, which stores, processes, handles or makes use of radioactive materials unless reported to and accepted by the Company. The foregoing shall not apply to locations or property making use of radioactive isotopes contained within equipment used for diagnostic or testing purposes

EXCLUDED CAUSES OF LOSS

1. Consequential loss, damage or expense of any kind or description including but not limited to loss of market or delay, liquidated damages, performance penalties, penalties for

non-completion, delay in completion, or non compliance with contract conditions, whether caused by a peril insured or otherwise

2. Faulty or defective workmanship, materials, supplies, or design
3. Error, omission or deficiency in design, plans, specifications, engineering or surveying
4. War
5. Nuclear reaction or radiation or radioactive contamination however caused
6. Unexplained disappearance, shortage or other loss discovered upon taking inventory.
7. Loss, damage costs, expenses, fines or penalties at the order of any government agency
8. Any form of fungus, however caused, including but not limited to yeast, mold, mildew, smut, mushrooms, spores or any substance, product or byproduct produced by, released by or arising as a consequence of the past or current existence of fungus. This includes, but is not limited to the cost to remediate the presence or effects of any of the foregoing shall also be excluded.
9. The actual, alleged or threatened release, discharge, escape or dispersal of Contaminants or Pollutants
10. Asbestos Hazard
11. Loss or damage covered under any written or implied guarantee or warranty by any manufacturer or supplier
12. Cessation of work, whether total or partial.
13. Normal subsidence, settling, cracking, expansion, contraction or shrinkage of walls, floors, ceilings, buildings, foundations, patios, walkways, driveways or pavements
14. Infestation, disease, freeze, drought and hail, weight of ice or snow or any damage caused by insects, vermin, rodents or animals but only as respects to Trees, Plants, Shrubs and Landscaping.
15. Erosion of graded or planted finish or rough grades which results from normal precipitation
16. Loss, damage, destruction, distortion, erasure, corruption, alteration, diminishment in value, or loss of use or usefulness of electronic data, operating systems, micro processors, or computers.
17. Flood as defined herein. However if fire, explosion, or leakage from FIRE PROTECTIVE EQUIPMENT ensues, then this policy insurers only such ensuing loss or damage
18. Earthquake as defined herein. However if fire, explosion, or leakage from FIRE PROTECTIVE EQUIPMENT ensues, then this policy insurers only such ensuing loss or damage

EXTENSIONS OF COVERAGE

1. **TRANSIT:**

Subject to the sublimit, coverage applies with respect to property insured from the commencement of loading at the original point of shipment anywhere within the policy territory until completion of unloading at the location of Insured Project, including shipments on inland or coastal waters but excluding ocean marine shipments. To the extent others are responsible for loss or damage to property insured while in transit under terms F.O.B. to a designated location or recipient, this extension of coverage will apply excess thereof and shall not contribute thereto.

The Insured agrees to keep records of all shipments insured hereunder and make them available to the Company upon request.

This coverage shall be void if the Insured enters into any special agreement with carriers releasing them from their common law or statutory liability or agreeing that this insurance shall in any way inure to the benefit of such carriers, however, the Insured may, without prejudice to this coverage, accept such bills of lading, receipts, or contracts of transportation as are ordinarily issued by carriers containing a limitation as to the value of property insured.

2. **OFFSITE STORAGE:**

Subject to the sublimit, coverage applies with respect to property insured anywhere within the policy territory but excluding such property while in the course of manufacturing or processing at a manufacturer's or supplier's site or while in transit. To the extent others are responsible for loss or damage to covered property while in offsite storage, this extension of coverage will apply excess thereof and shall not contribute thereto.

3. **EXPEDITING EXPENSE:**

Subject to the sublimit, this Policy shall pay for reasonable wages for overtime, night work, and work on public holidays and extra costs of express freight or other rapid means of transportation which are necessary to make temporary repairs and to expedite the permanent repair or replacement of the property insured when damaged by an peril insured, but only to the extent such is necessary to continue as nearly as practicable the normal operation of the work in progress.

4. **ORDINANCE OR LAW / DEMOLITION AND INCREASED COST OF CONSTRUCTION:**

Subject to the sublimit, in the event of insured loss or damage under this policy that causes the enforcement of any law or ordinance in effect at the time of loss that regulates the repair, rebuilding or re-construction of the damaged portions of the Insured Project, then to the extent required by such enforcement of any law or ordinance, the Company shall be liable for:

A. Cost of demolishing undamaged parts of the Insured Project including cost of clearing the site.

- B. The value of such undamaged part of the facility which must be demolished;
- C. Increased cost of repair, rebuilding or re-construction of the damaged portions of the Insured Project on the same premises for the same use but not exceeding like height, floor area, style, material and limited to the minimum requirements of the law or ordinance.

With respect to coverage provided by Paragraph B., it is further understood and agreed that the Company shall not be liable for any loss, unless and until the damaged or destroyed building(s) or structure(s) is actually rebuilt or replaced on the same premises with due diligence and dispatch and in no event, unless repair or replacement is completed within two (2) years after the destruction or damage or within such further time as the Company may allow, in writing, during the two (2) years.

The following costs are not payable hereunder:

- A. Cost of demolition or increased cost of repair or reconstruction, debris removal, or other consequential loss caused by the enforcement of any law or ordinance regulating asbestos material or CONTAMINANTS OR POLLUTANTS*;
 - B. Cost of any governmental direction or request declaring that asbestos material present in, part of or utilized on any undamaged portion of insured property can no longer be used for the purpose for which it was intended or installed and must be removed or modified.
 - C. Cost of compliance with the enforcement of any law or ordinance which an Insured would have otherwise incurred by nature of such law or ordinance in the absence of any loss or damage covered by this policy.
5. **CLEAN UP OF CONTAMINANTS OR POLLUTANTS***:

Subject to the sublimit, the Company will pay for the necessary and reasonable expenses actually incurred by the Insured to cleanup and remove CONTAMINANTS OR POLLUTANTS* from land or water confined to the INSURED PROJECT if the discharge, dispersal, seepage, migration, release or escape of the CONTAMINANTS OR POLLUTANTS* is directly caused by insured physical loss of or damage to property insured which occurs during the term of this policy.

It is a condition precedent to recovery under this extension of coverage, that the Company shall have paid or agreed to pay for direct physical loss or damage to Insured Property hereunder and that the Insured shall give written notice to the Company of intent to claim for cost of debris removal or cost to clean up not later than twelve (12) months after the date of such loss or damage.

6. **FIRE BRIGADE CHARGES AND EXTINGUISHING EXPENSES:**

Subject to the sublimit, when property insured is destroyed or damaged by a peril insured, this Policy shall cover:

A. Fire brigade charges and other extinguishing expenses for which the Insured may be assessed;

B. Loss of fire extinguishing materials expended in fighting fire;

7. **PLANS, BLUEPRINTS, DRAWINGS, ETC:**

Subject to the sublimit, this Policy is extended to cover direct physical loss of or damage to plans, blueprints, drawings, renderings, specifications or other contract documents and models while at the Insured Project.

8. **TREES, PLANTS, SHRUBS AND LANDSCAPING:**

This Policy is extended to cover direct physical loss of or damage to trees, plants, shrubs and landscaping materials which are located at the Insured Project, the value of which have been included in the estimated Total Company Value reported to the Company, however, liability for such shall not exceed \$ 1,000 any one item;

9. **DEBRIS REMOVAL:**

Subject to the sublimit, in the event of direct physical loss or damage insured against and occurring during the term of this Policy, the Company will pay the following necessary and reasonable costs:

- A. costs to remove debris being a part of the property insured from the location of the Insured Project; and / or
- B. cost of cleanup at the Insured Project made necessary as a result of such direct physical loss or damage.

The Company will not pay the expense or cost to extract CONTAMINANTS OR POLLUTANTS* from debris, or to remove, restore, or replace contaminated or polluted land or water. Nor will the Company pay to remove or transport property or debris to a site for storage or decontamination required because the property or debris is affected by CONTAMINANTS OR POLLUTANTS*, whether or not such removal, transport or decontamination is required by law, ordinance or regulation.

It is a condition precedent to recovery under this extension that the Company shall have paid, or agreed to pay, for direct physical loss or damage to the property insured, unless such payment is precluded solely by the operation of any deductible, and that the Insured shall give written notice to the Company of intent to claim for cost of debris removal or cost to cleanup not later than (12) twelve months after the date of such physical loss or damage.

SELECTED GENERAL CONDITIONS

1. IN CASE OF LOSS

A. Notice of OCCURRENCE:

The Insured will, as soon as practicable, after notifying the University Representative and the University's Chief Risk Officer, report in writing to the Company every OCCURRENCE that may give rise to a claim under this Policy.

B. Proof of Loss:

The Insured will as soon as practicable, file with the Company a signed and sworn detailed proof of loss.

C. Payment of Loss:

All adjusted claims will be due and payable no later than thirty days after presentation and acceptance of proof of loss by this Company or its appointed representative.

D. Partial Payment of Loss:

In the event of a loss insured by this policy, it is understood and agreed that the Company will make partial payments of claims subject to the policy provisions and the normal policy adjustment provisions.

2. RECOVERY OR SALVAGE

Any recovery or salvage will apply as if recovered or received prior to the loss settlement and the loss will be readjustment accordingly, except for:

- A. proceeds from subrogation and other insurance recovered or received after a loss settlement under this policy;
- B. any recovery from suretyship, insurance, reinsurance, security or indemnity taken by or for the benefit of the Company.

3. VALUATION

At the time and place of loss, the basis of adjustment of a claim, unless otherwise endorsed herein, shall be as follows:

- A. Property Under Construction – The cost to repair or replace the property lost or damaged at the time and place of loss with material of like kind and quality less betterment, including contractor's reasonable profit and overhead not exceeding the percentages in the original contract; if not so replaced then loss shall be settled on the basis of ACTUAL CASH VALUE with proper deduction for depreciation.

- B. Property of Others (Including Items Supplied by the Owner) – The cost to repair or replace the property lost or damaged with material of like kind and quality including contractor's charges incurred prior to loss and related to such property, if any, less betterment, or the property owner's cost, whichever is less.
- C. Temporary Works – The actual cash value of the lost or damaged property valued as of the time and place of loss.
- D. Valuable Papers and Records - The cost to reproduce the property with other property of like kind and quality including the cost of gathering or assembling information from back up data if replaced, or if not replaced, at the value of blank material;
- 1. Installed Trees and Shrubs - The cost to replace with property of like kind, quality and size plus the proper proportion of labor expended if such damage occurs after installation.

4. PROTECTION OF PROPERTY

The Named Insured will take reasonable steps to protect, recover or save the property insured and minimize any further or potential loss or damage when:

- A. The property insured has sustained direct physical loss or damage by an insured peril; or
- B. The property insured is in imminent danger of sustaining direct physical loss or damage by the perils of:
 - 1. WINDSTORM or other related perils, but only when the potential for the same to occur has been forecasted by the National Weather Service;
 - 2. Fire;

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:**

A condition of inundation of normally dry areas, including dewatered areas, that results from:

- A. The rising or overflow of inland or tidal waters;
- B. The unusual and rapid accumulation or runoff of surface waters.
- C. Mudslides (mudflows) which are caused by flooding as defined in subparagraph B above and are akin to a river of liquid and flowing mud on the surfaces of normally dry land areas, as when earth is carried by a current of water and deposited along the path of the current;

The collapse or subsidence of land along the shore of a lake or other body of water as a result of erosion or undermining caused by waves or currents of water exceeding the cyclical levels which result in flooding as defined in A above.

2. **CONTAMINANTS OR POLLUTANTS:**

Any material which after its release can cause or threaten damage to human health or human welfare or which can cause or threaten damage, deterioration, loss of value, marketability or loss of use to property insured hereunder as listed in the Federal Water Pollution Control Act, Clean Air Act, Resource Conservation and Recovery Act of 1976, and Toxic Substances Control Act, or as designated by the US Environmental Protection Agency.

3. **EARTHQUAKE:**

All land movement due to seismic activity, including but not limited to shocks, tremors, volcanic action, earth rising or shifting, landslide, subsidence, sinkhole, rockfall and tsunami.

4. **FIRE PROTECTION SYSTEMS:**

Tanks, water mains, hydrants, or valves, and any other equipment whether used solely for fire protection or jointly for fire protection and for other purposes but excluding:

- A. branch piping from a joint system where such branches are used entirely for purposes other than fire protection.
- B. any underground water mains or appurtenances located outside of the described premises and forming part of the public water distributing system.
- C. Any pond or reservoir in which the water is impounded by a dam

5. **OCCURRENCE:**

Any one loss, disaster, casualty, accident, incident, or a series of one or more of the foregoing arise out of a single event or originating cause during the Policy term and including all resultant or concomitant losses wherever located with the following exceptions:

With the exception of strikes, riots, civil commotion and vandalism or EARTHQUAKE*, FLOOD* and WINDSTORM*, OCCURRENCE* means any one loss, disaster, casualty, accident, incident, or a series of one or more of the foregoing arising out of a single event or originating cause during the Policy term and including all resultant or concomitant losses wherever located.

6. **WINDSTORM:**

A named atmospheric disturbance accompanied by wind, rain, hail, tornado or any combination of the foregoing and including any resulting flood, tidal or wave action.

7. **PROJECT CERTIFICATE**

A certificate of insurance (sample attached) evidencing coverage under the Policy of individual Insured Project(s).

SAMPLE ONLY

Lexington Insurance Company							
CERTIFICATE OF INSURANCE							
CERTIFICATE PERIOD _____ to _____		CERTIFICATE NUMBER		IM	0001	- 00	
This Certificate follows terms and conditions of LEXINGTON INSURANCE COMPANY Policy				IM	7477530	- 00	
This certificate neither affirmatively nor negatively amends, extends or alters the coverage, limits, terms or conditions of the Master policy unless expressly stated herein.							
NAMED INSURED <small>(include address)</small>	The Regents of The University of California and/or their construction managers, contractors, subcontractors, as their interests may appear 1111 Franklin Street, 10th Floor Oakland, CA 94607-5200	PREMIUM \$			ANNUAL RATE		
		Builders Risk					/\$100
		Delay In Completion					/\$100
		Hot Testing / Month					/\$100
		Earthquake					/\$100
		Flood					/\$100
		Windstorm / Month					/\$100
		Damage To Existing Property					/\$100
		Ordinance & Law / Demo & ICC					/\$100
		Transit					/\$100
		Offsite Storage					/\$100
		Expediting Expense					/\$100
		Fire Dept. Service Charges					/\$100
		Plans, Blueprints & Models					/\$100
		Terrorism					/\$100
LOSS PAYEE <small>(include address)</small>	N/A = Not Applicable						
MORTGAGEE <small>(include address)</small>	Not Applicable						
PROJECT LOCATION <small>(include address)</small>	UC Campus Address: Project Name & Number Prime Contractor						
PROJECT DESCRIPTION <small>(Structural type, size, material, occupancy, etc.)</small> <small>(If renovation or rehab, be specific)</small>							
COVERAGE <small>(Place X in all applicable coverage blocks)</small>	All Risk	Hot Testing	Contractor's Wrap Around	Delay In Completion	Damage To Existing Property	Ordinance & Law / Demo & ICC	Terrorism

CERTIFICATE NUMBER: IM _____ - 00

SAMPLE ONLY

STANDARD COVERAGE TERMS	
<small>(Coverage shall only apply under this Certificate to those individual Limits, Sub-limits and Aggregate Limits for which a value is entered below)</small>	
LIMIT OF LIABILITY	\$ * Any One OCCURRENCE* During The Certificate Period
SUB-LIMITS OF LIABILITY <small>(Sublimits per OCCURRENCE* except Delay In Completion as Certificate Aggregate)</small>	\$ <u>See Above</u> Physical Damage To Insured Property
	\$ <u>Excluded</u> Delay In Completion (see coverage terms below for specific sublimits)
	\$ <u>2,500,000</u> Physical Damage To Property In Transit - Any One Conveyance
	\$ <u>2,500,000</u> Physical Damage To Property In Offsite Storage - Any One Location
	\$ <u>1,000,000</u> Expediting Expense
	\$ <u>250,000</u> Fire Brigade Charges & Extinguishing Expenses
	\$ <u>250,000</u> Physical Damage To Plans, Blueprints, Drawings, Renderings, Specifications Or Other Contract Documents And Models At The Insured Project
	\$ <u>1,000,000</u> Ordinance Or Law / Demolition & Increased Cost of Construction
	\$ <u>Excluded</u> Damage To Existing Property
	<u>25.0%</u> Of the amount of insured physical loss or damage - Debris Removal
ANNUAL AGGREGATES <small>(Aggregate limits apply to each annual period within this Certificate beginning on the Certificate inception date)</small>	\$ <u>Excluded</u> Caused By, Resulting From, Contributed To Or Aggravated By The Peril Of EARTHQUAKE*
	\$ <u>Excluded</u> Caused By, Resulting From, Contributed To Or Aggravated By The Peril Of COASTAL WINDSTORM*
	\$ <u>Excluded</u> Caused By, Resulting From, Contributed To Or Aggravated By The Peril Of FLOOD*
DEDUCTIBLES <small>(Deductibles apply per OCCURRENCE*) (When % is entered, the % is applied against the total insured physical damage values at risk at the time and place of loss subject to the dollar minimum)</small>	\$ <u>25,000*</u> Physical Damage, Except
	\$ <u>Excluded</u> % EARTHQUAKE*
	\$ <u>Excluded</u> % COASTAL WINDSTORM*
	\$ <u>Excluded</u> % FLOOD*
	\$ <u>Excluded</u> Hot Testing
	<u>Excluded</u> Calendar Day Deductible Period – Delay In Completion - Standard Coverage
<u>Excluded</u> Calendar Day Deductible Period – Delay In Completion - Optional Coverage	
DELAY IN COMPLETION COVERAGE TERMS	
<small>(Coverage for Delay In Completion shall only apply under this Certificate when this section is completed in its entirety)</small>	
NAMED INSURED & BUSINESS ADDRESS	Not Applicable
ANTICIPATED DATE OF COMPLETION*	N/A
PERIOD OF INDEMNITY*	N/A Calendar Days
Subject to individual Certificate Aggregate sublimits shown below, the total Certificate Aggregate limit for which the Company shall be liable is	
	\$ N/A
CERTIFICATE AGGREGATE SUB-LIMITS OF LIABILITY	Loss Of Gross Earnings \$ <u>N/A</u>
	Loss Of Rental Income \$ <u>N/A</u>
	Soft Costs / Additional Expense \$ <u>N/A</u>
<small>When a Certificate Aggregate Sub-limit is entered for Soft Costs / Additional Expense above, coverage shall be further limited to the individual Certificate Aggregate Sub-limits entered to the right</small>	Interim Interest Expense \$ <u>N/A</u>
	Realty Taxes / Ground Rents \$ <u>N/A</u>
	Advertising Expense \$ <u>N/A</u>
	Commission Expense \$ <u>N/A</u>
	Architect / Engineer Fees \$ <u>N/A</u>
	Project Administration Expense \$ <u>N/A</u>
	Legal / Accounting Fees \$ <u>N/A</u>
	Insurance Premiums \$ <u>N/A</u>
	\$ _____
	\$ _____
\$ _____	

CERTIFICATE NUMBER: IM _____ - 00

SAMPLE ONLY

HOT TESTING PERIOD TERMS

(If an X is entered in the coverage block on page one the following must be provided)

HOT TESTING PERIOD: N/A Days

OTHER COVERAGE TERMS / CONDITIONS

(Identify other terms and conditions below that apply to this Certificate)

- * An Interior Water Damage Sublimit of \$10,000,000 is applicable to all projects on a per occurrence basis.
- * A Deductible of \$100,000 is applicable to the Interior Water Damage Sublimit on a per occurrence basis

Countersigned at: _____

Dated: _____ By: _____ Title: _____

EXHIBIT 15
CERTIFICATE OF SUBSTANTIAL COMPLETION

Project Name: SCIENCE AND ENGINEERING BUILDING 2

Contractor: _____

Project Number: 900020

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 Prime Trade 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.

3. Contractor shall be responsible for all Contract requirements except items or responsibilities of University set forth in Paragraph 2 above.
4. 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 22
 MATERIAL SUBSTITUTION PROPOSAL**

TO (NAME): _____
 PROJECT: SCIENCE AND ENGINEERING BUILDING 2 PROJECT NO.: 900020

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
2. Laboratory test or performance results
3. Drawings & wiring diagrams of the proposed product
4. Drawings & description of changes required by other subcontractors
5. Samples
6. Manufacturer's guarantee & maintenance instructions

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"/>	Revise and Resubmit	<input type="checkbox"/>	See Attached

University's
Representative
Signature: _____ Date: _____

EXHIBIT 23
MATERIAL SUBMITTAL APPROVAL FORM

(SEE INSTRUCTIONS ON PAGE 2)

TO: UNIVERSITY OF CALIFORNIA, MERCED	FROM: (Prime Trade Contractor)	DATE:
CONTRACT NUMBER: 900020	SUBMITTAL NUMBER:	PREVIOUS SUBMITTAL NUMBER:
		SUBMITTAL: [] NEW [] RESUBMITTAL

TO BE COMPLETED BY PRIME TRADE CONTRACTOR			FOR UNIVERSITY'S USE ONLY			
ITEM NO.	SPECIFICATION SECTION/PARA NO./DRAWING NO.	DESCRIPTION OF MATERIAL/SHOP DRAWINGS (Includes Type, Model No., Catalog No., Mfg., etc.)	Approved	Dis-Approved	SEE COMMENTS	INITIAL

NOTE By completing this form the undersigned Contractor certifies that the material and shop drawings complies with all drawings and specifications of subject contract and the 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. Contractor is responsible for identifying all proposed material substitutions, dimensions, quantities, techniques of construction and coordination with all other trades.

DATE	TYPE OR PRINT NAME AND TITLE	SIGNATURE
------	------------------------------	-----------

FOR UNIVERSITY'S USE ONLY

TO: (Contractor)
 Approved Disapproved
 As indicated Above and Subject to Any Applicable Comments on the Reverse Side. Request Resubmittal on Disapproved items within _____ Days of Date Shown Below.

DATE	TYPE OR PRINT NAME AND TITLE	SIGNATURE
------	------------------------------	-----------

COMMENTS (NUMBER TO CORRESPOND WITH APPLICABLE ITEM NUMBER ON PAGE 1)

INSTRUCTIONS TO CONTRACTORS

1. The term "material" is defined as articles, supplies, raw materials, equipment, parts, components, and items that are to be incorporated into the work required by the contract.
2. This form is to be used by Contractors for submitting Shop Drawings, Equipment Data, Manufacturer's Literature and Certificates and Samples of Materials to the University for approval in accordance with the provisions of this contract. Submit the number of copies which the Contractor requires, plus 3 copies which will be retained by the University.
3. Item(s) to be approved will be clearly tabbed or identified. Data pertaining to item(s) to be approved will be clearly identified or tabbed, particularly where documents are voluminous, in order to properly evaluate the materials or articles to be incorporated in the work. Each attachment will be numbered to correspond with the item number shown on the face of this form.
4. Requests submitted shall be numbered consecutively, by contract, in the space entitled "Submittal No." this number, in addition to the Contract No., will be used to identify each Material Approval Submittal. ReSubmittals will be indicated in the appropriate block and the insertion of previous Submittal number and date in addition to a new Submittal number. A single Submittal should be used for all work of a section of the specifications, but in NO instance should the Submittal include work for more than 1 contract. Submittals requiring priority handling will be submitted by separate submittal using the form and so marked across the face of the form.
5. Materials Substitutions Requests: Contractor shall check the block provided if a proposed material substitution is being submitted. Requests for materials and equipment substitutions will not be accepted unless Contractor complies with directions specified in Section 01630 Product Options and Substitutions.
6. This material Approval Submittal is not valid unless it is signed by the University's Representative.

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SECTION D-ALT 2-15900 - ENERGY MANAGEMENT AND CONTROL SYSTEM

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SCIENCE AND ENGINEERING BUILDING 2
100% CONSTRUCTION DOCUMENTS
UNIVERSITY OF CALIFORNIA, MERCED
MERCED, CALIFORNIA

PROJECT NO.: 900020

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LIGHTING FIXTURES

TOILET ACCESSORIES

PLUMBING FIXTURES

DOOR HARDWARE

OWNER EQUIPMENT

AUDIO VISUAL EQUIPMENT

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SECTION 01110 – SUMMARY OF WORK

PART 1 - GENERAL

1.1 WORK REQUIRED BY CONTRACT DOCUMENTS

- A. Interior room Identification Signs
- B. Illuminated Exterior Building Monument Sign (AA2 Primary Building ID)
- C. Illuminated Exterior Building Monument Sign (AA3 Primary Building ID)
- D. Interior Wall-Mounted LEED Display Sign

1.2 PROJECT SCHEDULE

- A. Interior Room Identification Signs must be fabricated and ready for installation no later than January 24, 2014. The installation date may be varied and shall be coordinated with University Representative prior to any changes in the date.
- B. Illuminated Exterior Building Monument Signs must be fabricated and ready for installation by Friday, February 21, 2014. The installation date may be varied and shall be coordinated with University Representative.
- C. Signage package is based on 2007 Building Code Requirements.

1.3 WORK SEQUENCE

- A. See Preliminary Master Project Schedule in the Instructions to Bidders. As specified, the Master Project Schedule will be developed and updated after contract award.

1.4 UNIVERSITY OCCUPANCY

- A. The University plans to occupy the building in its entirety on the date shown for Substantial Completion on the Preliminary Master Project Schedule included in the Instructions to Bidders.

1.5 SUBSTANTIAL COMPLETION

- A. Substantial Completion shall be applicable to the entire Work.

SCIENCE AND ENGINEERING BUILDING 2
UNIVERSITY OF CALIFORNIA, MERCED
MERCED, CALIFORNIA

PROJECT NO.: 900020

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

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NOVEMBER 1, 2004
REVISION: 1
LF/SF/MPT

SUMMARY OF WORK
01110 - 2

SECTION 01113 - SPECIAL REQUIREMENTS

PART 1 - GENERAL

1.1 DEFINITION OF PROJECT SITE

- A. Prime Trade 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. All Prime Trade Contractors shall use the Project Access Road off of Lake Road at Bellevue Road as shown on the Site Logistics Plan.
- B. The Earthwork 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 Prime Trade Contractor shall not permit any Prime Trade Contractor 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 Prime Trade Contractor shall ensure that no Prime Trade Contractor personnel shall use the Lake to fish, swim or for other non-construction activities.
- c. The Prime Trade Contractor shall ensure that no run-off shall enter the Lake except as indicated on the Drawings.
- d. The Prime Trade 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 Prime Trade Contractor shall not permit any Prime Trade Contractor 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 Prime Trade Contractor shall ensure that no Prime Trade Contractor 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 Prime Trade 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 Prime Trade 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. *See 1.3 above.*
- B. Prime Trade Contractor shall take all necessary precaution to insure the safety of University Students, Faculty and Visitors at all all times.
- C. Prime Trade Contractor must obtain prior written approval from the University's Representative to block streets or parking areas at any time.
- D. The Prime Trade 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. See Site Logistics Plan for designated parking area and laydown areas.
- 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 Prime Trade 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.

- E. 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 Prime Trade Contractor shall adopt all practical means to minimize interference to traffic. Access to other facilities under construction shall be maintained at all times. The Prime Trade 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. Prime Trade Contractor shall furnish at Prime Trade 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 Prime Trade 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 Prime Trade Contractor shall comply with the provisions of 01350 Environmental Mitigation.
- E. The Prime Trade Contractor shall ensure that all of the Prime Trade Contractor's activities that affect traffic control, road use, materials delivery, equipment delivery, rights of way and preservation of 3rd party access rights are coordinated with those of all Separate Prime Trade Contractors.

1.8 SURROUNDING SITE CONDITION SURVEY

- A. Prior to commencing the Work, Prime Trade 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 Prime Trade 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 Prime Trade 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. Prime Trade 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 Prime Trade Contractor with no adjustment of Contract Sum or Contract Time.
- D. The Prime Trade Contractor shall coordinate all Work with the operations of separate Prime Trade Contractors as needed. This shall include, but not be limited to, the responsibility of the Prime Trade Contractor to coordinate with other contractors installing underground utilities. Such coordination should take place prior to any excavation or trenching operations by the Prime Trade Contractor.
- E. If any other structures or utilities are encountered, the Prime Trade 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 Prime Trade Contractor, the Prime Trade 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. Prime Trade 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 Prime Trade Contractor does not expose all existing utilities, Prime Trade

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 Prime Trade 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 Prime Trade Contractor operations, shall be removed and replaced at the Prime Trade Contractor's expense.

1.11 PROTECTION OF PERSONNEL

- A. Prime Trade 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 Conditions Prime Trade Contractor shall install and maintain 6' high chain link site security fencing and gates as shown on the Site Logistics Plan. Fencing at the building perimeter shall include green shade screen to shield construction activities from view. ALL Prime Trade 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. Housing 4 Project
 - b. Various Infrastructure Projects
 - 3. Disagreements between the Prime Trade Contractor and other Separate Prime Trade 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 Prime Trade 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 Prime Trade Contractors.

1.14 FINAL EXAM SCHEDULE

- A. Prime Trade 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. Prime Trade 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 Prime Trade 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. Prime Trade 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, Prime Trade 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. Prime Trade 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. Prime Trade Contractor shall provide and maintain all temporary facilities as required for completion of the Project.

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.

1.20 CLEANUP

- A. During the progress of the Work, the Prime Trade 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 by General Conditions Prime Trade Contractor (BP1.4) off campus. Prime Trade Contractor shall not use University refuse containers. See also Exhibit 30.

1.21 UNIVERSITY FURNISHED CONSTRUCTION DOCUMENTS

- A. University will furnish to the Prime Trade 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 Prime Trade Contractor wants the Drawings in another size other than the size issued with the Bidding Documents, the Prime Trade 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 Conditions Prime Trade 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. Prime Trade 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, Prime Trade Contractor shall provide copies of operator's training and crane certification to the University's Representative.
2. Crane Staging Area: Prime Trade 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. Prime Trade Contractor is responsible for providing necessary staging area for crane.
3. Storage: Prime Trade 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. Prime Trade 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 Prime Trade Contractor and communications given to and received from the Project Site Supervisor shall be binding on Prime Trade Contractor.
- B. The Prime Trade 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, Prime Trade Contractor fails to complete the Contract on time, Prime Trade 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 Prime Trade 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 Prime Trade 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 PRIME TRADE CONTRACTOR SITE PERSONNEL

- A. In addition to the Project Site Superintendent/Foreman, the Prime Trade Contractor shall provide site personnel of quality and quantity sufficient to carry out all of the on-site Prime Trade 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 01113

SECTION 01120 - 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. Each Prime Trade 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 Prime Trade 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 each Prime Trade 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 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 Prime Trade 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.
- 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. Prime Trade Contractor shall designate a LEED[®] Representative, for the approval of the University's Representative. Prime Trade Contractor's LEED[®] Representative shall be an individual responsible for implementation, coordination, and documentation of LEED[®] Credit Requirements specified herein. Prime Trade 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 prime trade contractor as noted in this LEED® specification, 1.6 Submittals.

LEED® Certification	
LEED® Reference	Point Description
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. Prime Trade Contractor shall conduct LEED® Certification meetings as required with all subcontractors, in addition to those meetings outlined in Section 01311 Project Meetings.
1. Prime Trade Contractor’s Project Manager
 2. University’s Representative & or University’s LEED® Coordinator
 3. Prime Trade 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. Prime Trade 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.
- 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, Prime Trade 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, Prime Trade 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 8: Product Data for interior and exterior lighting fixtures that stop direct-beam illumination from leaving the building site.
 2. 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.
 3. SS Credit 7.2: Product data and manufacturer's catalog cuts highlighting that the roofing material complies with LEED® Solar Reflectance Index requirements.

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, Prime Trade 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 – Prime Trade 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, Prime Trade 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, Prime Trade 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, Prime Trade 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, Prime Trade 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, Prime Trade 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, Prime Trade 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, Prime Trade 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 Prime Trade 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 Prime Trade 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: Contractor shall prevent loss of soil during construction.
 - 1. Contractor shall comply with the Universities Erosion Control Plan
- D. Reduced Site Disturbance: Prime Trade 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: Prime Trade 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, Prime Trade Contractor shall comply with applicable submittal requirements stipulated in 1.6 of this specification.
 - 2. Within 14 calendar days of Project Completion, Prime Trade 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: Prime Trade Contractor shall comply with the following requirements of LEED® Energy and Atmosphere Prerequisite 1 – Fundamental Building Systems Commissioning:
 - 1. Refer to Section 01810 Commissioning.
- G. Additional Commissioning: Prime Trade Contractor shall comply with the following requirements of LEED® Energy and Atmosphere Credit 3 – Additional Commissioning:
 - 1. Refer to Section 01810 Commissioning.
- H. Ozone Depletion: Prime Trade Contractor shall meet the intent to reduce ozone depletion potential through the following.
 - 1. Prime Trade Contractor shall provide refrigeration equipment that does not contain or make use of hydrochlorofluorocarbons (HCFC's).
 - 2. Prime Trade Contractor shall provide fire suppression systems that do not contain or make use of Halon.
- I. Construction Waste Management: Prime Trade Contractor shall comply with University's Site Waste Management Plan.
- J. Recycled Content: Prime Trade 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: Prime Trade 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: Prime Trade 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: Prime Trade 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: Prime Trade Contractor shall develop and implement an Indoor Air Quality (IAQ) Management Plan for the construction and preoccupancy phases of Project buildings.
 - 1. Prime Trade 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, 2nd 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) Prime Trade 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, Prime Trade 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. Prime Trade 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 Prime Trade Contractor must track and submit full documentation per LEED®-NC Certification Requirements. These credits are designated “PTC”.

LEED® Certification	
LEED® Reference	Point Description
*SS Prerequisite: PTC	Erosion and Sedimentation Control
*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
*SS Credit 6.1	Storm Water Management
*SS Credit 6.2	Storm Water Management Treatment
SS Credit 7.2	Heat Island Effect, Roof
*SS Credit 8	Light Pollution Reduction
*WE Credit 1	Water Efficient Landscaping
WE Credit 3	Water Efficiency
EA Prerequisite 1 – 3	Energy Design
EA Credit 1	Optimize Building Energy Performance
EA Credit 3	Additional Commissioning
EA Credit 4	Elimination of HCFC's & Halon
EA Credit 5	Measurement and Verification
MR Prerequisite 1	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

LEED® Certification	
LEED® Reference	Point Description
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	Indoor Chemical & Pollutant Source Control
IEQ Credit 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	Exceptional Water Savings
*ID Credit 2.0	LEED® Accredited Professional
RP Credit 1	Regional Priority Credits

* 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			
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	650							
– Pigmented	350							
flats	250	100						50
floor coatings	420		100					50
Graphic arts (sign) coatings	500							
industrial maintenance (im) coatings	420			250		100		
High temperature im coatings			420					
Zinc-rich im primers	420		340			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	300		250		50			
aluminum roof coatings	500				100			
Roof primers, bituminous	350		350					
Rust: preventive coatings	420		400			100		
shellac								
– clear	730							
– Pigmented	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							
<p>* 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.</p>								

- 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. Prime Trade Contractor shall execute the approved Construction IAQ Management Plan as specified in this Section.
- B. During construction Prime Trade 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: Prime Trade 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. Prime Trade 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, Prime Trade 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: Prime Trade 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, Prime Trade 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, Prime Trade 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, Prime Trade 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 01120

SECTION 01130 – REQUESTS FOR INFORMATION

PART 1 - GENERAL

1.1 SUMMARY

- A. This section contains the procedures to be followed by the Contractor for submitting requests for clarification or additional information.

1.2 PROCEDURES

- A. Notification by the 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 Contractor will not be answered. Impacts to the Project arising from the Contractor's failure to properly submit RFI's are the 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. Contractor discovers an unforeseen condition or circumstance that is not described in the Contract Documents.
2. 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. 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 Contractor submits the RFI as a request for substitution.
 - b. The Contractor submits the RFI as a submittal.
 - c. The Contractor submits the RFI under the pretense of a Contract Documents discrepancy or omission without thorough review of the Documents.

- d. The 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 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 Contractor are found to fall into these categories, the 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. Contractor shall ask for any clarification or request for information immediately upon discovery. 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, **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 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 Contractor.
 2. Should the 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 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 Contractor shall follow procedures set forth in the General Conditions.

END OF SECTION 01130

SECTION 01210 - ALLOWANCES

PART 1 - GENERAL

1.1 ALLOWANCES REQUIREMENTS

- A. Included in the Contract Sum are all Allowances stated below. Items covered by Allowances shall be supplied for such amounts and by such persons or firms as University's Representative may direct.
- B. The following shall apply, unless otherwise provided in the Contract Documents:
 - 1. Allowances shall cover the cost to Contractor of materials and equipment delivered at the Project site and all required taxes, less applicable trade discounts.
 - 2. Contractor's costs required for storage on and off the Project site, security, loading and unloading, handling at the Project site, labor, installation costs, overhead, profit, and other expenses contemplated for stated Allowance amounts shall be included in the Contract Sum and not in the Allowances.
 - 3. Unless otherwise provided herein, whenever costs are more than or less than Allowances, the Contract Sum shall be adjusted by Change Order based on (1) the difference between actual costs and the Allowances and (2) changes in Contractor's costs.
 - 4. At any time during the course of the Contract, the University's Representative may elect to delete any or all allowances via Change Order for full amount listed below.

1.2 DESCRIPTION OF ALLOWANCES – NOT USED

PART 2 - - PRODUCTS (NOT USED)

PART 3 - - EXECUTION (NOT USED)

END OF SECTION 01210

SECTION 01230 - ALTERNATES

PART 1 - GENERAL

1.1 ALTERNATES REQUIREMENTS

- A. This Section identifies each Alternate and describes basic changes to the Work only when that Alternate is made a part of the Work by specific provision in the Agreement.
- B. The Lump Sum Base Bid and Alternates shall include the costs of all supporting elements required, so that the combination of the Lump Sum Base Bid and any Alternates shall be complete. The scope of Work for all Alternates shall be in accordance with applicable Drawings and Specifications.
- C. Except as otherwise specifically provided by University, the Work described in Alternates shall be completed with no increase in Contract Time.
- D. This Section includes only the non-technical descriptions of the Alternates. Refer to the specific Sections of Divisions 2-16 of the Specifications and the Alternates Sheet of Drawings for technical descriptions of the Alternates.
- E. Coordinate related Work and modify surrounding Work as required to properly and completely integrate the Alternates into the Work.

1.2 DESCRIPTION OF DEDUCTIVE ALTERNATES – NOT USED

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01230

SECTION 01270 – UNIT PRICES

PART 1 - GENERAL

1.1 DESCRIPTION

- A. Unit Price quotations shall be inserted in the appropriate spaces in the Bid Form for each Unit Price item of Work described herein.
- B. Unit Prices stated in the Agreement shall be used to compute adjustments of the Contract Sum for approved Unit Price items of Work. Such adjustments shall be made by Change Order (Exhibit 9).
- C. Unit Prices shall include all labor, materials, tools, and equipment; all other direct and indirect costs necessary to complete the item of Work and to coordinate the Unit Price Work with adjacent Work; and shall include all overhead and profit. Contractor shall accept compensation computed in accordance with the Unit Prices for work installed in place as full compensation for furnishing such Work.
- D. Compensation will be paid for those items of Work described in below, Unit Prices.

1.2 SPECIFIED WORK

- A. Applicable Sections of the Specifications describe the materials and methods required under the various Unit Price items of Work.

1.3 UNIT PRICES (NOT USED)

1.4 ADVANCED COORDINATION

- A. Immediately notify University's Representative when conditions require the use of Unit Price items of Work.
- B. The applicability of, measurement methods for, documentation of, and the final adjustment of the Contract Sum for Unit Price items of Work shall be determined by the University's Representative.
- C. After performing Unit Price items of Work as directed by University's Representative, Contractor shall take necessary measurements in the presence of University's Representative and shall submit calculations of quantities to University's Representative for approval. Contractor shall notify University's Representative 1 day in advance of taking measurements.

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MERCED, CALIFORNIA

PROJECT NO.: 900020

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01270

NOVEMBER 1, 2004
REVISION: 1
LF/SF/MPT

UNIT PRICES
01270 - 2

SECTION 01310 - PROJECT COORDINATION

PART 1 - GENERAL

1.1 COORDINATION REQUIREMENTS

- A. Prime Trade Contractor shall coordinate the Work and shall not delegate responsibility for coordination to any Subcontractor.
1. Prime Trade Contractor shall anticipate the interrelationship of all Subcontractors and their relationship with the Work.
 2. Prime Trade Contractor shall resolve differences or disputes between Subcontractors concerning coordination, interference, or extent of the Work between Sections.
 3. Prime Trade 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. Prime Trade Contractor shall not obstruct spaces and installations that are required to be clear by Applicable Code Requirements.
 5. Prime Trade 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. Prime Trade 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. Prime Trade 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. Prime Trade 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. Mechanical, Fire Sprinkler, Plumbing and Electrical Prime Trade Contractors shall schedule and coordinate the Work of all Prime Trade Contractors and 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 above named Prime Trade Contractors, with assistance from the Drywall Prime Contractor, shall participate in the preparation of a coordinated 3-D Building Information Model (BIM) of the overhead mechanical, electrical, fire protection and plumbing utilities demonstrating how these utilities will fit within the designated ceiling space. These utilities will be fully coordinated one with the other as well as with architectural and structural components of the building. The Drywall Prime Contractor 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 Prime Trade Contractor shall provide a 3-D model of their work based on their approved shop drawings.
- c. During MEP coordination, Prime Trade Contractors shall submit monthly the BIM coordination models and the final coordinated and signed off BIM models. Final as-built BIM models shall be submitted prior close-out.
- d. Where the Drawings are diagrammatic, showing only the general arrangement of the systems, each Prime Trade 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. Each Prime Trade 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, each Prime Trade 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. Each Prime Trade 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 01310

SECTION 01311 - PROJECT MEETINGS

PART 1 - GENERAL

1.1 PTC 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. Prime Trade Contractor's Project Manager
 - 3. Prime Trade 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 PRIME TRADE CONTRACTOR MEETINGS

- A. Progress Meetings:
 1. To be held a minimum of one-week intervals or more often when required by the University's Representative.
 2. Meeting Locations: Jobsite trailer.
 3. All Prime Trade Contractors shall attend.
- B. Coordination Meetings:
 1. To be held at minimum of one-week intervals or more often when required by the University's Representative.
 2. Meeting Location: Jobsite trailer.

1.6 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 Prime Trade 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. Prime Trade 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.

