

UNIVERSITY OF CALIFORNIA, SANTA BARBARA

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SANTA BARBARA • SANTA CRUZ

OFFICE OF DESIGN & CONSTRUCTION SERVICES and PHYSICAL FACILITIES

CONTRACTING SERVICES

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Santa Barbara, California 93106-1030
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SENT VIA: FAX ON THIS DATE
 HAND DELIVERY ON THIS DATE
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HOLDERS OF PLANS AND SPECIFICATIONS:

Stairwell Lighting Upgrade,
Project No. FM110579S/136-02

Addendum No. 2

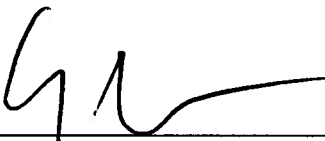
September 2, 2011

Enclosed is **ADDENDUM NO. 2** to the Construction Documents on the above-captioned project.

Bid date changed from September 6, 2011 to **Thursday, September 8, 2011** at 2:30 PM to be held at:

CONTRACTING SERVICES
Facilities Management, Bldg. 439,
Door #E, Reception Counter
University of California, Santa Barbara
Santa Barbara, CA 93106-1030.

Late arrivals shall be disqualified. Please allow time for unforeseen traffic delays, securing a parking permit and potential parking problems.



Greg Moore
Associate Director, Contracting Services

ADDENDUM NUMBER 2

to the

Stairwell Lighting Upgrade

September 2, 2011

GENERAL

The following changes, additions or deletions shall be made to the following document(s) as Indicated; all other conditions shall remain the same.

I. ADVERTISEMENT FOR BIDS

Item No.

1. First page, last sentence beginning with "Bid Deadline...", CHANGE to read in it's entirety as follows:
"Bid Deadline: Sealed bids must be received on or before **2:30 P.M. on Thursday, September 8, 2011**. Sealed Bids will be received only at: Contracting Services, Facilities Management, Building #439, Door "E", Reception Counter, University of California, Santa Barbara, Santa Barbara, California 93106-1030."

II SUPPLEMENTARY INSTRUCTIONS TO BIDDERS

Item No.

1. Number 4, CHANGE to read in it's entirety as follows:
"Bids will be received on or before the Bid Deadline: **2:30 P.M., Thursday, September 8, 2011** and only at: Contracting Services, Facilities Management, Building #439, Door "E", Reception Counter, University of California, Santa Barbara, Santa Barbara, California 93106-1030."

I SPECIFICATIONS

Item No.

1. Section 16010 - "Electrical General Requirements" - **Add** in its entirety. (See specification section attached: p.1-9).

END OF ADDENDUM NO. 2

SECTION 16010
ELECTRICAL GENERAL REQUIREMENTS

1.00 GENERAL

1.01 SCOPE

Electrical General Requirements specifically applicable to Division 16 Sections, in addition to Division 1 - General Requirements. Work includes but is not necessarily limited to the following:

- A. Definitions, guarantees, submittals, clean-up, "As-Builts" and all other applicable requirements of Division 0 and Division 1 apply to the work of this section.
- B. Examine all other sections for work related to those sections which are required to be included as work under this section.
- C. Coordinate all work in this Division with related trades.
- D. Make detailed arrangements with the University telecommunication company for telephone service to the building.
- E. Furnish and install the following:
 1. Incidental items not indicated on the drawings nor mentioned in the Specifications that belong to the work described, or are required to provide complete systems, as though called out here in every detail.
 2. All construction power and lighting and all power for testing of equipment and systems through final acceptance tests.
 3. All equipment and facilities required to provide temporary and permanent services.
 4. Electrical distribution systems, including , feeders, pullboxes, distribution transformers, panelboards, branch circuit wiring, and circuit control and disconnect devices.
 5. All electrical work for the mechanical systems, except as specified herein to be furnished or installed as part of other sections of the specifications.
 6. All distribution material for and connection of the mechanical equipment, as required by the specific equipment furnished so that a complete and operable system results.
 7. All lighting fixtures, including lamps.
 8. Conduits, outlets and cabinets or terminal boards for the Telecommunication systems.
 9. Work related to the mechanical trade as listed below shall be included in this Division of the work. Refer to control drawings and mechanical drawings for exact requirements of work in this scope. Furnish and install the following:
 10. All conduit, outlets, line voltage wiring, and control devices required for the specified operation of the equipment.
 11. Furnishing and installation of all hangers, anchors, sleeves, chases and supports, for all electrical materials and equipment.
 12. Connect all motors and electrical line voltage control equipment.
 13. Cleaning, patching, repairing and painting.

