

UNIVERSITY OF CALIFORNIA, SANTA BARBARA

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SANTA BARBARA • SANTA CRUZ

OFFICE OF DESIGN & CONSTRUCTION SERVICES and PHYSICAL FACILITIES

CONTRACTING SERVICES  
Building 439  
Santa Barbara, California 93106-1030  
Telephone (805) 893-3356  
Fax (805) 893-8592

**SENT VIA:**  FAX ON THIS DATE  
 HAND DELIVERY ON THIS DATE  
 FEDERAL EXPRESS ON THIS DATE  
 UNITED PARCEL SERVICE ON THIS DATE

HOLDERS OF PLANS AND SPECIFICATIONS:

Boiler Room Equipment Replacement Carrillo Dining  
Commons Bldg. 562 and Santa Cruz Residence Hall  
Bldg. 548  
Project No. FM110338S/137-51  
**Addendum No. 01**

April 7, 2011

Enclosed is **ADDENDUM NO. 01** to the Construction Documents on the above-captioned project.

Bid date is Thursday, April 14, 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.



Anna Galanis  
Director, Contracting Services

ADDENDUM NUMBER 1  
to the  
CONSTRUCTION DOCUMENTS

April 7, 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. INFORMATION AVAILABLE TO BIDDERS**

Item No.

1. Information Available to Bidders Add number 6. Reports in its entirety:

**6. Reports:**

Asbestos and Pb (Lead) Survey UCSB Carrillo/Santa Cruz Boilers Bldgs. 562/548, prepared by Gene Horstin, dated 3/24/2011, 11 pages.

Asbestos and Pb (Lead) Survey UCSB Carrillo/Santa Cruz Boilers Bldgs. 562/548, prepared by Gene Horstin, dated 4/06/2011, 5 pages.

Reports available to bidders at: <http://facilities.ucsb.edu/contracts/bid/>

**II. BID FORM**

Item No.

1. Bid Form: **Replace** in its entirety with Revised Bid Form Revised per Addendum 1, 7 pages attached. Any Bids not submitted on the "Revised Bid Form Revised per Addendum 1", will be rejected.

### III. SPECIFICATIONS

#### Item No.

1. Section 01020 - "Allowances" – **Add** in its entirety. (attached 2 pages).
2. Section 01500 - "Construction Facilities and Temporary Controls" – **Add** 1.04 in its entirety. (attached 3 pages)
3. Section 01640 - "Product Options and Substitutions", "Part 1-General", "1.02 Special Requirements for Products, Material or.....Trade Name and Model Number" - **Change** 1.02A from 30 days to 15 days.
4. Section 01640 - "Product Options and Substitutions", "Part 1-General", "1.03 Special Requirements for Substitutions" - **Change** 1.03D from 15 days to 10 days and 1.03K from 15-day and 30-day to 10-day and 15-day.
5. Section 07840 - "Firestopping" – **Add** in its entirety. (attached 5 pages).
6. Section 15900 – "Building Automation System", "Part 1-General", "1.01 Work Covered", "1.01B" - **Add** the following sentence at the end of the paragraph: "Siemens Talon to match existing."
7. Section 15900 – "Building Automation System", "Part 1-General", "1.02 Contractor Qualifications", "1.02A" – **Change** to read in it's entirety: "1.02.A At the time of installation the Contractor or Sub-contractor shall have a valid C-7 Contractor's License. At the time of installation the Contractor or Sub-contractor shall be certified on the Talon-AX System."
8. Section 15900 – "Building Automation System", "Part 2 –Products", "2.01 Acceptable Manufacturers", "2.01A". – **Change** to read in it's entirety: "2.01.A Siemen-Talon Control System to match existing."