1.7 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 all contractors.
 - 2. All Prime Trade Contractors 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. Prime Trade 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 01311

SECTION 01312 - PRIME TRADE CONTRACTOR SCHEDULES

PART 1 - GENERAL

1.1 PRIME TRADE 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 Master Schedule included within the bid documents. This will require time commitment from officers and supervisors of all contractors. All contractors 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 Master Project Schedule reviewed.
2. Periodically "pull planning" sessions will be held to refine and expand on the detail in the Master Project Schedule.
3. These sessions will require the contractor's superintendents and foreman to brainstorm and create detailed activities and resource requirements that support the Master Schedule.
4. After all contractors 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. All contractors 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 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 each trade contractor 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 each trade contractor 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 MASTER PROJECT SCHEDULE

- A. The 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 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 Master Project Schedule will identify all holidays and non- working days.
- D. Updating.
 1. The 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. 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 01312

SECTION 01315 - PROJECT DOCUMENT MANAGEMENT AND CONTROL (NOT USED)

PART 1 - GENERAL

1.1 SUMMARY

- A. This section describes the project document management extranet program or Project Control System that shall be utilized on the Project. This system is mandatory and the University will not accept any request for substitution for this program.
- B. Requests for Information, Submittals, meeting minutes and other important project documentation will be issued via and stored on the Prolog project management system, accessed via secure Citrix interface, on the PPD&C website (<https://ppdc.ucmerced.edu>).

1.2 WORK SPECIFIED ELSEWHERE

- A. The Contractor shall provide, at the Contractor's Temporary Site Office, and home office if required, the computer hardware and software to provide access to the Project Control System.
- B. The University has established the project document management database for this project. The University or its agents will provide management of the database and interface with the system provider.
- C. Use of the Project Control System will not replace or change any contractual responsibilities of the Contractor. The system has been implemented to enhance and expedite team communication.

PART 2 - PRODUCTS

2.1 PROJECT CONTROL SYSTEM

- A. The Project Control System will use Prolog from Meridian Project Systems, via web based interface.

2.2 VENDOR CONTACT DETAILS & COSTS

- A. Information concerning the system can be obtained by contacting:
 - 1. Meridian Project Systems, 1720 Prairie Road, Suite 120, Folsom CA 95630, Phone: 916-294-2000, Toll Free: (800) 850-2660, Fax: 916-294-2001, Website: www.meridiansystems.com

PART 3 - EXECUTION

3.1 LICENSES FOR CONTRACTOR

- A. The Contractor is responsible for procurement of the temporary licenses to use the existing Prolog database for the duration of the Project. These licenses will permit Internet access to the database for this Project. The Contractor will coordinate with the UC Merced Project Account Analyst for temporary licenses for the duration of the Project. The Contractor shall:
1. Determine the number of licenses required for the use of the Contractor's Prolog Team. The Contractor's Prolog Team shall include the Contractor, sub-contractors and suppliers as deemed appropriate by the Contractor.
 2. Procure sufficient licenses for the use of the Contractor's Prolog Team.
 3. Provide training in the use of Project Talk to the Contractor's Prolog Team.
 4. Make any and all license payments directly to the vendor identified in Subsection 2.2.

3.2 ADDITIONAL LICENSES NOT USED

3.3 TECHNICAL REQUIREMENTS FOR PROJECT TALK

- A. The Contractor shall employ, as a minimum, a cable, a DSL or ISDN connection to the Internet for those computers used for Prolog.
- B. Meridian Project Systems' Software only runs via Internet Explorer. Said software will not run on Apple computers or Apple operating systems.
- C. Contractor will conduct adequate training for all of their users and conduct ample testing to insure smooth communications with the University's Representative and University's Design Professional.

3.4 PROJECT TALK AND NETWORK SECURITY

- A. Information regarding Prolog and network security can be obtained from the vendor listed in Subsection 2.2

3.5 PROJECT CORRESPONDENCE

- A. All Contractor Project correspondence shall be either created electronically or digitized so that it can be stored and tracked by the document management and control system. This includes, but is not limited to:
1. Requests for Information (RFI's) and attachments,
 2. Submittal cover sheets and Submittal Registry,
 3. Potential Change Orders,
 4. Document Tracking,
 5. Meeting Minutes

6. All Contractor produced reports and documents as defined in the Contract Documents. Shop Drawings, cut sheets and other samples may be included in the Prolog tracking and storage system at the discretion of the University's Representative.
- B. Contractor agrees that all right, title, and ownership of all project information and project data is vested in the University. Contractor shall not use this data for any other project without written permission of the University's Representative. In the event that ownership is disputed, Contractor hereby grants a license to the University and it assigns and representatives to use the project information and project data for projects at the University's campus.

END OF SECTION 01315

SECTION 01329 – 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, Prime Trade 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, which will be computer generated by the University's Representative with input from the Prime Trade Contractors (see Instructions to Bidders for additional detail, the 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.
- 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 Prime Trade 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 will be computer generated by the Owner's Representative with input from the Prime Trade Contractors; When approved by the University, the schedule 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 Prime Trade 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 Prime Trade 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. System test dates.
- 3. Scheduled overtime Work if required by Contract Documents.
- 4. Dates Prime Trade Contractor requests designated workspaces, storage area, access, and other facilities to be provided by the University.
- 5. Dates Prime Trade Contractor requests orders and decisions from the University on designated items.
- 6. Dates Prime Trade Contractor requests University-furnished equipment.
- 7. Dates Prime Trade Contractor requests University-furnished utilities.
- 8. Connection and relocation of existing utilities.
- 9. Connecting to or penetrating existing structures.
- 10. Scheduled inspections as required by Codes, or as otherwise specified.

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 Prime Trade 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 path activities, non-critical activities and milestone activities.
 - h. 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.
 - i. 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 Prime Trade 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 Prime Trade Contractor or the University's Representative determines the Contract Schedule to be in need of revision, within 10 working days thereafter, the Prime Trade 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. Prime Trade 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 Prime Trade 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 Prime Trade 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 Prime Trade 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 Prime Trade 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 Prime Trade Contractor has met the conditions of the General Conditions, all of which are prerequisites for entitlement of an extension of the contract time. The Prime Trade 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 Prime Trade Contractor has not met the requirements of the General Conditions, or if the Prime Trade 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 Prime Trade 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 Prime Trade 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 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 Prime Trade Contractor's authority and responsibility to plan and schedule the Work.
6. Distribute copies as required for initial distribution and monthly distribution.

1.3 TIME CONTROL

- A. Set up control procedures so that approved schedules are adhered to. Prime Trade 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 Prime Trade 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 01329

SCIENCE AND ENGINEERING BUILDING 2
UNIVERSITY OF CALIFORNIA, MERCED
MERCED, CALIFORNIA

PROJECT NO.: 900020

NOVEMBER 1, 2004
REVISION: 1
LF/SF/MPT

CONTRACT SCHEDULES
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SECTION 01334 - 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. Prime Trade 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 01630 Product Options and Substitutions. Prime Trade 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, Prime Trade Contractor shall procure and distribute the necessary copies of such instructions to the University's Representative and the Prime Trade 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 Prime Trade Contractor shall submit a schedule for submission of Shop Drawings, Product Data, and Samples (the "Submittal Schedule"). The schedule shall include the Prime Trade 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 Prime Trade 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. Prime Trade 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 Prime Trade Contractor must first determine from the Contract Schedule the date the particular item is needed for the Work. Working backwards, the Prime Trade Contractor will add the required number of days for shipment, time for fabrication, and similar items to determine the date of the first submittal. Prime Trade Contractor shall be responsible for the impact to the schedule resulting from submittals that do not conform to contract requirements. Prime Trade 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 Prime Trade 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 Prime Trade Contractor shall prepare Shop Drawings that comply with the Requirements of Section 01789 Project Record 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 (if required)
 - 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 01120 LEED® Requirements shall be noted on the cover 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 PRIME TRADE 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 Prime Trade Contractor for conformance with the requirements of the Contract Documents and for coordination with other Sections. Prime Trade Contractor's stamp and signature shall indicate that the submittal has been reviewed by the Prime Trade 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 Prime Trade Contractor shall:
 1. Submit items in a group or in a sequence in 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 Prime Trade Contractor for re-submittal.
 2. Submit submittals promptly in timely manner to avoid delay in the Work or in the Work of any Separate Prime Trade Contractor.
 3. Submit a completed Exhibit 22 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 of shop drawings to the University's Representative. The University's Representative shall return 1 blue line reproduction with review comments to the Prime Trade Contractor.

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 Prime Trade 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 in accordance with paragraph 1.2B and dates of any previous submissions.
3. Project name and number.
4. Contract identification.
5. The names of:
 - a. Prime Trade 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. Prime Trade 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. Prime Trade 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 Prime Trade 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. Prime Trade Contractor's Project site file.
 - b. Record documents file maintained by the Prime Trade Contractor.
 - c. Separate Prime Trade 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 carry the final approved review stamp to the University's Representative for file.

- F. University's Representative and the University's Design Professional will review Prime Trade 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 Prime Trade Contractor as required by the Contract Documents.

SCIENCE AND ENGINEERING BUILDING 2
UNIVERSITY OF CALIFORNIA, MERCED
MERCED, CALIFORNIA

PROJECT NO.: 900020

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01334

NOVEMBER 1, 2004
REVISION: 1
LF/SF/MPT

SHOP DRAWINGS, PRODUCT DATA AND SAMPLES
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SECTION 01350 - ENVIRONMENTAL MITIGATION

PART 1 - GENERAL

1.1 WORK INCLUDED

A. Related Sections

1. 01120 LEED® Requirements
2. 01738 Site Waste Management
3. 01906 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 Prime Trade 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, Prime Trade 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 Prime Trade Contractor need to generate construction noise adjacent to occupied buildings, the Prime Trade Contractor shall inform the University's Representative in writing 14 calendar days prior to generating the noise.
 - 6) The Prime Trade 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) Prime Trade 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 Prime Trade 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 Prime Trade 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. Prime Trade 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 Prime Trade 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. Prime Trade 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 Prime Trade Contractor of the potential for encountering significant paleontological resources.
2. If a potentially significant paleontological find is discovered, the Prime Trade 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 Prime Trade 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 Prime Trade Contractor's Project Site Superintendent shall be trained in the prevention and correction of spills.
9. Prime Trade 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 Prime Trade Contractor off the University's property. Prime Trade Contractor shall not use University refuse containers. Clear soil spoils shall be transported and deposited at a designated on-campus site.
- B. A temporary staging area for storage of excavated soil is shown on the Civil Drawings. The intent of this area is to serve as a nearby storage area for excavated soil intended by the Primary Trade 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 Prime Trade 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 Prime Trade Contractor shall not use any refuse container belonging to the University. The General Conditions Prime Trade Contractor shall provide debris boxes for the use of all Prime Trade Contractors and dispose all debris off-site excepting chemical and hazardous waste which shall be disposed of by the Prime Trade Contractor generating the waste. Prime Trade Contractors shall be responsible for depositing their waste into the debris boxes provided by the General Conditions Prime Trade 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 Prime Trade Contractor at no additional cost to the University.
- B. The Prime Trade Contractor shall not burn or bury rubbish or waste materials on the University's property.
- C. During construction, the Prime Trade Contractor shall maintain buildings, premises and property free from accumulations of waste materials and rubbish. The Prime Trade 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. Prime Trade Contractor shall ensure that seeds from invasive plant species are not transported into the Campus site by earth moving equipment. At a minimum, the Prime Trade 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 Prime Trade 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 Conditions Prime Trade Contractor shall install and maintain all temporary construction fencing around the Project site in accordance with Section 01560 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 green shade meshing to obstruct views into the construction site.
- B. The Prime Trade 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 Prime Trade Contractor's personnel travel beyond the Project site boundary except on roads.
- D. In no instance shall the Prime Trade 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.

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. 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 Prime Trade Contractor shall ensure that all

Prime Trade Contractor, sub-contractor and Prime Trade Contractor supplier personnel attend a training session before they start working at the Project site.

3. The Prime Trade 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 Prime Trade 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 Conditions Prime Trade Contractor shall erect drift fences or other effective salamander barriers around the site before 1st 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 Conditions Prime Trade 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 Prime Trade Contractor. The Sensitive Areas shall extend to a distance of 160 feet from each occupied burrow during the non-breeding season of 1st September through 31 January. The sensitive Areas shall extend to a distance of 250 feet from each occupied burrow during the breeding season of 1st February through 31st August. The General Conditions Prime Trade 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 Conditions Prime Trade 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 Prime Trade 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. Prime Trade 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 Prime Trade Contractor, at the Prime Trade Contractor's expense and to the satisfaction of the University's Representative. The Prime Trade Contractor shall follow CALTRANS "Handbook of Practices, Storm Water Pollution Practice."

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01350

SECTION 01351 - 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. Prime Trade 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. Prime Trade Contractor shall have storm water pollution prevention measures in place and conduct inspections year-round. It is the responsibility of the Prime Trade 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 Prime Trade Contractor of rain predictions.

- F. Sanitary sewer blockages can result in a back-up and discharge to the storm drain system. Prime Trade Contractor shall immediately notify the University's Representative if they become aware of a clogged sanitary sewer associated with the Project.
- G. Prime Trade 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. Prime Trade 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. Prime Trade 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. Prime Trade 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>.
- C. Prime Trade Contractor shall employ a Qualified SWPPP Practitioner (QSP) to oversee and implement the Storm Water Pollution Prevention Plan.

1.3 SUBMITTALS

- A. Submittals shall comply with requirements specified in Section 01334 Shop Drawings, Product Data and Samples.
- B. Submit a New Construction Project Information Form (Exhibit 19) to University of California, Merced Office of Environment, Health and Safety. 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. 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 of California, Merced Office of Environment, Health and Safety.

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 Prime Trade Contractor shall provide a Qualified SWPPP Practitioner (QSP) that will implement the University's SWPPP. The Prime Trade 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.

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 Prime Trade 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. Prime Trade 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. Prime Trade 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 Prime Trade 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 Prime Trade Contractor. Prime Trade Contractor shall keep a spill kit on site at all times for this purpose.
 - 2) Prime Trade 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. These activities must be performed by a Qualified SWPPP Practitioner (QSP). 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 Prime Trade 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 Prime Trade Contractor'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 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. During extended storm events, inspections 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. The Prime Trade Contractor shall submit a copy of all inspection reports to the University's Representative for review.
 - b. Inspections 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 Prime Trade 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. Prime Trade 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 01410 - 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 2007
 - 2) Part 3, California Electric Code 2007
 - 3) Part 4, California Mechanical Code 2007
 - 4) Part 5, California Plumbing Code 2007
 - 5) Part 6, California Energy Code 2007
 - 6) Part 7, California Elevator Safety Construction Code 2007
 - 7) Part 9, California Fire Code 2007
 - 8) Part 12, California State Reference Standards 2007
 - 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 Prime Trade 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 Prime Trade 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 Prime Trade 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 Prime Trade Contractor. The cost of required engineering services shall be borne by the Prime Trade 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 Prime Trade 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 Prime Trade 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 Prime Trade 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 Prime Trade 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. Prime Trade 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. Prime Trade Contractor will not be required to obtain a County of Merced building permit.

B. Fire Department

1. Prime Trade 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. Prime Trade 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 Prime Trade 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 Prime Trade 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 Prime Trade 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: Prime Trade 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 Prime Trade Contractor/University.

1.8 CIVIL OR CRIMINAL PENALTIES OR FINES

- A. Prime Trade 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 Prime Trade 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 Prime Trade Contractor is found liable for civil actions under the abovementioned statutes, regulations, permits or authorizations, Prime Trade 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 Prime Trade Contractor is convicted of criminal actions under the abovementioned statutes, regulations, permits or authorizations, Prime Trade 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 01420 - 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
ASAHC	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®	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 Prime Trade Contractor under this Contract, but that will be performed by the University, Separate Prime Trade Contractors, or other means.
 5. EQUAL - Of same quality, appearance, and utility to that specified, as determined by the University's Representative. The Prime Trade 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, PRIME TRADE CONTRACTOR INSTALLED - "To be furnished by University and installed by Prime Trade 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 01420

SECTION 01450 - 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 "Prime Trade Contractor's Testing Laboratory" means a testing laboratory retained and paid for by Prime Trade Contractor to perform the testing services required by the Contract Documents. Prime Trade 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, Prime Trade Contractor's own forces, or other organization. Prime Trade 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 PRIME TRADE 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, Prime Trade 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, Prime Trade Contractor shall make arrangements for such tests, inspections, and acceptances with Prime Trade Contractor's Testing Laboratory. Prime Trade 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, Prime Trade 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 Prime Trade 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 Prime Trade Contractor one copy of the reports from the University's Testing Laboratory.
- C. The number of copies for the Prime Trade 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 Prime Trade 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 Prime Trade Contractor.
- B. Source Quality Control: Geotechnical Engineer will sample and test fill material from the source designated by the Prime Trade Contractor. Prime Trade 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. Prime Trade 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 Prime Trade 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 Prime Trade Contractor's duty to examine the Project site of the Work contemplated. Prime Trade Contractor is cautioned to make such independent investigations and examinations as necessary to satisfy the Prime Trade Contractor of subsurface conditions to be encountered in the performance of the Work.
- D. The records of investigations will not relieve Prime Trade Contractor from the risk of unanticipated soil or subsurface conditions or from properly fulfilling the terms of the Contract at the Contract Sum.
- E. Prime Trade 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 Prime Trade 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 01450

SECTION 01454 - MOCKUPS

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 mockups of the following:
 - a. Full-size composite exterior enclosure assembly constructed on site at location designated by University Representative.
 - b. Laboratory casework mockup 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. Mockups will be used:
 - a. To verify qualities of materials, and execution.
 - b. Field test composite exterior enclosure assembly mockup to determine if system components and its integration with adjacent assemblies meet performance requirements.
 - c. To provide Exterior Enclosure Prime Trade Contractor with 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 mockups 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 01790 "Exterior Enclosure Performance Requirements"
 2. Section 03450 "Architectural Precast Concrete."
 3. Section 05400 "Cold-Formed Metal Framing."
 4. Section 06160 "Sheathing."
 5. Section 07271 "Self-Adhering Sheet Air Barriers."
 6. Section 07272 "Fluid-Applied Membrane Air Barriers."

7. Section 07412 "Metal Wall Panels."
8. Section 07413 "Insulated-Core Metal Wall Panels."
9. Section 07415 "Composite Wall Panels."
10. Section 07620 "Sheet Metal Flashing and Trim."
11. Section 07920 "Joint Sealants."
12. Section 08411 "Aluminum Framed Entrances."
13. Section 08413 "Aluminum-Framed Folding Operable Storefronts"
14. Section 08460 "Automatic Entrance Doors."
15. Section 08800 "Glazing."
16. Section 08911 "Glazed Aluminum Curtain Walls."
17. Section 09220 "Portland Cement Plaster."
18. Section 10713 "Exterior Sun Control Devices"
19. Section 16239 "Photovoltaic Collection System."
20. 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 mockup to be constructed at a location near the Project site, as shown on the Drawings, or, if not shown, as directed by University's Representative.
 1. This mockup 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 mockup.
 2. Construct mockup as shown on the Drawings.

3. Mock-up shall show:
 - a. Exterior wall assembly as specified in Division 05 Section "Cold-Formed Metal Framing", Division 06 Section "Sheathing", Division 07 Sections "Self-Adhering Sheet Air Barriers", "Fluid-Applied Membrane Air Barriers" and "Sheet Metal Flashing and Trim"
 - b. Architectural precast concrete as specified in Division 03 Section "Architectural Precast Concrete."
 - c. Metal wall panels as specified in Division 07 Section "Metal Wall Panels", "Insulated-Core Metal Wall Panels" and Section "Composite Wall Panels."
 - d. Fiber cement siding as specified in Division 07 Section "Siding."
 - e. Joint sealants as specified in Division 07 Section "Joint Sealants."
 - f. Flashings as specified in Division 07 Section "Sheet Metal Flashing and Trim."
 - g. Glazed-aluminum curtain wall systems as specified in Division 08 Section "Glazed-Aluminum Curtain Walls."
 - h. Aluminum windows as specified in Division 08 Section "Glazed-Aluminum Curtain Walls."
 - i. Glazing as specified in Division 08 Section "Glazing."
 - j. Portland cement plastering as specified in Division 09 Section "Portland Cement Plastering."
 - k. Exterior sun control devices as specified in Division 10 Section "Exterior Sun Control Devices."

- B. Laboratory Casework Mockup: Mockup to be constructed at location near the Project Site, as shown on the Drawings, or, if not shown, as directed by University's Representative.
 1. This mockup 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 laboratory casework mockup.
 2. Description: Refer to Sheet LF2.0B and Section 11602 "Laboratory Casework and Other Furnishings."

- C. Polished Concrete: Mockup to be constructed at location near the Project Site, as directed by University Representative.
 1. This mockup 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 polished concrete mockup.
 2. Size: Minimum 10 feet by 10 feet.

- D. Site Concrete: Mockup to be constructed at location near the Project Site, as directed by University Representative.
 1. This mockup 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 mockup.

2. Description: Refer to Section 03310 "Site Concrete"

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 03111 "Project Meetings."
 2. Convene pre-installation conference at least one week prior to commencing work on Mockups.
- 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 mockup shall be completed prior to fabrication and installation of any component system.
- F. Correct work installed within the composite exterior enclosure assembly mockup 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 mockup at no additional cost to the University.
- G. University's approval of component exterior enclosure assembly mockup will not relieve Exterior Enclosure Prime Trade Contractor of the responsibility for any deviations from the requirements of the Contract Documents unless Exterior Enclosure Prime Trade Contractor has specifically informed the University's Representative in writing of any deviation at the time of

the mockup 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 mockup in a clean and undamaged condition during construction and dispose of mockups when no longer required as determined by University's Representative.
- J. Exterior Enclosure Mockup 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 01790.

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. Mockup shop drawing: Submit detailed shop drawing of component exterior enclosure assembly. Drawing shall include all details for all components required for each composite exterior enclosure assembly mockup, required supports, water collection and drainage systems, anchorage, and other required work to complete composite mockup.
- 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.
- C. Maintain mock-ups in a 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 mockup 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 mockups. Provide test enclosure equivalent in size to composite exterior wall mockups, unless directed otherwise. 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/ft² (299 Pa) and maximum of 12.0 lbf/ft² (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 mockup at a rate of 5 gallons per square foot per hour for a period of 1.5 hours.

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 REMOVAL

- A. Remove unacceptable mock-ups.
- B. Except as otherwise specified, remove 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 01454

SECTION 01500 - TEMPORARY UTILITIES

PART 1 - GENERAL

1.1 REQUIREMENTS

- A. Responsible Prime Trade Contractor shall provide and maintain temporary utilities for construction operations and related necessary temporary structures. Remove them when they are no longer needed.
- B. Responsible Prime Trade Contractor shall pay for connections/disconnections of all temporary utilities; e.g., gas, water, power, and telephone.
- C. Responsible Prime Trade 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. Responsible Prime Trade Contractor shall maintain and operate systems to provide continuous service.
- F. Responsible Prime Trade 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. Responsible Prime Trade 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. Responsible Prime Trade Contractor shall legally and properly dispose of all debris resulting from removal and reconditioning operations.
- C. Concrete, Drywall and Painting Prime Trade Contractors shall patch and repair building elements as required by temporary utility removals.

1.3 REQUIREMENTS OF REGULATORY AGENCIES

- A. Responsible Prime Trade 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. Prime Trade Contractor shall meter temporary electricity and will be charged based on average UC Merced rates.
- B. Refer to Instructions to Bidders for temporary electrical scope of work and Prime Trade Contractor's responsibility.

1.5 TEMPORARY FIRE PROTECTION

- A. All Prime Trade 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 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 Conditions Prime Trade 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 your scope of work are to be provided by the responsible Prime Trade Contractor.
- C. The General Conditions Prime Trade 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, all Prime Trade Contractors 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 Prime Trade Contractor's Project Site Superintendent and the Prime Trade Contractor's Fire Liaison.
- D. All Prime Trade 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 Prime Trade 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 01410 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 01113 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. The Mechanical Prime Trade 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 01410 Regulatory Requirements.
- B. All Prime Trade Contractors 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 General Conditions Prime Trade 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 Conditions Prime Trade Contractor shall provide a mobile radio system on-site at all times for effective University's Representative communications with the Prime Trade Contractors field personnel. A radio will be provided to each Prime Trade Contractor.

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 responsible Prime Trade 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 responsible Prime Trade 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 responsible Prime Trade Contractor using water source shall provide all valving necessary to control the flow of water.
- D. The responsible Prime Trade 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 01500

SECTION 01560 - TEMPORARY BARRIERS AND ENCLOSURES

PART 1 - GENERAL

1.1 TEMPORARY FACILITIES

- A. All Prime Trade Contractors 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 Prime Trade Contractor installing the said work.
 2. The General Conditions Prime Trade Contractor shall provide a Man/Material Hoist, complete with operators and signals as required until such time as one of the elevators becomes operational at which time the hoist shall be removed by the General Conditions Prime Trade Contractor. The Electrical Prime Trade Contractor shall provide electrical power of sufficient voltage and amperage as needed for operation of the hoist and shall remove that service when it is no longer required.
 3. Temporary rigging, rubbish chutes, ladders between floors and similar equipment shall be provided by Prime Trade Contractor requiring said work
 4. Barricades, lights and similar safety precautions shall be provided by the Prime Trade Contractor requiring said work.
 5. OSHA compliant guardrails at floor openings and building perimeter shall be provided by the Structural Steel Prime Trade Contractor The General Conditions Primary Trade Contractor shall install toe guards upon placement of concrete slabs and shall maintain the guardrails until they are no longer required at which time they will be removed and returned to the Structural Steel Prime Trade Contractor by the General Conditions Prime Trade Contractor.
 6. The Earthwork Prime Trade Contractor shall erect and maintain a temporary OHSA compliant guardrail system around the building excavation 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 Prime Trade 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. No Prime Trade Contractor shall 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 Conditions Prime Trade Contractor.
- C. All Prime Trade Contractors are responsible for any damage caused by Prime Trade Contractor's Operations.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01560

SECTION 01568 - TREE AND PLANT PROTECTION

PART 1 - GENERAL

1.1 WORK INCLUDED

- A. The General Conditions Prime Contractor shall provide and maintain temporary fencing around all trees shown to be protected on the contract drawings. This Contractor shall assume responsibility for watering and maintaining these trees throughout the construction duration. All Prime Trade Contractors 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 Prime Trade 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 Prime Trade 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, all Prime Trade Contractors 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: All Prime Trade Contractors 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: All Prime Trade Contractors shall become acquainted with all site conditions, and shall take necessary precautions to protect site conditions and permanent improvements. Damage caused by the Prime Trade 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 all Prime Trade Contractors to call for a meeting at the Project site with the University's Representative. Meeting attendees shall include the Prime Trade 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 Prime Trade Contractor. Failure to call for said meeting implies acceptance by the Prime Trade 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 Prime Trade 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 Prime Trade Contractor shall compensate the University for any tree or shrub to remain which is damaged or destroyed owing to the Prime Trade 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 Prime Trade 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 Prime Trade Contractor as directed by the University's Representative.

1.7 WARRANTY OF REPLACEMENT PLANT MATERIAL

- A. Prime Trade 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 Prime Trade Contractor. If the General Conditions Prime Trade Contractor fails to perform routine maintenance, the cost of labor or a maintenance crew shall be paid by the Prime Trade Contractor.
- B. The General Conditions Prime Trade 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 Prime Trade 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 Conditions Prime Trade 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 Conditions Prime Trade 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 Conditions Prime Trade 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 Prime Trade 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 Prime Trade 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 Prime Trade 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 Prime Trade 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 Prime Trade Contractor. Prime Trade 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. Prime Trade 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 01568

SECTION 01600 - 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 Prime Trade Contractor. Identify location of Project site by Project name, street address, etc.
- C. University will not receive deliveries on behalf of the Prime Trade 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 01600

SECTION 01630 - 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 that Prime Trade 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; Prime Trade 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 Prime Trade Contractor uses any product, material or equipment other than the first-named one, Prime Trade 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 Prime Trade 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; Prime

Trade 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 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 PRIME TRADE CONTRACTOR OR IF REQUIRED BY EARLY ACTIVITIES INDICATED ON EXHIBIT 33 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 70 days after the date of commencement specified in the Notice to Proceed, for review and approval by the University's Representative, Prime Trade 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 70 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. Prime Trade Contractor shall utilize the first-named product, material or equipment if Prime Trade Contractor fails to make the appropriate required submittal pursuant to this paragraph within the 70-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. Prime Trade 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, Prime Trade 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 Prime Trade 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. Prime Trade 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 Prime Trade 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 Prime Trade 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, Prime Trade Contractor shall do so within the time period specified by the University's Representative. A proposed substitution may be rejected if Prime Trade 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 Prime Trade Contractor's expense.
- G. Prime Trade 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, Prime Trade 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, Prime Trade 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 Prime Trade Contractor from the requirements of the Contract Documents.
- K. The 35-day and 70-day submittal periods do not excuse Prime Trade Contractor from completing the Work within the Contract Time or excuse Prime Trade 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, Prime Trade 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, Prime Trade 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 Prime Trade 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 01630

SECTION 01664 - TRAINING

PART 1 - GENERAL

1.1 DESCRIPTION

- A. This section contains requirements for training the University's personnel, by persons retained by the Prime Trade 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 01810 Commissioning
- B. Division 11 Equipment
- C. Division 13 Special Construction
- D. Division 14 Conveying Systems
- E. Division 15 Mechanical
- F. Division 16 Electrical

1.3 QUALITY ASSURANCE

- A. When required by the Contract documents, the Prime Trade 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.
- B. In addition, the Prime Trade Contractor shall provide on-the-job training of the University's personnel for the following specification sections. 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. Section 11601 Fume Hoods and Other Air Containment Units
 - 2. Section 11605 Laboratory Equipment
 - 3. Section 11615 Controlled Environmental Rooms
 - 4. Section 14210 Elevators

1.4 SUBMITTALS

- A. The following information shall be submitted to the University's Representative in accordance with the provisions of Section 01334 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. Videotapes, 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 Prime Trade 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. Prime Trade 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 Prime Trade 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 Prime Trade 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 Prime Trade 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 bear 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 01664

SECTION 01720 - 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. All Prime Trade Contractors 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. All Prime Trade Contractors 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 Prime Trade Contractor's construction activities. The University shall provide the following
 1. 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
 2. Reestablish the above following excavation and prior to the start of foundations.
 3. 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.
 4. Reestablish building column line locations and benchmarks prior to start of site hardscape work as directed by the University's Representative.
- C. All Prime Trade Contractors 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. All Prime Trade Contractors shall locate and protect control points prior to beginning the Work, and preserve all permanent reference points throughout construction operations. The Prime Trade 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. All Prime Trade Contractors shall establish lines and levels, locate, and lay out for own work.
- B. All Prime Trade Contractors shall provide layouts as Work proceeds to assure compliance with required schedules, lines, levels, and tolerances for own work.

1.5 RECORDS

- A. All Prime Trade Contractors 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, All Prime Trade Contractors shall submit documentation to verify accuracy of field engineering Work.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01720

SECTION 01730 - 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 01334 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 Prime Trade 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 01730

SECTION 01736 - 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 Prime Trade 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 01410 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 01736

SECTION 01737 - 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 Prime Trade Contractor shall design and install all support and bracing systems except as noted. The Prime Trade 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 Prime Trade 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 01334 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 Prime Trade 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 01737

SECTION 01738 - SITE WASTE MANAGEMENT PROGRAM

PART 1 - GENERAL

1.1 SUMMARY

- A. The University of California Merced has committed to a triple zero policy of zero waste, zero emissions and zero energy by 2020. The University contributes a lot of operational waste each year and equally just as much waste in construction. This site waste management specification is designed to help meet our triple zero policy. The Prime Trade contractor is required to follow the requirements of this specification section and LEED Green Building Design and Construction, 2009 edition, Waste Management Credit 2 requirements for 2 points.
- 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 01120 LEED® Requirements.
 - 2. Section 01113 Special Requirements
 - 3. Section 01736 Selective Demolition
 - 4. Section 01906 Hazardous Materials Procedures.

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 Conditions Prime Trade Contractor shall furnish labor, containers, transportation and payment of any disposal fees for construction waste generated by new construction work. Removal of waste generated by selective demolition and removal of hazardous waste shall be the responsibility of the Prime Trade Contractor generating the waste. Paperwork demonstrating that Selective Demolition waste has been recycled shall be provided to the General Conditions Prime Contractor by the Prime Trade Contractor responsible for its removal.
- B. The General Conditions Prime Trade Contractor shall prepare and submit the appropriate LEED[®] template.
 - 1. The Waste Management Plan includes a list of anticipated types and quantities of waste materials (weight basis) generated from the project site and proposed sitting locations for waste containers.
 - 2. The Waste Management Plan is to be revised and re-submitted quarterly or as required by the University's Representative.

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 01906 Hazardous Materials Procedures.

1.5 REQUIREMENTS

- A. Recycling: Implemented by General Conditions Prime Trade 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: All Prime Trade Contractors shall deposit their waste into the appropriate recycling and waste bins. Recycling and waste bin area shall be kept neat and clean. 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 Conditions Prime Trade Contractor.
- C. Handling: All Prime Trade Contractors 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 Conditions Prime Trade 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 01738

SECTION 01770 - 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 Prime Trade 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 01780 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 Prime Trade Contractor shall promptly remove from the Project site and Project site vicinity (including roofs):
 - 1. All of Prime Trade 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 Prime Trade Contractor shall execute final cleaning prior to final inspection. Cleaning shall be by experienced professional cleaners.
- D. The Prime Trade 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 Prime Trade 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 Prime Trade 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 01770

NOVEMBER 1, 2004

REVISION: 1
LF/SF/MPT

CLOSEOUT PROCEDURES, FINAL CLEANING, AND EXTRA
MATERIAL
01770 - 3

SECTION 01780 - GUARANTEES, WARRANTIES, BONDS, SERVICE & MAINTENANCE
CONTRACTS

PART 1 - GENERAL

1.1 GUARANTEES

- A. Guarantees from Subcontractors shall not limit Prime Trade Contractor's warranties and guarantees to the University. The Prime Trade Contractor shall cause warranties of Subcontractors to be made directly to the University. If such warranties are made to the Prime Trade Contractor, Prime Trade Contractor shall assign such warranties to the University prior to final payment.
- B. At a minimum, the Prime Trade 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 01334 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 Prime Trade 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 01780

SECTION 01789 - PROJECT AS-BUILT DOCUMENTS

PART 1 - GENERAL

1.1 MAINTENANCE OF DOCUMENTS AND SAMPLES

- A. Store Project as-built documents and samples in the 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
- B. The Prime Trade 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.
- C. The Prime Trade Contractor shall obtain weekly written confirmation from the University's Representative that the as-built conditions are adequately represented in the As-built Drawings.
- D. On three (3) occasions to be determined by the University's Representative, the Prime Trade 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 Prime Trade 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.
- E. Record the following types of information on As-built Drawings
 - 1. 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.
 - 2. Locations of all significant Work concealed inside the building, the locations of which were changed by the Prime Trade Contractor from those shown on the Drawings.
 - 3. Locations of all items, not necessarily concealed but varying from the locations shown on the Drawings.
 - 4. All changes in size, location, and other features of installation not shown on Drawings.

5. 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.
 6. All electrical and control installations to indicate terminal points, wire numbers/circuit numbers, panel designations, device identification, and/or sequence of operations.
 7. Record existing below-grade utilities if they are exposed by the project or are located within the Project boundary on the as-built drawings.
 8. 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.
- F. Additional drawings shall be provided as required to properly describe changes.
- G. Upon completion of the Work, the As-built Drawings shall be certified by the Prime Trade Contractor to represent the true, as-built conditions and shall be given to the University's Representative as described in Subsection 1.3.
- H. Specifications and Addenda
- I. Record the following:
1. Manufacturer, trade name, catalog number, and supplier of each product and item of equipment actually installed.
 2. Changes made by Addenda, Change Order (Exhibit 9), or Field Order (Exhibit 8), and clarifications and interpretations made by Letter of Instruction (Exhibit 26).
 3. Provide two (2) hard copies of the specifications and addenda ten (10) days after Final Completion.
- J. Large-Scale Layout Drawings
- K. Division 15-Mechanical and Division 16-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.
- L. Project Photographs
- M. At appropriate intervals but not less than once a month, the Prime Trade Contractor shall submit digital site photographs on CD-ROM to the University's Representative. These photographs shall:
1. Use format NAME.JPG

2. 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.
- N. 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:
1. Be in Microsoft Word or Excel format.
 2. Cross reference to the name of each photograph.
 3. 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.
 4. Identify the date of the photograph.

1.3 PROJECT LEGACY DOCUMENTS

A. AS-BUILT DRAWINGS

- B. The Prime Trade 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.
- C. 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 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.
- D. The Prime Trade 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:
1. Any lines added to the Design Drawing in model space by the Contractor shall be in AUTOCAD® layers not currently used by the Design Drawings. The Prime Trade Contractor shall not use more than five (5) layers for added lines.
 2. Any lines deleted from the Design Drawing in model space by the Prime Trade Contractor shall be copied into a single layer not currently used by the Design Drawings.
 3. The Prime Trade Contractor's As-Built Drawings based on the Design Drawings shall therefore contain:
 - a. The lines on the Design Drawings in the same AUTOCAD® layers as the Design Drawings (not changed by the Contractor).
 - b. A single AUTOCAD® layer containing the lines on Design Drawings deleted by the Contractor.

- c. Not more than five (5) AUTOCAD® layers containing the lines added by the Prime Trade Contractor to the Design Drawing.

- E. 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:
 - 1. Title block and plot set-up shall be in Paper space.
 - 2. All other drawing data shall be in Model space.
 - 3. Each drawing shall contain a title block and orientation/north arrow approved by the University's Representative.

- F. SHOP DRAWINGS

- G. The Prime Trade Contractor shall submit to the University's Representative, 10 calendar days after Final Completion, fully updated Shop Drawings.

- H. Prime Trade Contractor shall:
 - 1. Provide 2 hard copies of the Shop Drawings on 24 pound, 96 Bright Bond paper.
 - 2. Provide 2 CD-ROMs, each of which contains all drawing data if the Prime Trade Contractor used Computer Aided Drafting software to prepare the Shop Drawings.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01789

SECTION 01790 - 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. Section 01454 "Mockups"
 2. Section 03450 "Architectural Precast Concrete."
 3. Section 05400 "Cold-Formed Metal Framing."
 4. Section 06160 "Sheathing."
 5. Section 07271 "Self-Adhering Sheet Air Barriers."
 6. Section 07272 "Fluid-Applied Membrane Air Barriers."
 7. Section 07412 "Metal Wall Panels."
 8. Section 07413 "Insulated-Core Metal Wall Panels."
 9. Section 07415 "Composite Wall Panels."
 10. Section 07620 "Sheet Metal Flashing and Trim."
 11. Section 07920 "Joint Sealants."
 12. Section 08411 "Aluminum Framed Entrances."
 13. Section 08413 "Aluminum-Framed Folding Operable Storefronts"
 14. Section 08460 "Automatic Entrance Doors."
 15. Section 08800 "Glazing."
 16. Section 08911 "Glazed Aluminum Curtain Walls."
 17. Section 09220 "Portland Cement Plaster."
 18. Section 10200 "Louvers and Vents."

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, Exterior Enclosure Prime Trade Contractors are responsible for the engineering design of the entire Exterior Enclosure, and to make modifications of, and additions to the details as may be required to fulfill the performance requirements. Exterior Enclosure Prime Trade Contractors shall maintain the visual design concept as shown, including member sizes, profiles and alignment of components, provided they meet performance requirements.
- 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 Exterior Enclosure Prime Trade Contractors' Integrated 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. Exterior Enclosure Prime Trade Contractors, 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 Exterior Enclosure Prime Trade Contractors of any responsibilities for providing a system with the required performance requirements. If the structural calculations indicate any deficiencies, Exterior Enclosure Prime Trade Contractors shall, at their 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. Exterior Enclosure Prime Trade Contractors are 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 Wall Mockup specified in Section 01454.
- H. Incorporate changes resulting from testing of Composite Exterior Wall Mockup specified in Section 01454.

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.
 - d. Topographic Factor: 1.09.
 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, Composite Wall Panels, Insulated-Core Metal Wall Panels, 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 Exterior Enclosure Prime Trade 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. Exterior Enclosure Prime Trade Contractors' qualifications.
 - 2. Each Exterior Enclosure System component manufacturers' 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 by Exterior Enclosure Prime Trade Contractor.
 6. Coordinate the submittal process to help insure an orderly and timely review of submittals in the proposed construction sequence.
 7. Mock-up should be approved prior to submittal of Shop drawings.
 8. 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.
 9. Submit final production Shop Drawings after approval of architectural mock-up and completion of mock-up testing.
 10. 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 each of the following exterior enclosure system component assembly groups, separate shop drawings for the component assembly groups will not be accepted.
 - a. Curtain Wall and Metal Panel Systems:
 - 1) Section 05400 "Cold-Formed Metal Framing."
 - 2) Section 06160 "Sheathing."
 - 3) Section 07271 "Self-Adhering Sheet Air Barriers."
 - 4) Section 07412 "Metal Wall Panels."
 - 5) Section 07413 "Insulated-Core Metal Wall Panels."
 - 6) Section 07415 "Composite Wall Panels."
 - 7) Section 07620 "Sheet Metal Flashing and Trim."
 - 8) Section 07920 "Joint Sealants."
 - 9) Section 08411 "Aluminum Framed Entrances."
 - 10) Section 08413 "Aluminum-Framed Folding Operable Storefronts"
 - 11) Section 08460 "Automatic Entrance Doors."
 - 12) Section 08800 "Glazing."
 - 13) Section 08911 "Glazed Aluminum Curtain Walls"; Curtain Wall System Types CWS-1, CWS-2, CWS-3, and CWS-4.

- b. Portland Cement Plaster:
 - 1) Section 05400 "Cold-Formed Metal Framing."
 - 2) Section 06160 "Sheathing."
 - 3) Section 07272 "Fluid-Applied Membrane Air Barriers."
 - 4) Section 07620 "Sheet Metal Flashing and Trim."
 - 5) Section 07920 "Joint Sealants."
 - 6) Section 08800 "Glazing."
 - 7) Section 08911 "Glazed Aluminum Curtain Walls"; Window Wall System Type W-1.
 - 8) Section 09220 "Portland Cement Plaster."
- c. Architectural Precast Concrete
 - 1) Section 03450 "Architectural Precast Concrete."
 - 2) Section 08911 "Glazed Aluminum Curtain Walls"; Window Wall System Type W-1.
 - 3) Section 10200 "Louvers and Vents."
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. Exterior Enclosure Prime Trade Contractors' Qualifications: Approval by University's Representative is required of proposed manufacturers and will be based upon submission by Exterior Enclosure Prime Trade Contractors of certifications that:
1. Exterior Enclosure Prime Trade Contractors shall have undivided responsibility for the entire component assembly group.
 2. Provide a list of 5 similar completed projects with addresses of location, Architect and Owner.
- B. 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 Exterior Enclosure Prime Trade Contractors 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.
- C. Exterior Enclosure Prime Trade Contractors' and Erector's Qualifications: Refer to individual Exterior Enclosure system component sections.
- 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 Exterior Enclosure Prime Trade 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 Wall Mockup: Provide exterior enclosure system component elements as required for the construction and testing of composite exterior wall mockups specified in Section 01454 "Mockups."