1.02 APPLICABLE PUBLICATIONS

The following publications form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

- A. American National Standards Institute, Inc. (ANSI) Publications
- B. State of California Administrative Codes
- C. National Electrical Manufacturers Association (NEMA) Publication
- D. National Fire Protection Association (NFPA) Publications
- E. Underwriters Laboratories, Inc. (UL) Publications

1.03 WORK SEQUENCE

- A. Install work in phases to accommodate University's representative occupancy requirements. During the construction period, coordinate electrical schedule and operations with University representative, Refer to Division 1 - General Requirements.
 - 1. Work hours shall be 8am-5pm, M-F.

1.04 DEFINITIONS

- A. The words "work" or "electrical work" herein include products, labor, equipment, tools, appliances, transportation and all related items, directly or indirectly required to complete the specified and indicated electrical installation.
- B. The word "concealed" shall mean that the installation will not be visible when all permanent or removable elements of the construction are in place. The word "exposed" shall mean that the installation is visible when all permanent or removable elements of the construction are in place.
- C. The word "code" shall mean any and all regulations and requirements of regulatory bodies, public and private, having jurisdiction over the work involved.
- D. The word "product" used in Division 16 means all material, equipment, machinery, and/or appliances directly or indirectly required to complete the specified and/or indicated electrical work.
- E. The words "standard product" shall mean a manufactured product, illustrated and/or described in catalogs or brochures, which are in general distribution prior to the date of issue of construction documents for bidding. Products will generally be identified by means of a specific catalog number and manufacturer's name.
- F. The word "provide" shall mean furnish and install and where applicable shall also mean connect, complete installation and test.
- G. The words "powered equipment", as used in Division 16, shall mean a complex product converting and electrical energy source to:
 - 1. Heat energy.
 - 2. Mechanical power.
 - 3. Direct current.
 - 4. Electrical energy differing in frequency.
- H. Refer to Division 1, General Requirements, for additional definitions of words and phrases used to describe Division 16, Electrical Work.

1.05 UNIVERSITY FURNISHED PRODUCTS

Unless noted otherwise, all items shall be furnished by the Contractor for a complete and operational installation.

- A. All items required for a complete and operational installation shall be furnished and installed by the Contractor.

1.06 DISCREPANCIES

- A. Where a conflict in requirements occurs between the specifications and drawings, or in the specifications or on the drawings, and a resolution is not obtained from the University Representative before the bidding date, the more expensive alternate will become the contractual requirements.
- B. Omissions from the drawings or specifications or the misdescription of details of work which are manifestly necessary to carry out the intent of the drawings and specifications, or which are customarily performed, shall not relieve the Contractor from performing such omitted or misdescribed details of the work but they shall be performed as if fully and correctly set forth and described in the drawings and specifications.
- C. The Contractor shall check all drawings furnished him immediately upon their receipt and shall promptly notify the University Representative of any discrepancies. Figures marked on drawings shall in general be followed in preference to scale measurements. Large scale drawings shall in general govern small scale drawings. The Contractor shall compare all drawings and verify the figures before laying out the work and will be responsible for any errors which might have been avoided thereby.

1.07 CHANGES

- A. The Contractor shall be responsible to make and obtain approval for all necessary adjustments in circuiting as required to accommodate the relocations of equipment and/or devices which are affected by any approved authorized changes. All changes shall be clearly indicated on the "As-Built" drawings.

1.08 SUBMITTALS

- A. Submit shop drawings, manufacturer's data certificates for equipment, materials and finish, and pertinent details for each system where specified in each individual section, and obtain approval before procurement, fabrication, or delivery of the items to the job site. Partial submittals are not acceptable and will be returned without review. Include the manufacturer's name, trade name, catalog model or number, nameplate data, size, layout dimensions, capacity, project specification and paragraph reference, applicable technical society publication references, and other information necessary to establish contract compliance of each item the Contractor proposes to furnish. Photographs of existing installations and data submitted in lieu of catalog data are not acceptable and will be returned without approval. Contractor shall be responsible for reviewing and certifying submittals as conforming to the drawings and specifications prior to submittal and shall verify conformance of equipment as delivered with final shop submittals, specifications and plans. Contractor shall report to University Representative any deviations prior to initiation of construction. Contractor is responsible for promptly reporting to University any news of late equipment delivery which is likely or certain to delay installation.
- B. Submit under provisions of Section 01300.

