

PROJECT MANUAL

OCTOBER, 2024

**BUILDING 101 – MAJOR REPAIRS
INTERMOUNTAIN RESEARCH AND EXTENSION CENTER**

Project Number I7300A

October 1, 2002
Revision: 4
LF/SF:01110

SUMMARY OF WORK
01110-1



Project Name: Bldg. 101 Major Repairs
Intermountain Research & Extension Center

Project Number: I7300A

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Language provided within this document

DIVISION 2 thru Division 32 / TECHNICAL MATERIAL SPECIFICATIONS

Information provided as part of the Consturction Drawing set

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DIVISION 1

SECTION 01110 SUMMARY OF WORK

PART 1 - GENERAL

1.01 WORK REQUIRED BY CONTRACT DOCUMENTS

As provided in the Advertisement to Bid:

Project is a remodel to existing +/- 1,950 sf single story, slab on grade wood framed structure with metal roofing and cementitious exterior siding. New work elements include demolition, electrical, mechanical, plumbing, windows, doors, millwork, painting, finishes and general construction. Domestic water, propane, waste water and electrical services are existing/ to remain/ rework as required. No new square footage is being added to the structure as part of the project. All exterior features (including walks, paving and parking areas) are existing to remain/ no work. All contents of the building will be removed prior to the start of the construction and the Contractor will have exclusive access to the structure during the full duration of the construction process.

Provide all labor, material, equipment, tools, transportation, bonds and insurances.

1.02 PROJECT PHASING (NOT USED)

1.03 WORK SEQUENCE (NOT USED)

1.04 UNIVERSITY OCCUPANCY

All contents of the building will be removed prior to the start of the construction and the Contractor will have exclusive access to and use of the structure during the full duration of the construction process.

1.05 SUBSTANTIAL COMPLETION

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

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01110



SECTION 01113 SPECIAL REQUIREMENTS

PART 1 - GENERAL

A.1 CONTRACTOR’S USE OF PROJECT SITE

- A. Contractor’s use of the Project site for the Work and Storage is to be located in the existing paved parking area in front and to the side (between structure and highway) of the building. Adequate space will be provided for the Contractor’s operational needs.

A.2 WORK HOURS

- A. No Work shall be done outside of standard Monday through Friday work week. Work during University observed holidays or weekends may not occur unless prior written approval has been obtained from the University's Representative.
- B. The schedule for the center work week is as follows: 7:00 am to 3:30 pm.
- C. The University’s holidays for the portion of 2025 that construction is anticipate to possibly occur is as follows:

HOLIDAY	CALENDAR DATE
New Year	Wednesday, January 1, 2025
Martin Luther King Holiday	Monday, January 20, 2025
President’s Day	Monday, February 17, 2025
Cesar Chavez Holiday	Friday, March 28, 2025
Memorial Day	Monday, May 26, 2025

A.3 SITE INGRESS AND EGRESS

- A. Access to Project site will be provide via main Center Headquarters driveway (to main public parking area)
- B. The Contractor is required to coordinate with the University Representative for alternative routes of site ingress and egress as required for deliveries of oversized loads of materials and/or equipment.



A.4 ROADS

- A. Contractor to observe all posted speed limit signs.
- B. Contractor shall protect existing asphalt roadways including the edge of the existing permanent road/transition to graded site access road.
- C. Contractor to install and maintain necessary precautions/practices to contain site originated soil/mud/dust from migrating off-site via vehicle tires or airborne.

A.5 PARKING / LAY DOWN STORAGE SPACE

- A. Please note that it is the intention of the University to provide all necessary space that is required to efficiently construct the project. The Contractor shall coordinate additional space(s) as required with the University Representative should the need arise

A.6 TRAFFIC CONTROL

- A. Contractor shall adopt all practical means to minimize interference to traffic.

A.7 SURROUNDING SITE CONDITION SURVEY

- A. Prior to commencing the Work, Contractor, and University's Representative shall tour the Project site together to examine and record existing damage to existing road, paved areas and all other improvements. This record shall serve as a basis for determination of any subsequent damage due to Contractor's operations and shall be signed by all parties making the tour. Any cracks, sags, or damage to the existing roadways and improvements not noted in the original survey, but subsequently discovered, shall be reported to the University's Representative.

A.8 INTERRUPTION OF BUILDING SERVICE

- A. The Contractor may shut down utilities as required to perform the work but only after previous coordination and approval by University Representative

A.9 PROTECTION OF EXISTING STRUCTURES AND UTILITIES

- A. The Drawings show primary existing above and below grade structures and utilities that are known to the University.
- B. The University will coordinate with underground locating services to locate, verify and surface mark the location of any known and/or suspected utilities within the project boundaries
- C. If any other structures or utilities are encountered, request University's Representative to provide direction on how to proceed with the Work.
- D. If any structure or utility is damaged, take appropriate action to ensure the safety of persons and property.



- E. No Work is to be performed on energized electrical equipment unless scheduled with the University's Representative.
- F. 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 Contractor does not expose all existing utilities, Contractor shall not be entitled to additional compensation for Work necessary to avoid interferences.
- G. 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 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.
- H. 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 Contractor operations, shall be removed and replaced at the Contractor's expense.

A.10 PROTECTION OF PERSONNEL

- A. University of California personnel will be occupying the adjacent buildings and surrounding grounds during the construction period. Contractor shall take proper precautions to ensure the safety of all persons during the construction period.