- G. Composite Exterior Wall Mockup Testing: Perform testing for composite exterior wall mockups as specified in Section 01454 "Mockups."
- H. Required Conferences:
1. Conferences: Exterior Enclosure Prime Trade Contractors to attend weekly meetings to be held at University's Representative's office.
 2. Exterior Enclosure Prime Trade Contractor-Manufacturer Review: Exterior Enclosure Prime Trade Contractor shall review the University's Representative's drawings and specifications with agent of sheet membrane underlayment materials manufacturer and obtain manufacturer'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. Exterior Enclosure Prime Trade Contractors 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, Prime Trade Contractor, Exterior Enclosure Prime Trade Contractors, Exterior Enclosure System component contractors, and manufacturer glass and glazing materials manufacturer, and other whose work may be affected by Exterior Enclosure System work.
 - c. Exterior Enclosure Prime Trade Contractors 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 Exterior Enclosure System. 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 Exterior Enclosure Prime Trade Contractors 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 Exterior Enclosure Prime Trade Contractors 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. Exterior enclosure system subcontractor 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 exterior enclosure system subcontractor.

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 Exterior Enclosure Prime Trade 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 01790

SECTION 01810 - 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 15 Mechanical.
 - 3. Commissioning of selected systems and equipment specified under Division 16 Electrical.

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 01664 Training.
 - 2. Section 13890 Special Construction Commissioning
 - 3. Section 15970 Mechanical Commissioning.
 - 4. Section 16080 Electrical Commissioning.
- C. Division 11 Equipment
- D. Division 13 Special Construction
- E. Division 14 Conveying Systems
- F. Division 15 Mechanical
- G. Division 16 Electrical

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 Prime Trade 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. Prime Trade Contractor Members:
 - a. Commissioning Coordinator (see paragraph 1.3C).
 - b. Division 13, Division 15, and Division 16 project managers plus key subcontractors where appropriate, including the Test & Balance Prime Trade Contractor.
 2. University Members:
 - a. University's Representative: University Project Manager with authority over:
 - 1) University Commissioning Authority
 - 2) University plant operator/engineer (during the functional testing and training phases only).
 - 3) University Design Professional.
- C. Commissioning Coordinator:
1. The Prime Trade 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 Prime Trade 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 Prime Trade Contractor.
 3. Services to be provided: See paragraph 3.1.

1.4 SUBMITTALS

- A. See Section 01334 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, 15, and 16.

D. Commissioning Reports:

1. Start-up and Factory Tests.
 - a. See Divisions 13, 15, and 16 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, 15, and 16 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 13, 15, and 16 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.
 - 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 word-searchable electronic format; acceptable formats are MS Word, Adobe Acrobat (pdf) and HTML; submit other formats for review and approval prior to submission; scanned paper documents not acceptable
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:
 - 4) Five bound copies.
 - 5) One electronic copy on CD in word-searchable PDF format. Reports may be scanned from paper copies but word-searchable electronic versions preferred.
 - 6) One electronic copy as above copied onto the Central Utility Plant (CUP) Operator's Workstation server.
8. Operations and Maintenance Manuals: See Divisions 13, 15, and 16.
 9. Training manuals: See Section 01664 Training and Divisions 13, 15, and 16.
 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)
 - 2) Final version of the University's requirements and design basis narratives, including brief descriptions of each system.
 - 3) Controls. (Material provided by Division 15.)
 - 4) As-built sequences of operation for all equipment.
 - 5) Controls drawings
 - 6) A list of time of day schedules and a schedule to review them for relevance and efficiency.
 - 7) A list of all user adjustable setpoints and reset schedules with rationale for their selection and range.
 - 8) Energy and Water Efficiency Measures. (Material provided by University Representative.)
 - 9) A description and rationale for all energy and water saving features and strategies with operating and instructions.
 - 10) Guidelines for establishing and tracking benchmarks for whole building energy use and equipment efficiencies of cooling, heating, and service hot water equipment.
 - 11) Seasonal Issues. Not applicable to UC Merced projects.
 - 12) Calibration. (Material provided by Division 15.)
 - 13) Recommendations for recalibration frequency of sensors and devices by type and use.
 - 14) Continuing Commissioning Plan (Material provided by University Representative.)
 - 15) 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, 15, and 16 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, 15, and 16. 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. Prime Trade Contractor Members of Commissioning Team shall attend all scheduled meetings; University Members of Commissioning Team shall be invited to all meetings, witness demonstration tests, and training and may elect to attend where they feel their attendance is beneficial.
 - 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, 15, and 16 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 Prime Trade 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 Prime Trade 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 15:
 - a. Ensure trends are initiated as specified in Division 15. The post-construction review will occur directly after functional testing is complete. 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, 15, and 16.
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.
- C. Prime Trade Contractor shall compensate University's Representative on a time and material basis at standard billing rates for any additional time required to witness additional demonstration tests or to review additional EMCS trends beyond the initial tests (see paragraphs 3.1A.6.c and 3.1A.7.d), at no additional cost to the University.

3.3 SYSTEM ACCEPTANCE

- A. Specified Division 13, 15, and 16 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 13, 15, and 16, 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 01810

SECTION 01830 - 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 Prime Trade 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 Prime Trade 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. Prime Trade Contractor's 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.

SCIENCE AND ENGINEERING BUILDING 2
UNIVERSITY OF CALIFORNIA, MERCED
MERCED, CALIFORNIA

PROJECT NO.: 900020

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01830

NOVEMBER 1, 2004
REVISION: 1
LF/SF/MPT

OPERATING AND MAINTENANCE
01830 - 6

SECTION 01906 - HAZARDOUS MATERIALS PROCEDURES

PART 1 - GENERAL

1.1 CONTRACTOR'S RESPONSIBILITY

- A. Except as otherwise specified, in the event Prime Trade 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, Prime Trade 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 Prime Trade 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 Prime Trade 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 Prime Trade 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 (COSHA) are not allowed for use on University projects. The COSHA 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 Prime Trade 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 Prime Trade 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 Prime Trade 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. Prime Trade 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. Prime Trade 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 01906

LIST OF DRAWINGS

SHEET NO.	TITLE	DATE
1	0206-S&E2-10 1440 Signs Specifiction-20131017.pdf	10/17/2013
2	0206-S&E2-Interior Sign Schedule-20131017.pdf	10/17/2013
3	0206-S&E2-Interior Sign Schedule-20131017-Sort By Sign Types.pdf	10/17/2013
4	0206-S&E2-Sign Graphic Bid Package-20131017.pdf	10/17/2013
5	UCM SE2 Level B.pdf	10/17/2013
6	UCM SE2 Level 1.pdf	10/17/2013
7	UCM SE2 Level 2.pdf	10/17/2013
8	UCM SE2 Level 3.pdf	10/17/2013
9	UCM SE2 Level Roof.pdf	10/17/2013

END OF LIST OF DRAWINGS

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. Illuminated Exterior Building Monument Sign (AA3 Secondary Building ID)
4. Interior Wall-Mounted LEED Display Sign
5. Project Schedule:

1. Interior Room Identification Signs must be fabricated and ready for installation by Friday January 24, 2014. The installation date may be varied and needs to be coordinated with University Representative.
2. Illuminated Exterior Building Monument Signs must be fabricated and ready for installation by Friday February 21, 2014. The installation date may be varied and needs to be coordinated with University Representative.

6. Signage package is based on 2007 Building Code requirements.

1.2 SUBMITTALS

- A. Procedures: In accordance with signage schedule “0206-S&E2-Interior sign Schedule20131017.pdf” and summary of interior signage types in “0206-S&E2-Interior sign Schedule20131017-Sort By Sign Types.pdf”, signage graphic bid package “0206-S&E2-Sign Graphic Bid Package-20131017.pdf”, building floor plans “UCM SE2 Level B.pdf”, “UCM SE2 Level 1.pdf”, “UCM SE2 Level 2.pdf”, “UCM SE2 Level 3.pdf”, “UCM SE2 Level Roof.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. For Illuminated Exterior Building Monument Sign (AA2 Primary Building ID), 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 unless noted otherwise. All sides of the background must consist of the same color as selected.
 - 7) Graphic Color: Benjamin/Moore-Branchport Brown, unless noted otherwise.
 - 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: Student Services). Final copy layout and size will be determined during shop drawing submittal period.
 - 1) Copy: Sciences & Engineering Building 2 (final copy to be determined)
 - 2) Signage Location: In softscape, exact location to be determined by University's Representative.

- 3) Quantity Required: One (1)
- c. Illuminated Exterior Building Monument Sign (AA3 Secondary Building ID): Must match the current existing exterior building monument signs on campus (for example: Student Services). Final copy layout and size will be determined during shop drawing submittal period.
 - 1) Copy: Sciences & Engineering Building 2 (final copy to be determined)
 - 2) Signage Location: In softscape, exact location to be determined by University's Representative.
 - 3) Quantity Required: One (1)
- d. 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

UC MERCED

Science & Engineering Building 2 (0206)-Interior Signage Schedule

October 17, 2013

Project Schedule: All Interior Room Identification Signs must be fabricated and ready for installation by Friday January 24, 2014. 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 February 21, 2014. 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 unless noted differently.

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 Architectural Drawing	Signage Type	Signage Text	# Of Signage	Backer	# Of Signage	# Of Signage (sort)	Room Description	UCM Note
Basement:																					
/				10	00	0206			115		001-A			21	001	1		1	1	RESEARCH EQUIP	
/				10	00	0206			110		002-A			2	002	1		1	1	VENDING	
/				10	00	0206			1159		0C5-B			21	020	1		1	1	NMR	
/				10	00	0206			66					15	020A	1		1	1	NMR	
/				10	00	0206			63					15	020B	1		1	1	NMR	
/				10	00	0206			82		020-A			15	020C	1		1	1	NMR PUMPS	
/				10	00	0206			344		0C5-A			21	024	1		1	1	MASS SPEC	
/				10	00	0206			132		030-A			2	030	1		1	1	SERVER TECHS	
/				10	00	0206			1046		040-A			2	040	1		1	1	RESEARCH SERVER	
/				10	00	0206			??		040-B			15	040A	1		1	1	SERV CLO	
/				10	00	0206			1576		050-A									ENVIRONMENTAL ENGINEERING	See sign in 050A and 050D entrances.
/				10	00	0206					050-B									ENVIRONMENTAL ENGINEERING	See sign in 050A and 050D entrances.
/				10	00	0206			192		0C9-D (NOT 050-B)			21	050	1		1	1	SUPPORT	This sign is for the overall 050 area, not just the hallway.
/				10	00	0206					0C9-D	8B		8B	EXIT ROUTE	1		1	1	SUPPORT	This sign will be placed inside of 050A to 0C9.
/				10	00	0206					0C9-D			9A		1		1	1	SUPPORT	Should 9A be included? This sign will be placed inside of 050A to 0C9.
/				10	00	0206			105		050A-A			2	050B	1		1	1	COMPUTATION (GS)	
/				10	00	0206			102		050A-B			2	050C	1		1	1	INSTRUMENT	
/				10	00	0206			186		0C9-C			21	050	1		1	1	EQUIP	This sign is for the overall 050 area, not just the hallway.
/				10	00	0206					0C9-C	8B		8B	EXIT ROUTE	1		1	1	EQUIP	This sign will be placed inside of 050D to 0C9.
/				10	00	0206					0C9-C			9A		1		1	1	EQUIP	Should 9A be included? This sign will be placed inside of 050D to 0C9.
/				10	00	0206			105		050D-D			2	050E	1		1	1	EQUIP	
/				10	00	0206			106		050D-C			2	050F	1		1	1	INSTRUMENT	
/				10	00	0206			106		050D-B			2 (w/BACKER)	050G	1	1	1	1	SUPPORT	
/				10	00	0206			108		NO DOOR?			2	050H	1		1	1	CER	
/				10	00	0206			348		060-A			21	060	1		1	1	VISUALIZATION	
/				10	00	0206			307		070-A			21	070	1		1	1	LASER LAB	
/				10	00	0206			1562		080-A									MATERIAL SCIENCE ENGINEERING	See sign in 080A and 080C entrances.
/				10	00	0206					080-B									MATERIAL SCIENCE ENGINEERING	See sign in 080A and 080C entrances.
/				10	00	0206			212		080A-A			21	080	1		1	1	COMPUTATION (GS)	This sign is for the overall 080 area, not just the hallway.
/				10	00	0206					080A-A			8B	EXIT ROUTE	1		1	1	COMPUTATION (GS)	This sign will be placed inside of 080A to 0C9.
/				10	00	0206					080A-A			9A		1		1	1	COMPUTATION (GS)	Should 9A be included? This sign will be placed inside of 080A to 0C9.
D				10	00	0206					080-B									COMPUTATION (GS)	
/				10	00	0206			619		080-C			15	080B	1		1	1	MATERIAL SCIENCE ENGINEERING	
/				10	00	0206			187		0C9-B (NOT 080-A)			21	080	1		1	1	EQUIP.	This sign is for the overall 080 area, not just the hallway.
/				10	00	0206					0C9-B (NOT 080-A)	8B		8B	EXIT ROUTE	1		1	1		This sign will be placed inside of 080D to 0C9.
/				10	00	0206					0C9-B (NOT 080-A)			9A		1		1	1		Should 9A be included? This sign will be placed inside of 080D to 0C9.

UC MERCED

Science & Engineering Building 2 (0206)-Interior Signage Schedule

October 17, 2013

Project Schedule: All Interior Room Identification Signs must be fabricated and ready for installation by Friday January 24, 2014. 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 February 21, 2014. 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 unless noted differently.

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 Architectural Drawing	Signage Type	Signage Text	# Of Signage	Backer	# Of Signage	# Of Signage (sort)	Room Description	UCM Note
/			10	00	0206		080D			99		080C-D			2 (w/BACKER)	080D	1	1	1	1	INSTRUMENT	
/			10	00	0206		080E			106		080C-C			2 (w/BACKER)	080E	1	1	1	1	INSTRUMENT	
/			10	00	0206		080F			103		080C-B			2	050F	1		1	1	INSTRUMENT	
/			10	00	0206		080G			104		080C-A			2	050G	1		1	1	INSTRUMENT	
/			10	00	0206		085			207		085-A			2 (w/BACKER)	085	1	1	1	1	PUMP	
/			10	00	0206		090			303		0C9-A			16	090...??(department name to be determined?)	1		1	1	IMAGING	
/			10	00	0206		090					0C9-A	8B		8B	EXIT ROUTE	1		1	1	IMAGING	This sign will be placed inside of 090 to 0C9.
/			10	00	0206		090					0C9-A	9A		9A		1		1	1	IMAGING	This sign will be placed inside of 090 to 0C9.
/			10	00	0206		090A			192		090A-A			2 (w/BACKER)	090A	1	1	1	1	DUAL BEAM	
/			10	00	0206		090B			292		090B-A			2 (w/BACKER)	090B	1	1	1	1	TITAN	
/			10	00	0206		090C			359		090C-B			2 (w/BACKER)	090C	1	1	1	1	TEM	
/			10	00	0206		090D			187		090D-A			2	090D	1		1	1	SEM	
/			10	00	0206		090E			121		090E-A			2	090E	1		1	1	TRAINING TEM	
/			10	00	0206		090F			153		090F-A			2	090F	1		1	1	MICROTOME	
/			10	00	0206		090G			199		090G-A (NOT 090-A)			2	090G	1		1	1	PREP	
/			10	00	0206		0A1			163		0M3-B									AREAWAY	Has no sign.
/			10	00	0206		0C1			484		0C1-A									HALLWAY	Has no sign.
/			10	00	0206		0C2			??		0C2-A			8B	EXIT ROUTE	1		1	1	HALLWAY	
/			10	00	0206		0C5			262		0C5-A, 0C5-B									HALLWAY	Has no sign.
/			10	00	0206		0C6			411		0C5-B									HALLWAY	Has no sign.
/			10	00	0206		0C9			1581		0C9-A									HALLWAY	Has no sign.
/			10	00	0206		0C9					0C9-B			9A		1		1	1	HALLWAY	Need to check with consultant to know why these two evocation locations are so closed. Are they required?
/			10	00	0206		0C9					0C9-B			22C		1		1	1	HALLWAY	Sign holder for EH&S Lab sign use.
/			10	00	0206		0C9					0C9-C			9A		1		1	1	HALLWAY	Need to check with consultant to know why these two evocation locations are so closed. Are they required?
/			10	00	0206		0C9					0C9-C			22C		1		1	1	HALLWAY	Sign holder for EH&S Lab sign use.
/			10	00	0206		0C9					080A-A			22C		1		1	1	HALLWAY	Sign holder for EH&S Lab sign use.
/			10	00	0206		0C9					0C9-D			22C		1		1	1	HALLWAY	Sign holder for EH&S Lab sign use.
/			10	00	0206		0C10			240											HALLWAY	Has no sign.
/			10	00	0206		0E1			89		0E1	10		10	IN CASE OF FIRE, USE STAIRWAY	1		1	1	ELEVATOR-1	
/			10	00	0206		0E1					0E1	9A		9A		1		1	1	ELEVATOR-1	Final location to be determined.
/			10	00	0206		0E1					0E1			1	0E1...ELEVATOR 1	1		1	1	ELEVATOR-1	
/			10	00	0206		0E2			89		0E2	10		10	IN CASE OF FIRE, USE STAIRWAY	1		1	1	ELEVATOR-2	
/			10	00	0206		0E2					0E2	9A		9A		1		1	1	ELEVATOR-2	Final location to be determined.
/			10	00	0206		0E2					0E2			1	0E2...ELEVATOR 2	1		1	1	ELEVATOR-2	
/			10	00	0206		0J1			92		0J1			1	0J1...CUSTODIAN	1		1	1	JC SUPPLY	
/			10	00	0206		0M2			647		0C2-C			15	0M2	1		1	1	MECHANICAL	
/			10	00	0206		0M2					0M2-A			15	0M2	1		1	1	MECHANICAL	
/			10	00	0206		0M3			1982		0C2-B			1	0M3...ELECTRICAL ROOM	1		1	1	ELECTRICAL	Does this sign have to be red?

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Science & Engineering Building 2 (0206)-Interior Signage Schedule

October 17, 2013

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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 Architectural Drawing	Signage Type	Signage Text	# Of Signage	Backer	# Of Signage	# Of Signage (sort)	Room Description	UCM Note	
/					10	00	0206					0P1-B			15	0M3	1		1	1	ELECTRICAL		
/					10	00	0206				74	0M3-A			15	0M3A	1		1	1	BATT INVERT		
/					10	00	0206				1021	0P1-A			15	0P1	1		1	1	PLUMBING		
/					10	00	0206				1021	0P1-B			15	0P1	1		1	1	PLUMBING		
/					10	00	0206				216	0S2-A			35A	STAIR 1...EXIT STAIR UP	2		2	2	STAIR 1		
/					10	00	0206					0S2-A		9A	9A				2	2	2	STAIR 1	Frame for evacuation plan. Final location to be determined.
/					10	00	0206					0S2-A			13B	STAIR 1...NO ROOF ACCESS...B...B THROUGH 3??	1		1	1	STAIR 1	Final location to be determined.	
/					10	00	0206				245	0S2-A		35A	35A	STAIR 2...EXIT STAIR UP	1		1	1	STAIR 2		
/					10	00	0206					0S2-A		9A	9A				1	1	1	STAIR 2	Frame for evacuation plan. Final location to be determined.
/					10	00	0206					0S2-A		31	31	AREA OF REFUGE IN STAIRWELL	1		1	1	STAIR 2		
/					10	00	0206					0S2-A		13B	13B	STAIR 2... ROOF ACCESS...B...B THROUGH ROOF??	1		1	1	STAIR 2	Final location to be determined.	
/					10	00	0206					0S2-A		9A	9A				1	1	1	STAIR 2	Frame for evacuation plan. Final location to be determined.
/					10	00	0206					0S2-A		32	32	AREA OF REFUGE...ALTERNATE EXIT IS LOCATED IN STAIRWELL 3...(use the copy in sign type)	1		1	1	STAIR 2	Final location to be determined.	
/					10	00	0206				192	0S3-A		35A	35A	STAIR 3...EXIT STAIR UP	1		1	1	STAIR 3		
/					10	00	0206					0S3-A		9A	9A				1	1	1	STAIR 3	Frame for evacuation plan. Final location to be determined.
/					10	00	0206					0S3-A		31	31	AREA OF REFUGE IN STAIRWELL	1		1	1	STAIR 3	Final location to be determined.	
/					10	00	0206					0S3-A		13B	13B	STAIR 3... NO ROOF ACCESS...B...B THROUGH 3??	1		1	1	STAIR 3	Final location to be determined.	
/					10	00	0206					0S3-A		9A	9A				1	1	1	STAIR 3	Frame for evacuation plan. Final location to be determined.
/					10	00	0206					0S3-A		32	32	AREA OF REFUGE...ALTERNATE EXIT IS LOCATED IN STAIRWELL 2...(use the copy in sign type)	1		1	1	STAIR 3	Final location to be determined.	
/					10	00	0206				218	0T1-A		4	4 (MEN)	MEN	1		1	1	MEN	Restroom sign on door.	
/					10	00	0206					0T1-A		6A	6 (MEN)	MEN	1		1	1	MEN	Restroom sign on wall. Smith Group used 6A-with shower. Need to check.	
/					10	00	0206					0T1-A			15A	0T1	1		1	1	MEN	Restroom sign on wall.	
/					10	00	0206				227	0T2-A		4	4 (WOMEN)	WOMEN	1		1	1	WOMEN	Restroom sign on door.	
/					10	00	0206					0T2-A		6A	6 (WOMEN)	WOMEN	1		1	1	WOMEN	Restroom sign on wall. Smith Group used 6A-with shower. Need to check.	
/					10	00	0206					0T2-A			15A	0T2	1		1	1	WOMEN	Restroom sign on wall.	
/					10	00	0206				207	0U1-A			15	0U1	1		1	1	BDF		
/					10	00	0206				159	0U2-A			1A	0U2...FIRE PUMP ROOM?? (copy to be finalized later)	1		1	1	FIRE PUMP	Copy to be finalized later.	
												ADD			9A				5	5	5		17"Wx11"H landscape insert for Annunciation Maps.
															22D				5	5	5		17"Wx11"H portrait insert for Annunciation Maps.
															5 (left)				4	4	4		
															5 (right)				4	4	4		
First Floor:																							
/					10	00	0206			322		101-A		8A	8A	EXIT	1	1	1	1	SCHOLARLY ACTIVITY		
/					10	00	0206					101-A		12B	12B	ISA symbol on door	1		1	1	SCHOLARLY ACTIVITY	blue vinyl, see drawing.	

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Science & Engineering Building 2 (0206)-Interior Signage Schedule

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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 Architectural Drawing	Signage Type	Signage Text	# Of Signage	Backer	# Of Signage	# Of Signage (sort)	Room Description	UCM Note
/				10	00	0206		102	927		102-A		8A	8A	EXIT	1	1	1	1	SCHOLARLY ACTIVITY	
/				10	00	0206		102			102-A		9A	9A		1	1	1	1	SCHOLARLY ACTIVITY	Final location to be determined.
/				10	00	0206		102			102-A		12B	12B	ISA symbol on door	1		1	1	SCHOLARLY ACTIVITY	blue vinyl, see drawing.
/				10	00	0206		102			102-A			16 (EXTERIOR)??	??	1	1	1	1	SCHOLARLY ACTIVITY	Sign place holder only. TBD.
/				10	00	0206		102			102-B		8A	8A	EXIT	1	1	1	1	SCHOLARLY ACTIVITY	
/				10	00	0206		102			102-B		9A	9A		1	1	1	1	SCHOLARLY ACTIVITY	Final location to be determined.
/				10	00	0206		102			102-B		12B	12B	ISA symbol on door	1		1	1	SCHOLARLY ACTIVITY	blue vinyl, see drawing.
/				10	00	0206		102			102-B			16 (EXTERIOR)??	??	1	1	1	1	SCHOLARLY ACTIVITY	Sign place holder only. TBD.
/				10	00	0206		102					19	19	MAXIMUM OCCUPANCY...63	1		1	1	SCHOLARLY ACTIVITY	
/				10	00	0206		102					7	7	ASSISTIVE LISTENING SYSTEM AVAILABLE	1		1	1	SCHOLARLY ACTIVITY	
/				10	00	0206		102A	??		102-C				STOR					STOR	Has no sign.
/				10	00	0206		104	78		104-A			15	104	1		1	1	CYLINDERS	
/				10	00	0206		104A	56		104-B			15	104A	1		1	1	02 CYLINDERS	
/				10	00	0206		105	247		105-A			1 (EXTERIOR)	105...STAGING	1		1	1	STAGING	
/				10	00	0206		105			1C2-A			15	105	1		1	1	STAGING	
/				10	00	0206		105	233		106-B			15	105	1		1	1	STAGING	
/				10	00	0206		106	233		106-A			1 (EXTERIOR)	106...TRASH & RECYCLING	1		1	1	TRASH/ RECYCLING	
/				10	00	0206		106	233		106-B			15	106	1		1	1	TRASH/ RECYCLING	
D				10	00	0206		106			106-B				TRASH RECYCLING			0		TRASH RECYCLING	
/				10	00	0206		110	853		105-B			21	110	1		1	1	EHS WASTE	Sign holder for EH&S Lab sign use.
/				10	00	0206		110			105-B			8B	EXIT ROUTE	1		1	1	EHS WASTE	
/				10	00	0206		110			110-B			21 (EXTERIOR)	110	1		1	1	EHS WASTE	Sign holder for EH&S Lab sign use.
/				10	00	0206		110			110-B			8A	EXIT	1		1	1	EHS WASTE	
/				10	00	0206		110			1C4-A			21	110	1		1	1	EHS WASTE	Sign holder for EH&S Lab sign use.
/				10	00	0206		110			1C4-A			8B	EXIT ROUTE	1		1	1	EHS WASTE	
/				10	00	0206		110A	134		110-A			15	110A	1		1	1	H2 SOLVENT	
/				10	00	0206		120	715		120-A			21	120	1		1	1	ENVIRONMENTAL ENGINEERING	
/				10	00	0206		120			120-A		8B	8B	EXIT ROUTE	1		1	1	ENVIRONMENTAL ENGINEERING	
/				10	00	0206		120A	564											COMUTATION	Has no sign.
/				10	00	0206		120B	577											COMUTATION	Has no sign.
/				10	00	0206		120C	142		120C-A			15	120C	1		1	1	PRINTERS	
/				10	00	0206		120D	115		120D-A			15	120D	1		1	1	RESEARCH EQUIP	
/				10	00	0206		120E	133		120E-A			2 (w/BACKER)	120E	1	1	1	1	OFFICE	
/				10	00	0206		120F	135		120F-A			2 (w/BACKER)	120F	1	1	1	1	OFFICE	
/				10	00	0206		120G	133		120G-A			2 (w/BACKER)	120G	1	1	1	1	OFFICE	
/				10	00	0206		120H	281		120H-A			2 (w/BACKER)	120H	1	1	1	1	OFFICE	
/				10	00	0206		120J	195		120J-A			2 (w/BACKER)	120J	1	1	1	1	BREAKOUT	
/				10	00	0206		130	924		130-A		8A	8A	EXIT	1	1	1	1	WET CLASS LAB	
/				10	00	0206		130			130-A			9A		1	1	1	1	WET CLASS LAB	Final location to be determined.
/				10	00	0206		130			130-A		7	7	ASSISTIVE LISTENING SYSTEM AVAILABLE	1		1	1	WET CLASS LAB	
/				10	00	0206		130			130-A		12B	12B	ISA symbol on door	1		1	1	WET CLASS LAB	blue vinyl, see drawing.
/				10	00	0206		130			130-A			21 (EXTERIOR)	130	1	1	1	1	WET CLASS LAB	
/				10	00	0206		130			140-B			2	130	1		1	1	WET CLASS LAB	
/				10	00	0206		135	119		135-A			2	135	1		1	1	TECH OFFICE	
/				10	00	0206		140	300		140-A		8A	8A	EXIT	1	1	1	1	PREP	
/				10	00	0206		140			140-A			2 (EXTERIOR)	140	1	1	1	1	PREP	

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/				10	00	0206		150	942		140-C			2	150	1		1	1	WET CLASS LAB	
/				10	00	0206		150			150-A		8A	8A	EXIT	1	1	1	1	WET CLASS LAB	
/				10	00	0206		150			150-A			9A		1	1	1	1	WET CLASS LAB	Final location to be determined.
/				10	00	0206		150			150-A		7	7	ASSISTIVE LISTENING SYSTEM AVAILABLE	1		1	1	WET CLASS LAB	
/				10	00	0206		150			150-A		12B	12B	ISA symbol on door	1		1	1	WET CLASS LAB	blue vinyl, see drawing.
/				10	00	0206		150			150-A			21 (EXTERIOR)	150	1	1	1	1	WET CLASS LAB	
/				10	00	0206		155	437		155-A			8A	EXIT	1	1	1	1	ELECTRONICS SHOP (BENCHTOP)	
/				10	00	0206		155			155-B			15	155	1		1	1	ELECTRONICS SHOP (BENCHTOP)	
/				10	00	0206		155			155-C			21 (EXTERIOR)	155	1	1	1	1	ELECTRONICS SHOP (BENCHTOP)	
/				10	00	0206		155			155-C			9A		1	1	1	1	ELECTRONICS SHOP (BENCHTOP)	Final location to be determined.
/				10	00	0206		155			155-C			12B	ISA symbol on door	1		1	1		blue vinyl, see drawing.
/				10	00	0206		160	942		160-A		8A	8A	EXIT	1	1	1	1	WET CLASS LAB	
/				10	00	0206		160			160-A			9A		1	1	1	1	WET CLASS LAB	Final location to be determined.
/				10	00	0206		160			160-A		7	7	ASSISTIVE LISTENING SYSTEM AVAILABLE	1		1	1	WET CLASS LAB	
/				10	00	0206		160			160-A		12B	12B	ISA symbol on door	1		1	1	WET CLASS LAB	blue vinyl, see drawing.
/				10	00	0206		160			160-A			21 (EXTERIOR)	160	1	1	1	1	WET CLASS LAB	
/				10	00	0206		160			160-A			22C(EXTERIOR)		1	1	1	1	WET CLASS LAB	Sign holder for EH&S Lab sign use.
/				10	00	0206		160			170-B			2	160	1		1	1	WET CLASS LAB	
/				10	00	0206		165	880		155-B			15	165	1		1	1	SERVICE LEARNING	
/				10	00	0206		165			165-A		8A	8A	EXIT	1	1	1	1	SERVICE LEARNING	
/				10	00	0206		165			165-C			21 (EXTERIOR)	165	1	1	1	1	SERVICE LEARNING	
/				10	00	0206		165			165-C			9A		1	1	1	1	SERVICE LEARNING	Final location to be determined.
/				10	00	0206		165			165-C			12B	ISA symbol on door	1		1	1	SERVICE LEARNING	blue vinyl, see drawing.
/				10	00	0206		170	300		170-A		8A	8A	EXIT	1	1	1	1	PREP	
/				10	00	0206		170			170-A			2 (EXTERIOR)	170	1	1	1	1	PREP	
/				10	00	0206		175	436		165-B			15	175	1	1	1	1	MACHINE SHOP (BENCHTOP)	
/				10	00	0206		175			175-A		8A	8A	EXIT	1	1	1	1	MACHINE SHOP (BENCHTOP)	
/				10	00	0206		175			175-C			21 (EXTERIOR)	175	1	1	1	1	MACHINE SHOP (BENCHTOP)	
/				10	00	0206		175			175-C			9A		1	1	1	1	MACHINE SHOP (BENCHTOP)	Final location to be determined.
/				10	00	0206		175			175-C			12B	ISA symbol on door	1		1	1	MACHINE SHOP (BENCHTOP)	blue vinyl, see drawing.
/				10	00	0206		180	618		180-A		8A	8A	EXIT	1	1	1	1	THERMOFLUID LAB (WET CLASS)	
/				10	00	0206		180			180-A			9A		1	1	1	1	THERMOFLUID LAB (WET CLASS)	Final location to be determined.
/				10	00	0206		180			180-A		7	7	ASSISTIVE LISTENING SYSTEM AVAILABLE	1		1	1	THERMOFLUID LAB (WET CLASS)	
/				10	00	0206		180			180-A		12B	12B	ISA symbol on door	1		1	1	THERMOFLUID LAB (WET CLASS)	blue vinyl, see drawing.
/				10	00	0206		180			180-A			21 (EXTERIOR)	180	1	1	1	1	THERMOFLUID LAB (WET CLASS)	
/				10	00	0206		180			180-A			22C(EXTERIOR)		1	1	1	1	THERMOFLUID LAB (WET CLASS)	Sign holder for EH&S Lab sign use.
/				10	00	0206		180			185-B			15	180	1	1	1	1	THERMOFLUID LAB (WET CLASS)	
/				10	00	0206		180			170-C			2	180	1		1	1	THERMOFLUID LAB (WET CLASS)	
/				10	00	0206		185	1108		185-A		8A	8A	EXIT	1	1	1	1	WIND TUNNEL	
/				10	00	0206		185			185-B			15	185	1	1	1	1	WIND TUNNEL	
/				10	00	0206		185			185-C			21 (EXTERIOR)	185	1	1	1	1	WIND TUNNEL	
/				10	00	0206		185			185-C			9A		1	1	1	1	WIND TUNNEL	Final location to be determined.
/				10	00	0206		185			185-C			12B	ISA symbol on door	1		1	1	WIND TUNNEL	blue vinyl, see drawing.
/				10	00	0206		190	269		190-A		8A	8A	EXIT	1	1	1	1	STRUCT SUPPORT	
/				10	00	0206		190			190-A			2 (EXTERIOR)	190	1	1	1	1	STRUCT SUPPORT	
/				10	00	0206		1C1		251										HALLWAY	

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Science & Engineering Building 2 (0206)-Interior Signage Schedule

October 17, 2013

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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 unless noted differently.

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 Architectural Drawing	Signage Type	Signage Text	# Of Signage	Backer	# Of Signage	# Of Signage (sort)	Room Description	UCM Note	
/			10	00	0206		1C2				205	1C1-A		8B	8B	EXIT ROUTE	1		1	1	HALLWAY		
/			10	00	0206		1C2				205	1C2-A		8B	8B	EXIT ROUTE	1		1	1	HALLWAY		
/			10	00	0206		1C4				47	1C4-1, 120-A										Has no sign.	
/			10	00	0206		1C6				534	102-A										Has no sign.	
/			10	00	0206		1C6					102-B										Has no sign.	
/			10	00	0206		1C8				124	1C8-A		8A	8A	EXIT	1	1	1	1	HALLWAY		
/			10	00	0206		1C8					1C8-A			9A		1	1	1	1		Final location to be determined.	
/			10	00	0206		1C8					1C8-A			16 (EXTERIOR)??	ROOM 135, 1U2, 1J1 & 1M2 (ELECTRICAL ROOM) INSIDE	1	1	1	1		Place holder only. Need confirmation from Fire Marshal and users	
/			10	00	0206		1E1				89	1E1		10	10	IN CASE OF FIRE, USE STAIRWAY	1		1	1	ELEVATOR-1		
/			10	00	0206		1E1					1E1		9A	9A		1		1	1	ELEVATOR-1	Final location to be determined.	
/			10	00	0206		1E1					1E1			1	1E1...ELEVATOR 1	1		1	1	ELEVATOR-1		
/			10	00	0206		1E2				89	1E2		10	10	IN CASE OF FIRE, USE STAIRWAY	1		1	1	ELEVATOR-2		
/			10	00	0206		1E2					1E2		9A	9A		1		1	1	ELEVATOR-2	Final location to be determined.	
/			10	00	0206		1E2					1E2			1	1E2...ELEVATOR 2	1		1	1	ELEVATOR-2		
/			10	00	0206		1J1				60	1J1-A			1	1J1...CUSTODIAN	1		1	1	JC		
/			10	00	0206		1M1				84	1C2-B			1A	1M1...FIRE ALARM CONTROL ROOM??ELECTRICAL ROOM??	1		1	1	ELEC	Place holder only. Need confirmation from Fire Marshal.	
/			10	00	0206		1M2				184	1C8-B			1	1M2...ELECTRICAL ROOM	1		1	1	ELEC		
/			10	00	0206		1S1				387				1	1S1...STAIR 1	2		2	2	STAIR 1		
/			10	00	0206		1S1							9A	9A		1		1	1	STAIR 1	Final location to be determined.	
/			10	00	0206		1S1								13B	STAIR 1...NO ROOF ACCESS...1...B THROUGH 3??	2		2	2	STAIR 1	Include the "Star" in the sign.	
/			10	00	0206		1S2				247	1S2-A		8A	8A	EXIT	1		1	1	STAIR 2		
/			10	00	0206		1S2					1S2-A		9A	9A		1		1	1	STAIR 2	Final location to be determined.	
/			10	00	0206		1S2					1S2-A		13B	13B	STAIR 2... ROOF ACCESS...1...B THROUGH ROOF??	1		1	1	STAIR 2		
/			10	00	0206		1S2					1S2-A			1 (EXTERIOR)	1S2...STAIR 2	1		1	1	STAIR 2		
/			10	00	0206		1S2					1S2-B		9A	9A		1		1	1	STAIR 2	Final location to be determined.	
/			10	00	0206		1S2					1S2-B		8A	8A	EXIT	1		1	1	STAIR 2		
/			10	00	0206		1S2					1S2-B			1	1S2...STAIR 2	1		1	1	STAIR 2		
/			10	00	0206		1S3				430	1S3-A		8A	8A	EXIT	1		1	1	STAIR 3		
/			10	00	0206		1S3					1S3-A		9A	9A		1		1	1	STAIR 3	Final location to be determined.	
/			10	00	0206		1S3					1S3-A		13B	13B	STAIR 3... NO ROOF ACCESS...1...B THROUGH 3??	1		1	1	STAIR 3		
/			10	00	0206		1S3					1S3-A			1 (EXTERIOR)	1S2...STAIR 2	1		1	1	STAIR 3		
/			10	00	0206		1SH1				109											SHAFT 1	Has no sign.
/			10	00	0206		1SH2				78											SHAFT 2	Has no sign.
/			10	00	0206		1SH3				104											SHAFT 3	Has no sign.
/			10	00	0206		1SH4				83											SHAFT 4	Has no sign.
/			10	00	0206		1SH5				126											SHAFT 5	Has no sign.
/			10	00	0206		1T1				197	1T1-A		4	4 (MEN)	MEN	1		1	1	MEN	Restroom sign on door.	
/			10	00	0206		1T1					1T1-A		6A	6 (MEN)	MEN	1		1	1	MEN	Restroom sign on wall.	
/			10	00	0206		1T1					1T1-A			15A	1T1	1		1	1	MEN	Restroom sign on wall.	
/			10	00	0206		1T2				196	1T2-A		4	4 (WOMEN)	WOMEN	1		1	1	WOMEN	Restroom sign on door.	