- C. Proposed Products List: Include Products specified in the following Sections:
1. Section 16050 - Basic Materials and Methods
 2. Section 16170 - Grounding and Bonding
 3. Section 16195 - Electrical Identification
 4. Section 16510 - Lighting
- D. Submit shop drawings and product data grouped and referenced by the technical Section numbers.
- E. The Contractor shall be responsible for all equipment ordered and/or installed prior to receipt of shop drawings returned from the University Representative bearing the electrical engineer's stamp of "Reviewed". All corrections or modifications to the equipment as noted on the shop drawings shall be performed and equipment removed from the job site at the request of the University Representative without additional compensation.
- F. Shop Drawings: Drawings shall be a minimum of 8.5 inches by 11 inches in size with a minimum scale of 1/8-inch per foot, except as specified otherwise. Include wiring diagrams and installation details of equipment indicating proposed location, layout and arrangement, control panels, accessories, piping, duct work, and other items that must be shown to assure a coordinated installation. In wiring diagrams, identify circuit terminals and indicate the internal wiring for each item of equipment and the interconnection between each item of equipment. Indicate adequate clearance for operation, maintenance, and replacement of operating equipment devices. If equipment is disapproved, revise drawings to show acceptable equipment and resubmit.
- G. Manufacturer's Data: For each manufactured item, provide current manufacturer's descriptive literature of cataloged products, equipment drawings, diagrams, performance and characteristic curves if applicable, and catalog cuts.
- H. Standard Compliance: When materials or equipment provided by the Contractor must conform to the standards of organizations such as American National Standards Institute (ANSI) or Underwriters' Laboratories (UL), submit proof of such conformance to the University Representative for approval. If an organization uses a label or listing to indicate compliance with a particular standard, the label or listing will be acceptable evidence, unless otherwise specified. In lieu of the label or listing, submit a certificate from an independent testing organization, which is competent to perform acceptance testing and is approved by the University. The certificate shall state that the item has been tested in accordance with the specified organization's test methods and that the item conforms to the specified organization's standard.
- I. Certified Test Reports: Before delivery of materials and equipment, certified copies of all test reports specified in individual sections shall be submitted for approval.
- J. Certificates of Compliance or Conformance: Submit manufacturer's certifications as required on products, materials, finish, and equipment indicated in the technical sections. Certifications shall be documents prepared specifically for this contract. Pre-printed certifications and copies of previously submitted documents will not be acceptable. The manufacturer's certifications shall name the appropriate products, equipment, or materials and the publication specified as controlling the quality of that item. Certification shall not contain statements to imply that the item does not meet requirements specified, such as "as good as"; or "achieve the same end use and results as materials formulated in accordance with the referenced publications"; or "equal or exceed the service and performance of the specified material." Certifications shall simply state that the item conforms to the requirements specified. Certificates shall be printed on the manufacturer's letterhead and shall be signed by the manufacturer's official authorized to sign certificates of compliance or conformance.

1.09 REGULATORY REQUIREMENTS

- A. Electrical: Conform to NFPA 70, ANSI C2, CAC Title 24, NFPA 101 and all other state and local codes.
- B. The requirements of authorities shall be the minimum acceptable requirements for the work and nothing described in these Specifications or indicated on the drawings shall be construed to permit work not conforming to the most stringent of the applicable codes and regulations. When drawings or specifications call for materials or construction of better quality of larger size than required by codes, laws, rules and regulations, the drawings and specifications shall take precedence.
- C. Equipment not complying with applicable codes shall be removed and replaced with approved equipment at Contractor's expense. UL listing labels, where applicable, shall be installed prior to shipment from factory.
- D. Obtain permits, and request inspections from authority having jurisdiction.