### IV. DRAWINGS

#### Item No.

1. DRAWING NO. M-1.00, Carrillo Dining Commons Pump Schedule – **Delete** Note 1 on CP-3, CP-4, CP-5 and CP-6.

2. DRAWING NO. M-100, Carrillo Dining Commons Steam Boiler Schedule: In Features delete reflex type sight glass and 14" diameter barometric damper. Provide standard sight glass.
3. DRAWING NO. M-201, Carrillo Dining Commons: **Add** General Note No. 01 "Existing 8 FT by 8 FT louver may be removed to allow access for removal and replacement of major equipment. Louver to be re-installed and sealed water tight."
4. DRAWING NO. M-202, Carrillo Dining Commons. **Add** following note to Carrillo Dining Commons – Mechanical Boiler Water Treatment Schematic – "Provide 3D Traser Boiler System including material, installation, start-up, and adjustments. Nalco 3D to match existing."
5. DRAWING NO. M-2.02, Carrillo Dining Commons: Size of steam line to feedwater tank is missing. See attached sketch AD1-MSK-1
6. DRAWING NO. M-1.00, Santa Cruz Residence Hall Pump Schedule – **Delete** Note 1 on CP-1 and CP-2.
7. DRAWING NO. M-202, Santa Cruz Residence Hall: Concrete pad for B-1, B-2, and B-3 is new.

END OF ADDENDUM NO. 1

REVISED BID FORM

FOR:Boiler Room Equipment Replacement Carrillo Dining Commons Bldg. 562 and Santa Cruz Residence  
Hall Bldg. 548

FM110338S/137-51

UNIVERSITY OF CALIFORNIA  
SANTA BARBARA  
SANTA BARBARA, CALIFORNIA

March 2011

BID TO: University of California, Santa Barbara  
Facilities Management, Building 439  
Door E, Reception Counter  
Santa Barbara, CA 93106  
(805)893-3298

BID FROM:

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

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

\_\_\_\_\_  
(City

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

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

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

\_\_\_\_\_  
(Fax Number)

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

DATE BID SUBMITTED

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

**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 may 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 licenses required by the State of California and the Bidding Documents; b) it has carefully read and examined the Bidding Documents for the proposed Work on this Project; c) it has examined the site of the proposed Work and all Information Available to Bidders; d) it has become familiar with all the conditions related to the proposed Work, including the availability of labor, materials, and equipment. Bidder hereby offers to furnish all labor, materials, equipment, tools, transportation, and services necessary to complete the proposed Work on this Project in accordance with the Contract Documents for the sums quoted. Bidder further agrees that it will not withdraw its Bid within 60 days after the Bid Deadline, and that, if it is selected as the apparent lowest responsive and responsible Bidder, that it will, within 10 days after receipt of notice of selection, sign and deliver to University the Agreement in triplicate and furnish to University all items required by the Bidding Documents. If awarded the Contract, Bidder agrees to complete the proposed Work within One Hundred fifty-nine (159) calendar days after the date of commencement specified in the Notice to Proceed.

**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 has been issued for this Bid.

**3.0 NOT USED**

**4.0 LUMP SUM BASE BID**

**1. Carrillo Dining Commons, Bldg. 562:**

\$   ,    ,    .

(Place Figures in appropriate boxes)

Bidder includes in the Lump Sum Base Bid the following allowances:

**\$27,600.00** for DDC Control System

**\$35,000.00** for Boiler Chemical System

**2. Santa Cruz Residence Hall, Bldg. 548:**

\$   ,    ,    .    
(Place Figures in appropriate boxes)

Bidder includes in the Lump Sum Base Bid the following allowances:

**\$25,800.00** for DDC Control System

**5.0 SELECTION OF APPARENT LOW BIDDER**

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

**6.0 NOT USED**

**7.0 DAILY RATE OF COMPENSATION FOR COMPENSABLE DELAYS (Used As Basis For Award)**

Bidder shall determine and provide below the daily rate of compensation for any Compensable Delay caused by University at any time during the performance of the Work:

\$   ,    .   x 10 **MULTIPLIER**  
(Place Amount in 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 NOT USED**



**11.0 BIDDER INFORMATION**

**TYPE OF ORGANIZATION:**

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

- IF A CORPORATION, THE CORPORATION IS ORGANIZED UNDER THE LAWS OF THE STATE OF \_\_\_\_\_

**NAME OF PRESIDENT OF THE CORPORATION:**

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

**NAME OF SECRETARY OF THE CORPORATION:**

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

- IF A PARTNERSHIP, NAMES OF ALL GENERAL PARTNERS:

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

**CALIFORNIA CONTRACTORS LICENSE(S):**

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

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

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

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

**EMPLOYER IDENTIFICATION NUMBER (EIN):**

**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, \_\_\_\_\_, hereby declare that I am  
(Printed Name)

the \_\_\_\_\_ of \_\_\_\_\_  
(Title) (Name of Bidder)