A.11 PROJECT SITE SECURITY

- A. The Contractor may elect to install perimeter security fencing, employ lockable containers and other means to secure material and equipment. This is at the Contractor's discretion and is not a requirement of the contract. Discuss type, location and duration with University Representative and gain written approval prior to any installation
- B. At the start of construction and for the full construction duration the Contractor shall place construction style locksets on the two entry doors of the structure. The Contractor is responsible for the management of the keys. Furnish the University Representative with two non-reproducible keys to use for University access, keys to be returned to the Contractor at the end of the project when original lock/key access is restored. (Purpose for this is to help assure that access is managed by non Contractor personnel).

A.12 MULTIPLE CONSTRUCTION CONTRACTS

- A. Telecommunications, fire alarm, security system and other such building systems are NOT the requirement of the Contractor within the scope of this project. the University may elect to award separate contract(s) for certain work to occur. The Contractor will be required to work in conjunction with these separate awards.



A.13 WORK SITE DECORUM

- A. Contractor shall control the conduct of its employees so as to prevent unwanted interaction initiated by Contractor's employees with University of California staff, or other individuals (except those associated with the Project), adjacent to the Project site. Contractor shall take special care in control of the conduct of its employees with regards to any and all non-University employees that may visit the Center. Without limitation, unwanted interaction by Contractor's employees includes whistling at or initiating conversations with passersby. In the event that any Contractor's employee initiates such unwanted interaction, or utilizes profanity, 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.
- B. SMOKE AND TOBACCO-FREE ENVIRONMENT: The University of California is committed to a healthy campus and workplace culture and environment. Effective January 2, 2014, the University of California is a Smoke and Tobacco-Free environment. Smoking and the use of smokeless tobacco products (e.g. e-cigarettes and other unregulated nicotine products) is strictly prohibited on all University of California-controlled properties, owned or leased and regardless of location. This policy is intended to provide a healthier, safer, and productive work and learning environment for the entire University of California community. For more information on the Smoke/Tobacco-Free Policy, please visit (<http://breathefree.ucdavis.edu>). For more information on the President's Mandate and other related resources, please visit <http://uctobaccofree.com/>.
- C. Alcoholic beverages are prohibited on the University's Project site.
- D. Only employees of the General Contractor or Subcontractors or their suppliers that are directly involved in the performance of the work may be on the job site. All others, such as family members or friends, may not be on the job site without written permission of the University's representative.

A.14 PUBLICITY

- A. 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 appropriate public relations authority of the University.

A.15 PROJECT SIGN

- A. No signs or advertisements will be permitted on the Project site, except with express permission of University's Representative.

A.16 JOB OFFICE

- A. A dedicated Job Trailer is not requirement of this project but the Contractor may elect to incorporate one (at their discretion / without compensation from the University). Note: the Contractor may elect to use a portion of the structure for job office.



A.17 SALVAGE

- A. All material, fixtures and equipment required by the contract to be removed is the property of the Contractor and shall be removed from the Center and legally disposed of unless otherwise noted.

A.18 CLEANUP

- A. During the progress of the Work, the 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 Contractor off Center. Contractor shall not use Center refuse containers.

A.19 FURNISHED CONSTRUCTION DOCUMENTS

- A. University will furnish to the Contractor 5 sets of Drawings and specifications upon an award of the Contract at no cost. If more than 5 sets are required the Contractor will pay for the cost of printing.

A.20 UNIVERSITY FURNISHED ITEMS (not used)

PART 2 -PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01113



SECTION 01251 INFORMATION & PROCEDURES INSTRUCTIONS

NOTE: Contractor may propose alternate process for RFIs to the University for consideration. (note: University will not be able to consider alternate processes prior to bid award / Contractor shall prepare bid based upon this process outlined in this section)

PART 1 - GENERAL

1.1 DESCRIPTION

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

1.2 PROCEDURES

- A. Notification by Contractor
 - 1. Submit all requests for clarification or additional information in writing to the University's Representative using the Request for Information (RFI) form (Exhibit V).
 - 2. Number RFIs 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 would be "001." The resubmittal of RFI 001 with the same issue would be numbered "001a". The second RFI would be "002."
- A. Limit each RFI to 1 subject.
- B. Submit a RFI 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.
- C. RFIs will not be recognized or accepted if, in the opinion of University's Representative, one of the following conditions exist:
 - 1. Contractor submits the RFI as a request for substitution.
 - 2. Contractor submits the RFI as a submittal.
 - 3. Contractor submits the RFI under the pretense of a Contract Documents discrepancy or omission without thorough review of the Documents.



4. Contractor submits the RFI in a manner that suggests 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.
5. Contractor submits an RFI in an untimely manner without proper coordination and scheduling of Work of related trades.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 REQUEST FOR INFORMATION

- A. Request for any clarification or request for information immediately upon discovery. Submit RFIs in a reasonable time frame so as not to affect the Contract Schedule and while allowing the full response time described below:
 1. Indicate specification section impacted.
 2. Address impacts to schedule and cost.
 3. Suggest possible solutions to fit field conditions, if appropriate.
- B. Response Time
 1. University's Representative, whose decision will be final and conclusive, shall resolve such questions and issue instructions to Contractor within a reasonable time frame. In most cases, RFIs will receive a response within 14 days. In some cases, this time may need to be lengthened for complex issues, or shortened for emergency situations, as mutually agreed in writing.
 2. Should Contractor proceed with the Work affected before receipt of a response from University's Representative within the response time described above, any portion of the Work that 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.
 3. Failure to Agree: In the event of failure to agree as to the scope of the Contract requirements, Contractor shall follow procedures set forth in the General Conditions.