1.10 PRODUCT ALTERNATES OR SUBSTITUTIONS

- A. Where a manufacturer's product is specified, the intent is to establish definite quality, construction and performance characteristics. The manufacturer's latest published catalog data for the product shall become part of this specification as though stated herein to the extent that such data establishes quality desired, testing procedures, safety features, life expectancy, performance characteristics and, in the case of finish material, the general appearance. Substitute products, where permitted, will be required to equal or exceed these various requirements as established by the specified product manufacturer's literature.

1.11 GUARANTEE

- A. Except as may be specified under other sections in the Specifications, guarantee all equipment furnished under the Specifications for a period of one year from date of acceptance against defective workmanship and material and improper installation. Upon notification of failure, correct deficiency immediately and without cost to the University.
- B. Standard warranty of manufacturer shall apply for replacement of parts after expiration of the above period. Manufacturer shall furnish replacement parts to the University or their service agency as directed. Furnish manufacturer's warranties in accordance with Division 1 of this Specification.

1.12 PROJECT/SITE CONDITIONS

- A. Install work in locations shown on drawings, unless prevented by project conditions.
- B. Prepare drawings showing proposed rearrangement of work to meet project conditions, including changes to work specified in other Sections. Obtain permission of University Representative before proceeding.

1.13 OPERATION AND MAINTENANCE MANUAL

Submit as required for systems and equipment indicated in the technical sections. Furnish six copies, bound in hardback binders or an approved equivalent. Furnish one complete manual prior to performance of systems or equipment tests, and furnish the remaining manuals prior to contract completion. Inscribe the following identification on the cover; the words "OPERATION AND MAINTENANCE MANUAL," the name and location of the system, equipment, building, name of Contractor, and contract number. Include in the manual the names, addresses, and telephone numbers of

each subcontractor installing the system or equipment and the local representatives for the system or equipment. Include a table of contents and assemble the manual to conform to the table of contents, with the tab sheets placed before instructions covering the subject. The instructions shall be legible and easily read, with large sheets of drawings folded in. The manual shall include:

- A. Internal and interconnecting wiring and control diagrams with data to explain detailed operation and control of the system or equipment.
- B. A control sequence describing startup, operation, and shutdown.
- C. Description of the function of each principal item of equipment.
- D. Installation and maintenance instructions.
- E. Safety precautions.
- F. Diagrams and illustrations.
- G. Testing methods and test equipment required.
- H. Performance data.
- I. Parts list. The list shall indicate sources of supply, recommended spare parts, and name of servicing organization.
- J. Appendix: List qualified permanent servicing organizations for support of the equipment, including addresses and certified qualifications.

1.14 POSTED OPERATING INSTRUCTIONS

Furnish approved operating instructions for systems and equipment indicated in the technical sections for use by operation and maintenance personnel. The operating instructions shall include wiring diagrams, control diagrams, and control sequence for each principal system and equipment. Print or engrave operating instructions and frame under glass or in approved laminated plastic. Post instructions as directed. Attach or post operating instructions adjacent to each principal system and equipment including startup, proper adjustment, operating, lubrication, shutdown, safety precautions, procedure in the event of equipment failure, and other items of instruction as recommended by the manufacturer of each system or equipment.

Provide weather-resistant materials or weatherproof enclosures for operating instructions exposed to the weather. Operating instructions shall not fade when exposed to sunlight and shall be secured to prevent easy removal or peeling.

1.15 INSTRUCTION TO UNIVERSITY PERSONNEL

Where indicated in the technical sections, furnish the services of competent instructors to give full instruction to University personnel in the adjustment, operation, and maintenance of systems and equipment, including pertinent safety requirements as required. Each instructor shall be thoroughly familiar with all parts of the installation and shall be trained in operating theory as well as practical operation and maintenance work. Coordinate schedule of instructional class with University during the first regular work week after the equipment or system has been accepted and turned over to University for regular operation.

- A. Provide two hour training classes for University electricians and relampers.

1.16 CATALOGED PRODUCTS/SERVICE AVAILABILITY

Materials and equipment shall be current products by manufacturers regularly engaged in the production of such products. Products shall have been in satisfactory commercial or industrial use for 2 years prior to bid opening. The 2-year period shall include applications of equipment and materials under similar circumstances and of similar size. The 2-year period shall be satisfactorily completed by a product for sale on the commercial market through advertisements, manufacturer's catalogs, or brochures. Products having less than a 2-year field service record will be acceptable if a certified record of satisfactory field operation for not less than 6000 hours, exclusive of the manufacturer's factory or laboratory tests, is furnished. The equipment items shall be supported by service organizations which are reasonably convenient to the equipment installation in order to render satisfactory service to the equipment on a regular and emergency basis during the warranty period of the contract.