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Science & Engineering Building 2 (0206)-Interior Signage Schedule

October 17, 2013

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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 Architectural Drawing	Signage Type	Signage Text	# Of Signage	Backer	# Of Signage	# Of Signage (sort)	Room Description	UCM Note
/		10	00	0206		1T2					1T2-A		6A	6 (WOMEN)	WOMEN	1		1	1	WOMEN	Restroom sign on wall.
/		10	00	0206		1T2					1T2-A			15A	1T2	1		1	1	WOMEN	Restroom sign on wall.
/		10	00	0206		1U1			109		1U1-A			15 (EXTERIOR)	1U1	1		1	1	UTILITY POC	
/		10	00	0206		1U2			218		1U2-A			15	1U2	1		1	1	IDF	
											ADD			40 (EXTERIOR)	NO SMOKING	10		10	10		
														5 (left)		4		4	4		
														5 (right)		4		4	4		
														9A		5		5	5		
														22D		5		5	5		
Second Floor:																					
/		10	00	0206		205			117		205-A			2 (w/BACKER)	205	1	1	1	1	OFFICE	
/		10	00	0206		206			301		206-A			21	206	1		1	1	CAIS (CSE LAB)	
/		10	00	0206		207			138		207-A			2 (w/BACKER)	207	1	1	1	1	OFFICE	
/		10	00	0206		208			138		208-A			2 (w/BACKER)	208	1	1	1	1	OFFICE	
/		10	00	0206		209			134		209-A			2 (w/BACKER)	209	1	1	1	1	OFFICE	
/		10	00	0206		210			134		210-A			2 (w/BACKER)	210	1	1	1	1	OFFICE	
/		10	00	0206		211			134		211-A			2 (w/BACKER)	211	1	1	1	1	OFFICE	
/		10	00	0206		212			134		212-A			2 (w/BACKER)	212	1	1	1	1	OFFICE	
/		10	00	0206		213			559		2C3-A			21	213	1		1	1	DEPARTMENT-HALLWAY	
/		10	00	0206		213					2C3-A			8B	EXIT ROUTE	1		1	1	DEPARTMENT-HALLWAY	
/		10	00	0206		213A			254		213A-A			2	213A	1		1	1	CSE BREAKOUT	
/		10	00	0206		213B			419		213B-A			2	213B	1		1	1	RESEARH GROUP 4	
/		10	00	0206		213C			441		213C-A			2	213C	1		1	1	RESEARH GROUP 1	
/		10	00	0206		213D			500		213D-A			2	213D	1		1	1	RESEARH GROUP 2	
/		10	00	0206		213E			507		213E-A			2	213E	1		1	1	RESEARH GROUP 3	
/		10	00	0206		213F			419?		213F-A			2	213F	1		1	1	RESEARH GROUP 5	
/		10	00	0206		214			134		214-A			2 (w/BACKER)	214	1	1	1	1	OFFICE	
/		10	00	0206		215			134		215-A			2 (w/BACKER)	215	1	1	1	1	OFFICE	
/		10	00	0206		216			134		216-A			2 (w/BACKER)	216	1	1	1	1	OFFICE	
/		10	00	0206		217			134		217-A			2 (w/BACKER)	217	1	1	1	1	OFFICE	
/		10	00	0206		218			97		218-A			2	218	1		1	1	CSE STOR	
/		10	00	0206		219			114		219-A			2	219	1		1	1	CSE SOLDERING	
/		10	00	0206		220			247		220-A			2 (w/BACKER)	220	1	1	1	1	SCHOLARLY ACTIVITY	
/		10	00	0206		220					220-A		7	7	ASSISTIVE LISTENING SYSTEM AVAILABLE	1		1	1	SCHOLARLY ACTIVITY	
/		10	00	0206		220					220-B									LEVEL 2 EAST BALCONY	Has no sign.
/		10	00	0206		??					2C3-B			2 (w/BACKER)	?? (to be determined)	1	1	1	1	LEVEL 2 EAST BALCONY	
/		10	00	0206		221			134		221-A			2 (w/BACKER)	221	1	1	1	1	OFFICE	
/		10	00	0206		222			134		222-A			2 (w/BACKER)	222	1	1	1	1	OFFICE	
/		10	00	0206		223			171		223-A			2 (w/BACKER)	223	1	1	1	1	OFFICE	
/		10	00	0206		224			649		2C5-A			1	224...CONFERENCE ROOM	1		1	1	CONFERENCE	

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Science & Engineering Building 2 (0206)-Interior Signage Schedule

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/			10	00	0206		224					2C5-B			1	224...CONFERENCE ROOM	1		1	1	CONFERENCE	
/			10	00	0206		224							7	7	ASSISTIVE LISTENING SYSTEM AVAILABLE	1		1	1	CONFERENCE	
/			10	00	0206		230			714		2C9-A		8B	8B	EXIT ROUTE	1		1	1	HALLWAY	
/			10	00	0206		230					2C9-A		9A	9A		1		1	1	HALLWAY	Final location to be determined.
/			10	00	0206		230					2C9-A		21	230		1		1	1	HALLWAY	
/			10	00	0206		230A			647		2C8-A		8B	8B	EXIT ROUTE	1		1	1	COMPUTATION	
/			10	00	0206		230A					2C8-A		9A	9A		1		1	1	COMPUTATION	
/			10	00	0206		230A					2C8-A		21	230A		1		1	1	COMPUTATION	
/			10	00	0206		230B			190		230C-A, 230B-A, 230B-B, 230F-B									ALCOVE	Has no sign.
/			10	00	0206		230C			226		230C-A			2	230C	1		1	1	MECH ENG LAB (STRUCT SYS)	
/			10	00	0206		230C					230C-A			22C		1		1	1	MECH ENG LAB (STRUCT SYS)	Sign holder for EH&S Lab sign use.
/			10	00	0206		230D			330		230B-B			2	230D	1		1	1	MECH ENG LAB (RADIATIVE TRANS)	
/			10	00	0206		230D					230B-B			22C		1		1	1	MECH ENG LAB (RADIATIVE TRANS)	Sign holder for EH&S Lab sign use.
/			10	00	0206		230E			329		230B-A			2	230E	1		1	1	MECH ENG LAB (IC. COMBUSTION)	
/			10	00	0206		230E					230B-A			22C		1		1	1	MECH ENG LAB (IC. COMBUSTION)	Sign holder for EH&S Lab sign use.
/			10	00	0206		230E					230H-A			15	230E	1		1	1	MECH ENG LAB (IC. COMBUSTION)	
/			10	00	0206		230F			467		230F-A			2	230F	1		1	1	MECH ENG LAB (RHEOLOGY/	
/			10	00	0206		230F					230F-A			22C		1		1	1	MECH ENG LAB (RHEOLOGY/	Sign holder for EH&S Lab sign use.
/			10	00	0206		230F					230F-B			2	230F	1		1	1	MECH ENG LAB (RHEOLOGY/	
/			10	00	0206		230F					230F-B			22C		1		1	1	MECH ENG LAB (RHEOLOGY/	Sign holder for EH&S Lab sign use.
/			10	00	0206		230G			188		230F-A, 230G-A, 230G-B, 230K-B									ALCOVE	Has no sign.
/			10	00	0206		230H			326		230G-B			2	230H	1		1	1	MECH ENG LAB (FUEL CELL)	
/			10	00	0206		230H					230G-B			22C		1		1	1	MECH ENG LAB (FUEL CELL)	Sign holder for EH&S Lab sign use.
/			10	00	0206		230H					230H-A			15	230H	1		1	1	MECH ENG LAB (FUEL CELL)	
/			10	00	0206		230J			327		230G-A			2	230J	1		1	1	MECH ENG LAB (THERMO VAC. CNTRL)	
/			10	00	0206		230J					230G-A			22C		1		1	1	MECH ENG LAB (THERMO VAC. CNTRL)	Sign holder for EH&S Lab sign use.
/			10	00	0206		230J					230M-A			15	230J	1		1	1	MECH ENG LAB (THERMO VAC. CNTRL)	
/			10	00	0206		230K			463		230K-A			2	230K	1		1	1	MECH ENG LAB (RHEOLOGY/ MICROFLUID)	
/			10	00	0206		230K					230K-A			22C		1		1	1	MECH ENG LAB (RHEOLOGY/ MICROFLUID)	Sign holder for EH&S Lab sign use.
/			10	00	0206		230K					230K-B			2	230K	1		1	1	MECH ENG LAB (MICRO AERIAL VEHICLE LG)	
/			10	00	0206		230K					230K-B			22C		1		1	1	MECH ENG LAB (MICRO AERIAL VEHICLE LG)	Sign holder for EH&S Lab sign use.
/			10	00	0206		230L			190		230K-A, 230L-A, 230L-B, 230P-A									ALCOVE	Has no sign.
/			10	00	0206		230M			332		230L-B			2	230M	1		1	1	MECH ENG LAB (HIGH SPEED)	
/			10	00	0206		230M					230L-B			22C		1		1	1	MECH ENG LAB (HIGH SPEED)	Sign holder for EH&S Lab sign use.
/			10	00	0206		230M					230M-A			15	230M	1		1	1	MECH ENG LAB (HIGH SPEED)	

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/				10	00	0206			312		230L-A			2	230N	1		1	1	MECH ENG LAB (INSTR. DEV)	
/				10	00	0206					230L-A			22C		1		1	1	MECH ENG LAB (INSTR. DEV)	Sign holder for EH&S Lab sign use.
/				10	00	0206			211		230P-A			2	230P	1		1	1	MECH ENG LAB (PRECISION)	
/				10	00	0206					230P-A			22C		1		1	1	MECH ENG LAB (PRECISION)	Sign holder for EH&S Lab sign use.
/				10	00	0206			420					2	230Q	1		1	1	COMPUTATION	
/				10	00	0206			145		230R-A			2	230R	1		1	1	MECH ENG LAB (AERO OPTICS)	
/				10	00	0206					230R-A			22C		1		1	1	MECH ENG LAB (AERO OPTICS)	Sign holder for EH&S Lab sign use.
/				10	00	0206			281		230S-A			2	230S	1		1	1	MECH ENG LAB (TURBULENCE DIAG.)	
/				10	00	0206					230S-A			22C		1		1	1	MECH ENG LAB (TURBULENCE DIAG.)	Sign holder for EH&S Lab sign use.
/				10	00	0206			283		230T-A			2	230T	1		1	1	MECH ENG LAB (RAPID PROTO)	
/				10	00	0206					230T-A			22C		1		1	1	MECH ENG LAB (RAPID PROTO)	Sign holder for EH&S Lab sign use.
/				10	00	0206			280		230U-A			2	230U	1		1	1	MECH ENG LAB (ROBOTIC DESIGN)	
/				10	00	0206					230U-A			22C		1		1	1	MECH ENG LAB (ROBOTIC DESIGN)	Sign holder for EH&S Lab sign use.
/				10	00	0206			278		230V-A			2	230V	1		1	1	MECH END LAB (ADV. CNTRL)	
/				10	00	0206					230V-A			22C		1		1	1	MECH END LAB (ADV. CNTRL)	Sign holder for EH&S Lab sign use.
/				10	00	0206			137		265-A			2	265	1		1	1	OFFICE SUPPORT	
/				10	00	0206			133		270-A			2 (w/BACKER)	270	1	1	1	1	OFFICE	
/				10	00	0206			133		271-A			2 (w/BACKER)	271	1	1	1	1	OFFICE	
/				10	00	0206			133		272-A			2 (w/BACKER)	272	1	1	1	1	OFFICE	
/				10	00	0206			134		273-A			2 (w/BACKER)	273	1	1	1	1	OFFICE	
/				10	00	0206			134		274-A			2 (w/BACKER)	274	1	1	1	1	OFFICE	
/				10	00	0206			133		275-A			2 (w/BACKER)	275	1	1	1	1	OFFICE	
/				10	00	0206			133		276-A			2 (w/BACKER)	276	1	1	1	1	OFFICE	
/				10	00	0206			134		277-A			2 (w/BACKER)	277	1	1	1	1	OFFICE	
/				10	00	0206			134		278-A			2 (w/BACKER)	278	1	1	1	1	OFFICE	
/				10	00	0206			133		279-A			2 (w/BACKER)	279	1	1	1	1	OFFICE	
/				10	00	0206			133		280-A			2 (w/BACKER)	280	1	1	1	1	OFFICE	
/				10	00	0206			134		281-A			2 (w/BACKER)	281	1	1	1	1	OFFICE	
/				10	00	0206			134		282-A			2 (w/BACKER)	282	1	1	1	1	OFFICE	
/				10	00	0206			133		283-A			2 (w/BACKER)	283	1	1	1	1	OFFICE	
/				10	00	0206			133		284-A			2 (w/BACKER)	284	1	1	1	1	OFFICE	
/				10	00	0206			134		285-A			2 (w/BACKER)	285	1	1	1	1	OFFICE	
/				10	00	0206			134		286-A			2 (w/BACKER)	286	1	1	1	1	OFFICE	
/				10	00	0206			244		290-A			2 (w/BACKER)	290	1	1	1	1	ME BREAKOUT	
/				10	00	0206							7	7	ASSISTIVE LISTENING SYSTEM AVAILABLE	1		1	1	ME BREAKOUT	
/				10	00	0206					290-B									ME BREAKOUT	Has no sign.
/				10	00	0206			??	??	2C10-A			2 (w/BACKER)	?? (to be determined)	1	1	1	1	LEVEL 2 WEST BALCONY	
/				10	00	0206			134		291-A			2 (w/BACKER)	291	1	1	1	1	OFFICE	
/				10	00	0206			134		292-A			2 (w/BACKER)	292	1	1	1	1	OFFICE	
/				10	00	0206			158		293-A			2 (w/BACKER)	293	1	1	1	1	OFFICE	
/				10	00	0206				224										HALLWAY	Has no sign.
/				10	00	0206				368										HALLWAY	Has no sign.
/				10	00	0206			651		2C3-B		9A	9A		1		1	1	HALLWAY	In front of Room 211? Final location to be determined.
/				10	00	0206			400											HALLWAY	Has no sign.

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Science & Engineering Building 2 (0206)-Interior Signage Schedule

October 17, 2013

Project Schedule: All Interior Room Identification Signs must be fabricated and ready for installation by Friday January 24, 2014. 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 February 21, 2014. 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 unless noted differently.

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 Architectural Drawing	Signage Type	Signage Text	# Of Signage	Backer	# Of Signage	# Of Signage (sort)	Room Description	UCM Note
/				10	00	0206				244	2C5-A, 2C5-B									HALLWAY	Has no sign.
/				10	00	0206				570										HALLWAY	Has no sign.
/				10	00	0206				??										BRIDGE	Has no sign.
/				10	00	0206				182	2C8-A, 2C8-B		9A	9A		1		1	1	HALLWAY	In front of 2C7-Bridge? Final location to be determined.
/				10	00	0206				1030	2C10-A, 2C9-B			9A		1		1	1	HALLWAY	In front of 286? Final location to be determined.
/				10	00	0206				466	2C10-A									HALLWAY	Has no sign.
/				10	00	0206				89	2E1		10	10	IN CASE OF FIRE, USE STAIRWAY	1		1	1	ELEVATOR-1	
/				10	00	0206					2E1		9A	9A		1		1	1		Final location to be determined.
/				10	00	0206					2E1			1	2E1...ELEVATOR 1	1		1	1		
/				10	00	0206				89	2E2		10	10	IN CASE OF FIRE, USE STAIRWAY	1		1	1	ELEVATOR-2	
/				10	00	0206					2E2		9A	9A		1		1	1		Final location to be determined.
/				10	00	0206					2E2			1	2E2...ELEVATOR 2	1		1	1		
/				10	00	0206				38	2C9-B			1	2J1...CUSTODIAN	1		1	1	JC	
/				10	00	0206				84	2C2-A			1	2M1...ELECTRICAL ROOM	1		1	1	ELEC	
/				10	00	0206				181	2C8-B			1	2M2...ELECTRICAL ROOM	1		1	1	ELEC	
/				10	00	0206				396				35	STAIR 1...EXIT STAIR DOWN	2		2	2	STAIR 1	
/				10	00	0206							9A	9A		2		2	2	STAIR 1	Final location to be determined.
/				10	00	0206								13B	STAIR 1...NO ROOF ACCESS...2...B THROUGH 3??	1		1	1	STAIR 1	
/				10	00	0206			225		2S2-A		35A	35	STAIR 2...EXIT STAIR DOWN	1		1	1	STAIR 2	
/				10	00	0206					2S2-A		9A	9A		1		1	1	STAIR 2	Final location to be determined.
/				10	00	0206					2S2-A		31	31	AREA OF REFUGE IN STAIRWELL	1		1	1	STAIR 2	
/				10	00	0206					2S2-A		13B	13B	STAIR 2... ROOF ACCESS...2...B THROUGH ROOF??	1		1	1	STAIR 2	
/				10	00	0206					2S2-A		9A	9A		1		1	1	STAIR 2	Final location to be determined.
/				10	00	0206					2S2-A		32	32	AREA OF REFUGE...ALTERNATE EXIT IS LOCATED IN STAIRWELL 3...(use the copy in sign type)	1		1	1	STAIR 2	
/				10	00	0206				304	2S3-A		35A	35A	STAIR 3...EXIT STAIR DOWN	1		1	1	STAIR 3	
/				10	00	0206				304	2S3-A		9A	9A		1		1	1	STAIR 3	Final location to be determined.
/				10	00	0206				304	2S3-A		31	31	AREA OF REFUGE IN STAIRWELL	1		1	1	STAIR 3	
/				10	00	0206				304	2S3-A		13B	13B	STAIR 3... NO ROOF ACCESS...2...B THROUGH 3??	1		1	1	STAIR 3	
/				10	00	0206				304	2S3-A		9A	9A		1		1	1	STAIR 3	Final location to be determined.
/				10	00	0206				304	2S3-A		32	32	AREA OF REFUGE...ALTERNATE EXIT IS LOCATED IN STAIRWELL 2...(use the copy in sign type)	1		1	1	STAIR 3	
/				10	00	0206				90										SHAFT 1	Has no sign.
/				10	00	0206				76										SHAFT 2	Has no sign.
/				10	00	0206				100										SHAFT 3	Has no sign.
/				10	00	0206				82										SHAFT 4	Has no sign.
/				10	00	0206				190										SHAFT 5	Has no sign.

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Science & Engineering Building 2 (0206)-Interior Signage Schedule

October 17, 2013

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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 Architectural Drawing	Signage Type	Signage Text	# Of Signage	Backer	# Of Signage	# Of Signage (sort)	Room Description	UCM Note
/				10	00	0206				197	2T1-A		4	4 (MEN)	MEN	1		1	1	MEN	
/				10	00	0206					2T1-A		6A	6 (MEN)	MEN	1		1	1	MEN	
/				10	00	0206					2T1-A			15A	2T1	1		1	1	MEN	
/				10	00	0206				195	2T2-A		4	4 (WOMEN)	WOMEN	1		1	1	WOMEN	
/				10	00	0206					2T2-A		6A	6 (WOMEN)	WOMEN	1		1	1	WOMEN	
/				10	00	0206					2T2-A			15A	2T2	1		1	1	WOMEN	
/				10	00	0206				173	2U1-A			15	2U1	1		1	1	TELECOM (IDF)	
											ADD										
														5 (left)		4		4	4		
														5 (right)		4		4	4		
														9A		5		5	5		
														22D		5		5	5		
Third Floor:																					
/				10	00	0206			435		301-A			2	301	1		1	1	CONFERENCE	Waiting for answer from users
/				10	00	0206					301		7	7	ASSISTIVE LISTENING SYSTEM AVAILABLE	1		1	1	CONFERENCE	Waiting for answer from users
/				10	00	0206			519		302-A			1	302...CONFERENCE ROOM	1	1	1	1	VIDEO CONFERENCE	
/				10	00	0206					302		7	7	ASSISTIVE LISTENING SYSTEM AVAILABLE	1		1	1	VIDEO CONFERENCE	
/				10	00	0206			507		305			2	305	1		1	1	OFFICE	For inside partitions, see add sign 2A in the bottom of the list.
/				10	00	0206			138		305A-A			2 (w/BACKER)	305A	1	1	1	1	OFFICE	
/				10	00	0206			283		310-A			2	305, 310 & 315 SERIES? (to be determined)	1		1	1	HALLWAY	Need to check with users.
/				10	00	0206					310-A			8B	EXIT ROUTE	1		1	1	HALLWAY	Need to check with users.
/				10	00	0206			138		310A-A			2 (w/BACKER)	310A	1	1	1	1	OFFICE	
/				10	00	0206			134		310B-A			2 (w/BACKER)	310B	1	1	1	1	OFFICE	
/				10	00	0206			134		310C-A			2 (w/BACKER)	310C	1	1	1	1	OFFICE	
/				10	00	0206			125		310D-A			2 (w/BACKER)	310D	1	1	1	1	OFFICE	
/				10	00	0206			112		310E-A			2 (w/BACKER)	310E	1	1	1	1	OFFICE	
/				10	00	0206			663		311-A			21	311	1		1	1	RESEARCH GROUP 6	
/				10	00	0206			77		312-A			1	312...LACTATION ROOM	1	1	1	1	LACTATION	
/				10	00	0206			679		313-A			21	313	1		1	1	RESEARCH GROUP 7	
/				10	00	0206			642		314-A			21	314	1		1	1	RESEARCH GROUP 8	
/				10	00	0206			386		315-A			16	?? (name to be determined)	1		1	1	ENGINEERING??	Waiting for answer from users
/				10	00	0206					315-A			8B	EXIT ROUTE	1		1	1	ENGINEERING??	
/				10	00	0206					315-B			2 (w/BACKER)	?? (to be determined)	1	1	1	1	LEVEL 3 EAST BALCONY	
/				10	00	0206			129		315A			2	315A	1		1	1	RECEPTION	
/				10	00	0206			256		315B-A			2	315B	1		1	1	OFFICE SUPPORT	
/				10	00	0206			133		315C-A			2	315C	1		1	1	OFFICE SUPPORT	
/				10	00	0206			44		315C-A				OFFICE SUPPORT					OFFICE SUPPORT	Has no sign.
/				10	00	0206			134		315E-A			2 (w/BACKER)	315E	1	1	1	1	OFFICE	
/				10	00	0206			134		315F-A			2 (w/BACKER)	315F	1	1	1	1	OFFICE	
/				10	00	0206			134		315F-A			2 (w/BACKER)	315G	1	1	1	1	OFFICE	
/				10	00	0206			272??		315H-A			2 (w/BACKER)	315H	1	1	1	1	"OFFICE", becomes "SCHOLARLY ACTIVITY"	After the Bulletin ??, this room becomes "Scholarly Activity"
/				10	00	0206					315H			7	ASSISTIVE LISTENING SYSTEM AVAILABLE	1		1	1		Was in Room 320, Sign place holder for now.

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Science & Engineering Building 2 (0206)-Interior Signage Schedule

October 17, 2013

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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 Architectural Drawing	Signage Type	Signage Text	# Of Signage	Backer	# Of Signage	# Of Signage (sort)	Room Description	UCM Note
/				10 00 0206		320			248??		320-A			2 (w/BACKER)	320	1	1	1	1	"SCHOLARLY ACTIVITY" becomes "OFFICE"	After the Bulletin ??, this room becomes "Office"
/				10 00 0206		??			??		320-B									LEVEL 3 EAST BALCONY	Has no sign.
/				10 00 0206		321			134		321-A			2 (w/BACKER)	321	1	1	1	1	OFFICE	
/				10 00 0206		322			134		322-A			2 (w/BACKER)	322	1	1	1	1	OFFICE	
/				10 00 0206		323			171		323-A			2 (w/BACKER)	323	1	1	1	1	OFFICE	
/				10 00 0206		324			472		3C5-A			1	324...CONFERENCE ROOM	1	1	1	1	CONFERENCE	
/				10 00 0206		325			145		325-A			2	325	1		1	1	CONFERENCE SUPPORT	
/				10 00 0206		330			1521		3C7-A		8B	8B	EXIT ROUTE	1		1	1	ORGANIC CHEMISTRY	
/				10 00 0206		330					3C7-A		9A	9A		1		1	1	ORGANIC CHEMISTRY	Final location to be determined.
/				10 00 0206		330					3C7-A			21	330	1		1	1	ORGANIC CHEMISTRY	
/				10 00 0206		330					3C7-A			22C		1		1	1	ORGANIC CHEMISTRY	Sign holder for EH&S Lab sign use.
/				10 00 0206		330					335-A			15	330	1		1	1	ORGANIC CHEMISTRY	Sign holder for EH&S Lab sign use.
/				10 00 0206		335		271			335-A			15	335	1		1	1	ORGANIC CHEM GRAD STUDENTS	
/				10 00 0206		335					3C9-C			21	335	1		1	1	ORGANIC CHEMGRAD STUDENTS	
/				10 00 0206		340			2891		340-A, 340E									BIOENGINEERING	See sign in 340A and 340M entrances.
/				10 00 0206		340A			175		340-E									EQUIPMENT	See sign in 340A
/				10 00 0206		340A					3C9-B			21	340	1		1	1	EQUIPMENT	This sign is for the overall 340, not just the hallway.
/				10 00 0206		340A					3C9-B			8B	EXIT ROUTE	1		1	1	EQUIPMENT	
/				10 00 0206		340A					3C9-B			9A		1		1	1	EQUIPMENT	Final location to be determined.
/				10 00 0206		340A					3C9-B			22C		1		1	1	EQUIPMENT	Sign holder for EH&S Lab sign use.
/				10 00 0206		340B		101			340A-B			2	340B	1		1	1	INSTRUMENT	
/				10 00 0206		340C			137		340A-A			2	340C	1		1	1	CELL CULT	
/				10 00 0206		340D			101		340-D			2	340D	1		1	1	INSTRUMENT	
/				10 00 0206		340E			70		340-F			2	340E	1		1	1	FUME HOOD	
/				10 00 0206		340F			207		340-G			2	340F	1		1	1	CELL CULT	
/				10 00 0206		340G			95		340-H			2	340G	1		1	1	CELL CULT	
/				10 00 0206		340H			205		340-J			2	340H	1		1	1	CELL CULT	
/				10 00 0206		340J			205		340-K			2	340J	1		1	1	CELL CULT	
/				10 00 0206		340K			66		340-L			2	340K	1		1	1	FUME HOOD	
/				10 00 0206		340L			132		340M-C			2	340L	1		1	1	CELL CULT	
/				10 00 0206		340M			187		340-A									EQUIPMENT	See sign in 340M
/				10 00 0206		340M					3C9-A			21	340	1		1	1	EQUIPMENT	This sign is for the overall 340, not just the hallway.
/				10 00 0206		340M					3C9-A			8B	EXIT ROUTE	1		1	1	EQUIPMENT	
/				10 00 0206		340M					3C9-A			9A		1		1	1	EQUIPMENT	Final location to be determined.
/				10 00 0206		340M					3C9-A			22C		1		1	1	EQUIPMENT	Sign holder for EH&S Lab sign use.
/				10 00 0206		340N		102			340M-A			2	340N	1		1	1	INSTRUMENT	
/				10 00 0206		340P			103		340M-B			2	340P	1		1	1	INSTRUMENT	
/				10 00 0206		340Q			131		340-B			2	340Q	1		1	1	INSTRUMENT	
/				10 00 0206		340R			135		340-C			2	340R	1		1	1	INSTRUMENT	
/				10 00 0206		355			104		355-A			1	355...AUTOCLAVE	1	1	1	1	AUTOCLAVE	
/				10 00 0206		365			127		365-A			2	365	1		1	1	OFFICE SUPPORT	
/				10 00 0206		370			133		370-A			2 (w/BACKER)	370	1	1	1	1	OFFICE	
/				10 00 0206		371			134		371-A			2 (w/BACKER)	371	1	1	1	1	OFFICE	
/				10 00 0206		372			134		372-A			2 (w/BACKER)	372	1	1	1	1	OFFICE	
/				10 00 0206		373			134		373-A			2 (w/BACKER)	373	1	1	1	1	OFFICE	
/				10 00 0206		374			134		374-A			2 (w/BACKER)	374	1	1	1	1	OFFICE	
/				10 00 0206		375			134		375-A			2 (w/BACKER)	375	1	1	1	1	OFFICE	

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/				10	00	0206			134		376-A			2 (w/BACKER)	376	1	1	1	1	OFFICE	
/				10	00	0206			134		377-A			2 (w/BACKER)	377	1	1	1	1	OFFICE	
/				10	00	0206			134		378-A			2 (w/BACKER)	378	1	1	1	1	OFFICE	
/				10	00	0206			134		379-A			2 (w/BACKER)	379	1	1	1	1	OFFICE	
/				10	00	0206			134		380-A			2 (w/BACKER)	380	1	1	1	1	OFFICE	
/				10	00	0206			134		381-A			2 (w/BACKER)	381	1	1	1	1	OFFICE	
/				10	00	0206			134		382-A			2 (w/BACKER)	382	1	1	1	1	OFFICE	
/				10	00	0206			134		383-A			2 (w/BACKER)	383	1	1	1	1	OFFICE	
/				10	00	0206			134		384-A			2 (w/BACKER)	384	1	1	1	1	OFFICE	
/				10	00	0206			134		385-A			2 (w/BACKER)	385	1	1	1	1	OFFICE	
/				10	00	0206			134		386-A			2 (w/BACKER)	386	1	1	1	1	OFFICE	
/				10	00	0206			244		390-A			2 (w/BACKER)	390	1	1	1	1	BIOENGINEERING/ ORG CHEM BREAK OUT	
/				10	00	0206					390-B									BIOENGINEERING/ ORG CHEM BREAK OUT	Has no sign.
/				10	00	0206							7	7	ASSISTIVE LISTENING SYSTEM AVAILABLE	1		1	1	BIOENGINEERING/ ORG CHEM BREAK OUT	Has no sign.
/				10	00	0206			??	??	3C10-A			2 (w/BACKER)	?? (to be determined)	1	1	1	1	LEVEL 3 WEST BALCONY	
/				10	00	0206			136		391-A			2 (w/BACKER)	391	1	1	1	1	OFFICE	
/				10	00	0206			136		392-A			2 (w/BACKER)	392	1	1	1	1	OFFICE	
/				10	00	0206			158		393-A			2 (w/BACKER)	393	1	1	1	1	OFFICE	
/				10	00	0206				232										HALLWAY	Has no sign.
/				10	00	0206				292	3C2-A									HALLWAY	Has no sign.
/				10	00	0206				539			9A	9A		1		1	1	HALLWAY	In front 313? Final location to be determined.
/				10	00	0206				299								0		HALLWAY	Has no sign.
/				10	00	0206				163	3C5-A							0		HALLWAY	Has no sign.
/				10	00	0206				573								0		HALLWAY	Has no sign.
/				10	00	0206				??								0		BRIDGE	Has no sign.
/				10	00	0206				235			9A	9A		1		1	1	HALLWAY	In front of 3C7-Bridge? Final location to be determined.
/				10	00	0206				1003	3C9-A, 3C9-B, 3C9-C, 3C9-D		9A	9A		1		1	1	HALLWAY	In front of 386? Final location to be determined.
/				10	00	0206				469	3C10-A									HALLWAY	Has no sign.
/				10	00	0206				89	3E1		10	10	IN CASE OF FIRE, USE STAIRWAY	1		1	1	ELEVATOR-1	
/				10	00	0206					3E1		9A	9A		1		1	1	ELEVATOR-1	Final location to be determined.
/				10	00	0206					3E1			1	3E1...ELEVATOR 1	1		1	1	ELEVATOR-1	
/				10	00	0206				89	3E2		10	10	IN CASE OF FIRE, USE STAIRWAY	1		1	1	ELEVATOR-2	
/				10	00	0206					3E2		9A	9A		1		1	1		Final location to be determined.
/				10	00	0206					3E2			1	3E2...ELEVATOR 2	1		1	1		
/				10	00	0206			40		3C9-D			1	3J1...CUSTODIAN	1		1	1	JC	
/				10	00	0206			83		3C2-A			1	3M1...ELECTRICAL ROOM	1		1	1	ELEC	
/				10	00	0206			181		3C7-B			1	3M2...ELECTRICAL ROOM	1		1	1	ELEC	
/				10	00	0206				396				35	STAIR 1...EXIT STAIR DOWN	2		2	2	STAIR 1	
/				10	00	0206							9A	9A		2		2	2	STAIR 1	Final location to be determined.

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Science & Engineering Building 2 (0206)-Interior Signage Schedule

October 17, 2013

Project Schedule: All Interior Room Identification Signs must be fabricated and ready for installation by Friday January 24, 2014. 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 February 21, 2014. The installation date may be varied and needs to be coordinated.

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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 unless noted differently.

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 Architectural Drawing	Signage Type	Signage Text	# Of Signage	Backer	# Of Signage	# Of Signage (sort)	Room Description	UCM Note
/				10 00 0206		3S1								13B	STAIR 1...NO ROOF ACCESS...3...B THROUGH 3??	1		1	1	STAIR 1	
/				10 00 0206		3S2			225		3S2-A		35A	35	STAIR 2...EXIT STAIR DOWN	1		1	1	STAIR 2	
/				10 00 0206		3S2					3S2-A		9A	9A		1		1	1	STAIR 2	Final location to be determined.
/				10 00 0206		3S2					3S2-A		31	31	AREA OF REFUGE IN STAIRWELL	1		1	1	STAIR 2	
/				10 00 0206		3S2					3S2-A		13B	13B	STAIR 2... ROOF ACCESS...2...B THROUGH ROOF??	1		1	1	STAIR 2	
/				10 00 0206		3S2					3S2-A		9A	9A		1		1	1	STAIR 2	Final location to be determined.
/				10 00 0206		3S2					3S2-A		32	32	AREA OF REFUGE...ALTERNATE EXIT IS LOCATED IN STAIRWELL 3...(use the copy in sign type)	1		1	1	STAIR 2	
/				10 00 0206		3S3			304		3S3-A		35A	35A	STAIR 3...EXIT STAIR DOWN	1		1	1	STAIR 3	
/				10 00 0206		3S3					3S3-A		9A	9A		1		1	1	STAIR 3	Final location to be determined.
/				10 00 0206		3S3					3S3-A		31	31	AREA OF REFUGE IN STAIRWELL	1		1	1	STAIR 3	
/				10 00 0206		3S3					3S3-A		13B	13B	STAIR 3... NO ROOF ACCESS...3...B THROUGH 3??	1		1	1	STAIR 3	
/				10 00 0206		3S3					3S3-A		9A	9A		1		1	1	STAIR 3	Final location to be determined.
/				10 00 0206		3S3					3S3-A		32	32	AREA OF REFUGE...ALTERNATE EXIT IS LOCATED IN STAIRWELL 2...(use the copy in sign type)	1		1	1	STAIR 3	
/				10 00 0206		3SH1			90											SHAFT 1	Has no sign.
/				10 00 0206		3SH2			76											SHAFT 2	Has no sign.
/				10 00 0206		3SH3			100											SHAFT 3	Has no sign.
/				10 00 0206		3SH4			83											SHAFT 4	Has no sign.
/				10 00 0206		3SH5			191											SHAFT 5	Has no sign.
/				10 00 0206		3T1			197		3T1-A		4	4 (MEN)	MEN	1		1	1	MEN	
/				10 00 0206		3T1					3T1-A		6A	6 (MEN)	MEN	1		1	1	MEN	
/				10 00 0206		3T1					3T1-A			15A	3T1	1		1	1	MEN	
/				10 00 0206		3T2			196		3T2-A		4	4 (WOMEN)	WOMEN	1		1	1	WOMEN	
/				10 00 0206		3T2					3T2-A		6A	6 (WOMEN)	WOMEN	1		1	1	WOMEN	
/				10 00 0206		3T2					3T2-A			15A	3T2	1		1	1	WOMEN	
/				10 00 0206		3U1			173		3U1-A			15	3U1	1		1	1	TELECOM (IDF)	
											ADD										
														5 (left)		4		4	4		
														5 (right)		4		4	4		
														9A		5		5	5		
														22D		5		5	5		
Roof:																					
/				10 00 0206		400			7728					15 (Exterior)	400	1		1	1	RESEARCH ROOFTOP	
/				10 00 0206		410			??		410-A			15 (Exterior)	410	1		1	1	MECHANICAL	
/				10 00 0206		410A			98??		410-C			1 (Exterior)	410A...ELECTRICAL ROOM	1		1	1	ELEC	

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Science & Engineering Building 2 (0206)-Interior Signage Schedule-Sort by Sign Types

October 17, 2013

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Illuminated Exterior Building Monument Sign must be fabricated and ready for installation by Friday February 21, 2014. The installation date may be varied and needs to be coordinated.

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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 Architectural Drawing	Signage Type	Signage Text	# Of Signage	Backer	# Of Signage	# Of Signage (sort)	Total # Of Signage by Sign Types	Room Description	UCM Note
/				10 00		0206		0E1			0E1			1	0E1...ELEVATOR 1	1		1	1		ELEVATOR-1	
/				10 00		0206		0E2			0E2			1	0E2...ELEVATOR 2	1		1	1		ELEVATOR-2	
/				10 00		0206		0J1		92	0J1			1	0J1...CUSTODIAN	1		1	1		JC SUPPLY	
/				10 00		0206		0M3		1982	0C2-B			1	0M3...ELECTRICAL ROOM	1		1	1		ELECTRICAL	Does this sign have to be red?
/				10 00		0206		1E1			1E1			1	1E1...ELEVATOR 1	1		1	1		ELEVATOR-1	
/				10 00		0206		1E2			1E2			1	1E2...ELEVATOR 2	1		1	1		ELEVATOR-2	
/				10 00		0206		1J1		60	1J1-A			1	1J1...CUSTODIAN	1		1	1		JC	
/				10 00		0206		1M2		184	1C8-B			1	1M2...ELECTRICAL ROOM	1		1	1		ELEC	
/				10 00		0206		1S1		387				1	1S1...STAIR 1	2		2	2		STAIR 1	
/				10 00		0206		1S2			1S2-B			1	1S2...STAIR 2	1		1	1		STAIR 2	
/				10 00		0206		224	649		2C5-A			1	224...CONFERENCE ROOM	1		1	1		CONFERENCE	
/				10 00		0206		224			2C5-B			1	224...CONFERENCE ROOM	1		1	1		CONFERENCE	
/				10 00		0206		2E1			2E1			1	2E1...ELEVATOR 1	1		1	1			
/				10 00		0206		2E2			2E2			1	2E2...ELEVATOR 2	1		1	1			
/				10 00		0206		2J1		38	2C9-B			1	2J1...CUSTODIAN	1		1	1		JC	
/				10 00		0206		2M1		84	2C2-A			1	2M1...ELECTRICAL ROOM	1		1	1		ELEC	
/				10 00		0206		2M2		181	2C8-B			1	2M2...ELECTRICAL ROOM	1		1	1		ELEC	
/				10 00		0206		302	519		302-A			1	302...CONFERENCE ROOM	1	1	1	1		VIDEO CONFERENCE	
/				10 00		0206		312	77		312-A			1	312...LACTATION ROOM	1	1	1	1		LACTATION	
/				10 00		0206		324	472		3C5-A			1	324...CONFERENCE ROOM	1	1	1	1		CONFERENCE	
/				10 00		0206		355	104		355-A			1	355...AUTOCLAVE	1	1	1	1		AUTOCLAVE	
/				10 00		0206		3E1			3E1			1	3E1...ELEVATOR 1	1		1	1		ELEVATOR-1	
/				10 00		0206		3E2			3E2			1	3E2...ELEVATOR 2	1		1	1			
/				10 00		0206		3J1		40	3C9-D			1	3J1...CUSTODIAN	1		1	1		JC	
/				10 00		0206		3M1		83	3C2-A			1	3M1...ELECTRICAL ROOM	1		1	1		ELEC	
																				26		
/				10 00		0206		3M2		181	3C7-B			1	3M2...ELECTRICAL ROOM	1		1	1		ELEC	
/				10 00		0206		105	247		105-A			1 (EXTERIOR)	105...STAGING	1		1	1		STAGING	
/				10 00		0206		106	233		106-A			1 (EXTERIOR)	106...TRASH & RECYCLING	1		1	1		TRASH/ RECYCLING	
/				10 00		0206		1S2			1S2-A			1 (EXTERIOR)	1S2...STAIR 2	1		1	1		STAIR 2	
/				10 00		0206		1S3			1S3-A			1 (EXTERIOR)	1S3...STAIR 2	1		1	1		STAIR 3	
/				10 00		0206		410A		98??	410-C			1 (Exterior)	410A...ELECTRICAL ROOM	1		1	1		ELEC	
/				10 00		0206		430A		61	430-A			1 (Exterior)	430A...ELECTRICAL ROOM	1		1	1		ELEC	
/				10 00		0206		4E1			400-B			1 (Exterior)	4E1...ELEVATOR 1	1		1	1		ELEV 1	
																				8		
/				10 00		0206		0U2		159	0U2-A			1A	0U2...FIRE PUMP ROOM?? (copy to be finalized later)	1		1	1		FIRE PUMP	Copy to be finalized later.
/				10 00		0206		1M1		84	1C2-B			1A	1M1...FIRE ALARM CONTROL ROOM??ELECTRICAL ROOM??	1		1	1		ELEC	Place holder only. Need confirmation from Fire Marshal.
														1A	copy to be determined	2		2	2			For Marshal additional sign use.
														1A (Exterior)	copy to be determined	2		2	2			For Marshal additional sign use.
																				4		
																				2		

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Science & Engineering Building 2 (0206)-Interior Signage Schedule-Sort by Sign Types

October 17, 2013

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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 Architectural Drawing	Signage Type	Signage Text	# Of Signage	Backer	# Of Signage	# Of Signage (sort)	Total # Of Signage by Sign Types	Room Description	UCM Note
/				10	00	0206			110		002-A			2	002	1		1	1		VENDING	
/				10	00	0206			132		030-A			2	030	1		1	1		SERVER TECHS	
/				10	00	0206			1046		040-A			2	040	1		1	1		RESEARCH SERVER	
/				10	00	0206			105		050A-A			2	050B	1		1	1		COMPUTATION (GS)	
/				10	00	0206			102		050A-B			2	050C	1		1	1		INSTRUMENT	
/				10	00	0206			105		050D-D			2	050E	1		1	1		EQUIP	
/				10	00	0206			106		050D-C			2	050F	1		1	1		INSTRUMENT	
/				10	00	0206			108		NO DOOR?			2	050H	1		1	1		CER	
/				10	00	0206			103		080C-B			2	050F	1		1	1		INSTRUMENT	
/				10	00	0206			104		080C-A			2	050G	1		1	1		INSTRUMENT	
/				10	00	0206			187		090D-A			2	090D	1		1	1		SEM	
/				10	00	0206			121		090E-A			2	090E	1		1	1		TRAINING TEM	
/				10	00	0206			153		090F-A			2	090F	1		1	1		MICROTOME	
/				10	00	0206			199		090G-A (NOT 090-A)			2	090G	1		1	1		PREP	
/				10	00	0206					140-B			2	130	1		1	1		WET CLASS LAB	
/				10	00	0206			119		135-A			2	135	1		1	1		TECH OFFICE	
/				10	00	0206			942		140-C			2	150	1		1	1		WET CLASS LAB	
/				10	00	0206					170-B			2	160	1		1	1		WET CLASS LAB	
/				10	00	0206					170-C			2	180	1		1	1		THERMOFLUID LAB (WET CLASS)	
/				10	00	0206			254		213A-A			2	213A	1		1	1		CSE BREAKOUT	
/				10	00	0206			419		213B-A			2	213B	1		1	1		RESEARH GROUP 4	
/				10	00	0206			441		213C-A			2	213C	1		1	1		RESEARH GROUP 1	
/				10	00	0206			500		213D-A			2	213D	1		1	1		RESEARH GROUP 2	
/				10	00	0206			507		213E-A			2	213E	1		1	1		RESEARH GROUP 3	
/				10	00	0206			419?		213F-A			2	213F	1		1	1		RESEARH GROUP 5	
/				10	00	0206			97		218-A			2	218	1		1	1		CSE STOR	
/				10	00	0206			114		219-A			2	219	1		1	1		CSE SOLDERING	
/				10	00	0206			226		230C-A			2	230C	1		1	1		MECH ENG LAB (STRUCT SYS)	
/				10	00	0206			330		230B-B			2	230D	1		1	1		MECH ENG LAB (RADIATIVE TRANS)	
/				10	00	0206			329		230B-A			2	230E	1		1	1		MECH ENG LAB (IC. COMBUSTION)	
/				10	00	0206			467		230F-A			2	230F	1		1	1		MECH ENG LAB (RHEOLOGY/	
/				10	00	0206					230F-B			2	230F	1		1	1		MECH ENG LAB (RHEOLOGY/	
/				10	00	0206			326		230G-B			2	230H	1		1	1		MECH ENG LAB (FUEL CELL)	
/				10	00	0206			327		230G-A			2	230J	1		1	1		MECH ENG LAB (THERMO VAC.	
/				10	00	0206			463		230K-A			2	230K	1		1	1		MECH ENG LAB (RHEOLOGY/	
/				10	00	0206					230K-B			2	230K	1		1	1		MECH ENG LAB (MICRO AERIAL	
/				10	00	0206			332		230L-B			2	230M	1		1	1		MECH ENG LAB (HIGH SPEED)	
/				10	00	0206			312		230L-A			2	230N	1		1	1		MECH ENG LAB (INSTR. DEV)	
/				10	00	0206			211		230P-A			2	230P	1		1	1		MECH ENG LAB (PRECISION)	
/				10	00	0206			420					2	230Q	1		1	1		COMPUTATION	
/				10	00	0206			145		230R-A			2	230R	1		1	1		MECH ENG LAB (AERO OPTICS)	
/				10	00	0206			281		230S-A			2	230S	1		1	1		MECH ENG LAB (TURBULENCE	
/				10	00	0206			283		230T-A			2	230T	1		1	1		MECH ENG LAB (RAPID PROTO)	
/				10	00	0206			280		230U-A			2	230U	1		1	1		MECH ENG LAB (ROBOTIC DESIGN)	
/				10	00	0206			278		230V-A			2	230V	1		1	1		MECH END LAB (ADV. CNTRL)	
/				10	00	0206			137		265-A			2	265	1		1	1		OFFICE SUPPORT	
/				10	00	0206			435		301-A			2	301	1		1	1		CONFERENCE	Waiting for answer from users

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/		10	00		0206		305			507					2	305	1		1	1		OFFICE	For inside partitions, see add sign 2A in the bottom of the list.
/		10	00		0206		310			283		310-A			2	305, 310 & 315 SERIES? (to be determined)	1		1	1		HALLWAY	Need to check with users.
/		10	00		0206		315A			129					2	315A	1		1	1		RECEPTION	
/		10	00		0206		315B			256		315B-A			2	315B	1		1	1		OFFICE SUPPORT	
/		10	00		0206		315C			133		315C-A			2	315C	1		1	1		OFFICE SUPPORT	
/		10	00		0206		325			145		325-A			2	325	1		1	1		CONFERENCE SUPPORT	
/		10	00		0206		340B			101		340A-B			2	340B	1		1	1		INSTRUMENT	
/		10	00		0206		340C			137		340A-A			2	340C	1		1	1		CELL CULT	
/		10	00		0206		340D			101		340-D			2	340D	1		1	1		INSTRUMENT	
/		10	00		0206		340E			70		340-F			2	340E	1		1	1		FUME HOOD	
/		10	00		0206		340F			207		340-G			2	340F	1		1	1		CELL CULT	
/		10	00		0206		340G			95		340-H			2	340G	1		1	1		CELL CULT	
/		10	00		0206		340H			205		340-J			2	340H	1		1	1		CELL CULT	
/		10	00		0206		340J			205		340-K			2	340J	1		1	1		CELL CULT	
/		10	00		0206		340K			66		340-L			2	340K	1		1	1		FUME HOOD	
/		10	00		0206		340L			132		340M-C			2	340L	1		1	1		CELL CULT	
/		10	00		0206		340N			102		340M-A			2	340N	1		1	1		INSTRUMENT	
/		10	00		0206		340P			103		340M-B			2	340P	1		1	1		INSTRUMENT	
/		10	00		0206		340Q			131		340-B			2	340Q	1		1	1		ISNTRUMENT	
/		10	00		0206		340R			135		340-C			2	340R	1		1	1		INSTRUMENT	
/		10	00		0206		365			127		365-A			2	365	1		1	1		OFFCIE SUPPORT	
																				68			
/		10	00		0206		050G			106		050D-B			2 (w/BACKER)	050G	1	1	1	1		SUPPORT	
/		10	00		0206		080D			99		080C-D			2 (w/BACKER)	080D	1	1	1	1		INSTRUMENT	
/		10	00		0206		080E			106		080C-C			2 (w/BACKER)	080E	1	1	1	1		INSTRUMENT	
/		10	00		0206		085			207		085-A			2 (w/BACKER)	085	1	1	1	1		PUMP	
/		10	00		0206		090A			192		090A-A			2 (w/BACKER)	090A	1	1	1	1		DUAL BEAM	
/		10	00		0206		090B			292		090B-A			2 (w/BACKER)	090B	1	1	1	1		TITAN	
/		10	00		0206		090C			359		090C-B			2 (w/BACKER)	090C	1	1	1	1		TEM	
/		10	00		0206		120E			133		120E-A			2 (w/BACKER)	120E	1	1	1	1		OFFICE	
/		10	00		0206		120F			135		120F-A			2 (w/BACKER)	120F	1	1	1	1		OFFICE	
/		10	00		0206		120G			133		120G-A			2 (w/BACKER)	120G	1	1	1	1		OFFICE	
/		10	00		0206		120H			281		120H-A			2 (w/BACKER)	120H	1	1	1	1		OFFICE	
/		10	00		0206		120J			195		120J-A			2 (w/BACKER)	120J	1	1	1	1		BREAKOUT	
/		10	00		0206		205			117		205-A			2 (w/BACKER)	205	1	1	1	1		OFFICE	
/		10	00		0206		207			138		207-A			2 (w/BACKER)	207	1	1	1	1		OFFICE	
/		10	00		0206		208			138		208-A			2 (w/BACKER)	208	1	1	1	1		OFFICE	
/		10	00		0206		209			134		209-A			2 (w/BACKER)	209	1	1	1	1		OFFICE	
/		10	00		0206		210			134		210-A			2 (w/BACKER)	210	1	1	1	1		OFFICE	
/		10	00		0206		211			134		211-A			2 (w/BACKER)	211	1	1	1	1		OFFICE	
/		10	00		0206		212			134		212-A			2 (w/BACKER)	212	1	1	1	1		OFFICE	
/		10	00		0206		214			134		214-A			2 (w/BACKER)	214	1	1	1	1		OFFICE	
/		10	00		0206		215			134		215-A			2 (w/BACKER)	215	1	1	1	1		OFFICE	
/		10	00		0206		216			134		216-A			2 (w/BACKER)	216	1	1	1	1		OFFICE	
/		10	00		0206		217			134		217-A			2 (w/BACKER)	217	1	1	1	1		OFFICE	
/		10	00		0206		220			247		220-A			2 (w/BACKER)	220	1	1	1	1		SCHOLARLY ACTIVITY	
/		10	00		0206		??					2C3-B			2 (w/BACKER)	?? (to be determined)	1	1	1	1		LEVEL 2 EAST BALCONY	

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Science & Engineering Building 2 (0206)-Interior Signage Schedule-Sort by Sign Types

October 17, 2013

Project Schedule: All Interior Room Identification Signs must be fabricated and ready for installation by Friday January 24, 2014. 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 February 21, 2014. 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 unless noted differently.