END OF SECTION 01251



SECTION 01311 PROJECT COORDINATION

PART 1 - GENERAL

1.1 COORDINATION REQUIREMENTS

- A. Contractor shall coordinate the Work and shall not delegate responsibility for coordination to any Subcontractor.
- B. Anticipate the interrelationship of all Subcontractors and their relationship with the Work.
- C. Resolve differences or disputes between Subcontractors concerning coordination, interference, or extent of the Work between Sections.
- D. 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.
- E. Do not obstruct spaces and installations that are required to be clear by Applicable Code Requirements.
- F. Do not cover any piping, wiring, ducts, or other installations until they have been inspected and approved and required certificates of inspection have been issued.
- G. 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 at no additional cost to the University.
- H. Coordinate all portions of the Work requiring careful coordination in order to fit in space available.
- I. Ensure that anchorage, blocking, joining, and other detailing are provided as required.
- J. Electrical and Mechanical Coordination
 - 1. Routing and Coordination of Plumbing, Piping and/or Electrical Installations
 - a. Contractor shall schedule and coordinate the Work of all Subcontractors having installation responsibilities with respect to the sequence of Work and the allocation of space among the trades. Contractor's approved construction schedule shall clearly indicate 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. Should unavoidable conflicts be encountered during the preparation or review of the Shop Drawings, or during construction, they shall be promptly brought to the attention of the University's Representative, in writing, for resolution.



- c. Where the Drawings are diagrammatic, showing only the general arrangement of the systems, 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. 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, Contractor shall prepare and submit for approval, Shop Drawings of the proposed rearrangement.
- d. 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. 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 01311



SECTION 01312 PROJECT MEETINGS

PART 1 - GENERAL

1.1 PRECONSTRUCTION CONFERENCE

- 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: At Center, at a location designated by the University Representative and supplied by the University.
- C. Attending shall be:
 - 1. University's Representative.
 - 2. University's Consultants and University's Representative's Consultants, as appropriate.
 - 3. Contractor.
 - 4. Contractor's Superintendent.
 - 5. Subcontractors, as appropriate.
 - 6. Others, as appropriate.

1.2 PREINSTALLATION CONFERENCES (not used)

1.3 BILLING / SPECIAL CONCERNS MEETINGS

- A. A meeting shall be conducted by University's Representative each month. The meeting shall occur prior to submittal of the Application For Payment with regards to the process of payment. The meeting shall also address, at a minimum, the following special concerns; construction schedule / progress, weather impacts, jobsite security and fire prevention.
- B. Location: On site.
- C. Attending shall be:
 - 1. University's Representative.
 - 2. Contractor.
 - 3. Others, as appropriate



1.4 PROGRESS MEETINGS

- A. During the course of construction, periodic progress meetings will be held as required to discuss and resolve specific issues outside of the monthly billing / special concern meeting. The duration and number of meetings will be determined by the University's Representative as they are determined by the University Representative to be essential to facilitate the construction of the Project.
- B. Location: On site.
- C. Attending shall be:
 - 1. University's Representative.
 - 2. Contractor.
 - 3. Others, as appropriate

1.5 GUARANTEES, BONDS, WARRANTIES, AND SERVICE/OPERATION AND MAINTENANCE CONTRACTS/DATA REVIEW MEETING

- A. Eleven months following the date of Notice of 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 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's
 - 2. Contractor.
 - 3. Others, as appropriate.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01312



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, 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 may be hand drawn, if approved by the University's Representative, or computer generated), 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 schedule as a bar chart (Gantt) showing continuous flow from left to right. Specific calendar dates shall be clearly and legibly shown for the start and finish of each work activity.
 2. 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 CONTRACT SCHEDULE

- A. Within 20 working days of receipt of Notice to Proceed, Contractor shall submit a complete Contract Schedule.
- B. Activities
1. Identify all Work activities in correct sequence for the completion of the Work. Work activities shall include the following:
 - a. Major 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 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. Dates Contractor requests designated workspaces, storage area, access, and other facilities to be provided by the University.
 4. Dates Contractor requests orders and decisions from the University on designated items.
 5. Dates Contractor requests University-furnished equipment.
 6. Dates Contractor requests University-furnished utilities.
 7. Connection and relocation of existing utilities.
 8. Scheduled inspections as required by Codes, or as otherwise specified.
- C. Identify all Work activities that constitute the critical path.
- D. 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.
- E. 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 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.
- F. Delays of any non-critical Work activity shall not be the basis for an extension of Contract Time until the delays consume the float associated with that non-critical Work activity and cause the Work activity to become critical.
- G. The presentation of each Work activity on the Contract Schedule shall include a brief description of the Work activity, the duration of the Work activity in days, and a responsibility code identifying the organization or trades performing the Work activity.
- H. Contractor shall furnish cost estimates for each Work activity that cumulatively equal the total Contract Sum. Mobilization costs may be shown separately; however, other costs, e.g., profit and bond shall be pro-rated throughout all activities.

1.3 UPDATING

- A. Review the Contract Schedule with University's Representative once each month to incorporate in the Contract Schedule all changes in the progress, sequences, and scope of Work activities.
- B. Prepare and submit to University's Representative an updated Contract Schedule once each month, or as mutually agreed.
1. The updated Contract Schedule shall accurately represent the as-built condition of all completed and in-progress Work activities as of the date of the updated Contract Schedule.
 2. The updated Contract Schedule shall incorporate all changes mutually agreed upon by the Contractor and the University during preceding periodic reviews and all changes resulting from Change Orders and Field Orders.