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

I declare, under penalty of perjury, 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 \_\_\_\_\_,

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 ten percent (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:

Boiler Room Equipment Replacement Carrillo Dining Commons Bldg. 562 and Santa Cruz Residence Hall Bldg. 548; FM110338S/137-51

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 sixty (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 sixty (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 \_\_\_\_\_, 20

Principal

Surety

\_\_\_\_\_  
By: \_\_\_\_\_

\_\_\_\_\_  
By: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

Address for Notices:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

NOTE: Notary acknowledgement for Surety and Surety's Power of Attorney must be attached.

SECTION 01020

ALLOWANCES

PART 1. GENERAL

1.01 ITEMS COVERED BY ALLOWANCES

- A. Included in the contract sum are all allowances stated in the contract documents. Items covered by allowances shall be supplied for by 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 necessary for the stated Allowance amounts shall be included in the Contract Sum and not in the Allowances.
  - 3. 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 the full amount listed below.

PART 2. DESCRIPTION OF ALLOWANCES

2.01 ALLOWANCE NO. 1:

- A. Include an allowance of Twenty-five Thousand, Eight Hundred Dollars (\$ 25,800.00) for the cost of a DDC Control System for Santa Cruz Residence Hall, including components, installation, programming, start-up, and commissioning. DDC Control System shown on Santa Cruz Residence Hall Sheet M-301 and Specification Section 15900, Building Automation System.

2.02 ALLOWANCE NO. 2:

- A. Include an allowance of Twenty-seven Thousand, Six Hundred Dollars (\$ 27,600.00) for the cost of a DDC Control System for Carrillo Dining Commons, including components, installation, programming, start-up, and commissioning. DDC Control System shown on Carrillo Dining Commons Sheet M-301 and Specification Section 15900, Building Automation System.

2.03 ALLOWANCE NO. 3:

- A. Include an allowance of Thirty-five Thousand Dollars (\$ 35,000.00) for the cost of a boiler chemical system for Carrillo Dining Commons, including material, installation, start-up, and adjustments. Chemical Feed System shown on Carrillo Dining Commons sheet M-202, "Carrillo Dining Commons – Mechanical Boiler Water Treatment Schematic".

\*\*\*END OF SECTION\*\*

SECTION 01500  
CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

PART 1. GENERAL

1.04 CONTROL OF AIRBORNE CONTAMINANTS

- A. This section is applicable when any of the following tasks are performed in occupied existing buildings and/or where the project will impact occupied existing buildings.
1. Tasks that include chemical mixing on site, including but not limited to epoxy coatings.
  2. Tasks that include spray application.
  3. Welding and soldering tasks.
  4. Tasks that include sanding and grinding.
  5. Tasks that generate visible emissions.
  6. Tasks that generate fugitive dust, chemical vapors, aerosols, fumes and/or other airborne contaminants.
- B. Contractor shall develop detailed work plan(s) for each applicable task. Work plan shall be submitted to the University Representative for review at a minimum of five working days before applicable task is scheduled to commence. Each work plan shall document:
1. Work sequence.
  2. Work area limits of task.
  3. Negative Pressure Containment (NPC) details including isolation of the work area from building's Heating Ventilation Air Condition (HVAC) systems.
  4. Waste transport and disposal procedures.
  5. Material Safety Data Sheets (MSDS) for applicable products.
  6. Applicable training of workers.
  7. Applicable engineering controls (example: ventilation).
  8. Applicable Personal Protective Equipment (PPE) for workers.
  9. Acceptable airborne contaminant levels in and adjacent to the work area.
  10. Exposure monitoring plan for
    - a. Workers performing tasks.
    - b. Migration of airborne contaminants from work area.
  11. Housekeeping procedures.