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 Architectural Drawing	Signage Type	Signage Text	# Of Signage	Backer	# Of Signage	# Of Signage (sort)	Total # Of Signage by Sign Types	Room Description	UCM Note
I				10	00	0206			134		221-A			2 (w/BACKER)	221	1	1	1	1		OFFICE	
I				10	00	0206			134		222-A			2 (w/BACKER)	222	1	1	1	1		OFFICE	
I				10	00	0206			171		223-A			2 (w/BACKER)	223	1	1	1	1		OFFICE	
I				10	00	0206			133		270-A			2 (w/BACKER)	270	1	1	1	1		OFFICE	
I				10	00	0206			133		271-A			2 (w/BACKER)	271	1	1	1	1		OFFICE	
I				10	00	0206			133		272-A			2 (w/BACKER)	272	1	1	1	1		OFFICE	
I				10	00	0206			134		273-A			2 (w/BACKER)	273	1	1	1	1		OFFICE	
I				10	00	0206			134		274-A			2 (w/BACKER)	274	1	1	1	1		OFFICE	
I				10	00	0206			133		275-A			2 (w/BACKER)	275	1	1	1	1		OFFICE	
I				10	00	0206			133		276-A			2 (w/BACKER)	276	1	1	1	1		OFFICE	
I				10	00	0206			134		277-A			2 (w/BACKER)	277	1	1	1	1		OFFICE	
I				10	00	0206			134		278-A			2 (w/BACKER)	278	1	1	1	1		OFFICE	
I				10	00	0206			133		279-A			2 (w/BACKER)	279	1	1	1	1		OFFICE	
I				10	00	0206			133		280-A			2 (w/BACKER)	280	1	1	1	1		OFFICE	
I				10	00	0206			134		281-A			2 (w/BACKER)	281	1	1	1	1		OFFICE	
I				10	00	0206			134		282-A			2 (w/BACKER)	282	1	1	1	1		OFFICE	
I				10	00	0206			133		283-A			2 (w/BACKER)	283	1	1	1	1		OFFICE	
I				10	00	0206			133		284-A			2 (w/BACKER)	284	1	1	1	1		OFFICE	
I				10	00	0206			134		285-A			2 (w/BACKER)	285	1	1	1	1		OFFICE	
I				10	00	0206			134		286-A			2 (w/BACKER)	286	1	1	1	1		OFFICE	
I				10	00	0206			244		290-A			2 (w/BACKER)	290	1	1	1	1		ME BREAKOUT	
I				10	00	0206		??	??		2C10-A			2 (w/BACKER)	?? (to be determined)	1	1	1	1		LEVEL 2 WEST BALCONY	
I				10	00	0206			134		291-A			2 (w/BACKER)	291	1	1	1	1		OFFICE	
I				10	00	0206			134		292-A			2 (w/BACKER)	292	1	1	1	1		OFFICE	
I				10	00	0206			158		293-A			2 (w/BACKER)	293	1	1	1	1		OFFICE	
I				10	00	0206			138		305A-A			2 (w/BACKER)	305A	1	1	1	1		OFFICE	
I				10	00	0206			138		310A-A			2 (w/BACKER)	310A	1	1	1	1		OFFICE	
I				10	00	0206			134		310B-A			2 (w/BACKER)	310B	1	1	1	1		OFFICE	
I				10	00	0206			134		310C-A			2 (w/BACKER)	310C	1	1	1	1		OFFICE	
I				10	00	0206			125		310D-A			2 (w/BACKER)	310D	1	1	1	1		OFFICE	
I				10	00	0206			112		310E-A			2 (w/BACKER)	310E	1	1	1	1		OFFICE	
I				10	00	0206					315-B			2 (w/BACKER)	?? (to be determined)	1	1	1	1		LEVEL 3 EAST BALCONY	
I				10	00	0206			134		315E-A			2 (w/BACKER)	315E	1	1	1	1		OFFICE	
I				10	00	0206			134		315F-A			2 (w/BACKER)	315F	1	1	1	1		OFFICE	
I				10	00	0206			134		315F-A			2 (w/BACKER)	315G	1	1	1	1		OFFICE	
I				10	00	0206			272??		315H-A			2 (w/BACKER)	315H	1	1	1	1		"OFFICE", becomes "SCHOLARLY ACTIVITY"	After the Bulletin ??, this room becomes "Scholarly Activity"
I				10	00	0206			248??		320-A			2 (w/BACKER)	320	1	1	1	1		"SCHOLARLY ACTIVITY" becomes "OFFICE"	After the Bulletin ??, this room becomes "Office"
I				10	00	0206			134		321-A			2 (w/BACKER)	321	1	1	1	1		OFFICE	
I				10	00	0206			134		322-A			2 (w/BACKER)	322	1	1	1	1		OFFICE	
I				10	00	0206			171		323-A			2 (w/BACKER)	323	1	1	1	1		OFFICE	
I				10	00	0206			133		370-A			2 (w/BACKER)	370	1	1	1	1		OFFICE	
I				10	00	0206			134		371-A			2 (w/BACKER)	371	1	1	1	1		OFFICE	
I				10	00	0206			134		372-A			2 (w/BACKER)	372	1	1	1	1		OFFICE	
I				10	00	0206			134		373-A			2 (w/BACKER)	373	1	1	1	1		OFFICE	
I				10	00	0206			134		374-A			2 (w/BACKER)	374	1	1	1	1		OFFICE	

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Science & Engineering Building 2 (0206)-Interior Signage Schedule-Sort by Sign Types

October 17, 2013

Project Schedule: All Interior Room Identification Signs must be fabricated and ready for installation by Friday January 24, 2014. 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 February 21, 2014. 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 unless noted differently.

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 Architectural Drawing	Signage Type	Signage Text	# Of Signage	Backer	# Of Signage	# Of Signage (sort)	Total # Of Signage by Sign Types	Room Description	UCM Note
/		10	00	0206		1T1					1T1-A		6A	6 (MEN)	MEN	1		1	1		MEN	Restroom sign on wall.
/		10	00	0206		2T1					2T1-A		6A	6 (MEN)	MEN	1		1	1		MEN	
/		10	00	0206		3T1					3T1-A		6A	6 (MEN)	MEN	1		1	1		MEN	
																			4			
/		10	00	0206		0T2					0T2-A		6A	6 (WOMEN)	WOMEN	1		1	1		WOMEN	Restroom sign on wall. Smith Group used 6A-with shower
/		10	00	0206		1T2					1T2-A		6A	6 (WOMEN)	WOMEN	1		1	1		WOMEN	Restroom sign on wall.
/		10	00	0206		2T2					2T2-A		6A	6 (WOMEN)	WOMEN	1		1	1		WOMEN	
/		10	00	0206		3T2					3T2-A		6A	6 (WOMEN)	WOMEN	1		1	1		WOMEN	
																			4			
/		10	00	0206		102								7	ASSISTIVE LISTENING SYSTEM AVAILABLE	1		1	1		SCHOLARLY ACTIVITY	
/		10	00	0206		130					130-A		7	7	ASSISTIVE LISTENING SYSTEM AVAILABLE	1		1	1		WET CLASS LAB	
/		10	00	0206		150					150-A		7	7	ASSISTIVE LISTENING SYSTEM AVAILABLE	1		1	1		WET CLASS LAB	
/		10	00	0206		160					160-A		7	7	ASSISTIVE LISTENING SYSTEM AVAILABLE	1		1	1		WET CLASS LAB	
/		10	00	0206		180					180-A		7	7	ASSISTIVE LISTENING SYSTEM AVAILABLE	1		1	1		THERMOFLUID LAB (WET CLASS)	
/		10	00	0206		220					220-A		7	7	ASSISTIVE LISTENING SYSTEM AVAILABLE	1		1	1		SCHOLARLY ACTIVITY	
/		10	00	0206		224							7	7	ASSISTIVE LISTENING SYSTEM AVAILABLE	1		1	1		CONFERENCE	
/		10	00	0206		290							7	7	ASSISTIVE LISTENING SYSTEM AVAILABLE	1		1	1		ME BREAKOUT	
/		10	00	0206		301							7	7	ASSISTIVE LISTENING SYSTEM AVAILABLE	1		1	1		CONFERENCE	Waiting for answer from users
/		10	00	0206		302							7	7	ASSISTIVE LISTENING SYSTEM AVAILABLE	1		1	1		VIDEO CONFERENCE	
/		10	00	0206		315H								7	ASSISTIVE LISTENING SYSTEM AVAILABLE	1		1	1			Was in Room 320, Sign place holder for now.
/		10	00	0206		390							7	7	ASSISTIVE LISTENING SYSTEM AVAILABLE	1		1	1		BIOENGINEERING/ ORG CHEM BREAK OUT	Has no sign.
																			12			
/		10	00	0206		101			322		101-A		8A	8A	EXIT	1	1	1	1		SCHOLARLY ACTIVITY	
/		10	00	0206		102			927		102-A		8A	8A	EXIT	1	1	1	1		SCHOLARLY ACTIVITY	
/		10	00	0206		102					102-B		8A	8A	EXIT	1	1	1	1		SCHOLARLY ACTIVITY	
/		10	00	0206		110					110-B			8A	EXIT	1		1	1		EHS WASTE	
/		10	00	0206		130			924		130-A		8A	8A	EXIT	1	1	1	1		WET CLASS LAB	
/		10	00	0206		140			300		140-A		8A	8A	EXIT	1	1	1	1		PREP	
/		10	00	0206		150					150-A		8A	8A	EXIT	1	1	1	1		WET CLASS LAB	
/		10	00	0206		155			437		155-A			8A	EXIT	1	1	1	1		ELECTRONICS SHOP (BENCHTOP)	
/		10	00	0206		160			942		160-A		8A	8A	EXIT	1	1	1	1		WET CLASS LAB	
/		10	00	0206		165					165-A		8A	8A	EXIT	1	1	1	1		SERVICE LEARNING	
/		10	00	0206		170			300		170-A		8A	8A	EXIT	1	1	1	1		PREP	
/		10	00	0206		175					175-A		8A	8A	EXIT	1	1	1	1		MACHINE SHOP (BENCHTOP)	

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Science & Engineering Building 2 (0206)-Interior Signage Schedule-Sort by Sign Types

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/		10	00	0206		180			618		180-A		8A	8A	EXIT	1	1	1	1		THERMOFLUID LAB (WET CLASS)	
/		10	00	0206		185			1108		185-A		8A	8A	EXIT	1	1	1	1		WIND TUNNEL	
/		10	00	0206		190			269		190-A		8A	8A	EXIT	1	1	1	1		STRUCT SUPPORT	
/		10	00	0206		1C8				124	1C8-A		8A	8A	EXIT	1	1	1	1		HALLWAY	
/		10	00	0206		1S2				247	1S2-A		8A	8A	EXIT	1		1	1		STAIR 2	
/		10	00	0206		1S2					1S2-B		8A	8A	EXIT	1		1	1		STAIR 2	
/		10	00	0206		1S3				430	1S3-A		8A	8A	EXIT	1		1	1		STAIR 3	
																			19			
/		10	00	0206		050A					0C9-D		8B	8B	EXIT ROUTE	1		1	1		SUPPORT	This sign will be placed inside of 050A to 0C9.
/		10	00	0206		050D					0C9-C		8B	8B	EXIT ROUTE	1		1	1		EQUIP	This sign will be placed inside of 050D to 0C9.
/		10	00	0206		080A					080A-A		8B	8B	EXIT ROUTE	1		1	1		COMPUTATION (GS)	This sign will be placed inside of 080A to 0C9.
/		10	00	0206		080C					0C9-B (NOT 080-A)		8B	8B	EXIT ROUTE	1		1	1			This sign will be placed inside of 080D to 0C9.
/		10	00	0206		090					0C9-A		8B	8B	EXIT ROUTE	1		1	1		IMAGING	This sign will be placed inside of 090 to 0C9.
/		10	00	0206		0C2				??	0C2-A		8B	8B	EXIT ROUTE	1		1	1		HALLWAY	
/		10	00	0206		110					105-B		8B	8B	EXIT ROUTE	1		1	1		EHS WASTE	
/		10	00	0206		110					1C4-A		8B	8B	EXIT ROUTE	1		1	1		EHS WASTE	
/		10	00	0206		120					120-A		8B	8B	EXIT ROUTE	1		1	1		ENVIRONMENTAL ENGINEERING	
/		10	00	0206		1C2				205	1C1-A		8B	8B	EXIT ROUTE	1		1	1		HALLWAY	
/		10	00	0206		1C2				205	1C2-A		8B	8B	EXIT ROUTE	1		1	1		HALLWAY	
/		10	00	0206		213					2C3-A		8B	8B	EXIT ROUTE	1		1	1		DEPARTMENT-HALLWAY	
/		10	00	0206		230				714	2C9-A		8B	8B	EXIT ROUTE	1		1	1		HALLWAY	
/		10	00	0206		230A				647	2C8-A		8B	8B	EXIT ROUTE	1		1	1		COMPUTATION	
/		10	00	0206		310					310-A		8B	8B	EXIT ROUTE	1		1	1		HALLWAY	Need to check with users.
/		10	00	0206		315					315-A		8B	8B	EXIT ROUTE	1		1	1		ENGINEERING??	
/		10	00	0206		330				1521	3C7-A		8B	8B	EXIT ROUTE	1		1	1		ORGANIC CHEMISTRY	
/		10	00	0206		340A					3C9-B		8B	8B	EXIT ROUTE	1		1	1		EQUIPMENT	
/		10	00	0206		340M					3C9-A		8B	8B	EXIT ROUTE	1		1	1		EQUIPMENT	
																			19			
/		10	00	0206		050A					0C9-D		9A	9A		1		1	1		SUPPORT	Should 9A be included? This sign will be placed inside of
/		10	00	0206		050D					0C9-C		9A	9A		1		1	1		EQUIP	Should 9A be included? This sign will be placed inside of
/		10	00	0206		080A					080A-A		9A	9A		1		1	1		COMPUTATION (GS)	Should 9A be included? This sign will be placed inside of
/		10	00	0206		080C					0C9-B (NOT 080-A)		9A	9A		1		1	1			Should 9A be included? This sign will be placed inside of
/		10	00	0206		090					0C9-A		9A	9A		1		1	1		IMAGING	This sign will be placed inside of 090 to 0C9.
/		10	00	0206		0C9					0C9-B		9A	9A		1		1	1		HALLWAY	Need to check with consultant to know why these two
/		10	00	0206		0C9					0C9-C		9A	9A		1		1	1		HALLWAY	Need to check with consultant to know why these two
/		10	00	0206		0E1					0E1		9A	9A		1		1	1		ELEVATOR-1	Final location to be determined.
/		10	00	0206		0E2					0E2		9A	9A		1		1	1		ELEVATOR-2	Final location to be determined.
/		10	00	0206		0S1					0S2-A		9A	9A		2		2	2		STAIR 1	Frame for evacuation plan. Final location to be determined.
/		10	00	0206		0S2					0S2-A		9A	9A		1		1	1		STAIR 2	Frame for evacuation plan. Final location to be determined.
/		10	00	0206		0S2					0S2-A		9A	9A		1		1	1		STAIR 2	Frame for evacuation plan. Final location to be determined.
/		10	00	0206		0S3					0S3-A		9A	9A		1		1	1		STAIR 3	Frame for evacuation plan. Final location to be determined.
/		10	00	0206		0S3					0S3-A		9A	9A		1		1	1		STAIR 3	Frame for evacuation plan. Final location to be determined.
											ADD					5		5	5			17"Wx11"H landscape insert for Annunciation Maps.
/		10	00	0206		102					102-A		9A	9A		1	1	1	1		SCHOLARLY ACTIVITY	Final location to be determined.
/		10	00	0206		102					102-B		9A	9A		1	1	1	1		SCHOLARLY ACTIVITY	Final location to be determined.

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Science & Engineering Building 2 (0206)-Interior Signage Schedule-Sort by Sign Types

October 17, 2013

Project Schedule: All Interior Room Identification Signs must be fabricated and ready for installation by Friday January 24, 2014. 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 February 21, 2014. 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.

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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 Architectural Drawing	Signage Type	Signage Text	# Of Signage	Backer	# Of Signage	# Of Signage (sort)	Total # Of Signage by Sign Types	Room Description	UCM Note
/			10	00	0206		130					130-A			9A		1	1	1	1		WET CLASS LAB	Final location to be determined.
/			10	00	0206		150					150-A			9A		1	1	1	1		WET CLASS LAB	Final location to be determined.
/			10	00	0206		155					155-C			9A		1	1	1	1		ELECTRONICS SHOP (BENCHTOP)	Final location to be determined.
/			10	00	0206		160					160-A			9A		1	1	1	1		WET CLASS LAB	Final location to be determined.
/			10	00	0206		165					165-C			9A		1	1	1	1		SERVICE LEARNING	Final location to be determined.
/			10	00	0206		175					175-C			9A		1	1	1	1		MACHINE SHOP (BENCHTOP)	Final location to be determined.
/			10	00	0206		180					180-A			9A		1	1	1	1		THERMOFLUID LAB (WET CLASS)	Final location to be determined.
/			10	00	0206		185					185-C			9A		1	1	1	1		WIND TUNNEL	Final location to be determined.
/			10	00	0206		1C8					1C8-A			9A		1	1	1	1			Final location to be determined.
/			10	00	0206		1E1					1E1		9A	9A		1		1	1		ELEVATOR-1	Final location to be determined.
/			10	00	0206		1E2					1E2		9A	9A		1		1	1		ELEVATOR-2	Final location to be determined.
/			10	00	0206		1S1							9A	9A		1		1	1		STAIR 1	Final location to be determined.
/			10	00	0206		1S2					1S2-A		9A	9A		1		1	1		STAIR 2	Final location to be determined.
/			10	00	0206		1S2					1S2-B		9A	9A		1		1	1		STAIR 2	Final location to be determined.
/			10	00	0206		1S3					1S3-A		9A	9A		1		1	1		STAIR 3	Final location to be determined.
															9A		5		5	5			
/			10	00	0206		230					2C9-A		9A	9A		1		1	1		HALLWAY	Final location to be determined.
/			10	00	0206		230A					2C8-A		9A	9A		1		1	1		COMPUTATION	
/			10	00	0206		2C3			651		2C3-B		9A	9A		1		1	1		HALLWAY	In front of Room 211? Final location to be determined.
/			10	00	0206		2C8			182		2C8-A, 2C8-B		9A	9A		1		1	1		HALLWAY	In front of 2C7-Bridge? Final location to be determined.
/			10	00	0206		2C9			1030		2C10-A, 2C9-B		9A	9A		1		1	1		HALLWAY	In front of 286? Final location to be determined.
/			10	00	0206		2E1					2E1		9A	9A		1		1	1			Final location to be determined.
/			10	00	0206		2E2					2E2		9A	9A		1		1	1			Final location to be determined.
/			10	00	0206		2S1							9A	9A		2		2	2		STAIR 1	Final location to be determined.
/			10	00	0206		2S2					2S2-A		9A	9A		1		1	1		STAIR 2	Final location to be determined.
/			10	00	0206		2S2					2S2-A		9A	9A		1		1	1		STAIR 2	Final location to be determined.
/			10	00	0206		2S3			304		2S3-A		9A	9A		1		1	1		STAIR 3	Final location to be determined.
/			10	00	0206		2S3			304		2S3-A		9A	9A		1		1	1		STAIR 3	Final location to be determined.
															9A		5		5	5			
/			10	00	0206		330					3C7-A		9A	9A		1		1	1		ORGANIC CHEMISTRY	Final location to be determined.
/			10	00	0206		340A					3C9-B			9A		1		1	1		EQUIPMENT	Final location to be determined.
/			10	00	0206		340M					3C9-A			9A		1		1	1		EQUIPMENT	Final location to be determined.
/			10	00	0206		3C3			539				9A	9A		1		1	1		HALLWAY	In front 313? Final location to be determined.
/			10	00	0206		3C8			235				9A	9A		1		1	1		HALLWAY	In front of 3C7-Bridge? Final location to be determined.
/			10	00	0206		3C9			1003		3C9-A, 3C9-B, 3C9-C,		9A	9A		1		1	1		HALLWAY	In front of 386? Final location to be determined.
/			10	00	0206		3E1					3E1		9A	9A		1		1	1		ELEVATOR-1	Final location to be determined.
/			10	00	0206		3E2					3E2		9A	9A		1		1	1			Final location to be determined.
/			10	00	0206		3S1							9A	9A		2		2	2		STAIR 1	Final location to be determined.
/			10	00	0206		3S2					3S2-A		9A	9A		1		1	1		STAIR 2	Final location to be determined.
/			10	00	0206		3S2					3S2-A		9A	9A		1		1	1		STAIR 2	Final location to be determined.
/			10	00	0206		3S3					3S3-A		9A	9A		1		1	1		STAIR 3	Final location to be determined.
/			10	00	0206		3S3					3S3-A		9A	9A		1		1	1		STAIR 3	Final location to be determined.
															9A		5		5	5			
/			10	00	0206		4S2					420-B		9A	9A		1		1	1		STAIR 2	Final location to be determined.

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Science & Engineering Building 2 (0206)-Interior Signage Schedule-Sort by Sign Types

October 17, 2013

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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 unless noted differently.

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 Architectural Drawing	Signage Type	Signage Text	# Of Signage	Backer	# Of Signage	# Of Signage (sort)	Total # Of Signage by Sign Types	Room Description	UCM Note
														9A		5		5	5	85		Additional 17"x11" Landscape map holder for Evacuation Maps.
/		10	00	0206		4E1					400-B		9A	9A (Exterior)	1		1	1		ELEV 1		
/		10	00	0206		4S2					420-B		9A	9A (Exterior)	1		1	1		STAIR 2		
														9A (Exterior)	2		2	2	4		Additional 17"x11" Landscape map holder for Evacuation Maps.	
/		10	00	0206		0E1			89		0E1		10	10	IN CASE OF FIRE, USE STAIRWAY	1		1	1		ELEVATOR-1	
/		10	00	0206		0E2			89		0E2		10	10	IN CASE OF FIRE, USE STAIRWAY	1		1	1		ELEVATOR-2	
/		10	00	0206		1E1			89		1E1		10	10	IN CASE OF FIRE, USE STAIRWAY	1		1	1		ELEVATOR-1	
/		10	00	0206		1E2			89		1E2		10	10	IN CASE OF FIRE, USE STAIRWAY	1		1	1		ELEVATOR-2	
/		10	00	0206		2E1			89		2E1		10	10	IN CASE OF FIRE, USE STAIRWAY	1		1	1		ELEVATOR-1	
/		10	00	0206		2E2			89		2E2		10	10	IN CASE OF FIRE, USE STAIRWAY	1		1	1		ELEVATOR-2	
/		10	00	0206		3E1			89		3E1		10	10	IN CASE OF FIRE, USE STAIRWAY	1		1	1		ELEVATOR-1	
/		10	00	0206		3E2			89		3E2		10	10	IN CASE OF FIRE, USE STAIRWAY	1		1	1		ELEVATOR-2	
																			8			
/		10	00	0206		4E1			89		400-B		10	10 (Exterior)	IN CASE OF FIRE, USE STAIRWAY	1		1	1		ELEV 1	
																			1			
/		10	00	0206		101					101-A		12B	12B	ISA symbol on door	1		1	1		SCHOLARLY ACTIVITY	blue vinyl, see drawing.
/		10	00	0206		102					102-A		12B	12B	ISA symbol on door	1		1	1		SCHOLARLY ACTIVITY	blue vinyl, see drawing.
/		10	00	0206		102					102-B		12B	12B	ISA symbol on door	1		1	1		SCHOLARLY ACTIVITY	blue vinyl, see drawing.
/		10	00	0206		130					130-A		12B	12B	ISA symbol on door	1		1	1		WET CLASS LAB	blue vinyl, see drawing.
/		10	00	0206		150					150-A		12B	12B	ISA symbol on door	1		1	1		WET CLASS LAB	blue vinyl, see drawing.
/		10	00	0206		155					155-C		12B	12B	ISA symbol on door	1		1	1		WET CLASS LAB	blue vinyl, see drawing.
/		10	00	0206		160					160-A		12B	12B	ISA symbol on door	1		1	1		WET CLASS LAB	blue vinyl, see drawing.
/		10	00	0206		165					165-C		12B	12B	ISA symbol on door	1		1	1		SERVICE LEARNING	blue vinyl, see drawing.
/		10	00	0206		175					175-C		12B	12B	ISA symbol on door	1		1	1		MACHINE SHOP (BENCHTOP)	blue vinyl, see drawing.
/		10	00	0206		180					180-A		12B	12B	ISA symbol on door	1		1	1		THERMOFLUID LAB (WET CLASS)	blue vinyl, see drawing.
/		10	00	0206		185					185-C		12B	12B	ISA symbol on door	1		1	1		WIND TUNNEL	blue vinyl, see drawing.
/		10	00	0206		185					185-C		12B	12B	ISA symbol on door	3		3	3			blue vinyl, see drawing.
																			14			
/		10	00	0206		0S1							13B	13B	STAIR 1...NO ROOF ACCESS...B...B THROUGH 3??	1		1	1		STAIR 1	Final location to be determined.
/		10	00	0206		0S2							13B	13B	STAIR 2... ROOF ACCESS...B...B THROUGH ROOF??	1		1	1		STAIR 2	Final location to be determined.
/		10	00	0206		0S3							13B	13B	STAIR 3... NO ROOF ACCESS...B...B THROUGH 3??	1		1	1		STAIR 3	Final location to be determined.
/		10	00	0206		1S1							13B	13B	STAIR 1...NO ROOF ACCESS...1...B THROUGH 3??	2		2	2		STAIR 1	Include the "Star" in the sign.
/		10	00	0206		1S2					1S2-A		13B	13B	STAIR 2... ROOF ACCESS...1...B THROUGH ROOF??	1		1	1		STAIR 2	

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Science & Engineering Building 2 (0206)-Interior Signage Schedule-Sort by Sign Types

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/				10 00 0206		1S3					1S3-A		13B	13B	STAIR 3... NO ROOF ACCESS...1...B THROUGH 3??	1		1	1		STAIR 3	
/				10 00 0206		2S1								13B	STAIR 1...NO ROOF ACCESS...2...B THROUGH 3??	1		1	1		STAIR 1	
/				10 00 0206		2S2					2S2-A		13B	13B	STAIR 2... ROOF ACCESS...2...B THROUGH ROOF??	1		1	1		STAIR 2	
/				10 00 0206		2S3			304		2S3-A		13B	13B	STAIR 3... NO ROOF ACCESS...2...B THROUGH 3??	1		1	1		STAIR 3	
/				10 00 0206		3S1								13B	STAIR 1...NO ROOF ACCESS...3...B THROUGH 3??	1		1	1		STAIR 1	
/				10 00 0206		3S2					3S2-A		13B	13B	STAIR 2... ROOF ACCESS...2...B THROUGH ROOF??	1		1	1		STAIR 2	
/				10 00 0206		3S3					3S3-A		13B	13B	STAIR 3... NO ROOF ACCESS...3...B THROUGH 3??	1		1	1		STAIR 3	
/				10 00 0206		4S2					420-B		13B	13B	STAIR 2... ROOF ACCESS...ROOF...B THROUGH ROOF??	1		1	1		STAIR 2	
																			14			
/				10 00 0206		020A			66					15	020A	1		1	1		NMR	
/				10 00 0206		020B			63					15	020B	1		1	1		NMR	
/				10 00 0206		020C			82		020-A			15	020C	1		1	1		NMR PUMPS	
/				10 00 0206		040A			??		040-B			15	040A	1		1	1		SERV CLO	
/				10 00 0206		080B			619		080-C			15	080B	1		1	1		MATERIAL SCIENCE ENGINEERING	
/				10 00 0206		0M2				647	0C2-C			15	0M2	1		1	1		MECHANICAL	
/				10 00 0206		0M2					0M2-A			15	0M2	1		1	1		MECHANICAL	
/				10 00 0206		0M3					0P1-B			15	0M3	1		1	1		ELECTRICAL	
/				10 00 0206		0M3A				74	0M3-A			15	0M3A	1		1	1		BATT INVERT	
/				10 00 0206		0P1				1021	0P1-A			15	0P1	1		1	1		PLUMBING	
/				10 00 0206		0P1				1021	0P1-B			15	0P1	1		1	1		PLUMBING	
/				10 00 0206		0U1				207	0U1-A			15	0U1	1		1	1		BDF	
/				10 00 0206		104			78		104-A			15	104	1		1	1		CYLINDERS	
/				10 00 0206		104A			56		104-B			15	104A	1		1	1		02 CYLINDERS	
/				10 00 0206		105					1C2-A			15	105	1		1	1		STAGING	
/				10 00 0206		105			233		106-B			15	105	1		1	1		STAGING	
/				10 00 0206		106			233		106-B			15	106	1		1	1		TRASH/ RECYCLING	
/				10 00 0206		110A			134		110-A			15	110A	1		1	1		H2 SOLVENT	
/				10 00 0206		120C			142		120C-A			15	120C	1		1	1		PRINTERS	
/				10 00 0206		120D			115		120D-A			15	120D	1		1	1		RESEARCH EQUIP	
/				10 00 0206		155					155-B			15	155	1		1	1		ELECTRONICS SHOP (BENCHTOP)	
/				10 00 0206		165			880		155-B			15	165	1		1	1		SERVICE LEARNING	
/				10 00 0206		175			436		165-B			15	175	1	1	1	1		MACHINE SHOP (BENCHTOP)	
/				10 00 0206		180					185-B			15	180	1	1	1	1		THERMOFLUID LAB (WET CLASS)	
/				10 00 0206		185					185-B			15	185	1	1	1	1		WIND TUNNEL	
/				10 00 0206		1U2			218		1U2-A			15	1U2	1		1	1		IDF	
/				10 00 0206		230E					230H-A			15	230E	1		1	1		MECH ENG LAB (IC. COMBUSTION)	
/				10 00 0206		230H					230H-A			15	230H	1		1	1		MECH ENG LAB (FUEL CELL)	
/				10 00 0206		230J					230M-A			15	230J	1		1	1		MECH ENG LAB (THERMO VAC.	
/				10 00 0206		230M					230M-A			15	230M	1		1	1		MECH ENG LAB (HIGH SPEED)	

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/				10	00	0206				173	2U1-A			15	2U1	1		1	1		TELECOM (IDF)	
/				10	00	0206					335-A			15	330	1		1	1		ORGANIC CHEMISTRY	Sign holder for EH&S Lab sign use.
/				10	00	0206			271		335-A			15	335	1		1	1		ORGANIC CHEM GRAD STUDENTS	
/				10	00	0206				173	3U1-A			15	3U1	1		1	1		TELECOM (IDF)	
																				34		
/				10	00	0206				109	1U1-A			15 (EXTERIOR)	1U1	1		1	1		UTILITY POC	
/				10	00	0206				7728				15 (Exterior)	400	1		1	1		RESEARCH ROOFTOP	
/				10	00	0206				??	410-A			15 (Exterior)	410	1		1	1		MECHANICAL	
/				10	00	0206				72	410-B			15 (Exterior)	4EC1	1		1	1		ELEV CNTR	
																				4		
/				10	00	0206					0T1			15A	0T1	1		1	1		MEN	Restroom sign on wall.
/				10	00	0206					0T2			15A	0T2	1		1	1		WOMEN	Restroom sign on wall.
/				10	00	0206					1T1			15A	1T1	1		1	1		MEN	Restroom sign on wall.
/				10	00	0206					1T2			15A	1T2	1		1	1		WOMEN	Restroom sign on wall.
/				10	00	0206					2T1			15A	2T1	1		1	1		MEN	
/				10	00	0206					2T2			15A	2T2	1		1	1		WOMEN	
/				10	00	0206					3T1			15A	3T1	1		1	1		MEN	
/				10	00	0206					3T2			15A	3T2	1		1	1		WOMEN	
																				8		
/				10	00	0206			303		0C9-A			16	090...??(department name to be determined?)	1		1	1		IMAGING	
/				10	00	0206			386		315-A			16	?? (name to be determined)	1		1	1		ENGINEERING??	Waiting for answer from users
																				2		
/				10	00	0206					102-A			16 (EXTERIOR)??	??	1	1	1	1		SCHOLARLY ACTIVITY	Sign place holder only. TBD.
/				10	00	0206					102-B			16 (EXTERIOR)??	??	1	1	1	1		SCHOLARLY ACTIVITY	Sign place holder only. TBD.
/				10	00	0206					1C8-A			16 (EXTERIOR)??	ROOM 135, 1U2, 1J1 & 1M2 (ELECTRICAL ROOM) INSIDE	1	1	1	1			Place holder only. Need confirmation from Fire Marshal and users
																				3		
/				10	00	0206					102			19	MAXIMUM OCCUPANCY...63	1		1	1		SCHOLARLY ACTIVITY	
																				1		
/				10	00	0206			115		001-A			21	001	1		1	1		RESEARCH EQUIP	
/				10	00	0206			1159		0C5-B			21	020	1		1	1		NMR	
/				10	00	0206			344		0C5-A			21	024	1		1	1		MASS SPEC	
/				10	00	0206			192		0C9-D (NOT 050-B)			21	050	1		1	1		SUPPORT	This sign is for the overall 050 area, not just the hallway.
/				10	00	0206			186		0C9-C			21	050	1		1	1		EQUIP	This sign is for the overall 050 area, not just the hallway.
/				10	00	0206			348		060-A			21	060	1		1	1		VISUALIZATION	
/				10	00	0206			307		070-A			21	070	1		1	1		LASER LAB	
/				10	00	0206			212		080A-A			21	080	1		1	1		COMPUTATION (GS)	This sign is for the overall 080 area, not just the hallway.
/				10	00	0206			187		0C9-B (NOT 080-A)			21	080	1		1	1		EQUIP.	This sign is for the overall 080 area, not just the hallway.
/				10	00	0206			853		105-B			21	110	1		1	1		EHS WASTE	Sign holder for EH&S Lab sign use.
/				10	00	0206					1C4-A			21	110	1		1	1		EHS WASTE	Sign holder for EH&S Lab sign use.
/				10	00	0206			715		120-A			21	120	1		1	1		ENVIRONMENTAL ENGINEERING	
/				10	00	0206			301		206-A			21	206	1		1	1		CAIS (CSE LAB)	
/				10	00	0206			559		2C3-A			21	213	1		1	1		DEPARTMENT-HALLWAY	
/				10	00	0206					2C9-A			21	230	1		1	1		HALLWAY	

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Science & Engineering Building 2 (0206)-Interior Signage Schedule-Sort by Sign Types

October 17, 2013

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Illuminated Exterior Building Monument Sign must be fabricated and ready for installation by Friday February 21, 2014. 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 unless noted differently.