3. Contractor shall perform the Work in accordance with the updated Contract Schedule. Contractor may change the Contract Schedule to modify the order or method of accomplishing the Work only with prior agreement by the University.
- C. Contractor shall submit the updated Contract Schedule, in the form acceptable to University's Representative, at least 7 days prior to submitting the Application for Payment.
- D. University's Representative will determine acceptability of the updated Contract Schedule within 7 days after its receipt.
- E. No Applications for Payment (Exhibit D) will be processed nor shall any progress payments become due until updated Contract Schedules are accepted by University's Representative.
- F. The accepted, updated Contract Schedule shall be the Contract Schedule of record for the period it is current and shall be the basis for payment during that period.

1.4 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).
- B. Time extension requests shall be submitted in accordance with the provisions of General Conditions.
- C. The 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



SECTION 01334 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

NOTE: contractor may propose alternate process for submittals to the University for consideration including electronic. (note: University will not be able to consider alternate processes prior to bid award / Contractor shall prepare bid based upon this process outlined in this section)

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 and when specifically required by the Specifications and Drawings. 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 Substitution Procedures. 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. 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, Contractor shall procure and distribute the necessary copies of such instructions to the University's Representative and the Contractor shall furnish, install, or perform the Work in strict accordance therewith.

C. Submittal Schedule

- 1. The minimum time required by University's Representative to review and process Shop Drawings, Product Data and Samples shall be 18 days after receipt.



2. The Contractor shall submit a schedule for submission of Shop Drawings, Product Data, and Samples (the "Submittal Schedule"). The schedule shall include the Contractor's time to process the submittal(s), and the time required for review by the University's Representative. The schedule shall be agreed upon by the University's Representative and the 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. Contractor shall prepare the Submittal Schedule in the form contained in the Submittal Schedule (Exhibit G) and coordinate it with the Contract Schedule. No submittals will be processed prior to University's Representative receiving and approving the Submittal Schedule, unless an exception is made by the University's Representative.
4. In preparing the Submittal Schedule, the Contractor must first determine from the Contract Schedule the date the particular item is needed for the Work. Working backwards, the Contractor will add the required number of days for shipment, time for fabrication, and similar items to determine the date of the first submittal. Contractor shall be responsible for the impact to the schedule resulting from submittals that do not conform to contract requirements. 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 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.

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;
 3. Or as specified.
- B. Field Samples and mock-ups (not used)

1.6 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 Contractor for conformance with the requirements of the Contract Documents and for coordination with other Sections. Contractor's stamp and signature shall indicate that the submittal has been reviewed by the 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 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.

1.7 SUBMITTAL REQUIREMENTS

- A. Submit items in a group or in a sequence which provide the University's Representative with sufficient information to review items of Work which require coordination with each other. Submissions that do not provide sufficient information to review items of Work requiring coordination with each other shall be returned to the Contractor for re-submittal.
- B. Submit submittals promptly in accordance with the Submittal Schedule to avoid delay in the Work or in the Work of any Separate Contractor.



- C. Samples: Submit new samples as required for initial submittal.
- D. Number of Submittals Required
 - 1. Shop Drawings: Submit 7 copies of shop drawings to the University's Representative. The University's Representative shall return 3 copies with review comments to the Contractor.
 - 2. Product Data and Non-Reproducible Submittals: Submit 7 copies to the University's Representative. The University's Representative shall 3 return copies with review comments to the Contractor.
 - 3. Samples and Non-Reproducible Submittals: Submit 7 copies as specified in individual Specification Section(s) to the University's Representative.
 - 4. Material Submittal Approval Form (MSAF): Contractor shall fill out and attach Material Submittal Approval Form (Exhibit X) for shop drawings or product data to be reviewed by University's Representative. Submittals received without properly completed Material Submittal Approval Form will be returned without action to the Contractor.
- E. Submittals shall contain
 - 1. Date of submission and dates of any previous submissions.
 - 2. Project name and number.
 - 3. Contract identification.
 - 4. The names of
 - a. Contractor.
 - b. Subcontractor.
 - c. Supplier.
 - d. Manufacturer.
 - 5. Identification of the product with the Specification Section number.
 - 6. Field dimensions clearly identified as such.
 - 7. Relation to adjacent or critical features of the Work or materials.
 - 8. Reference standards such as American Society for Testing and Materials (ASTM) or Federal Specification (FS) numbers.
 - 9. Identification of changes from requirements of the Contract Documents.
 - 10. Identification of revisions on resubmittals. Note any departures from the Contract Documents or changes in previously reviewed submittals that were not commented upon by the University's Representative.
 - 11. An 8 by 3 inch blank space for review stamps.
 - 12. 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.
 - 13. Contractor shall submit submittal(s) with transmittal provided by the University's Representative.
- F. 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 will review a total of 2 submittals for the same item at no cost to the 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.
- G. 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. Contractor's Project site file.
 - b. Record documents file maintained by the Contractor.
 - c. Separate Contractors.
 - d. Subcontractors.
 - e. Supplier, manufacturer or fabricator.
 - 2. Distribute Samples that carry the University's Representative's review stamp as directed.
- H. University's Representative and University's Design Professional's will review 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 Contractor as required by the Contract Documents.
- I. Contractor shall submit data, including but not necessarily limited to, the Sections identified in Table of Submittals identified below:

Sections requiring submittal(s) include, but are not necessarily limited to, the Sections identified below:

Section	Shop Drawings	Data/List of Materials	Color and/or Samples	Mock -Ups	Tests Mtg
03100 Concrete Form Work					
03200 Concrete Reinforcement					
03300 Cast-in-Place Concrete					
051200 Structural Steel					
05500 Metal Fabrications					
00610 Rough Carpentry					
06200 Finish Carpentry and Millwork	X	X	X		
06400 Casework and Countertops	X	X	X		
06600 Fiber Reinforced Panels					
066010 Solid Surface Panels					
07210 Insulation	X				
072616 Vapor Retarders	X				
07600 Flashing and Sheet Metal	X				
07840 Firestopping					



Section	Shop Drawings	Data/List of Materials	Color and/or Samples	Mock-Ups	Tests Mtg
07900 Sealants and Caulking		X	X		
08110 Metal Door Frames		X	X		
081400 Wood Doors		X	X		
083050 Access Doors					
08400 Entrances and Storefronts					
085200 Windows	X	X	X		
08710 Hardware		X	X		
08800 Glazing		X	X		
089100 Louvers and Vents					
092500 Gypsum Board		X			
09510 Acoustical Ceilings					
096500 Sheet goods style flooring		X	X		
096800 laminate plank style flooring		X	X		
098800 Vapor Emission Treatment System					
099000 Painting		X	X		
101400 Signage					
101700 Toilet Compartments					
102800 Toilet and Bath Accessories					
104413 Fire Extinguishers		X			
133419 Metal Building System					
220000 Plumbing Requirements					
220100 Plumbing Materials and Methods					
220500 General Plumbing Systems					
220512 Plumbing Pipe and Fittings					
220700 Plumbing Systems Insulation					
221000 General Plumbing Piping sys					
224000 Plumbing Fixtures	X	X			
230000 Basic HVAC Requirements					
230500 Heating, Ventilation and AC					
230593 Testing, Adjusting and Balancing					
230700 HVAC unit					
233300 Ductwork Accessories					
233400 Fans		X			
233700 Air Outlets and Inlets		X			
239000 Acceptance					X



Section	Shop Drawings	Data/List of Materials	Color and/or Samples	Mock-Ups	Tests Mtg
260000 Basic Electrical Requirements					
260519 Low-Voltage Electrical Power Conductors and Cables					
260526 Grounding and bonding for Electrical Systems					
260533 Raceways					
260534 Boxes		X			
260548 Supporting Devices					
260553 Identification for Electrical Systems		X	X		
260805 Electrical Acceptance Testing		X			X
26092 Lighting Relay Control Panel					
260923 Occupancy Sensors					
262226 Wiring Devices					
262416 Panelboards					
26243 Electrical Service					
262713 Electrical Metering					
26280 Overcurrent Protective Devices		X			
262818 Enclosed Switches and Circuit Breakers		X			
264300 Surge Protective Devices		X			
265100 Lighting		X			
280000 Fire Detection and Alarm Basic Requirements					
283105 Fire Detection and Alarm					
312000 Earthwork					



Section	Shop Drawings	Data/List of Materials	Color and/or Samples	Mock-Ups	Tests Mtg
312100 Site Preparation					
312333 Trenching and Backfilling					
313116 Termite Control					
321313 Portland Cement Concrete Paving					
321723 Pavement Marking					

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01334



SECTION 01350 ENVIRONMENTAL MITIGATION

PART 1 - GENERAL

1.1 REQUIREMENTS

- A. 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:
 - 1. Dust Palliation
 - a. Not applicable
 - 2. Noise
 - a. Noise from job equipment and construction operations shall be kept to a minimum by use of adequate mufflers and other appropriate means.

1.2 ARCHAEOLOGICAL RESOURCES (NOT USED)

1.3 NOXIOUS OR TOXIC MATERIALS

- A. No noxious or toxic materials shall be used in or around occupied buildings without prior approval of the University.
- B. Store volatile wastes in covered metal containers and remove from premises daily.
- C. Prevent accumulations of wastes that create hazardous conditions.
- D. Provide adequate ventilation during use of volatile or noxious substances.
- E. Do not dispose of volatile wastes, such as mineral spirits, oil, or paint thinner on site.
- F. Do not allow or permit oil or fuel spillage during vehicle or equipment operations or maintenance. Any vehicle or equipment spills shall be cleaned up immediately and the soil disposed of properly. Provide secondary containment around any fuel or oil storage areas.
- G. Train Superintendent in prevention and correction of spills.

1.4 REMOVAL AND DISPOSAL OF EXCESS SOIL (NOT USED)

1.5 REMOVAL AND DISPOSAL OF WASTE MATERIALS

- A. All waste materials resulting from the process of clearing and construction shall be legally disposed of as follows:
 - 1. All refuse and debris, combustible and incombustible, resulting from the processes of construction, shall be removed from the University's property. The Contractor shall not use any refuse container belonging to the University.



2. Solvents: Solvents, oils and any other material that may be harmful to plant life shall be disposed of in containers and removed from 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 Contractor at no additional cost to the University.
- B. Do not burn or bury rubbish or waste materials on the University's property.
- C. During construction, maintain buildings, premises and property free from accumulations of waste materials and rubbish. Dispose of such waste, rubbish and debris at reasonable intervals off the University's property.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01350



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SECTION 01351 STORM WATER POLLUTION PREVENTION (NOT USED)

November 1, 2002
Revision: 4
LF/SF:01410

STORM WATER POLLUTION PREVENTION
01351-1



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. Storm Water Pollution Prevention Act.
 - 7. Local Air Quality Management District.