1.17 MANUFACTURER'S RECOMMENDATIONS

Where installation procedures or any part thereof are required to be in accordance with manufacturer's recommendations, furnish printed copies of the recommendations prior to installation. Installation of the item shall not proceed until recommendations are received. Failure to furnish recommendations shall be cause for rejection of the equipment or material.

1.18 DELIVERY AND STORAGE

Handle, store, and protect equipment and materials in accordance with the manufacturer's recommendations and with the requirements of NFPA 70B P, Appendix I, titled "Equipment Storage and Maintenance During Construction." Replace damaged or defective items with new items.

1.19 ELECTRICAL REQUIREMENTS

Furnish internal wiring for components of packaged equipment as an integral part of the equipment. Power wiring and conduit shall conform to the requirements of Section 16050 "Basic Materials and Methods."

2.00 PRODUCTS

Not Used.

3.00 EXECUTION

3.01 Obtain and pay for all permits and inspections, including any independent testing required to verify standard compliance, and deliver certificates for same to University. All work shall conform to the requirements of NFPA 70, Title 24, California Code of Regulations (CCR) & UBC 1988.

3.02 WORK RESPONSIBILITIES

A. The drawings indicate diagrammatically the desired locations or arrangement of conduit runs, outlets, equipment, etc., and are to be followed as closely as possible. Proper judgement must be exercised in executing the work so as to secure the best possible installation in the available space and to overcome local difficulties due to space limitations or interference with structural conditions. The contractor is responsible for the correct placing of his work and the proper location and connection of his work in relation to the work of other trades. Advise appropriate trade as to locations of access panels.

- B. Locations shown on University Representative ceiling plan or on wall elevations shall take precedence over electrical plan locations but where a major conflict is evident, notify the University Representative for instructions.
- C. In the event changes in the indicated locations or arrangements are necessary, due to developed conditions in the building construction or rearrangement of furnishings or equipment, such changes shall be made without extra cost, providing the change is ordered before the conduit runs, etc. and work directly connected to same is installed and no extra materials are required.
- D. Where equipment is furnished by others, verify dimensions and the correct locations of this equipment before proceeding with the roughing-in of connections.
- E. Lighting fixtures in mechanical spaces and elevator machine room are shown in their approximate locations only. Do not install light outlets or fixtures until mechanical piping and duct work is installed; then lights shall be installed in locations best suited for equipment arrangement or as directed by the University Representative.
- F. All scaled and figured dimensions are approximate of typical equipment of the class indicated. Before proceeding with any work, carefully check and verify all dimensions, sizes, etc. with the shop drawings to see that the equipment will fit into the spaces provided without violation of applicable codes.
- G. Should any changes to the work indicated on the drawings or described in the specifications be necessary in order to comply with the above requirements, notify the University Representative immediately and cease work on all parts of the contract which are affected until approval for any required modifications to the construction has been obtained from the University Representative.
- H. Be responsible for any cooperative work which must be altered due to lack of proper supervision or failure to make proper provisions in time. Such changes shall be under direction of the University Representative and shall be made to his satisfaction.
- I. Perform all work with competent and skilled personnel.
- J. All work, including aesthetic as well as electrical and mechanical aspects of the work, shall be of the highest quality consistent with the best practices of the trade.
- K. Replace or repair, without additional compensation, and any work which, in the opinion of the University Representative, does not comply with these requirements.

3.03 PAINTING OF EQUIPMENT

- A. Factory Applied: Electrical equipment shall have factory-applied painting systems which shall, as a minimum, meet the requirements of NEMA ICS 6 corrosion-resistance test, except equipment specified to meet requirements of ANSI C37.20 shall have a finish as specified in ANSI C37.20.
- B. Field Applied: Paint electrical equipment as required to touch up, to match finish on other equipment in adjacent spaces or to meet safety criteria.
- C. When not already covered under the painting section of the specifications, all electrical work exposed to view shall be painted in accordance with the painting section of the specifications to match surroundings. Work to be painted shall include conduit, hangars, outlet boxes, pull boxes, surface raceway and similar items.

END OF SECTION