## 12. Work area clearance standards.

- C. Task shall not commence until University Representative has:
1. Reviewed work plan and authorized in writing that the task may proceed.
  2. Inspected NPC.
- D. Contractor shall install, operate and maintain Negative Pressure Containment(s) (NPC) as needed to control fugitive dust, chemical vapors, aerosols, fumes and other airborne contaminants generate by applicable task. NPC(s) shall be designed and built to:
1. Separate the project air space from the building.
  2. Ensure that the campus population and research are protected from air borne contaminants.
  3. Provide adequate ventilation for the work space.
- E. Negative Pressure Containment (NPC): NPC shall meet at a minimum the following specifications.
1. Maintain negative pressure relative to outside pressure throughout the project.
  2. Achieve at least 6 Air Changes per Hour (ACH) and/or a minimum of - 0.02 column inches of water pressure differential, relative to outside pressure.
  3. Differential/Negative pressure shall be documented throughout the project by manometric measurements.
  4. Adequate number of exhaust machine(s) shall be provided, operated and maintained by Contractor to establish a NPC that achieves the required total exhaust in Cubic Feet per Minute (CFM) for 6 ACH as calculated by:
    - a.  $\text{Total Exhaust CFM} = 6 \text{ ACH} \times \text{Space Volume (Length}' \times \text{Width}' \times \text{Height}')/60$
  5. If dust/fibers/aerosols are generated by the project, the exhaust machines shall be equipped with HEPA filters.
  6. Critical barriers shall be placed over all the openings to the NPC. Air from the NPC shall be exhausted to the exterior of the building. Typical critical barriers shall consist of 6 mil fire resistant poly sheeting.
  7. NPC exhaust shall be done in a way that ensures it will not reenter the building, adjacent buildings or become a hazard to individuals.
  8. NPC shall encompass the work area limits.
- F. University Representative may independently monitor airborne contaminant levels.
1. University monitoring results will take precedent over those of the Contractor's.

- G. If University Representative and/or Contactor monitoring documents that airborne contaminant levels have exceeded those indicated by the work plan and/or applicable regulatory standards, the Contractor, at no cost to the University, shall:
1. Stop work and institute corrective measures to bring airborne contaminant levels within acceptable limits.
  2. Resume work only after receiving written approval from the University Representative.
- H. University may independently document that clearance standards, indicated by work plan and/or applicable regulatory standards, have been met.
- I. Contractor shall maintain and operate NPC(s) until applicable clearance standards are met and documented to the satisfaction of the University Representative.
1. Applicable clearance shall be those established by the work plan or applicable regulation.
  2. The Contractor, if requested by University Representative, shall:
    - a. Allow University Representative to independently conduct clearance testing.
- J. The NPC(s) shall remain in operation until written permission, from the University Representative, is given to the contractor for removal.

\*\*\*END OF SECTION\*\*\*

SECTION 07840

FIRESTOPPING

PART 1 GENERAL

1.01 DESCRIPTION

A. Section includes: Fire stopping for the following:

1. Penetrations through fire-resistance-rated floor and roof construction including both empty openings and openings containing cables, pipes, ducts, conduits, and other penetrating items.
2. Penetrations through fire-resistance-rated walls and partitions including both empty openings and openings containing cables, pipes, ducts, conduits, and other penetrating items.
3. Penetrations through smoke barriers and construction enclosing compartmentalized areas involving both empty openings and openings containing penetrating items.
4. Sealant joints in fire-rated construction.

B. Related work

1. Sealants required or specified in other Sections.

1.02 SYSTEM PERFORMANCE REQUIREMENTS

- A. Provide firestopping systems produced and installed to resist the spread of fire and the passage of smoke and other gases in compliance with Code.
- B. Comply with California Code of Regulations - Title 24, CBC - Chapter 7, Fire Tests of Through-Penetration Fire Stops.
- C. Underwriters Laboratories (UL) of Northbrook, IL runs ASTM E-814 under their designation of UL 1479 and publishes the results in their "Fire Resistance Directory" that is updated annually with a midyear supplement.

1. UL Fire Resistance Directory

- a. Through-Penetration Fire Stop Devices (XHCR).
- b. Fire Resistance Rating (BXUV).
- c. Through-Penetration Fire Stop Systems (XHEZ).
- d. Fill, Voids or Cavity Material (XHHW).
- e. Forming Materials (XHKU).

- D. Test Requirements: UL 2079, "Tests for Resistance of Building Joint Systems"(November 1994).