1.2 STANDARDS AND CODES

- A. Applicable laws, codes, rules, regulations, ordinances and standards
 - 1. California Code of Regulations (CCR)
 - a. Title 8, Industrial Relations
 - b. Title 17, Public Health
 - c. Title 19, Public Safety
 - d. Title 20, Public Utilities and Energy
 - e. Title 21, Public Works
 - f. Title 22, Environmental Health
 - g. Building codes as specifically referenced on Title sheet of plans or otherwise inferred to.

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 I) or Field Order (Exhibit J), 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, comply with the one establishing the more stringent requirements.



- 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 (NOT USED)

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 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.

1.7 PERMITS, NOTIFICATIONS, CERTIFICATES AND UNIFORM HAZARADOUS WASTE MANIFEST

- A. Permits

1. **Contractor will not be required to obtain local County or City building permit(s) for the construction of the project.**
2. Uniform Hazardous Waste Manifest: 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 a Representative from University of California Environmental Health & Safety. Only the Health & Safety Duty Officer will be allowed to sign individual manifests on behalf of the Contractor/University.

1.8 INSPECTION AND REVIEW

- A. **No Construction inspection will be performed by the local County or City Building Officials.**
- B. The University's Representative and other University designees will perform periodical reviews of the Project. The reviews are to confirm compliance with the Construction Documents. The reviews and any observations/comments produced by them shall be provided to the Contractor in writing. These observations/comments do not relieve the Contractor of the obligation to comply with the Construction Documents and all applicable codes and regulations.



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- C. The University retains the right to directly contract with any and all inspection and/or testing services that the University determines is necessary to confirm the acceptability of the work. These inspections shall be contracted by and paid for by the University and without cost to the Contractor. The Contractor is required to provide full cooperation as required to facilitate these inspections

- D. PRODUCTS (NOT USED)

PART 2 - EXECUTION (NOT USED)

END OF SECTION 01410



SECTION 01424 ABBREVIATIONS, SYMBOLS & DEFINITIONS

PART 1 - GENERAL

1.1 ABBREVIATIONS

- A. Clarification: additional abbreviation summaries are included on the plans.
- B. Abbreviations and Acronyms: Where abbreviations and acronyms are used in Specifications, they shall mean the recognized name of the entities in the following list:

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.
CE	Corps of Engineers (U.S. Dept. of the Army)
CEC	California Electrical Code
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 and Transportation Agency, Division of Highways "Materials Manual"
COSHA	California Occupational Safety and Health Act
CPC	California Plumbing Code
CPSC	Consumer Product Safety Commission
CRSI	Concrete Reinforcing Steel Institute
CS	Commercial Standards of NBS (U.S. Dept. of Commerce)
CSS	State of California, Business and Transportation Agency, Department of Public Works, Division of Highways' "Standard Specifications"
CTI	Cooling Tower Institute
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
GA	Gypsum Association
GFI	Ground Fault Interrupter
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
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
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
LIA	Lead Industries Association
MBMA	Metal Building Manufacturer's Association
MIA	Marble Institute of America
MIL	U.S. Government, Military Specification
MLSFA	Metal Lath/Steel Framing Association
MM	State of California, Business and Transportation Agency, Department of Public Works, Division of Highways' "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
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
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
RCSC	Research Council on Structural Connection
RFCI	Resilient Floor Covering Institute
RIS	Redwood Inspection Service
RUS	U.S. Department of Agriculture, Rural Utilities Service
RWQCB	Regional Water Quality Control Board's
SAE	Society of Automotive Engineers
SBC	State Building Code
SBS	State Building Standards Electrical Code, Title 24, Part 3
SCAQMD	South Coast Air Quality Management District
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
UFAS	Uniform Federal Accessibility Standards



UHMW	Ultra-High Molecular Weight
UL	Underwriters' Laboratories, Inc.
UR	University Representative
USA	Underground
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

1.2 SYMBOLS (NOT USED)

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 Contractor under this Contract, but that will be performed by the University, Separate Contractors, or other means.
5. EQUAL - Of same quality, appearance, and utility to that specified, as determined by the University's Representative. The 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. UNIVERSITY-FURNISHED, CONTRACTOR INSTALLED - "To be furnished by University at its cost and installed by Contractor as part of the Work."



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17. **UNIVERSITY REPRESENTATIVE – single UC employed individual (note: in event of illness or vacation or other commitment of time an alternate may be assigned) involved in the project and provide direct interface with Contractor.**

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01424



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 "Contractor's Testing Laboratory" means a testing laboratory retained and paid for by Contractor to perform the testing services required by the Contract Documents. 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, Contractor's own forces, or other organization. Contractor's Testing Laboratory shall have performed testing of the type specified for at least 5 years.
- C. No soils investigation or report has been created as part of this project. Soil bearing values used for the project are as prescribed by code.

1.2 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 to University's Testing Laboratory the preliminary design mixes proposed to be used for concrete and other materials that require review by University's Testing Laboratory.
- 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 notice to University's Representative sufficiently in advance of operations to allow for University's Testing Laboratory assignment of personnel and scheduling of tests.
- F. When tests or inspections are not performed after such notice, 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, Contractor shall make arrangements for such tests, inspections, and acceptances with Contractor's Testing Laboratory. Contractor shall give the University's Representative timely 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, 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 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 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. University's Representative will distribute 1 copy of the reports to the University, University's consultants, and Contractor.
- C. The number of copies for the 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 (not used)

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01450



SECTION 01510 TEMPORARY CONSTRUCTION UTILITIES

PART 1 - GENERAL

1.1 REQUIREMENTS

- A. Pay for connections/disconnections of all temporary utilities not furnished by the Center.
- B. Maintain and operate systems to provide continuous service.
- C. Modify and extend systems as required.
- D. 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. Remove all Contractor installed temporary services as a requirement of these Contract Documents. Restore utilities to their original condition at the completion of Work.
- B. Legally and properly dispose of all debris resulting from removal and reconditioning operations.