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 Architectural Drawing	Signage Type	Signage Text	# Of Signage	Backer	# Of Signage	# Of Signage (sort)	Total # Of Signage by Sign Types	Room Description	UCM Note
/		10	00	0206		230A					2C8-A			21	230A	1		1	1		COMPUTATION	
/		10	00	0206		311			663		311-A			21	311	1		1	1		RESEARCH GROUP 6	
/		10	00	0206		313			679		313-A			21	313	1		1	1		RESEARCH GROUP 7	
/		10	00	0206		314			642		314-A			21	314	1		1	1		RESEARCH GROUP 8	
/		10	00	0206		330					3C7-A			21	330	1		1	1		ORGANIC CHEMISTRY	
/		10	00	0206		335					3C9-C			21	335	1		1	1		ORGANIC CHEMGRAD STUDENTS	
/		10	00	0206		340A					3C9-B			21	340	1		1	1		EQUIPMENT	This sign is for the overall 340, not just the hallway.
/		10	00	0206		340M					3C9-A			21	340	1		1	1		EQUIPMENT	This sign is for the overall 340, not just the hallway.
																			23			
/		10	00	0206		110					110-B			21 (EXTERIOR)	110	1		1	1		EHS WASTE	Sign holder for EH&S Lab sign use.
/		10	00	0206		130					130-A			21 (EXTERIOR)	130	1	1	1	1		WET CLASS LAB	
/		10	00	0206		150					150-A			21 (EXTERIOR)	150	1	1	1	1		WET CLASS LAB	
/		10	00	0206		155					155-C			21 (EXTERIOR)	155	1	1	1	1		ELECTRONICS SHOP (BENCHTOP)	
/		10	00	0206		160					160-A			21 (EXTERIOR)	160	1	1	1	1		WET CLASS LAB	
/		10	00	0206		165					165-C			21 (EXTERIOR)	165	1	1	1	1		SERVICE LEARNING	
/		10	00	0206		175					175-C			21 (EXTERIOR)	175	1	1	1	1		MACHINE SHOP (BENCHTOP)	
/		10	00	0206		180					180-A			21 (EXTERIOR)	180	1	1	1	1		THERMOFLUID LAB (WET CLASS)	
/		10	00	0206		185					185-C			21 (EXTERIOR)	185	1	1	1	1		WIND TUNNEL	
																			9			
/		10	00	0206		0C9					0C9-B			22C		1		1	1		HALLWAY	Sign holder for EH&S Lab sign use.
/		10	00	0206		0C9					0C9-C			22C		1		1	1		HALLWAY	Sign holder for EH&S Lab sign use.
/		10	00	0206		0C9					080A-A			22C		1		1	1		HALLWAY	Sign holder for EH&S Lab sign use.
/		10	00	0206		0C9					0C9-D			22C		1		1	1		HALLWAY	Sign holder for EH&S Lab sign use.
/		10	00	0206		230C					230C-A			22C		1		1	1		MECH ENG LAB (STRUCT SYS)	Sign holder for EH&S Lab sign use.
/		10	00	0206		230D					230B-B			22C		1		1	1		MECH ENG LAB (RADIATIVE TRANS)	Sign holder for EH&S Lab sign use.
/		10	00	0206		230E					230B-A			22C		1		1	1		MECH ENG LAB (IC. COMBUSTION)	Sign holder for EH&S Lab sign use.
/		10	00	0206		230F					230F-A			22C		1		1	1		MECH ENG LAB (RHEOLOGY/	Sign holder for EH&S Lab sign use.
/		10	00	0206		230F					230F-B			22C		1		1	1		MECH ENG LAB (RHEOLOGY/	Sign holder for EH&S Lab sign use.
/		10	00	0206		230H					230G-B			22C		1		1	1		MECH ENG LAB (FUEL CELL)	Sign holder for EH&S Lab sign use.
/		10	00	0206		230J					230G-A			22C		1		1	1		MECH ENG LAB (THERMO VAC.	Sign holder for EH&S Lab sign use.
/		10	00	0206		230K					230K-A			22C		1		1	1		MECH ENG LAB (RHEOLOGY/	Sign holder for EH&S Lab sign use.
/		10	00	0206		230K					230K-B			22C		1		1	1		MECH ENG LAB (MICRO AERIAL	Sign holder for EH&S Lab sign use.
/		10	00	0206		230M					230L-B			22C		1		1	1		MECH ENG LAB (HIGH SPEED)	Sign holder for EH&S Lab sign use.
/		10	00	0206		230N					230L-A			22C		1		1	1		MECH ENG LAB (INSTR. DEV)	Sign holder for EH&S Lab sign use.
/		10	00	0206		230P					230P-A			22C		1		1	1		MECH ENG LAB (PRECISION)	Sign holder for EH&S Lab sign use.
/		10	00	0206		230R					230R-A			22C		1		1	1		MECH ENG LAB (AERO OPTICS)	Sign holder for EH&S Lab sign use.
/		10	00	0206		230S					230S-A			22C		1		1	1		MECH ENG LAB (TURBULENCE)	Sign holder for EH&S Lab sign use.
/		10	00	0206		230T					230T-A			22C		1		1	1		MECH ENG LAB (RAPID PROTO)	Sign holder for EH&S Lab sign use.
/		10	00	0206		230U					230U-A			22C		1		1	1		MECH ENG LAB (ROBOTIC DESIGN)	Sign holder for EH&S Lab sign use.
/		10	00	0206		230V					230V-A			22C		1		1	1		MECH END LAB (ADV. CNTRL)	Sign holder for EH&S Lab sign use.
/		10	00	0206		330					3C7-A			22C		1		1	1		ORGANIC CHEMISTRY	Sign holder for EH&S Lab sign use.
/		10	00	0206		340A					3C9-B			22C		1		1	1		EQUIPMENT	Sign holder for EH&S Lab sign use.
/		10	00	0206		340M					3C9-A			22C		1		1	1		EQUIPMENT	Sign holder for EH&S Lab sign use.
														22C		5		5	5			
																			29			
/		10	00	0206		160					160-A			22C(EXTERIOR)		1	1	1	1		WET CLASS LAB	Sign holder for EH&S Lab sign use.
/		10	00	0206		180					180-A			22C(EXTERIOR)		1	1	1	1		THERMOFLUID LAB (WET CLASS)	Sign holder for EH&S Lab sign use.
																			2			

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Science & Engineering Building 2 (0206)-Interior Signage Schedule-Sort by Sign Types

October 17, 2013

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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 Architectural Drawing	Signage Type	Signage Text	# Of Signage	Backer	# Of Signage	# Of Signage (sort)	Total # Of Signage by Sign Types	Room Description	UCM Note
														22D		5		5	5			17"Wx11"H portrait insert for Annunciation Maps.
														22D		5		5	5			
														22D		5		5	5			
														22D		5		5	5			
																				20		
/				10	00	0206					0S2-A		31	31	AREA OF REFUGE IN STAIRWELL	1		1	1		STAIR 2	
/				10	00	0206					0S3-A		31	31	AREA OF REFUGE IN STAIRWELL	1		1	1		STAIR 3	Final location to be determined.
/				10	00	0206					2S2-A		31	31	AREA OF REFUGE IN STAIRWELL	1		1	1		STAIR 2	
/				10	00	0206				304	2S3-A		31	31	AREA OF REFUGE IN STAIRWELL	1		1	1		STAIR 3	
/				10	00	0206					3S2-A		31	31	AREA OF REFUGE IN STAIRWELL	1		1	1		STAIR 2	
/				10	00	0206					3S3-A		31	31	AREA OF REFUGE IN STAIRWELL	1		1	1		STAIR 3	
																				6		
/				10	00	0206					0S2		32	32	AREA OF REFUGE...ALTERNATE EXIT IS LOCATED IN STAIRWELL 3...(use the copy in sign type)	1		1	1		STAIR 2	Final location to be determined.
/				10	00	0206					0S3		32	32	AREA OF REFUGE...ALTERNATE EXIT IS LOCATED IN STAIRWELL 2...(use the copy in sign type)	1		1	1		STAIR 3	Final location to be determined.
/				10	00	0206					2S2-A		32	32	AREA OF REFUGE...ALTERNATE EXIT IS LOCATED IN STAIRWELL 3...(use the copy in sign type)	1		1	1		STAIR 2	
/				10	00	0206				304	2S3-A		32	32	AREA OF REFUGE...ALTERNATE EXIT IS LOCATED IN STAIRWELL 2...(use the copy in sign type)	1		1	1		STAIR 3	
/				10	00	0206					3S2-A		32	32	AREA OF REFUGE...ALTERNATE EXIT IS LOCATED IN STAIRWELL 3...(use the copy in sign type)	1		1	1		STAIR 2	
/				10	00	0206					3S3-A		32	32	AREA OF REFUGE...ALTERNATE EXIT IS LOCATED IN STAIRWELL 2...(use the copy in sign type)	1		1	1		STAIR 3	
																				6		
/				10	00	0206				396	2S1			35	STAIR 1...EXIT STAIR DOWN	2		2	2		STAIR 1	
/				10	00	0206				225	2S2		35A	35	STAIR 2...EXIT STAIR DOWN	1		1	1		STAIR 2	
/				10	00	0206				396	3S1			35	STAIR 1...EXIT STAIR DOWN	2		2	2		STAIR 1	
/				10	00	0206				225	3S2		35A	35	STAIR 2...EXIT STAIR DOWN	1		1	1		STAIR 2	
																				6		
/				10	00	0206				241	4S2		35A	35 (Exterior)	STAIR 2...EXIT STAIR DOWN	1		1	1		STAIR 2	Final location to be determined.
																				1		
/				10	00	0206				216	0S1			35A	STAIR 1...EXIT STAIR UP	2		2	2		STAIR 1	
/				10	00	0206				245	0S2		35A	35A	STAIR 2...EXIT STAIR UP	1		1	1		STAIR 2	
/				10	00	0206				192	0S3		35A	35A	STAIR 3...EXIT STAIR UP	1		1	1		STAIR 3	
/				10	00	0206				304	2S3		35A	35A	STAIR 3...EXIT STAIR DOWN	1		1	1		STAIR 3	

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Science & Engineering Building 2 (0206)-Interior Signage Schedule-Sort by Sign Types

October 17, 2013

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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 Architectural Drawing	Signage Type	Signage Text	# Of Signage	Backer	# Of Signage	# Of Signage (sort)	Total # Of Signage by Sign Types	Room Description	UCM Note
1				10	00	0206				304	3S3-A		35A	35A	STAIR 3...EXIT STAIR DOWN	1		1	1		STAIR 3	
														40 (EXTERIOR)	NO SMOKING	10		10	10	6		
														FDC	S&E2 (final copy will be decided later. See UCM Notes)	2		2	2	10		2 Labels for fire department connections: 1" font size, font type Fruiter 57 Condensed, red background, and white letter stencil, layout vertically on the pipe. Letters are to face Ansel Adams Road. University will verify the final locations before installation
																			2			
Total:									9,853 (ASF)	11,825 (NASF)						614	136	614	614	614		

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Science & Engineering Building 2 (0206)

Signage

Project No: 900020

**SIGNAGE GRAPHIC
BID PACKAGE**

Sheet Index:

1.0 Interior Room Identification Signs:

1.1 Sign Type 1, Sign Type 1A, Sign Type 2, Sign Type 2A, Sign Type 3, and Sign Type 5

1.2 Sign Type 4 and Sign Type 6

1.3 Sign Type 6A, Sign Type 7, Sign Type 8A and Sign Type 8B

1.4 Sign Type 9A, Sign Type 10, Sign Type 12A, Sign Type 12B, Sign Type 15, and Sign Type 15A

1.5 Sign Type 13B, Sign, Sign Type 16, Sign Type 19, and Sign Type 20

1.6 Sign Type 21, Sign Type 22C, Sign Type 40, and Sign Type 41

1.7 Sign Type 22D, Sign Type 31, Sign Type 32, Sign Type 35, Sign Type 35A, Sign Type FDC

1.8 Typical Mounting Locations

1.9 Typical Mounting Locations

2.0 Illuminated Exterior Building Monument Sign (AA2-Primary Building ID & AA3-Secondary Building ID): Color & Materials Palette

2.1 Typography & Symbols

2.2 AA2-Elevation, Side Views, Back Side and Top View Details

2.3 AA2-Top View Section Details

2.4 AA2-Section Details

2.5 AA2-Elevation Section Details

2.6 AA2-Footing Details

2.7 AA3-Elevation, Side Views, and Top View Details

2.8 AA3-Elevation Section Details

3.0 Interior Wall-Mounted LEED Display Sign

Interior Room Identification Signs:

- a. All interior signs shall be manufactured using a 1/4" Photopolymer Process. All exterior signs shall be manufactured using a 1/4" exterior Photopolymer Process.
- b. Tactile characters shall be raised the required 1/32" inches from sign face. Glue -on letters or etched backgrounds are not acceptable.
- c. All text shall be accompanied by Grade 2 Braille. Braille shall be separated 1/2" from the corresponding raised characters or symbols. Grade 2 Braille translation to be provided by signage manufacturer.
- d. 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.
- e. In the cases when Braille is not specified in the written specification, use 1/4" acrylic using subsurface vinyl graphics and paint.
- f. Background Color: Dark Rhein Silver. Unless noted otherwise. All sides of the background must consist of the same color as selected.
- g. Graphic Color: Benjamin/Moore-Branchport Brown unless noted otherwise.
- h. Letterform shall be: Universe 57 Condense.
- i. 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.
- j. Signage mounted on glass shall have backers matching "Dark Rhein Silver" background color.



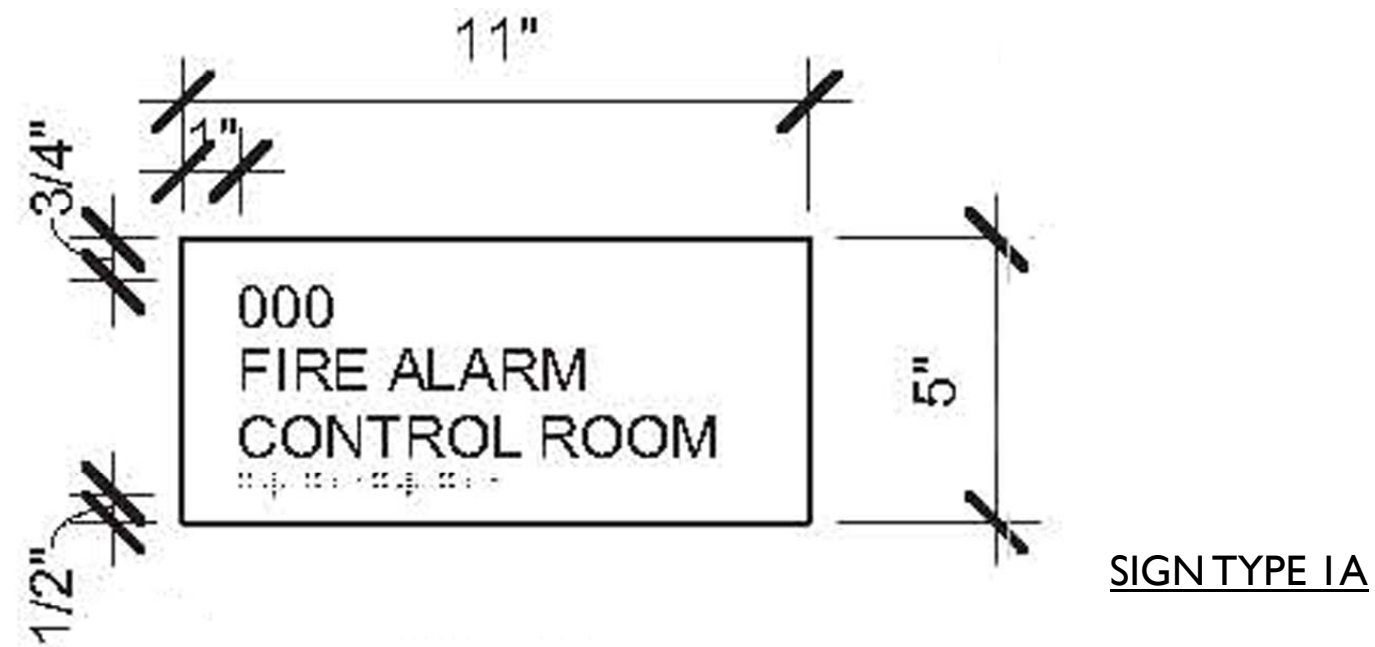
SIGN TYPE 1

Side View



SIGN TYPE 2

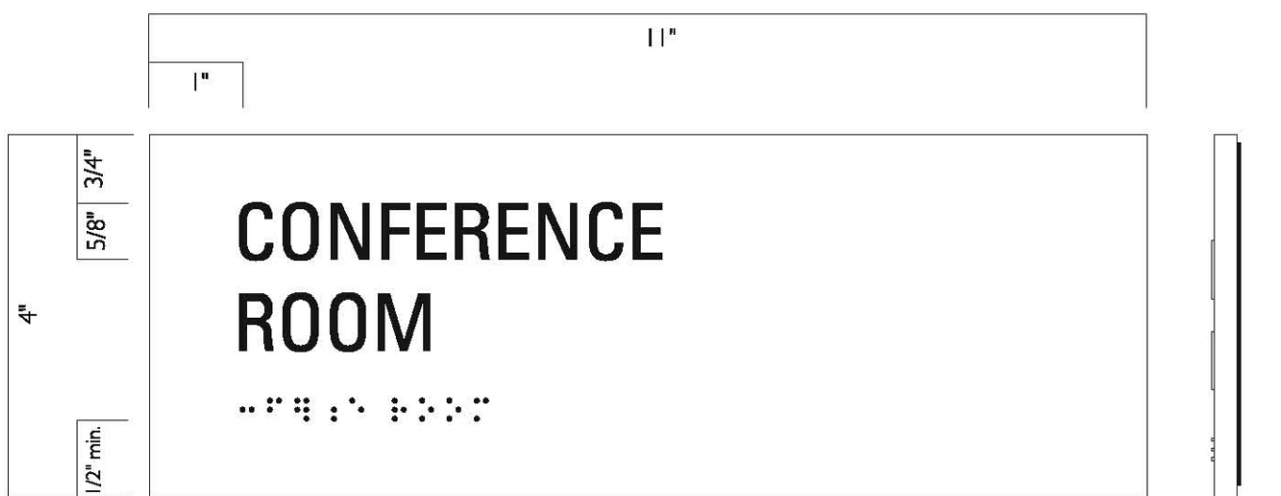
Side View



SIGN TYPE 1A



SIGN TYPE 2A



SIGN TYPE 3

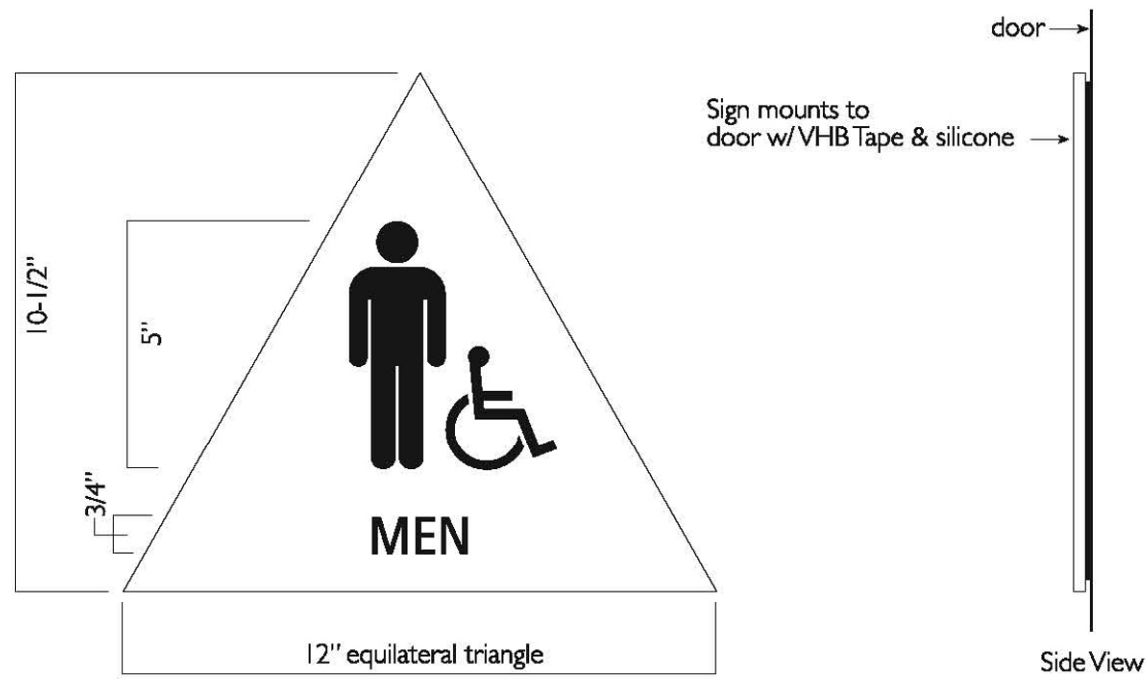
Side View



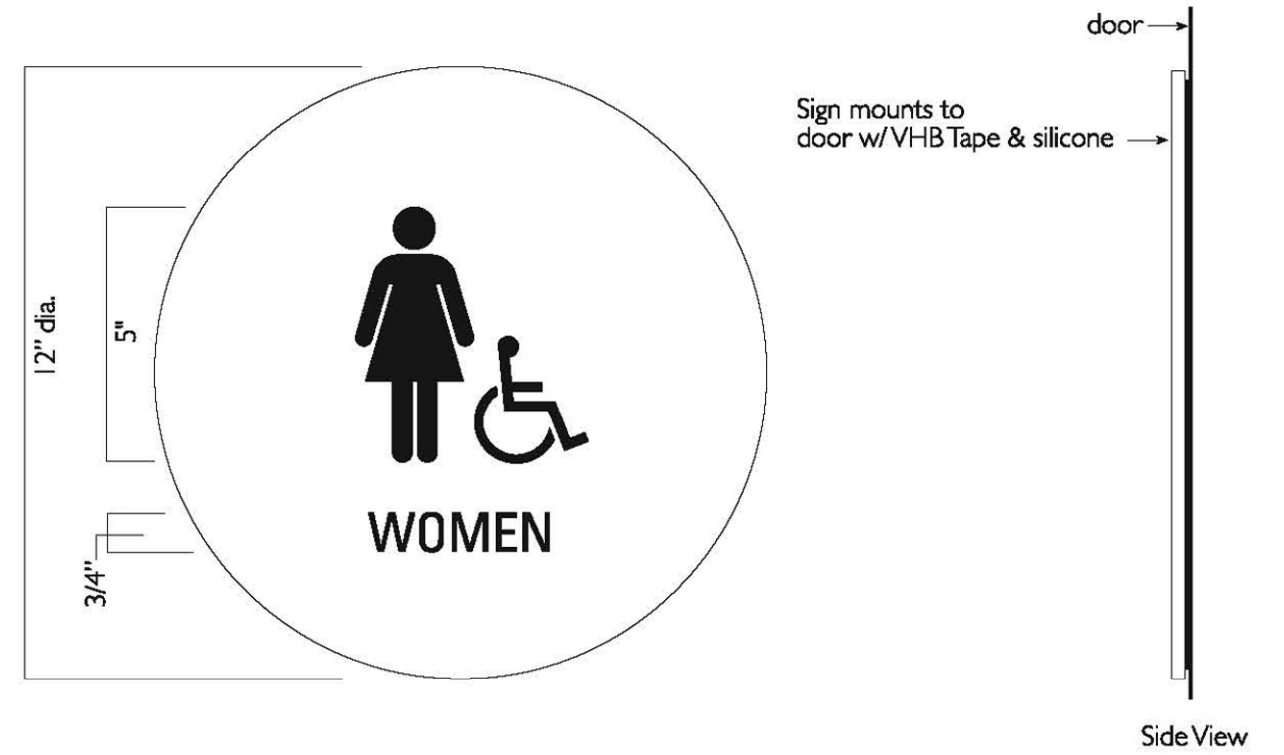
Side View



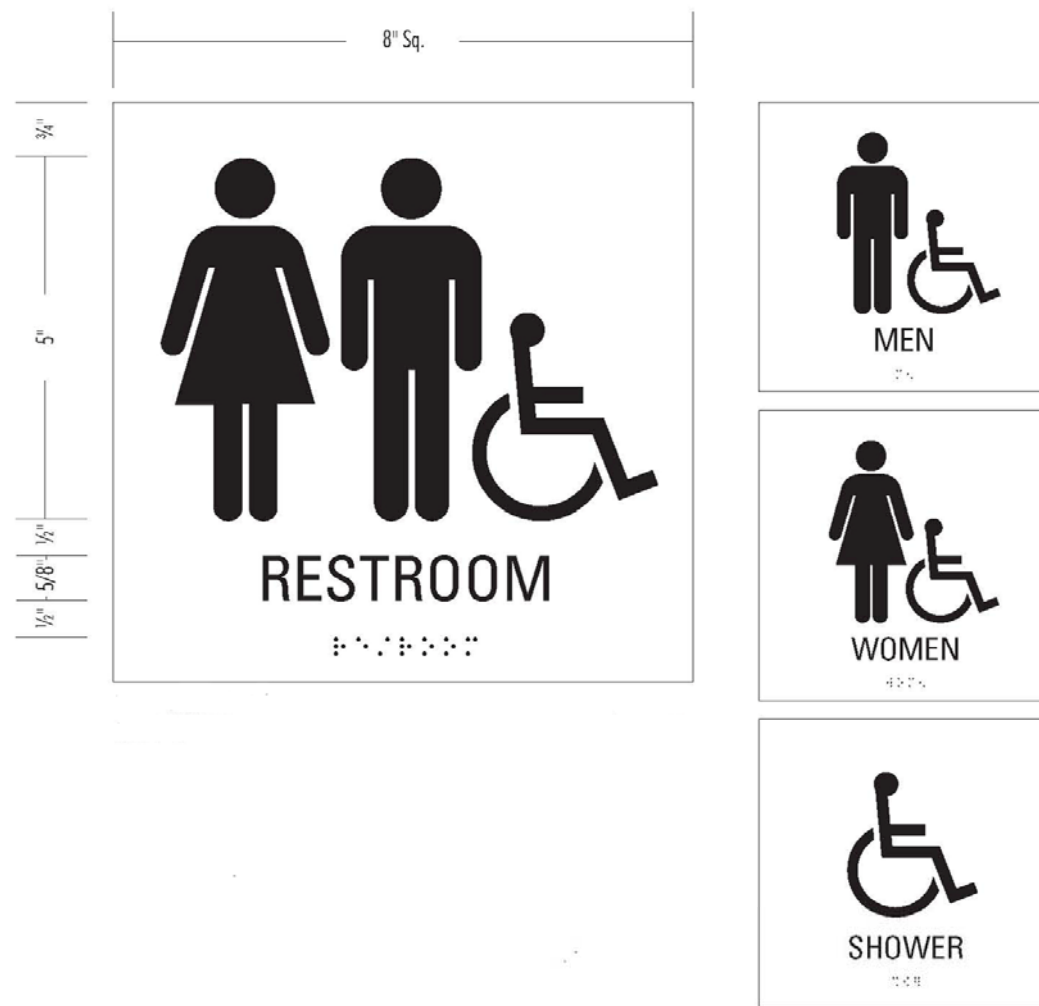
SIGN TYPE 5



SIGN TYPE 4-MEN



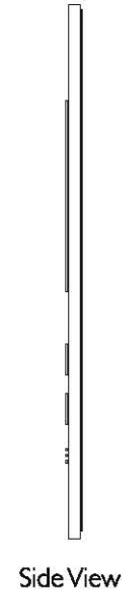
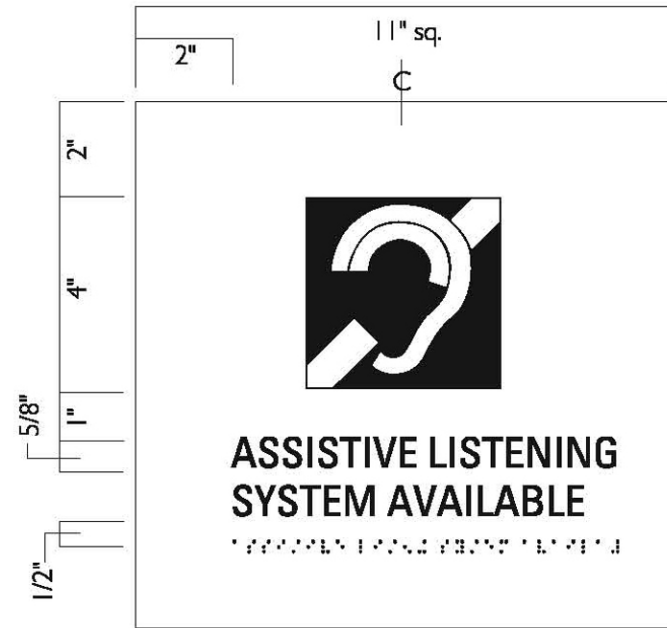
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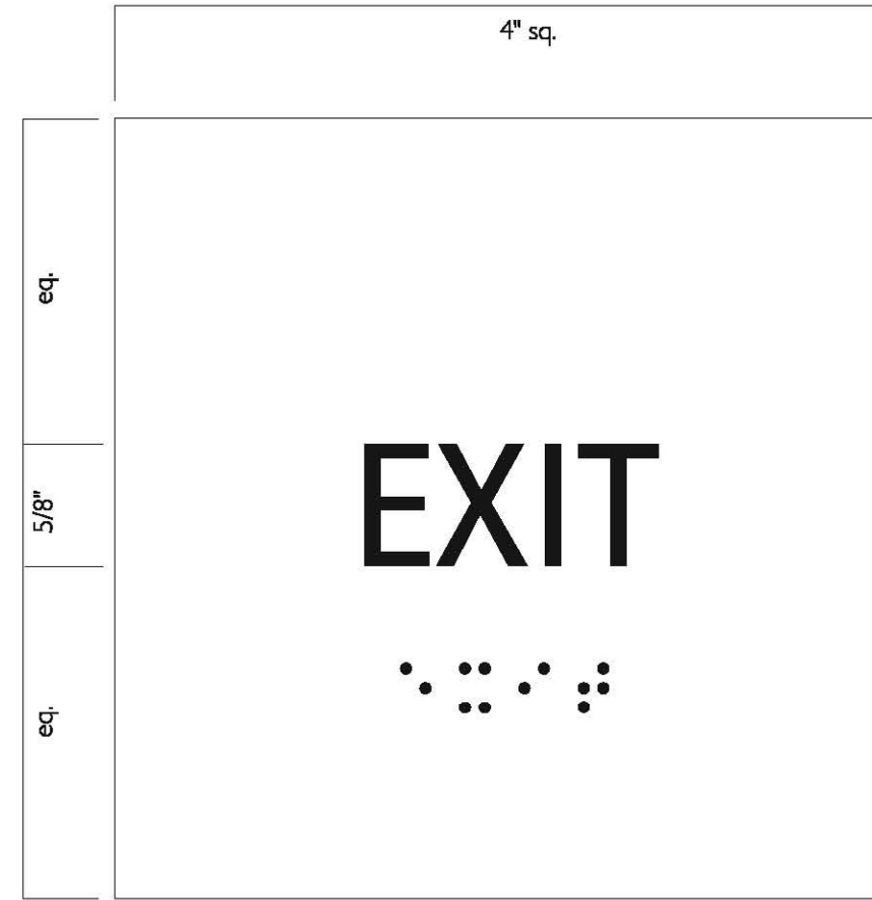
SIGN TYPE 6



SIGN TYPE 4-UNISEX



SIGN TYPE 7



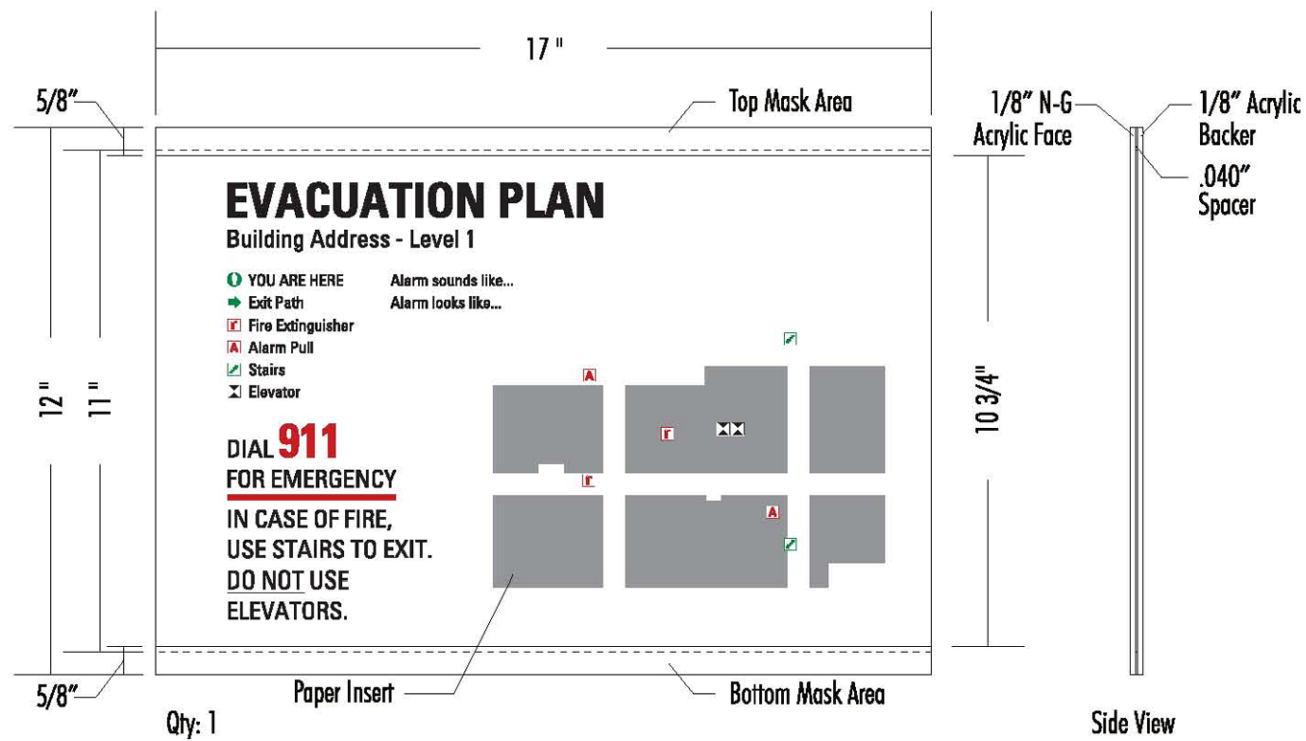
SIGN TYPE 8A



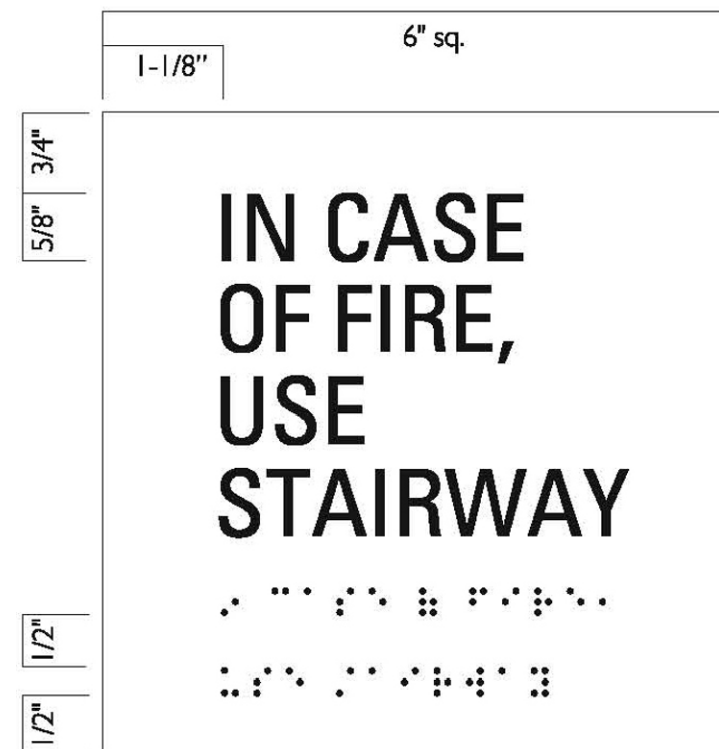
SIGN TYPE 6A



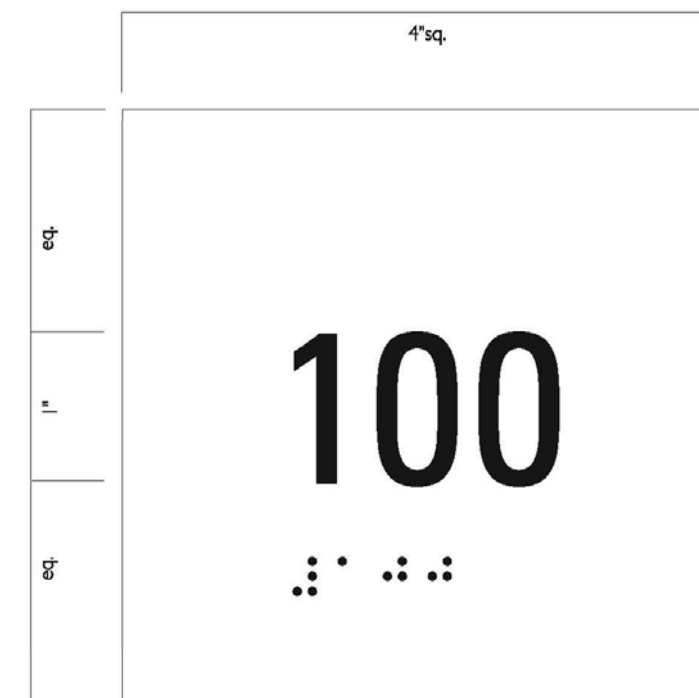
SIGN TYPE 8B



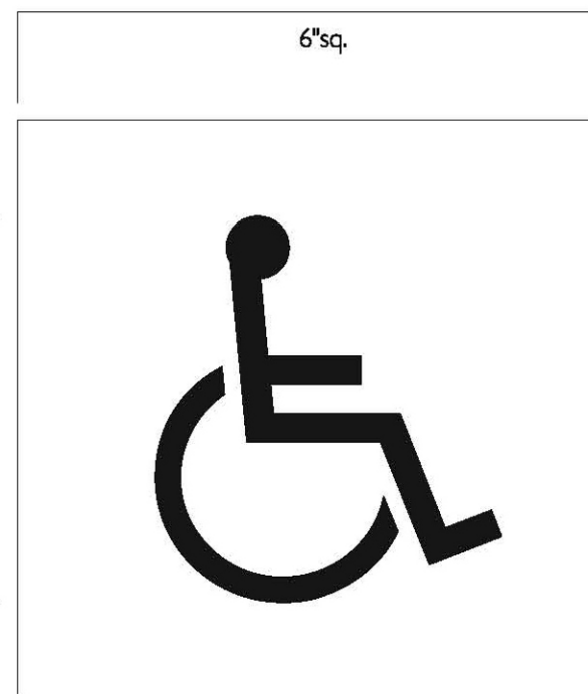
SIGN TYPE 9A-Map holder for Evacuation Maps and Annunciation Maps.
 University will provide the graphic.



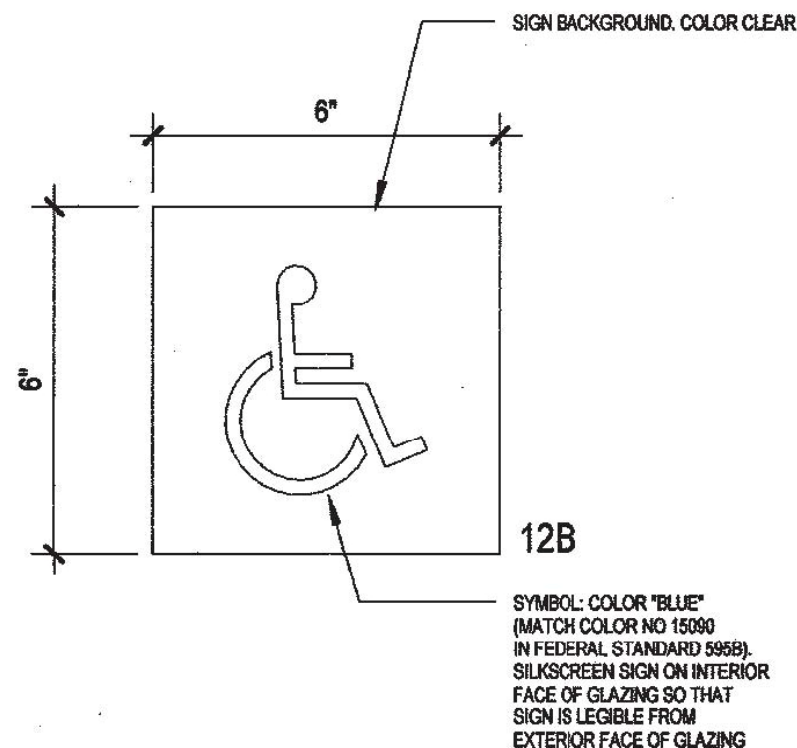
SIGN TYPE 10



SIGN TYPE 15



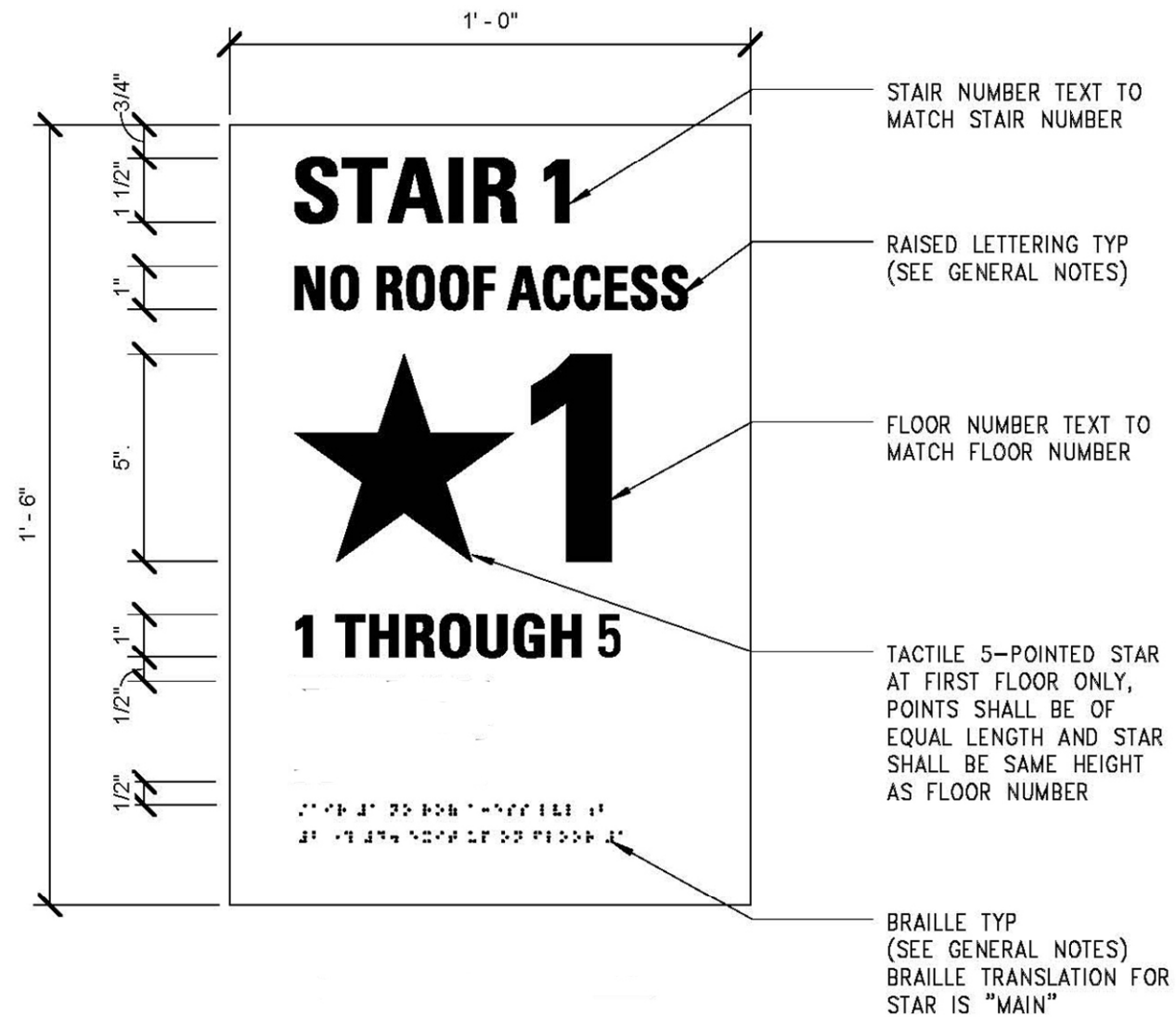
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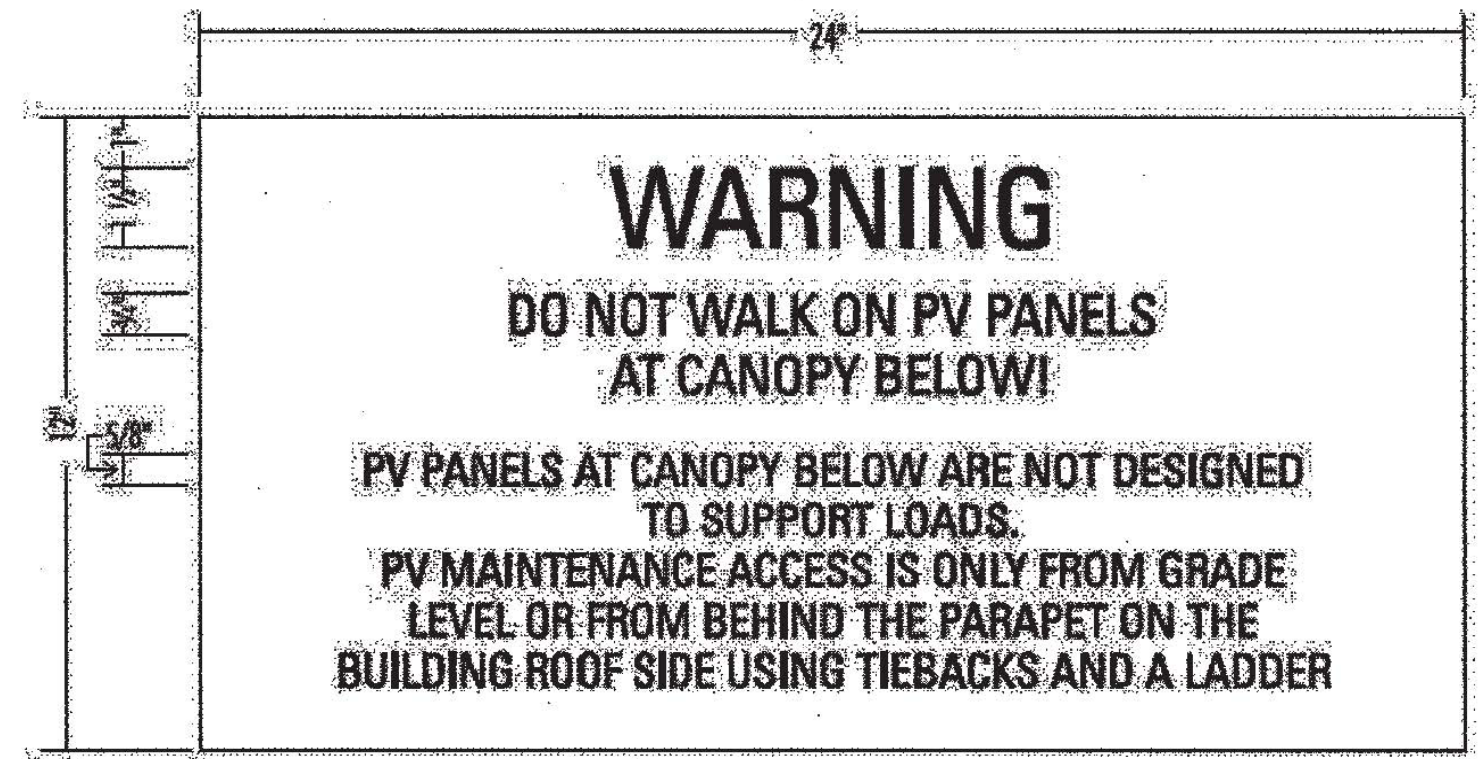
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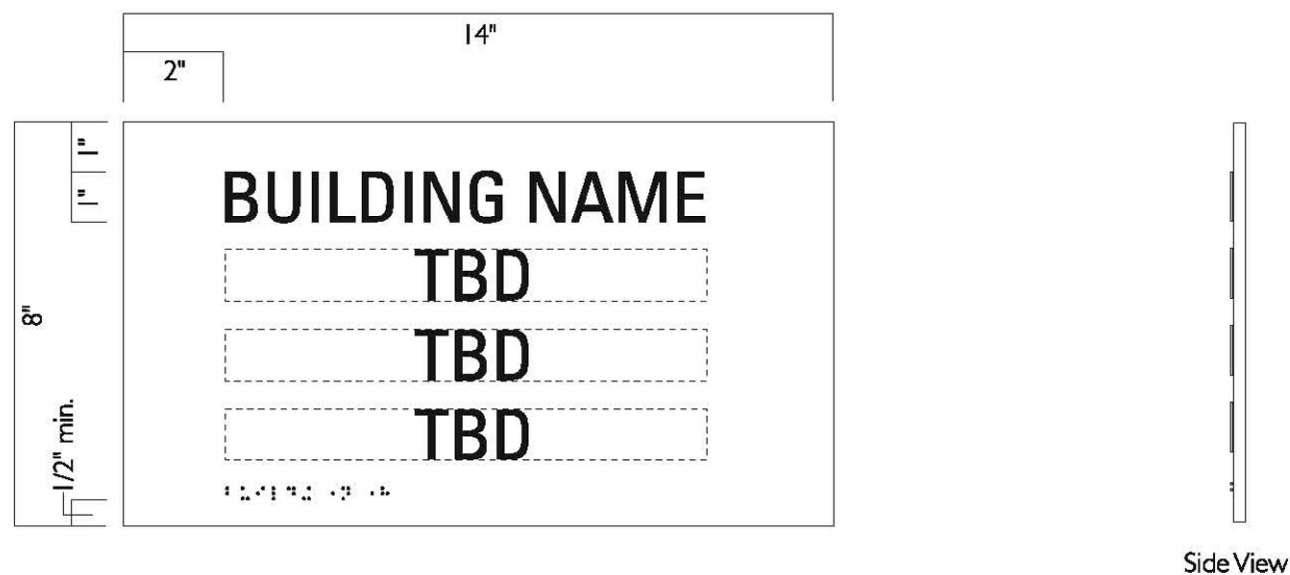
SIGN TYPE 15A