1.03 SUBMITTALS

- A. Procedure: In accordance with Section 01340.
- B. Data: Manufacturer product data for all materials and prefabricated devices

and manufacturer's installation instructions. Submitted material must be approved by Campus Fire Marshal prior to installation.

- C. Certification: Letter of certification, or certified laboratory test report that the material or combination of materials proposed for use meets the requirements specified in ASTM E 814, are so classified in UL Building Materials Directory, and are approved by the Building Department.
- D. Evaluation reports: Evidence of fire resistive joint systems' compliance with ICBO Evaluation Service Acceptance Criteria AC30, from ICBO Evaluation Service
- E. Documentation:
  - 1. Include illustrations, from a qualified testing and inspecting agency, applicable to each through penetration firestop configuration for construction and penetrating items.
  - 2. Where Project conditions require modification of qualified testing and inspecting agency illustration to suit a particular through penetration firestop condition, obtain Campus Fire Marshal acceptance of the modification prior to submitting shop drawings.

#### 1.04 QUALITY ASSURANCE

- A. Single source responsibility: Obtain through penetration firestop systems, for each kind of penetration and construction condition indicated, from a single manufacturer.
- B. Applicator's Qualifications: Company specializing in performing work of this section, with a minimum of 5 years experience who specializes in the installation of firestop products. Personnel shall be certified, licensed, or otherwise qualified by firestopping manufacturer as having been provided necessary training to select and install products according to manufacturer's requirements. Company must be Factory Mutual Approved.
- C. Compatibility: Provide firestop systems compatible with one another and with substrates under conditions of application and service.
- D. A manufacturer's direct representative (not distributor or agent) to be on site during initial installation of firestop systems to train appropriate contractor personnel in proper selection and installation procedures. This will be done per manufacturer's written recommendations published in their literature and drawing details.
- E. Firestop system installation, must meet requirements of ASTM E 814, UL 14'S or UL 2079 tested assemblies that provide a fire rating equal to that of construction being penetrated.
- F. For those firestop applications that exist for which no UL tested system is available through any manufacturer, a manufacturer's engineering judgement derived from similar UL system designs or other tests will be submitted to local authorities having jurisdiction for their review and approval prior to installation. Engineer judgement drawings must follow requirements set forth by She International Firestop Council (September 7, 1994).

## 1.05 HANDLING

- A. Storage: Store and handle materials to prevent their deterioration or damage. Do not use damaged and contaminated materials.

## PART 2 PRODUCTS

### 2.01 MANUFACTURERS:

- A. Subject to compliance with through penetration firestop systems (XHEZ) listed in Volume II of the UL Fire Resistance Directory, provide products of one or a combination of the following, as required by condition of use:
  1. Hilti Construction Chemicals, Inc.  
Tulsa, OK, telephone 918.252.6901.
  2. Tremco Inc.  
Beachwood, OH, telephone 216.292.5000.
  3. 3M Fire Protection Products.  
St. Paul, MN, telephone 612.736.0203

### 2.02 MATERIALS

- A. All through penetrations shall be labeled on both sides of the wall to indicate the appropriate UL system number, product used, installation date, hour rating installer, location number and telephone contact for the corresponding manufacturer. Material installed shall be as required for installation conditions and to achieve the required fire resistance.
- B. Use only firestop products that have been UL 1479, ASTM E-814, or UL2079 tested for specific fire rated construction conditions conforming to construction assembly type, penetrating item type, annular space requirements, and fire rating involved for each separate instance.
- C. For penetrations by non combustible items including steel pipe, copper pipe, rigid steel conduit and electrical metallic tubing (EMT), the following materials are acceptable:
  1. Hilti FS 601 Elastomeric Firestop Sealant
  2. Hilti FS ONE High Performance Intumescent Firestop Sealant
  3. 3M Fire Stop Sealant 2000
  4. 3M Fire Barrier CP25 WB
  4. Tremco Tremstop Fyre Sil Sealant
- D. For fire rated construction joints and other gaps, the following materials are acceptable:
  1. Hilti FS 601 Elastomeric Firestop Sealant
  2. Hilti CP 601 s Elastomeric Firestop Sealant.
  3. Hilti CP 606 Flexible Firestop Sealant.
  4. Hilti CP 672 Firestop Joint Spray
  5. 3M Firestop Sealant 2000
  6. Tremco Tremstop Fyre Sil Sealant