1.3 REQUIREMENTS OF REGULATORY AGENCIES

- A. Install and use temporary utilities in accordance with the following:
 - 1. California Electrical Code.
 - 2. Federal, State, and local codes and regulations.
 - 3. Utility company requirements.

1.4 TEMPORARY ELECTRICITY

- A. Contractor may use the current electrical service to the building for the construction of the project for the duration of the project without cost.

1.5 TEMPORARY FIRE PROTECTION

- A. Contractor shall conform to the rules, regulations, and instructions of the Center.
 - 1. 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, provide at least 1 multi-purpose dry chemical fire extinguisher for each 5,000-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.

- C. Assign a qualified person with authority to maintain fire protection equipment, institute fire prevention measures, be a liaison with the University's Representative and direct the prompt removal of combustible and waste materials from the Project site. Prior to start of Work the Project Superintendent and the Fire Safety Liaison shall meet with the University's Representative for a mandatory safety meeting.
- D. Call 9-1-1 when applicable, for any emergency. Report the exact location (building name and street intersection) and nature of the emergency. 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.
- E. 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.
- F. Do not tamper with or work on any fire alarm or fire protection system without first gaining authorization from the University Representative. System shutdown requests shall require a minimum of 48-hours advance notice.

1.6 TEMPORARY HEATING AND VENTILATION

- A. Contractor may use the current electrical service to the building for the construction of the project for the duration of the project without cost. University Representative and Contractor will work together to help manage the heating / ventilation operations to make sure that the energy consumption is minimized and not wasteful.
- B. Provide additional augmenting heat and ventilation 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.
- C. Provide additional augmenting ventilation of enclosed areas to cure installed materials, to prevent excessive humidity and to prevent hazardous accumulations of dust, fumes, vapors or gases as needed.

1.7 TEMPORARY SANITARY FACILITIES

- A. Contractor shall provide at the Project site, temporary toilets of a type acceptable to the University's Representative. Location of toilet facilities and their maintenance are subject to approval of the University's Representative.

1.8 TEMPORARY TELEPHONE SERVICE

- A. Contractor shall provide, at a minimum, a cellular telephone on-site at all times for effective University's Representative communications with the Contractor.



1.9 TEMPORARY DATA SERVICE

- A. Wireless service exists at the Center and is available to the Contractor free of charge. No aspect of the system/service including, but not limited to, reliability is guaranteed.

1.10 TEMPORARY CONSTRUCTION AND POTABLE WATER SERVICE

- A. University to provide water for construction.
- B. Contractor to provide potable water for human consumption in accordance with the regulatory requirements.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01510



SECTION 01560 TEMPORARY BARRIERS AND ENCLOSURES

PART 1 - GENERAL

1.1 TEMPORARY FACILITIES

- A. Contractor shall provide and maintain the following temporary facilities as required for prosecution of the Contract:
 - 1. Scaffolding, staging, runways, and similar equipment.
 - 2. Hoists or construction elevators, complete with operators, power and signals required.
 - 3. Storage containers for materials and / or equipment
 - 4. Temporary rigging, rubbish chutes, barricades around openings, ladders between floors and similar equipment.
 - 5. Barricades, lights and similar safety precautions.
 - 6. 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 (OSHA), 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, Contractor shall remove all temporary Work and facilities to put the Project site in the condition required by the General Conditions with no additional cost to the University.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01560



SECTION 01610 BASIC PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 REQUIREMENTS

- A. All material and equipment incorporated in the Work shall be:
 - 1. New.
 - 2. In condition acceptable to the University's Representative.
 - 3. Suitable for intended use.
 - 4. Keep materials clean, dry, and undamaged.
 - 5. Installed in greatest uninterrupted lengths as possible to reduce amount of joints, seams, etc.

1.2 TRANSPORTATION AND HANDLING

- A. Arrange for delivery of materials and equipment to minimize length of onsite storage prior to installation.
- B. All common carrier deliveries shall be marked for the Contractor. Identify location of Project site by Project name, street address, etc.
- C. University will not receive deliveries on behalf of the 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. 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.
- B. 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.
- C. Arrange storage to allow adequate inspection.
- D. Periodically inspect stored products to assure that products are maintained under specified conditions and are free from damage and deterioration.
- E. 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 at no additional cost to the University.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01610