SIGN TYPE 13B



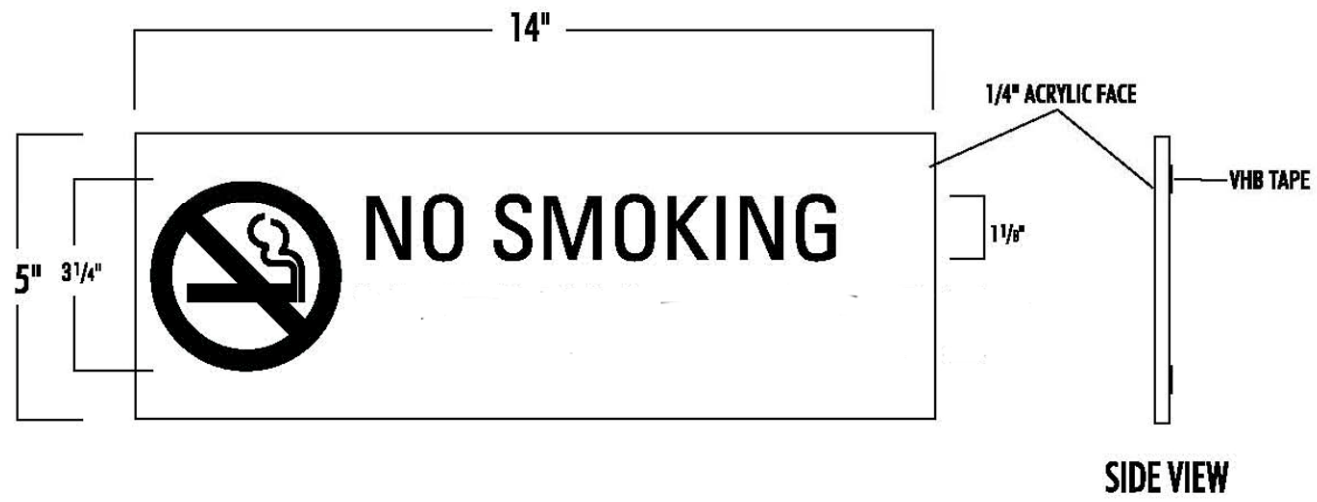
SIGN TYPE 20



SIGN TYPE 16



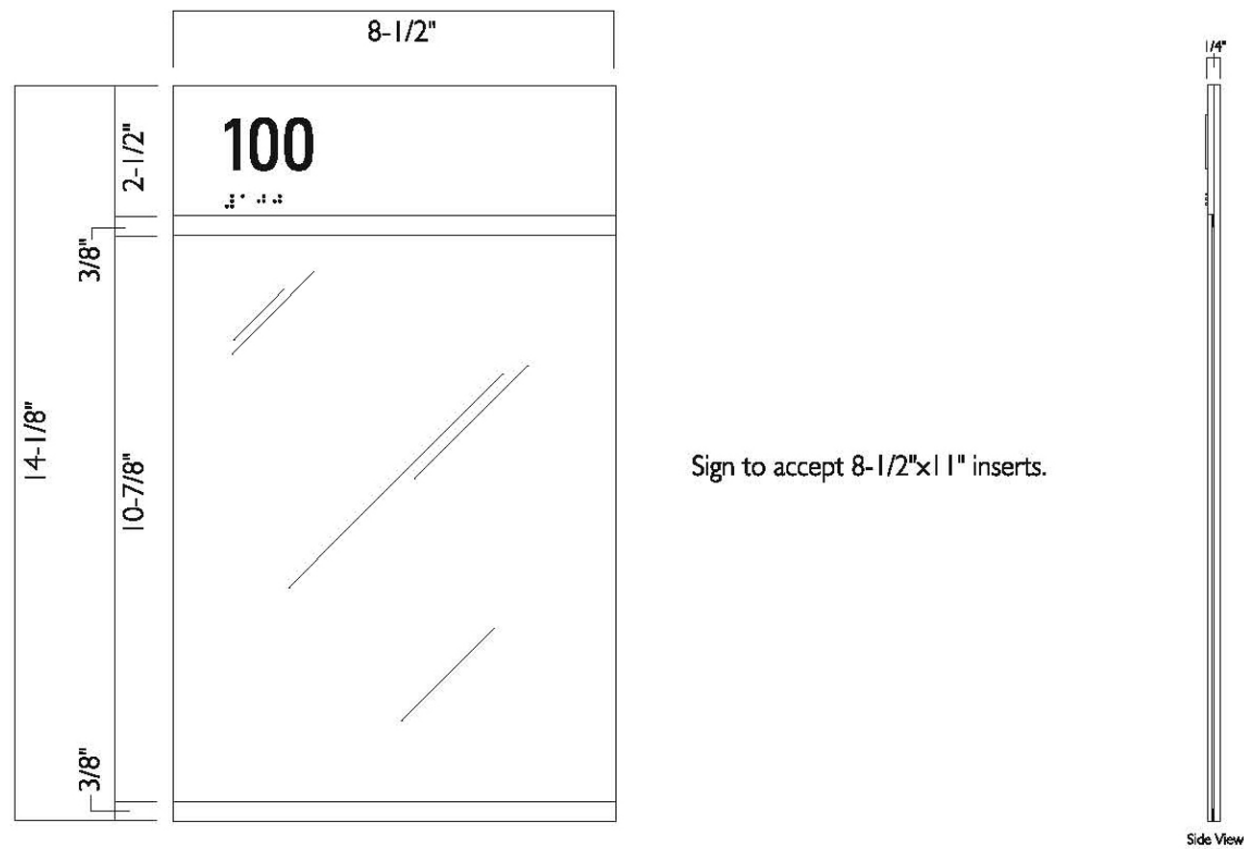
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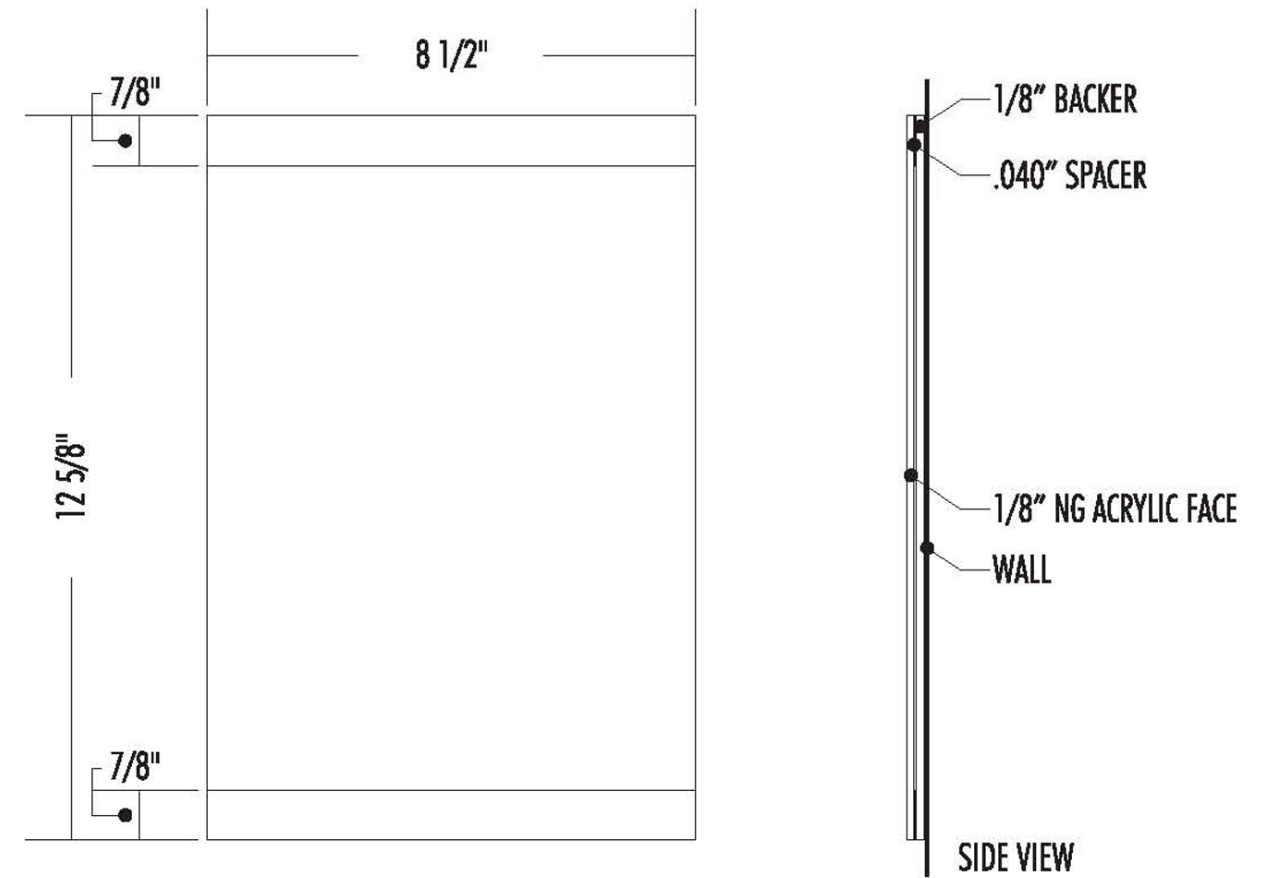
SIGN TYPE 40



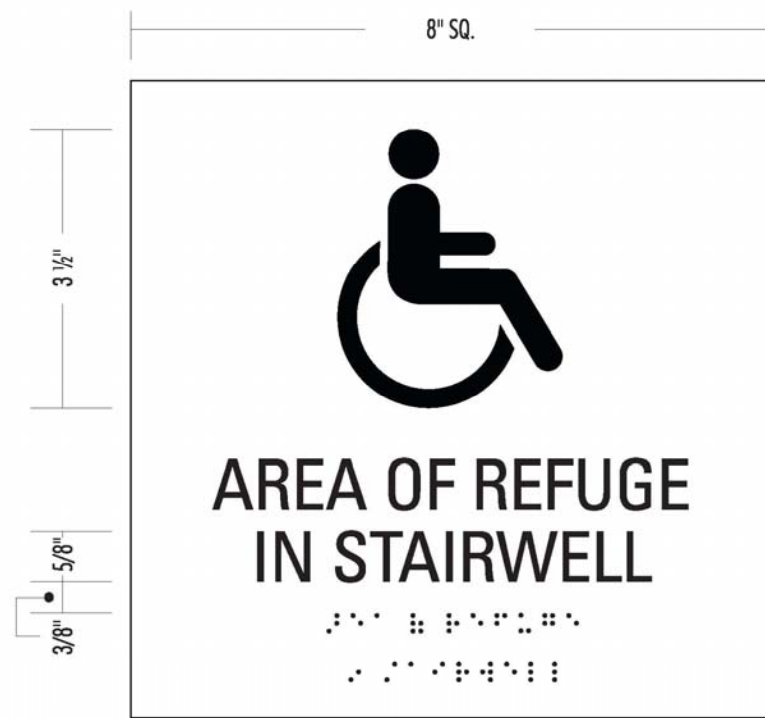
SIGN TYPE 41



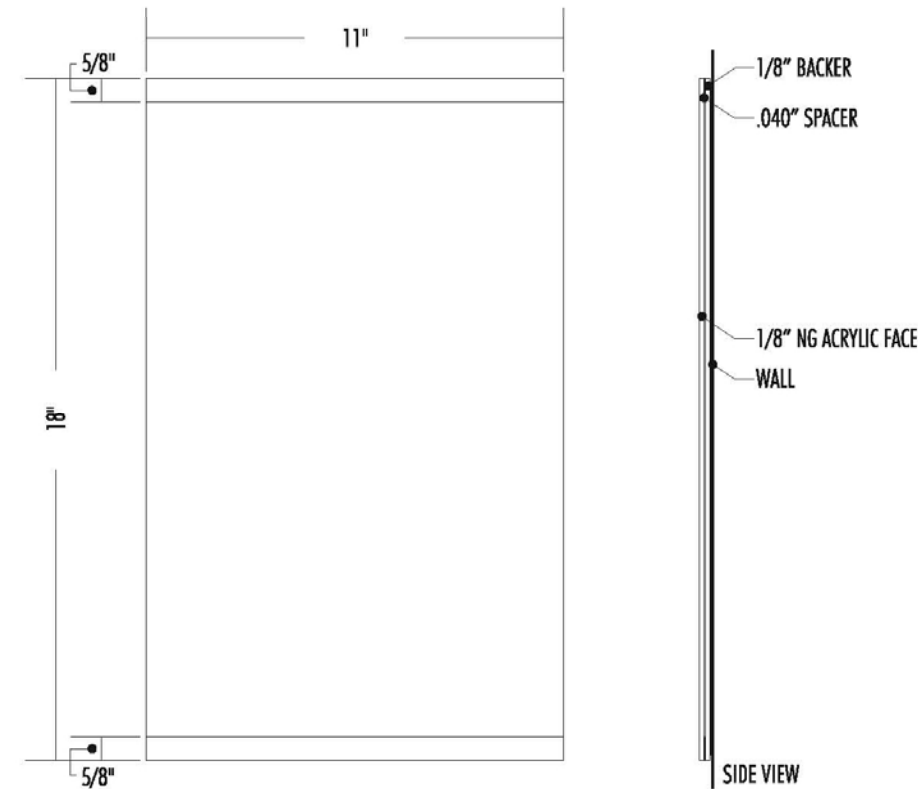
SIGN TYPE 21



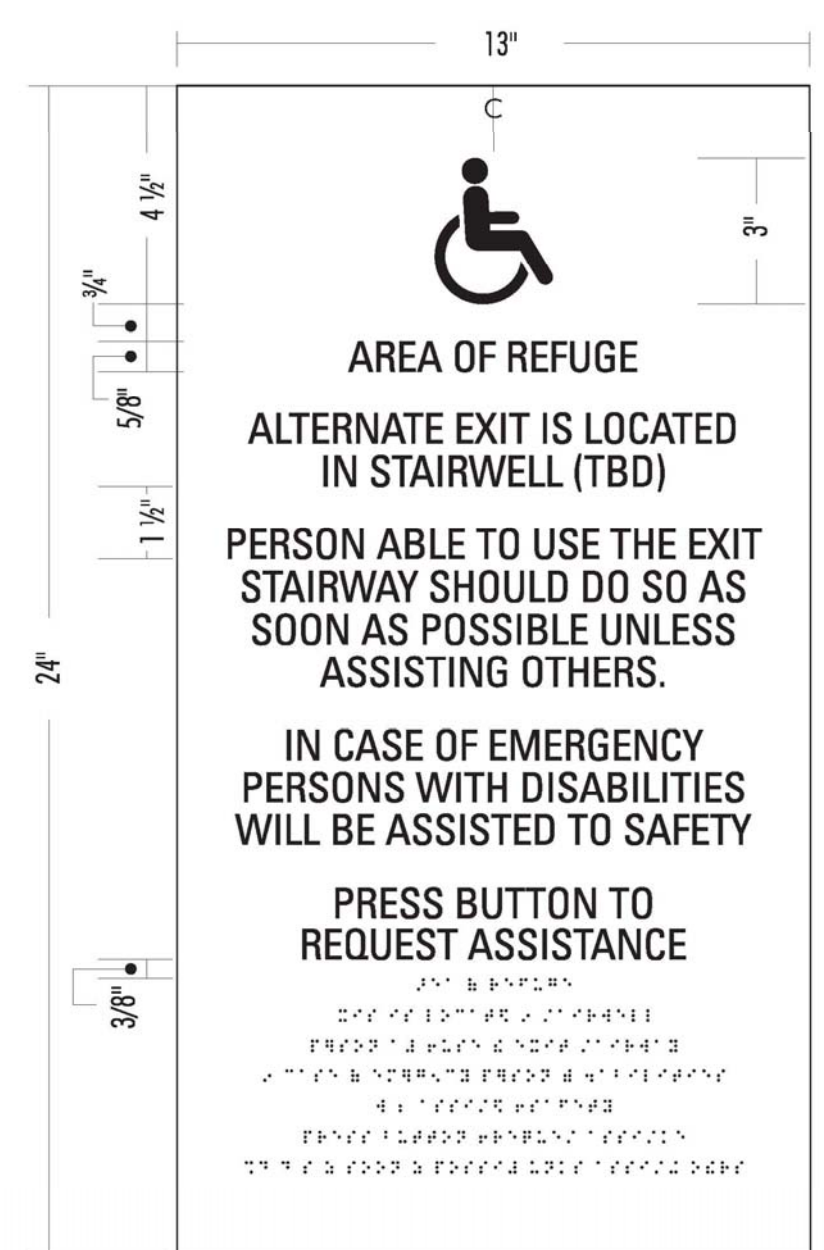
SIGN TYPE 22C



SIGN TYPE 31



SIGN TYPE 22D

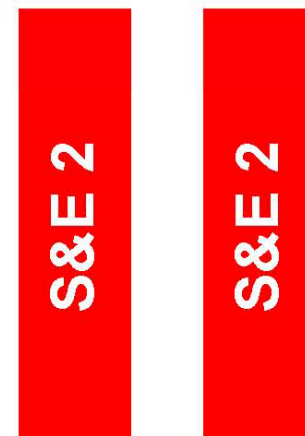


SIGN TYPE 32

SIGN TYPE 35

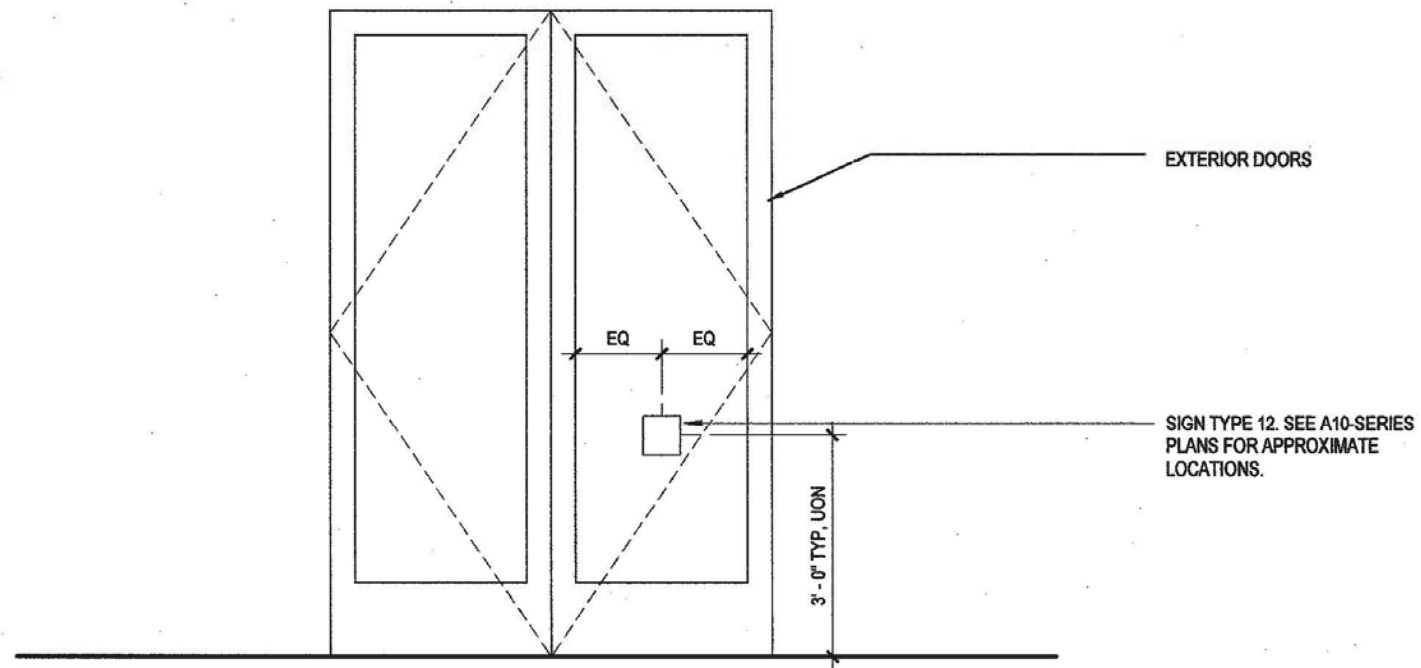


SIGN TYPE 35A

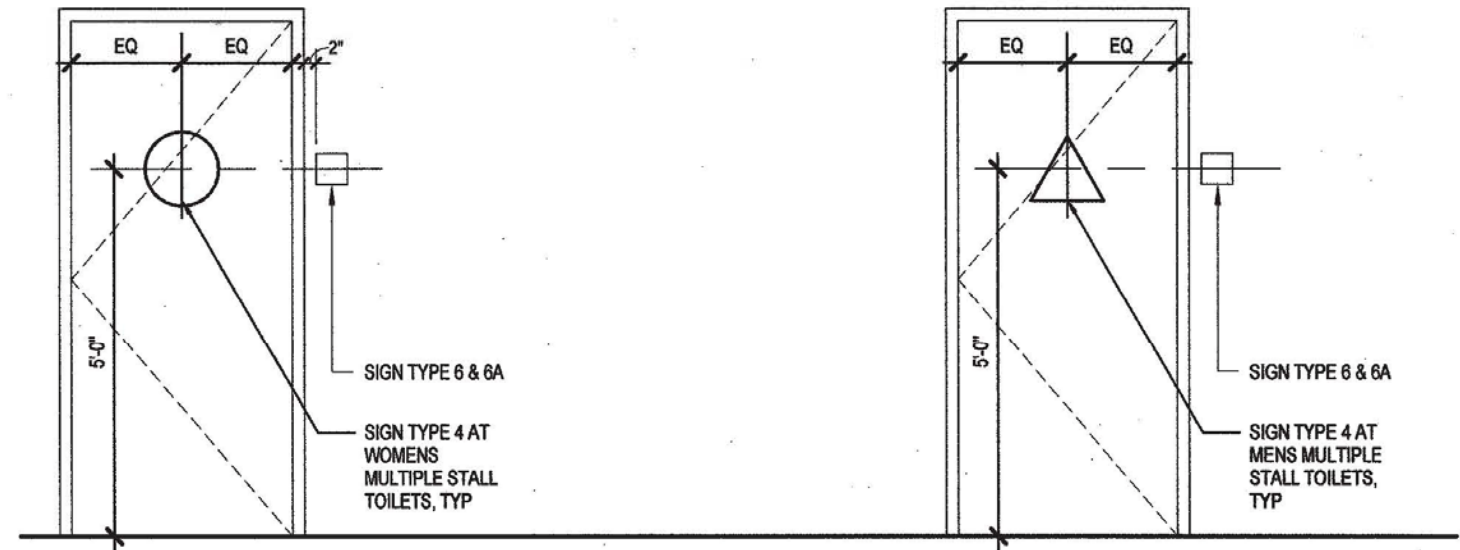


SIGN TYPE FDC

2 Labels for fire department connections: 1" font size, font type Fruiter 57 Condensed, red background, and white letter stencil, layout vertically on the pipe. Letters are to face Ansel Adams Road. The graphic sign copy is for place holder only. The University will confirm for the final sign copy. University will also verify the final locations before installation.



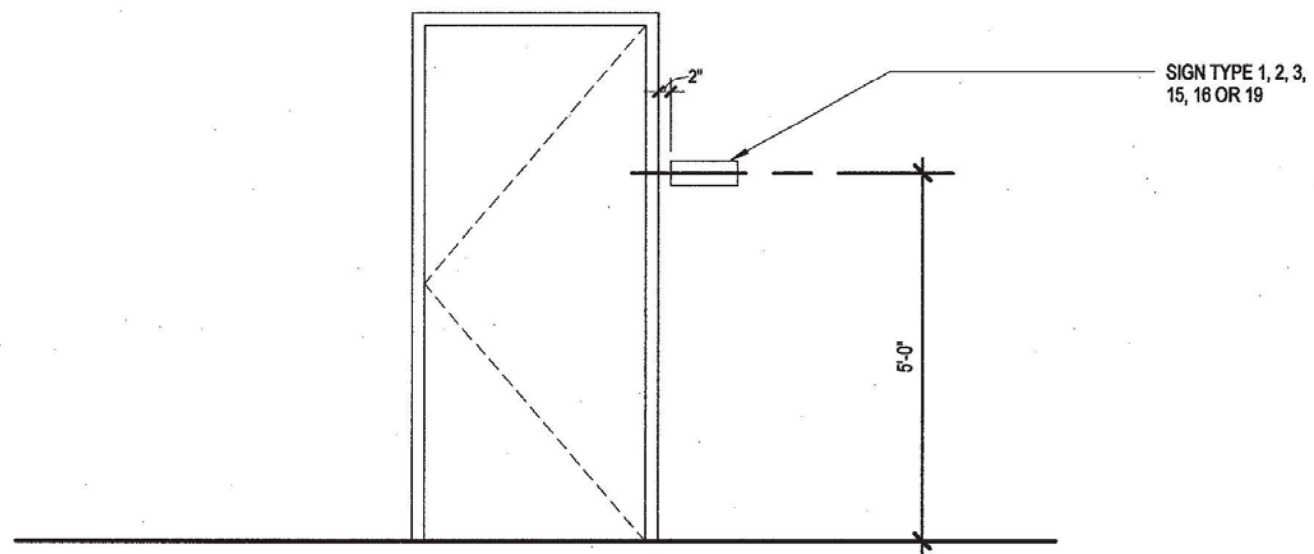
ELEVATION - SIGN TYPE 12



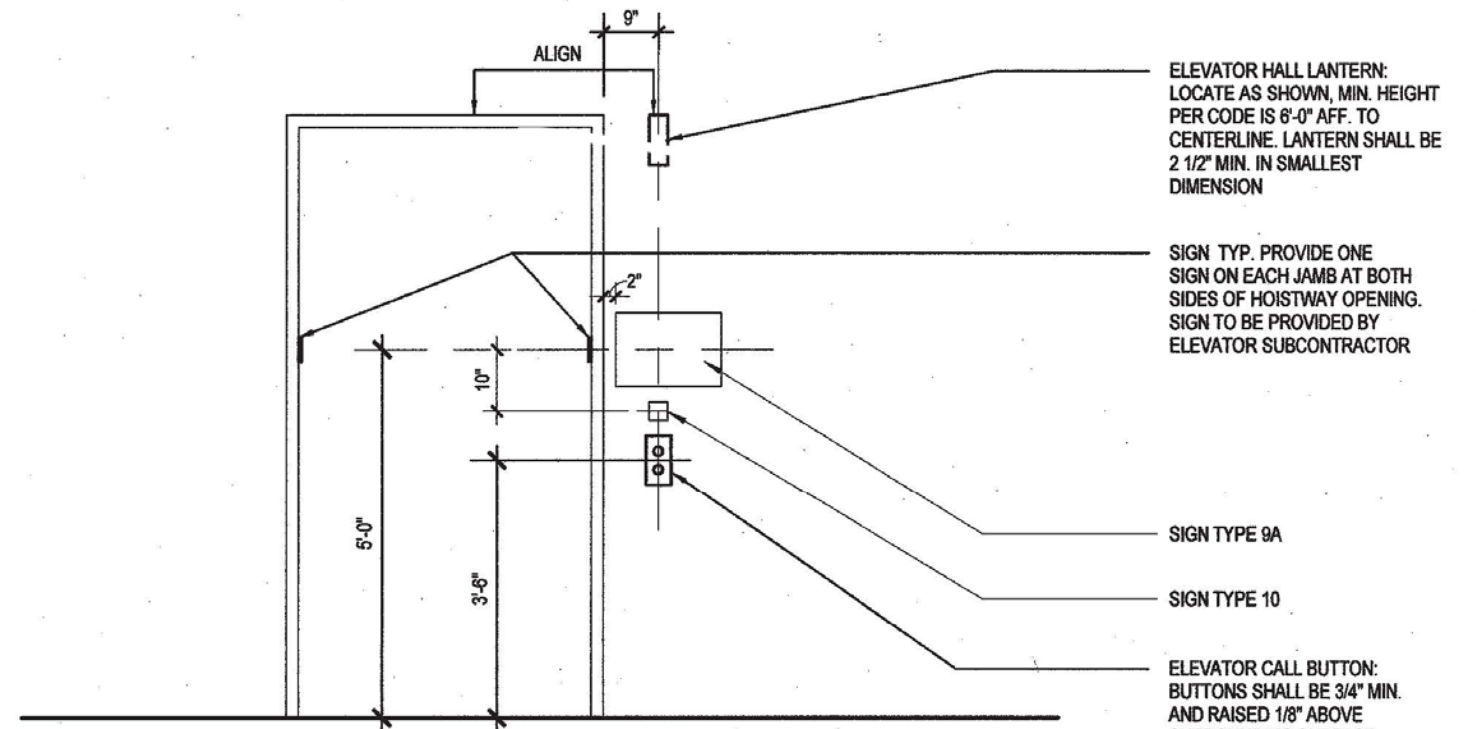
(A) TYPES 6 & 4 (WOMEN)

ELEVATION - SIGN TYPES 6 AND 4

(B) TYPES 6 & 4 (MEN)

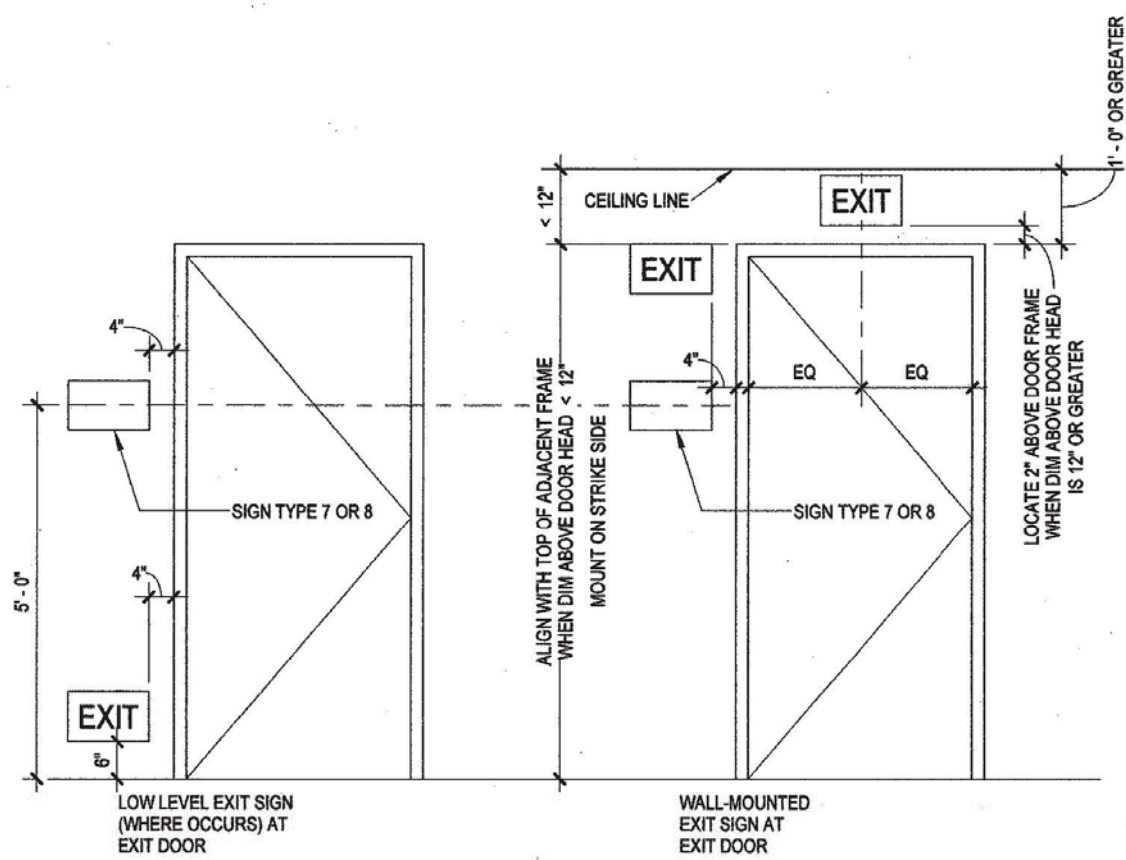


ELEVATION - SIGN TYPE 1, 2, 3, 15, 16 OR 19

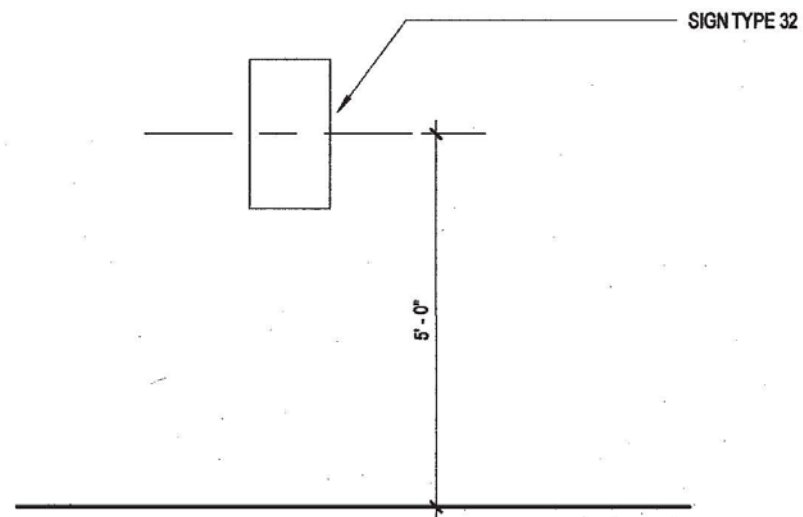


(A) AT SINGLE ELEVATOR DOORS

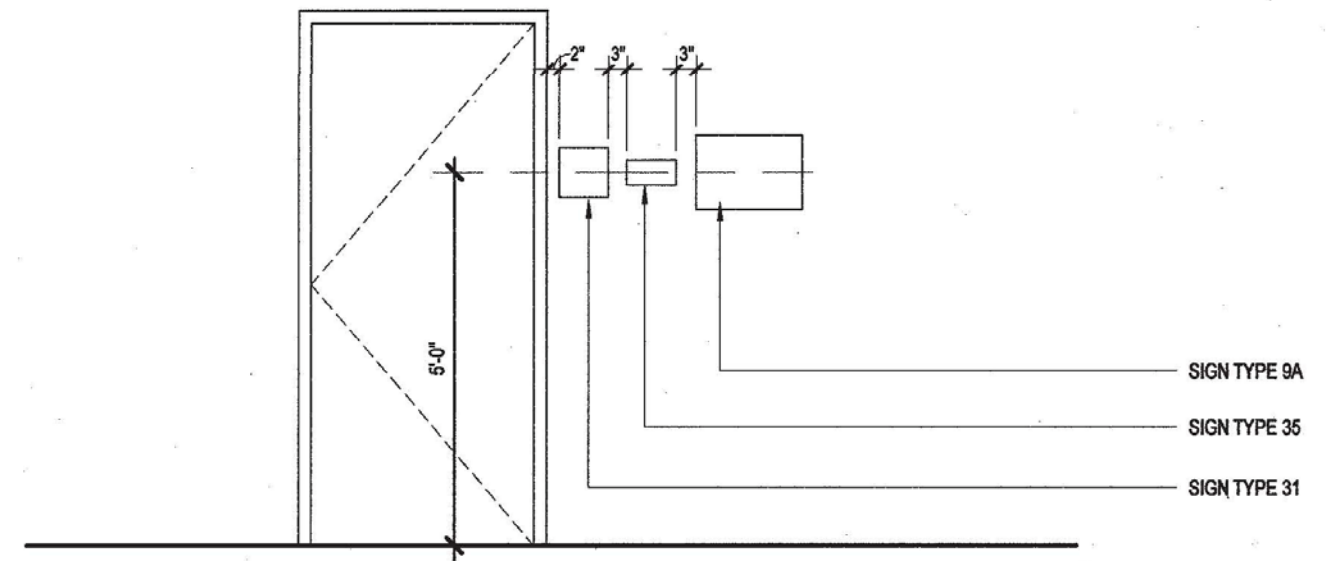
ELEVATION - SIGN TYPE 9A & 10



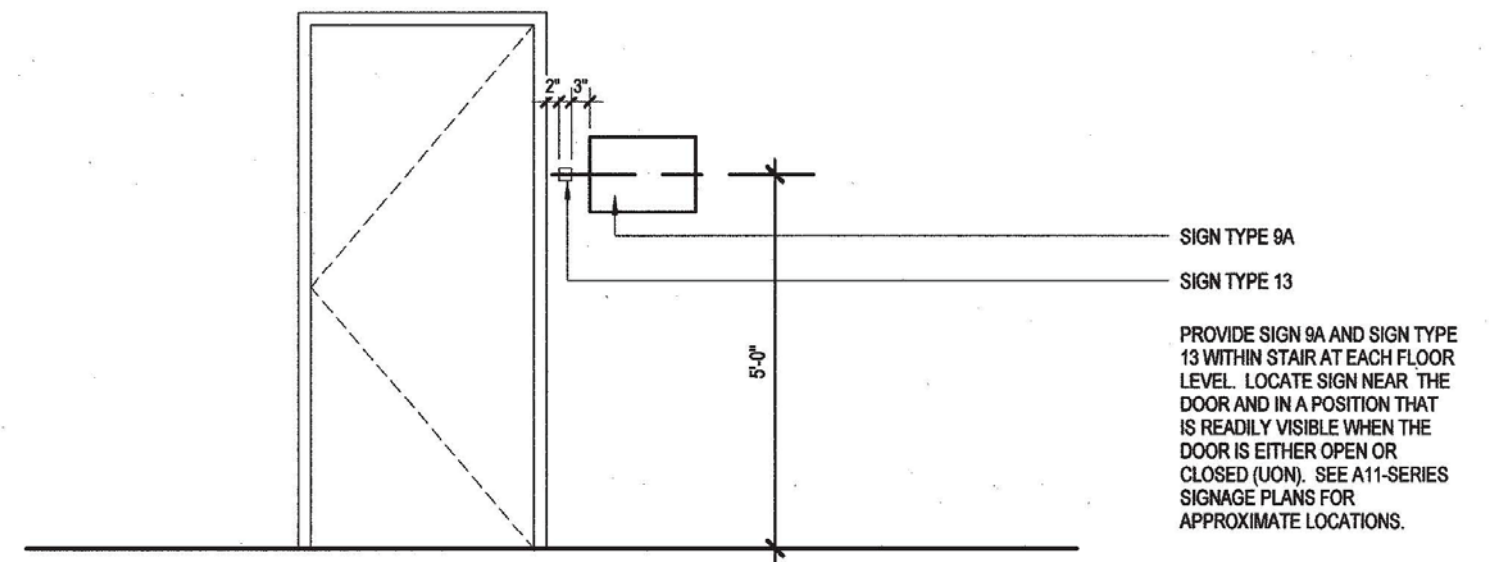
ELEVATION - SIGN TYPE 7 OR 8



ELEVATION - SIGN TYPE 32



(A) AT STAIRWELL (OUTSIDE)
ELEVATION - SIGN TYPES 31, 35, 9A

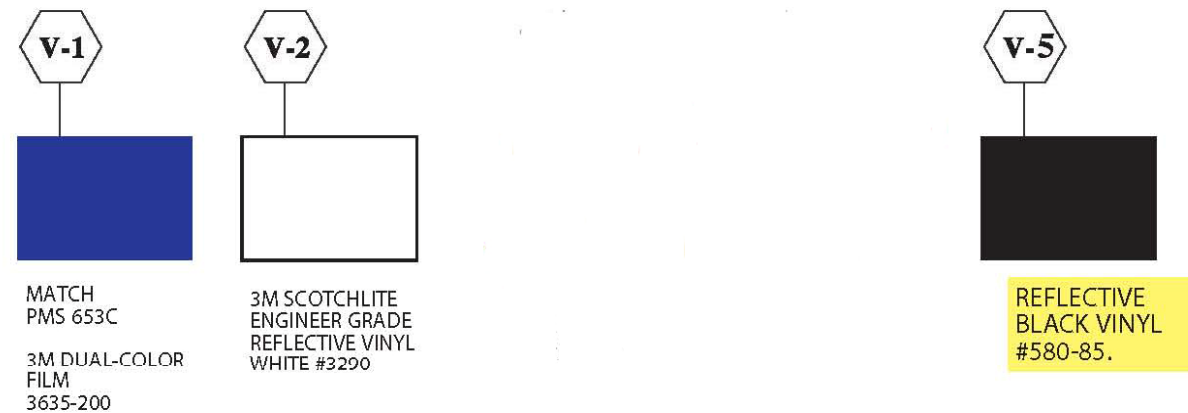
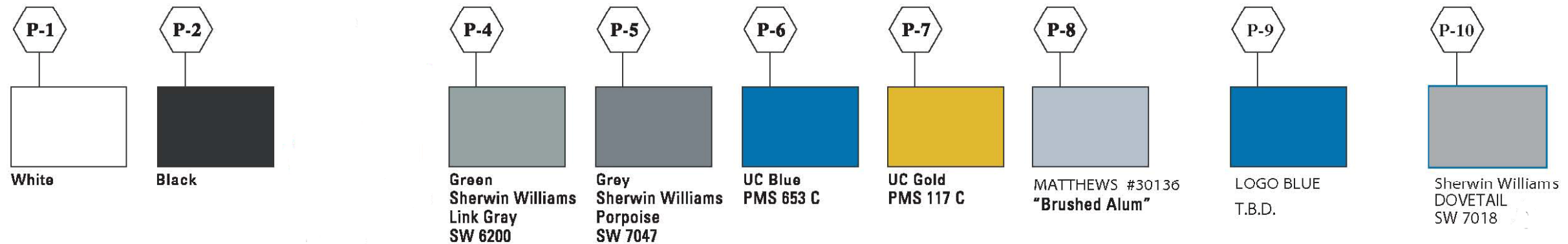