- E. For penetrations by combustible items (penetrants consumed by high heat aflame) including insulated metal pipe, PVC jacketed, flexible cable or cable bundles and plastic pipe (closed piping systems) the following materials are acceptable:
1. Hilti FS ONE High Performance Intumescent Firestop Sealant
  2. Hilti CP 618 Firestop Putty
  3. Hilti CP 642 Firestop Jacket
  4. Hilti CP 643 Firestop Jacket
  5. 3M Fire Barrier CP25 WB
  6. 3M Fire Barrier FS 195 Wrap/Strip
  7. Tremco Tremstop WBM Intumescent Firestop Sealant
- F. For penetrations by combustible plastic pipe (open piping systems), the following materials are acceptable:
1. Hilti CP 642 Firestop Jacket
  2. Hilti CP 643 Firestop Jacket
  3. Hilti FS ONE High Performance Intumescent Firestop Sealant
  4. 3M Fire Barrier PPO Plastic Pipe Device
- G. For large size/complex penetrations made to accommodate cable trays, multiple steel and copper pipes, electrical busways in raceways' the following materials are acceptable:
1. Hilti FS 635 Trowelable Firestop Compound
  2. Hilti FIRE BLOCK
  3. 3M Firestop Foam 2001
  4. 3M Fire Barrier CS 195 Composite Sheet
- H. For openings between structurally separate sections of wall and floors. Top of walls, the following materials are acceptable:
1. Hilti FS 60t Elastomeric Firestop Sealant
  2. Hilti CP 601s Elastomeric Firestop Sealant
  3. Hilti CP 606 Flexible Firestop Sealant
  4. Hilti FS ONE High Performance Intumescent Firestop Sealant
  5. 3M Fire Barrier CP 25 WB
- I. Provide a firestop system with a "F" Rating as determined by UL 1479 or ASTM E814 which is equal to the time rating of construction being penetrated.
- J. Provide a firestop system with an Assembly Rating as determined by UL 2079 which is equal to the time rating of construction being penetrated.
- K. Firestopping at Electrical Vboxes and Utility Outlets.
1. Hilti CP 618 Firestop Putty Stick
  2. Hilti CP 617 and CP 617L Firestop Putty Pad
- L. For voids created at the intersection of the exterior wall assemblies (curtain wall) and rated floor assembly, the following material is acceptable:
1. 3M Fire Barrier Spray and Thermafiber Safing (No equal)
- M. For pipe penetrations of cast in place concrete floors and concrete over metal decking the following material is acceptable:
1. Hilti CP 680 Cast-In Firestop Device (No equal)

## **PART 3 EXECUTION**

### **3.01 PREPARATION**

- A. Verify conditions and measurements affecting the work of this Section at site. Make sure that detrimental conditions are corrected before proceeding with installation.

### **3.02 INSTALLATION**

- A. Install materials in compliance with their manufacturer's instructions and the printed instructions of UL Fire Resistance Directory.
- B. Masking:
  - 1. Use masking tape to prevent firestopping from contacting adjoining surfaces that will remain exposed and that would be permanently stained or damaged by such contact or by cleaning methods used to remove smears from firestopping materials.
  - 2. Remove tape as soon as it is possible to do so without disturbing firestopping's seal with substrates.

### **3.03 IDENTIFICATION**

- A. Identify firestopping with pressure sensitive, self adhesive preprinted vinyl labels. Attach labels permanently to surfaces of penetrated construction on both sides of each firestopping installation where the labels will be visible to anyone seeking to remove penetrating items or firestopping. Include the following information on the labels:
  - 1. The words: "WARNING FIRESTOPPING DO NOT DISTURB. NOTIFY BUILDING MANAGEMENT OF ANY DAMAGE"
  - 2. Contractor's name, address and phone number.
  - 3. Firestopping system designation of applicable testing and inspecting agency.
  - 4. Date of installation.
  - 5. Firestopping manufacturer's name.
  - 6. Installer's name.

### **3.04 CLEANING**

- A. Clean-up spills of liquid components.
- B. Cut and trim excess materials neatly, flush with adjacent surfaces.

\*\*\*END OF SECTION\*



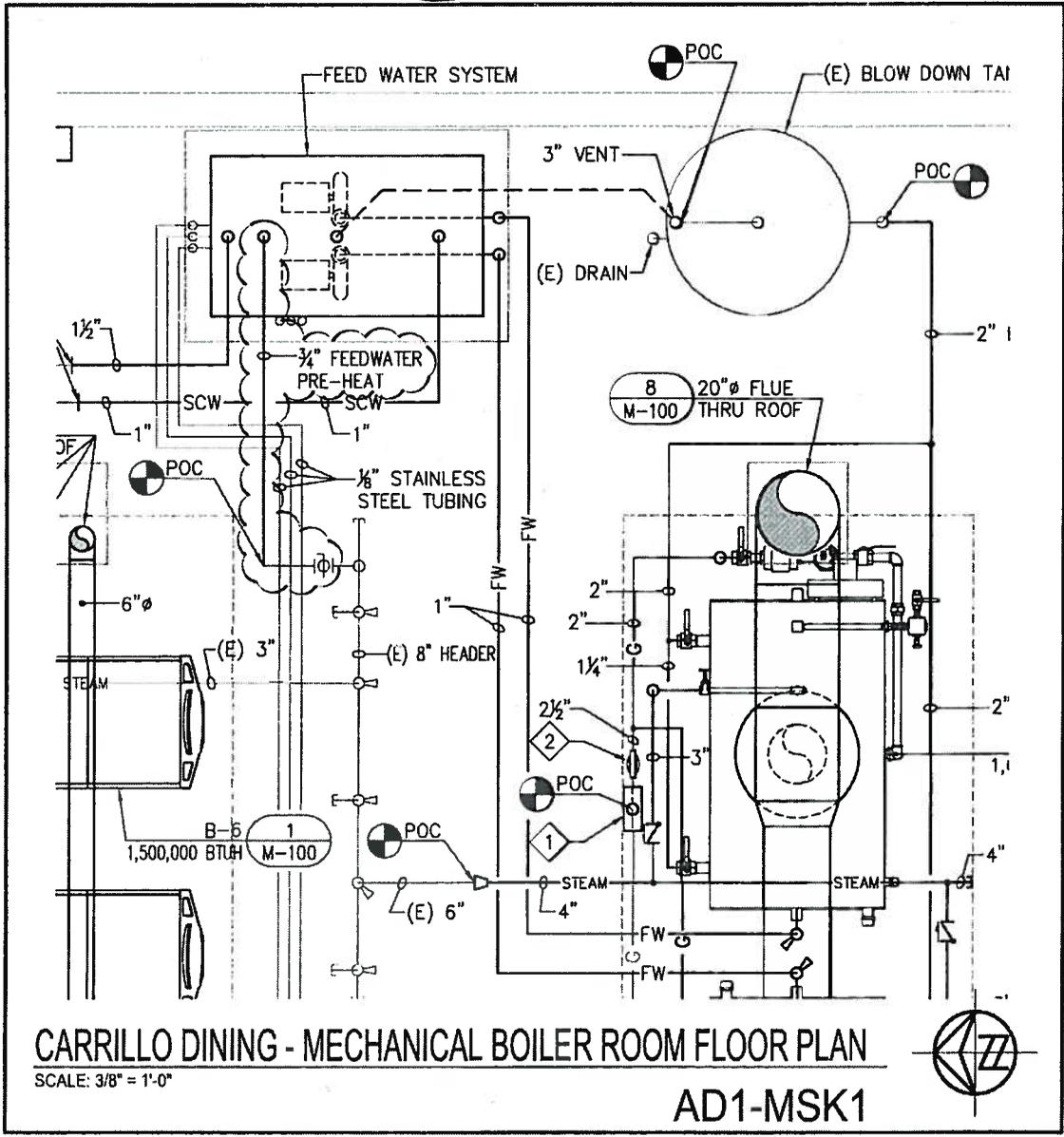
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PROJECT: UCSB-CARRILLO DINING COMMONS  
 DESIGNER: KEITH BRUMMEL  
 BMA PROJECT #10-193  
 DATE: 4-5-11



**CARRILLO DINING - MECHANICAL BOILER ROOM FLOOR PLAN**

SCALE: 3/8" = 1'-0"

**AD1-MSK1**