(B) AT STAIRWELL (INSIDE)
ELEVATION - SIGN TYPES 33 & 13

Illuminated Exterior Building Moment Sign (AA2-Primary Building ID & AA3-Secondary Building ID)

Color & Materials Palette

*** NOTE: ALL PAINT FINISHES ARE SATIN**





Minion Bold

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890

Frutiger 65 Bold

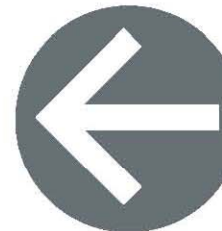
ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890

Frutiger 57 Condensed

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890

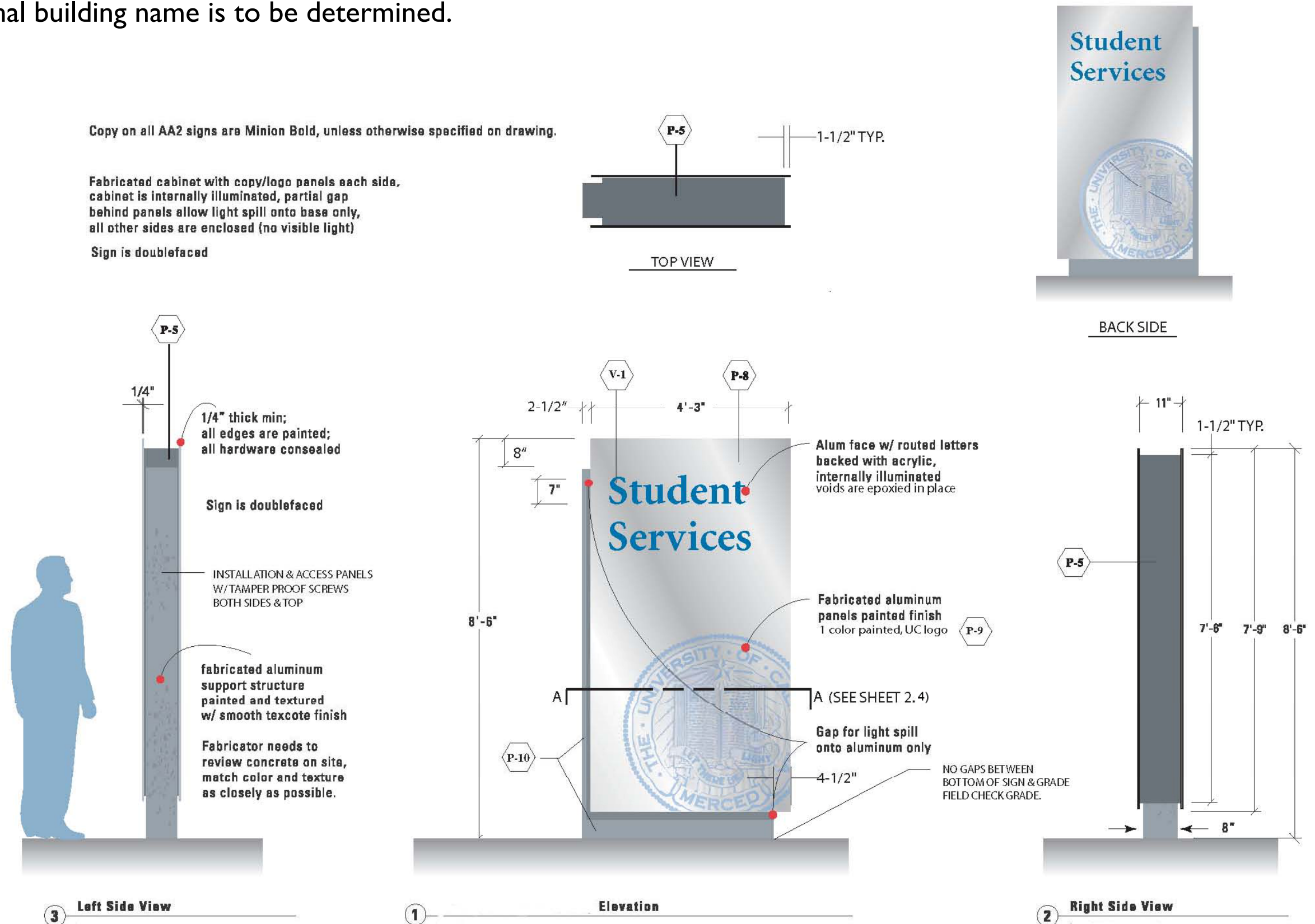
Frutiger 55 Roman

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890



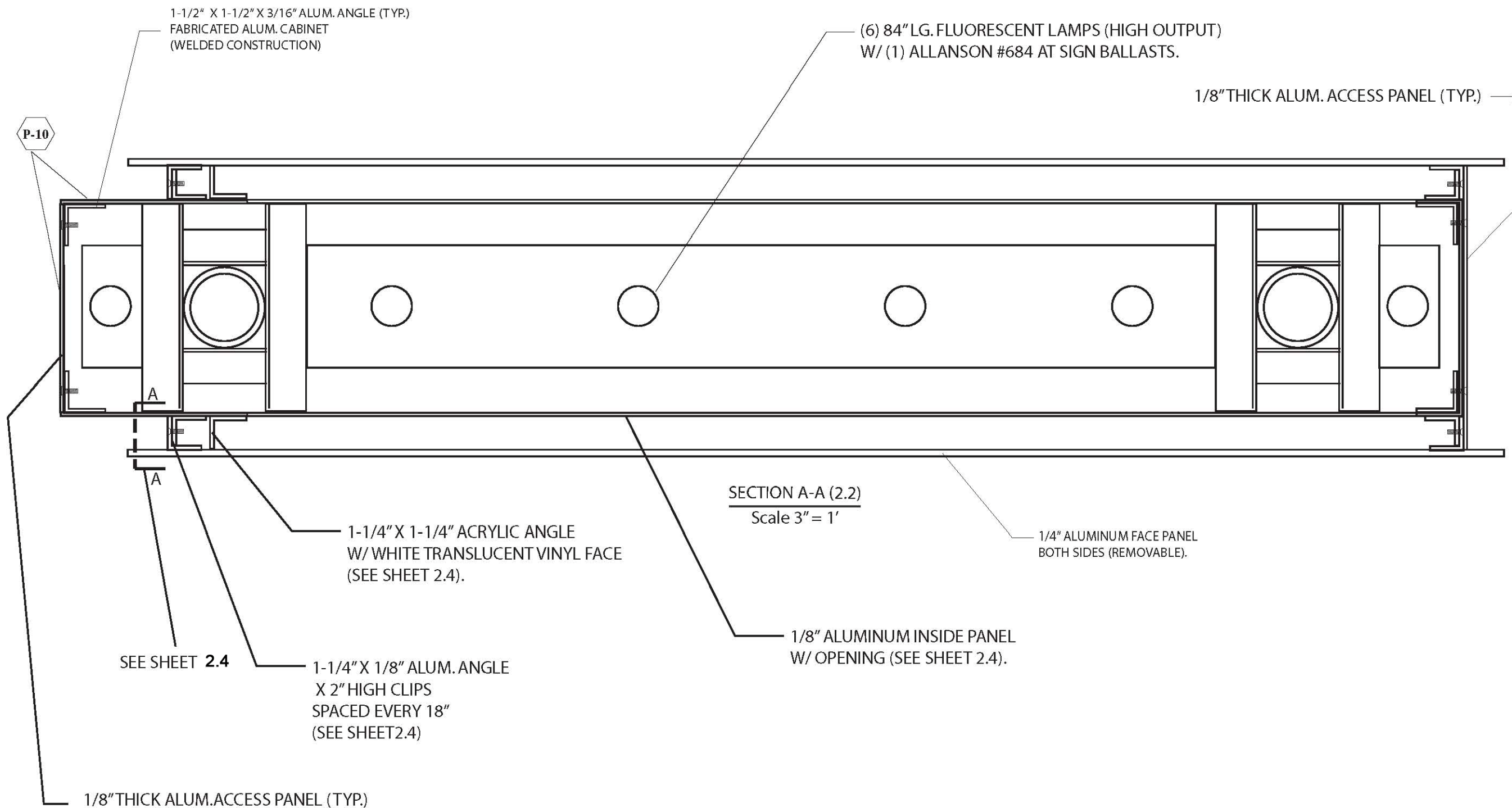
Illuminated Exterior Building Moment Sign

(AA2-Primary Building ID): Requires Stamp Structure Engineering Calculations. The graphic shown in page 2.2, 2.4 and 2.5 are for sample reference only. Final building name is to be determined.



Illuminated Exterior Building Moment Sign

(AA2-Primary Building ID):

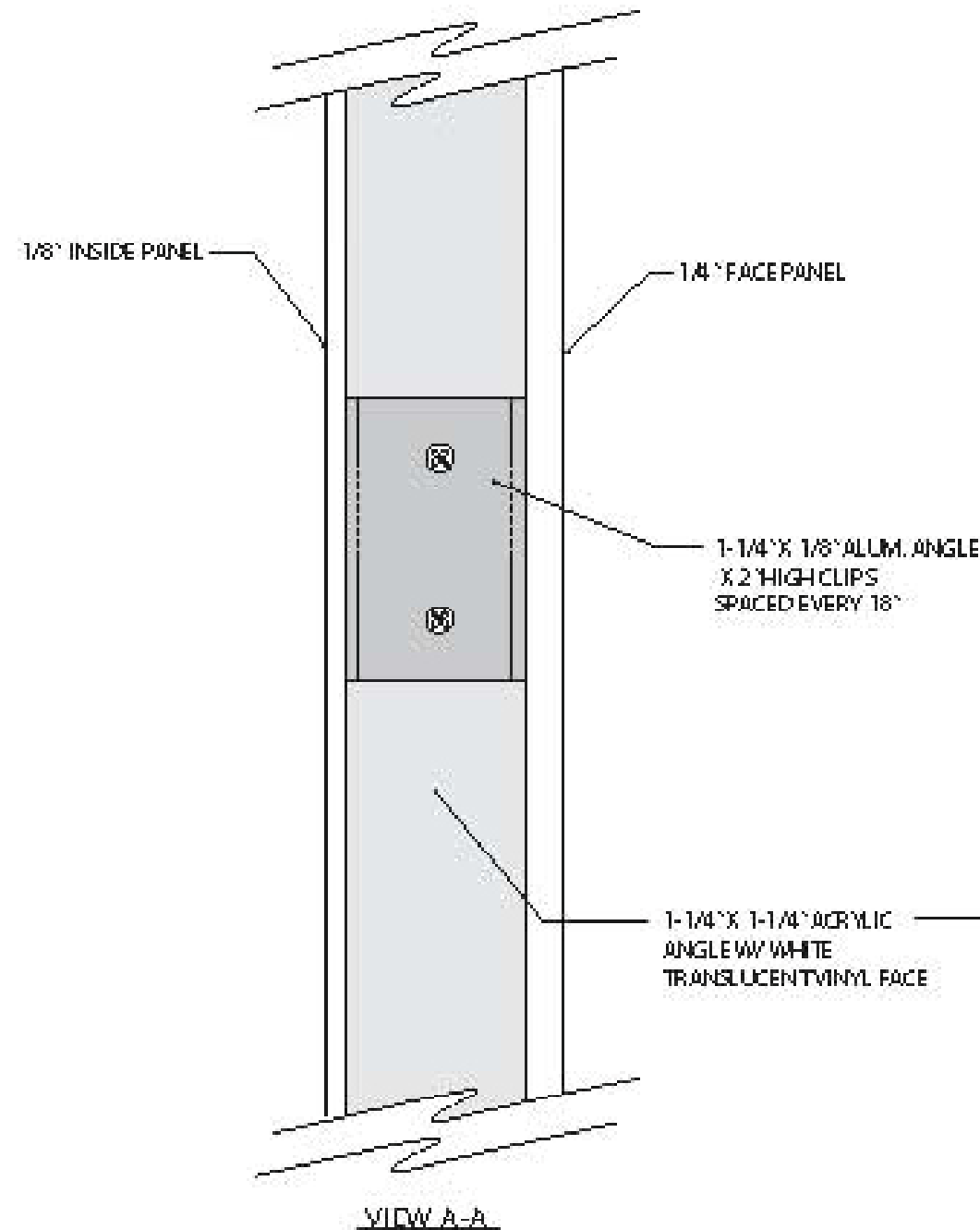


Illuminated Exterior Building Moment Sign

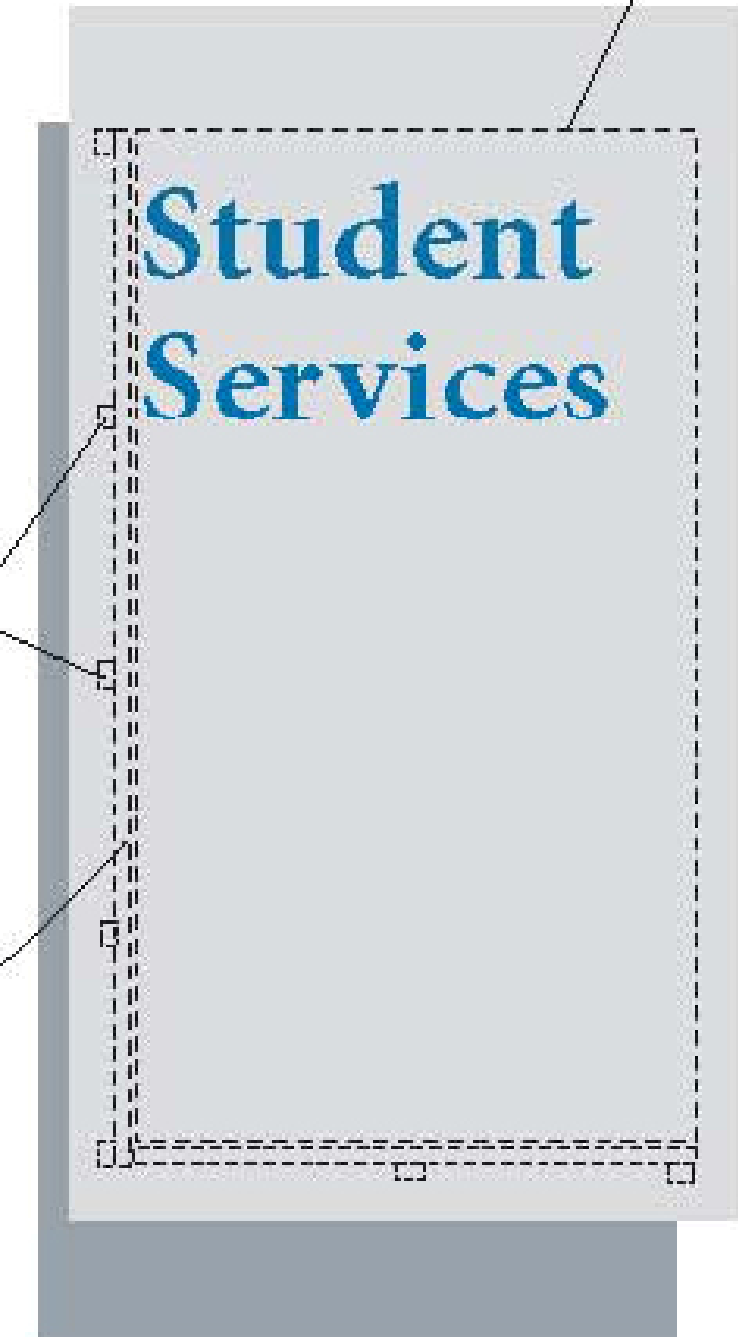
(AA2-Primary Building ID):



(6) 84" LG. FLUORESCENT LAMPS (HIGH OUTPUT)
W/ (1) ALLANSON #684 AT SIGN BALLASTS.

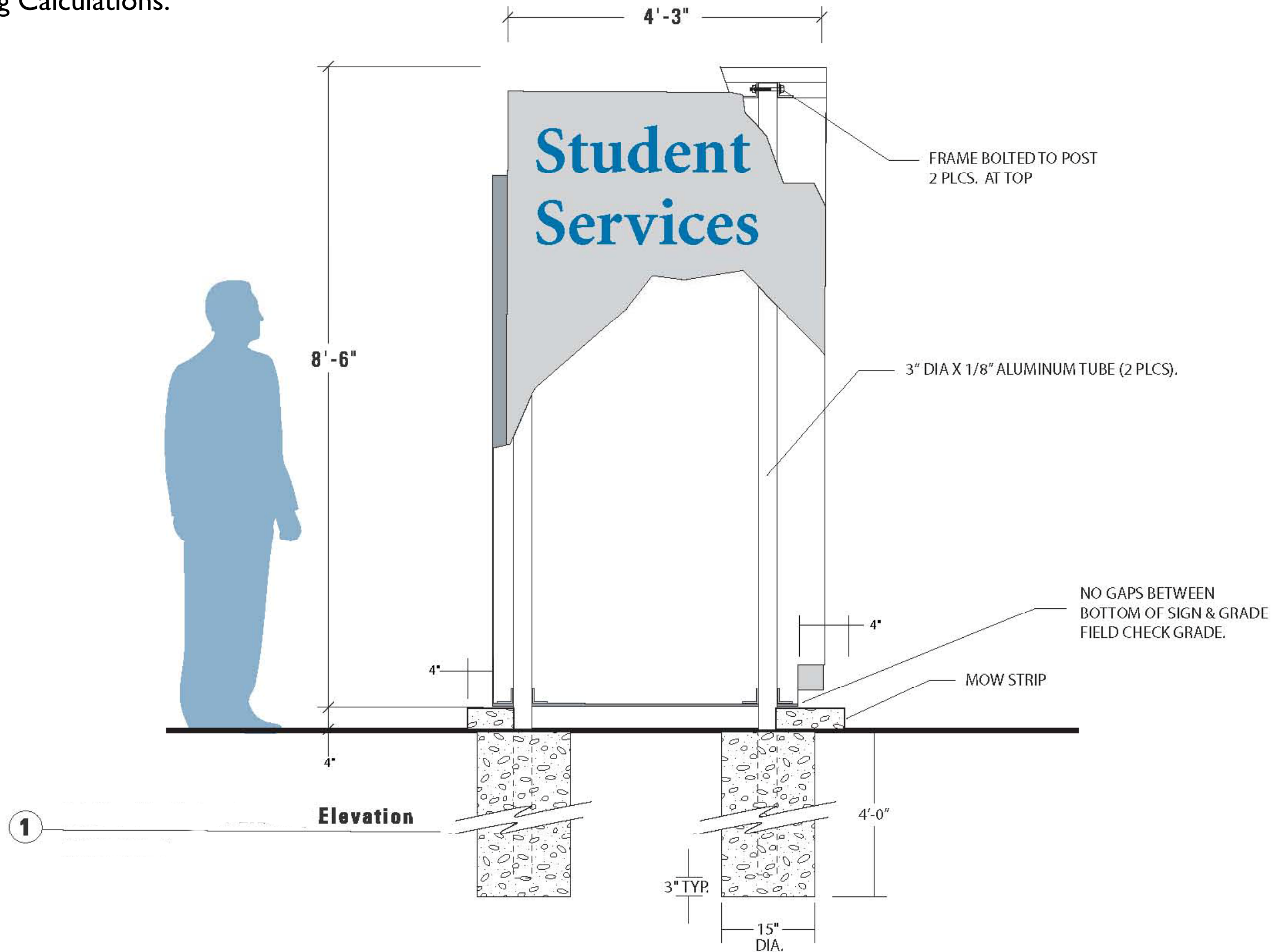


OPENING IN 1/8" ALUM. INSIDE PANEL



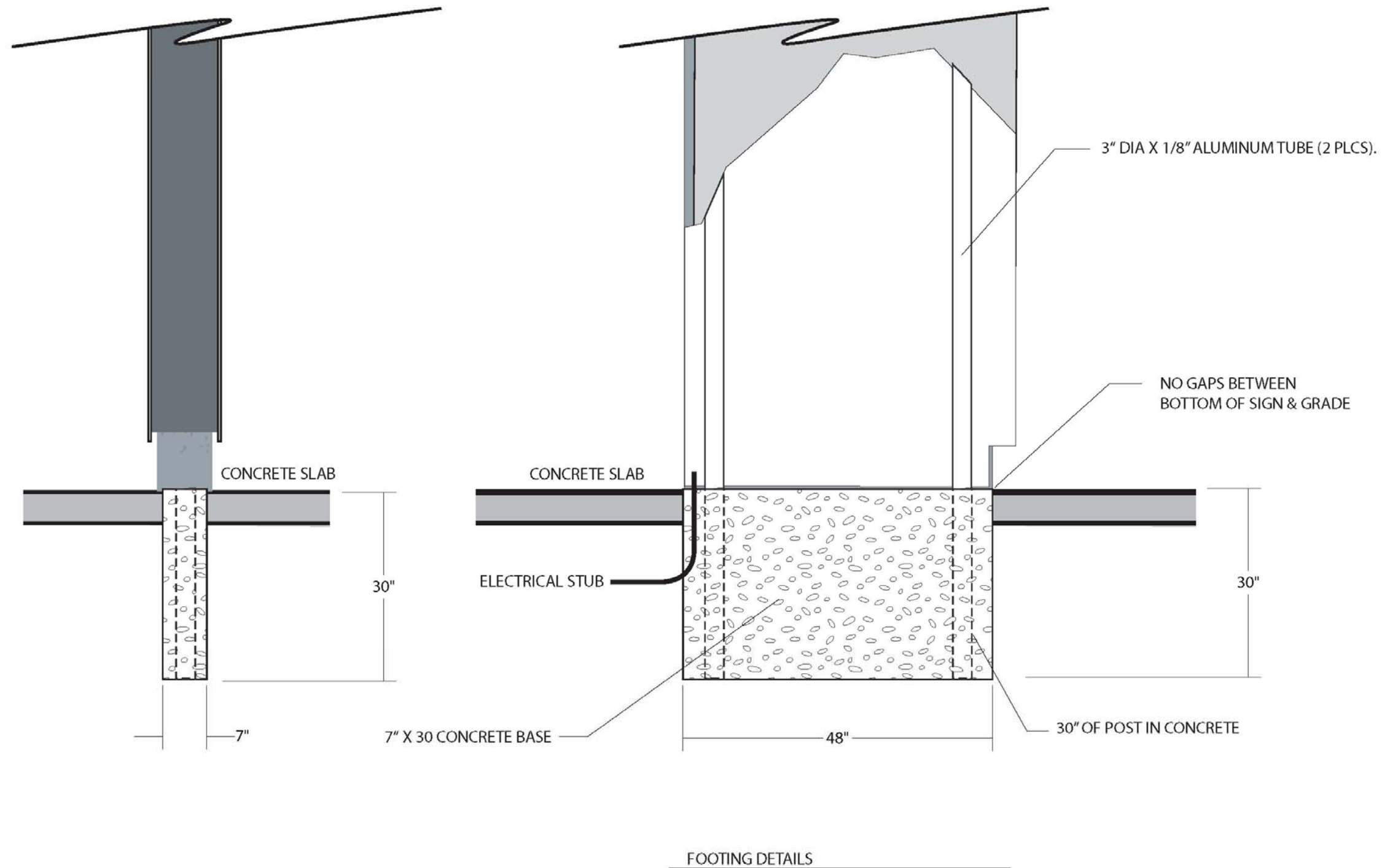
Illuminated Exterior Building Moment Sign

(AA2-Primary Building ID): This detail sheet is for reference only. Final concrete foundation will be pending on Stamp Structure Engineering Calculations.



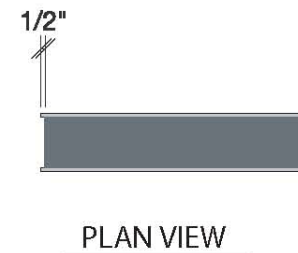
Illuminated Exterior Building Moment Sign

(AA2-Primary Building ID): This detail sheet is for reference only. Final concrete foundation will be pending on Stamp Structure Engineering Calculations.



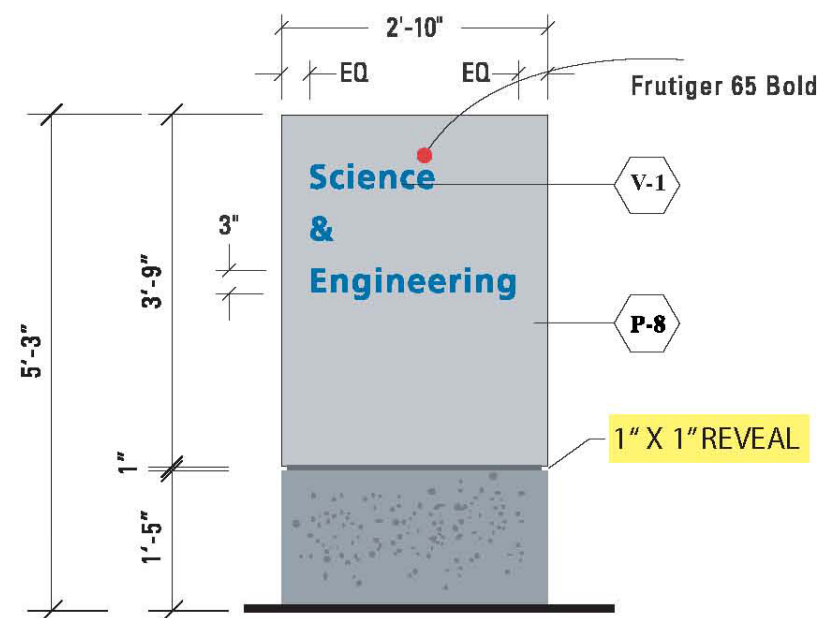
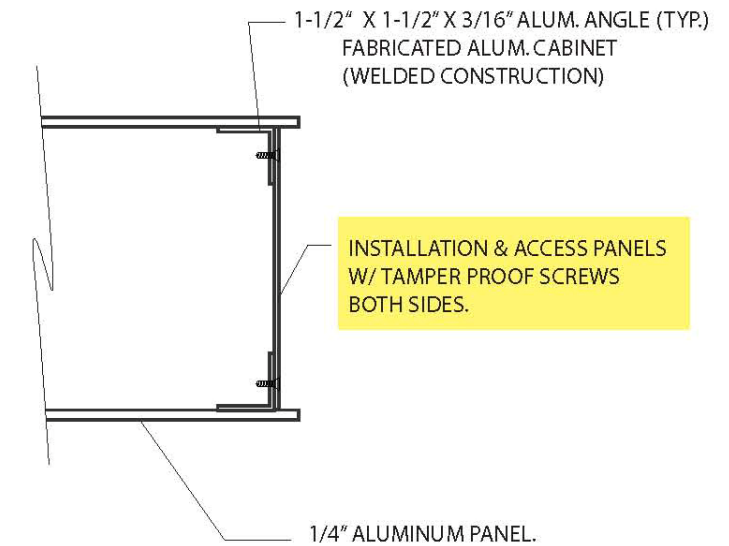
Illuminated Exterior Building Moment Sign

(AA3-Secondary Building ID): Does Not Require Stamp Structure Engineering Calculations. The graphic shown in page 2.7 and 2.8 are for sample only. Final building name is to be determined.

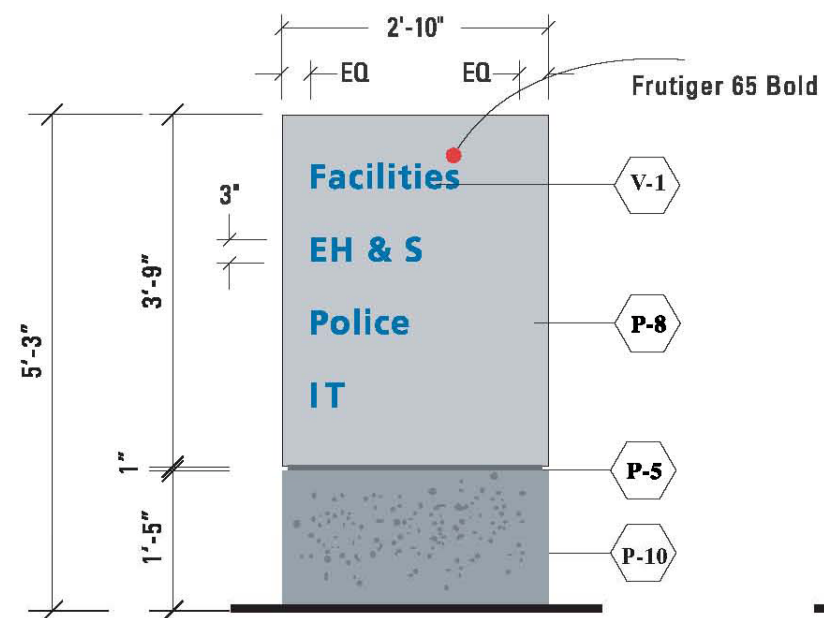


Fabricated painted aluminum cabinet with paint finish face panels, face panels are flush to main cabinet (no light spill), letters/address are routed and backed with acrylic, cabinet is internally illuminated

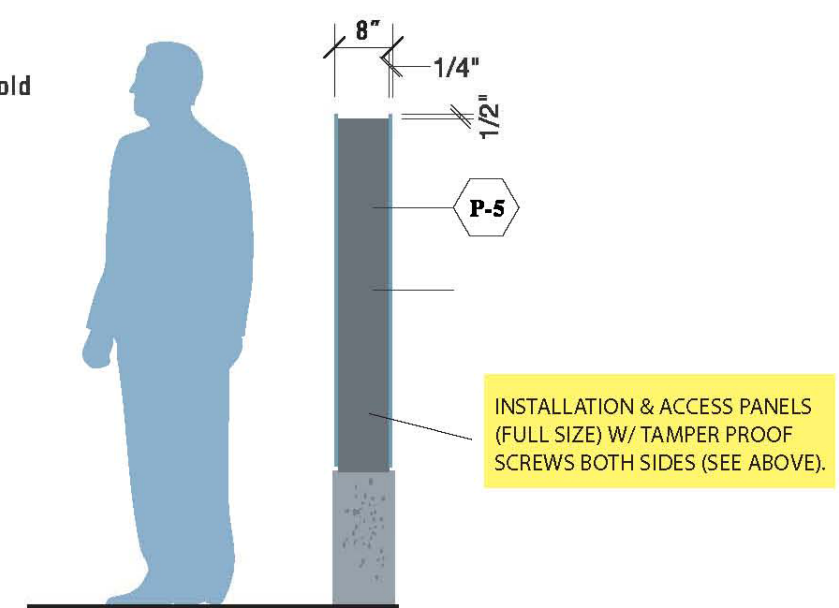
Sign is doublefaced



1 Elevation :: Science & Engineering
Scale 1/2" = 1'



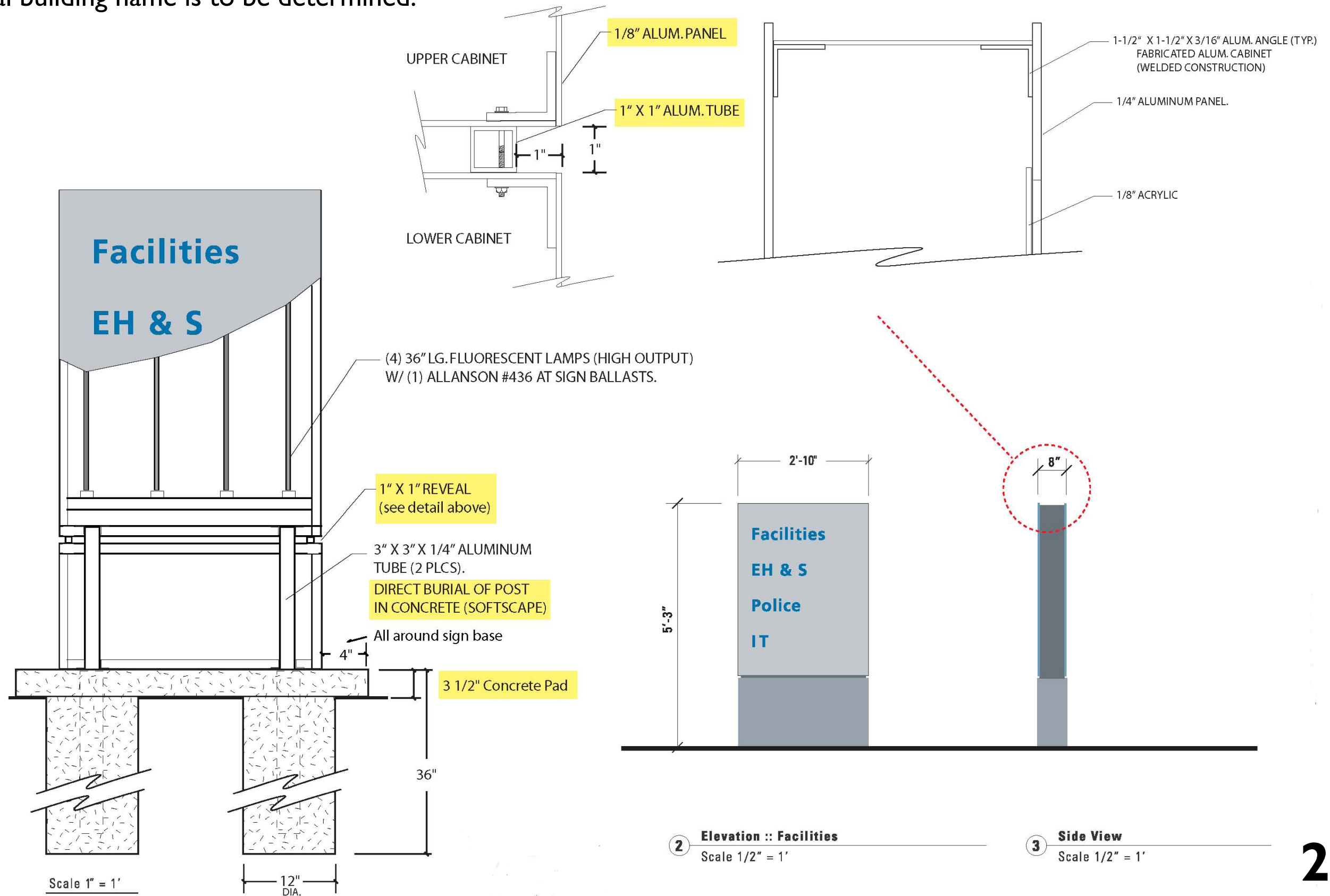
2 Elevation :: Facilities
Scale 1/2" = 1'



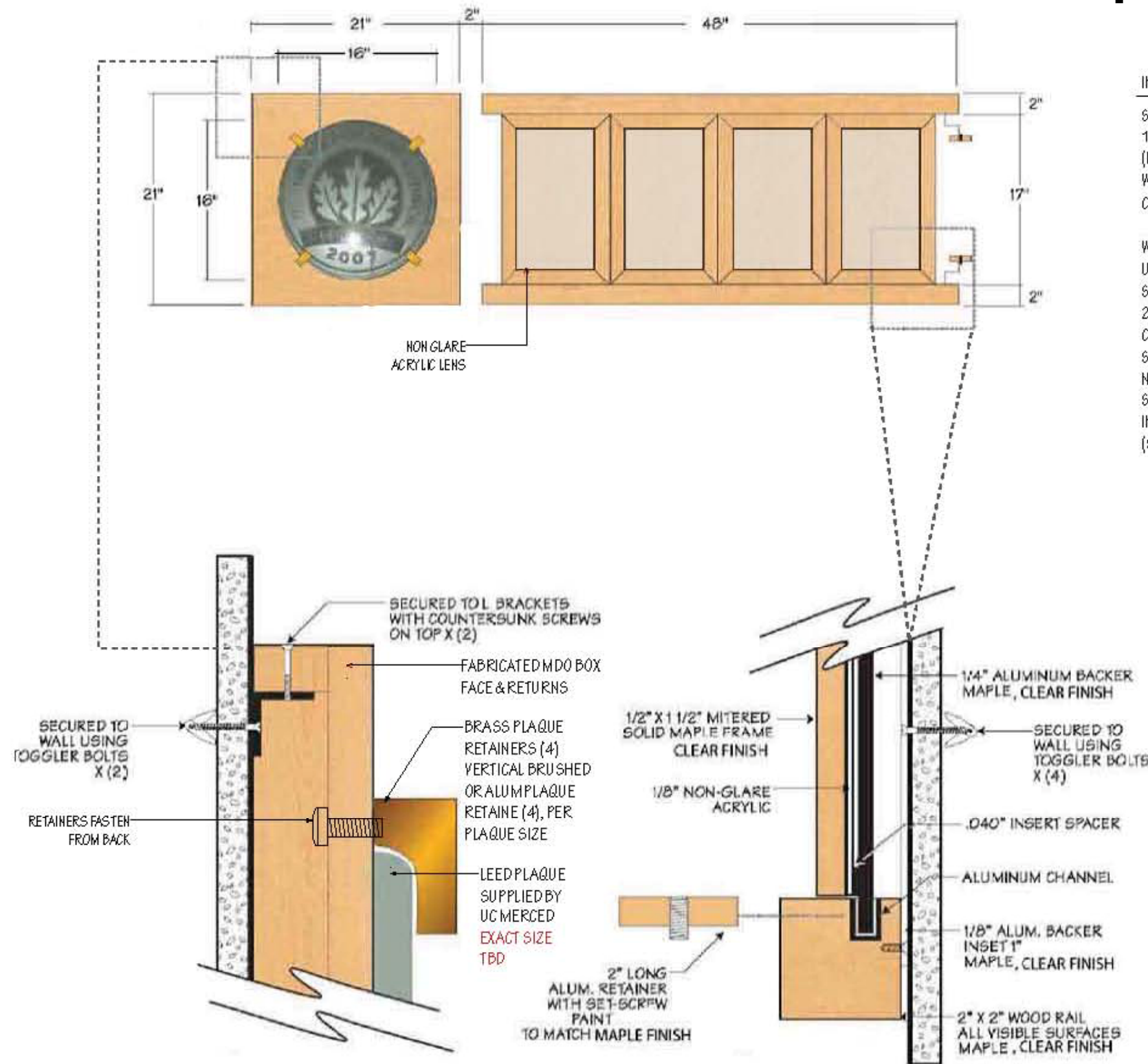
3 Side View
Scale 1/2" = 1'

Illuminated Exterior Building Moment Sign

(AA3-Secondary Building ID): Does Not Require Stamp Structure Engineering Calculations. The graphic shown in page 2.7 and 2.8 are for sample only. Final building name is to be determined.



Interior Wall-Mounted LEED Display Sign:



INTERIOR WALL MOUNTED LEED DISPLAY

SEAL:

1" THICK CLEAR ACRYLIC "LEED" CIRCLE (PROVIDED BY UC MERCED) APPROX 16" DIA. WITH 21" SQ X 2" THICK PLYWOOD PANEL WITH CLEAR MAPLE FINISH VENEER BACKER PANEL.

WINDOW FRAME(S):

UNDERSIZED 1/8" ALUMINUM BACKER PANEL SECURED TO WALL WITH TOGGLE BOLTS (MIN 4). 2" X 2" TOP AND BOTTOM FRAME RAILS WITH ALUMINUM CHANNEL TO RECEIVE 1/4" ALUMINUM BACKER. SOLID MAPLE "WINDOW" FRAMES CONSTRUCTED WITH NON-GLARE ACRYLIC FACES, TO SLIDE OUT OF RAIL SYSTEM TO ACCESS COLOR PAPER INSERTS. INSERTS PROVIDED BY UC MERCED. (SEE SIDE DETAIL(S) FOR CONSTRUCTION)