SECTION 01630 PRODUCT SUBSTITUTION PROCEDURES

PART 1 - GENERAL

1.1 SUBSTITUTION OF MATERIALS AND EQUIPMENT

- A. Catalog numbers and specific brands, trade names, or manufacturer's names followed by the designation "or equal" or "not limited to the following" are used in conjunction with Manufacturer, material and equipment required by the Specifications to establish the standards of quality, utility, and appearance required. Substitutions which are equal in quality, utility, and appearance to those specified may be accepted, subject to the following provisions:
1. Contractor shall submit to University's Representative, within 35-days after the date of commencement specified in the Notice to Proceed, a typed list containing a description of each proposed substitute material or equipment.
 2. Contractor shall provide supporting data required by Paragraph below.
 3. University's Representative will accept, in writing, proposed substitutions that are, in University's Representative's opinion, equal in quality, utility, and appearance to the material or equipment specified.
 4. Such acceptance shall not relieve Contractor from complying with the requirements of the Drawings and the Specifications.
 5. Contractor shall be responsible for all costs of any changes resulting from Contractor's proposed substitutions that affect other parts of the Work or the work of separate Contractors.
 6. The decision of University's Representative shall be final.
- B. If a request for substitution occurs after the 35-day period, the substitution may be reviewed at the discretion of University's Representative; and the costs of such review, as approved by the University, shall be borne by the Contractor and will be deducted from the Contract Sum.
- C. Requests for substitutions will only be considered if Contractor completes and submits Material Substitutions Proposal (Exhibit X) and the following supporting data:
1. Complete technical data including drawings, performance specifications, samples, and test reports of the article proposed for substitution; and any additional information required by the University's Representative.
 2. Complete breakdown of costs, which shall include additional costs and savings generated by the proposed substitution and shall indicate the amount, if any, to be deducted from the Contract Sum if the proposed substitution is accepted.
 3. Statement by Contractor that the proposed substitution is in full compliance with the requirements of the Contract Documents and Applicable Code Requirements.
 4. List of Subcontractors, if any that may be affected by the substitution.
 5. If the proposed substitution requires that portions of the Work be redesigned or removed in order to accommodate the substituted item, submit design and engineering calculations prepared by a properly licensed design professional.



- D. University's Representative may reject any substitution not proposed in the manner and within the time prescribed above.
- E. Wherever catalog numbers and specific brands, trade names, or manufacturer's names not followed by the designation "or equal" are used in conjunction with material or equipment required by the Specifications, no substitutions will be considered.
- F. The 35-day submittal substitution period does not excuse Contractor from completing the Work within the Contract Time or excuse Contractor from paying Liquidated Damages if Final Completion is delayed.
- G. Wherever more than 1 manufacturer's product is specified, the first-named product is the basis for the design used in the Work and the use of alternative-named manufacturers' products or substitutes may require modifications in that design. If such alternatives are proposed by Contractor and are approved by the University's Representative, Contractor shall assume all costs required to make necessary revisions and modifications to the design, including additional costs to the University for evaluation of revisions and modifications of the design resulting from the substitutions submitted by the Contractor to the University's Representative.
- H. Supporting data shall be submitted by Contractor for all "or equal" products in accordance with the requirements for substitutions.
- I. When materials and equipment are specified by first manufacturers' name and product number, second manufacturer's name, and "or equal," supporting data for the second manufacturer's product, if proposed by the Contractor, shall be submitted in accordance with the requirements for substitutions.
- J. If University's Representative, in reviewing the list of substitution materials and equipment, requires revisions or corrections to be made to previously accepted Shop Drawings and supplemental supporting data to be resubmitted, Contractor shall promptly do so. If any proposed substitution is judged by the University's Representative to be unacceptable, the specified material or equipment shall be provided.
- K. Samples may be required. Tests required by the University's Representative for the determination of quality and utility shall be made by the Contractor's Testing Laboratory and at the expense of Contractor, with acceptance of the test procedure first given by the University's Representative.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01630



SECTION 01737 SUPPORTING FROM BUILDING STRUCTURE

PART 1 - GENERAL

1.1 DESCRIPTION

- A. This Section provides guidelines and limitations for supporting all mechanical, electrical, plumbing or architectural items from the building structure, and for seismic bracing for all such items. Review Plans and Applicable Specifications Sections for all other requirements regarding this work, in the case of duplicated information, perform the prescribed work in conformance with the most stringent requirement(s)
- B. Design and install all support and bracing systems except as noted. Provide for attachment to portions of the building structure capable of bearing the loads imposed. Design systems to not over stress the building structure.
- C. Contractor is not required to design support and bracing for items which the Contract Documents provide specific attachment, support, and bracing.

1.2 QUALITY ASSURANCE

- A. Design and install all support systems to comply with the appropriate Seismic Zone requirements of the California Building Code (CBC) Chapter 23.
- 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 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

1.1 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.



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- B. Channel framing systems: as required to meet Project design.
- C. All exterior materials: hot-dipped galvanized or stainless steel.

PART 3 - EXECUTION

1.1 GUIDELINES & LIMITATIONS

- 1. Contractor shall coordinate the load requirements from all Subcontractors so that no combination of loads exceeds the limitations

1.2 SEISMIC BRACING

- A. 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 01770 CLOSEOUT PROCEDURES

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 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 Contractor shall promptly remove from the vicinity:
 - 1. All of 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.

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 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 at no additional cost to the University.



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- 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 (NOT USED)

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01770



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

PART 1 - GENERAL

1.1 GUARANTEES

- A. Guarantees from Subcontractors shall not limit Contractor's warranties and guarantees to the University. Whenever possible, Contractor shall cause warranties of Subcontractors to be made directly to the University. If such warranties are made to the Contractor, Contractor shall assign such warranties to the University prior to final payment.

1.2 FORM OF GUARANTEE

- A. Submit written guarantees 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 copy.
- 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. Provide information for University's personnel.
 - a. Proper procedure in case of failure.
 - b. Circumstances that might affect the validity of guarantee or bond.

1.4 FORM OF SUBMITTAL

- A. 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 Contractor.
- B. Binders: Commercial quality, 3-ring, with durable and cleanable plastic covers.
- C. Time of Submittals
 - 1. Within 10 days after date of Final Completion, prior to request for final payment.



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 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 University's Representative.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01780



SECTION 01789 PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.1 MAINTENANCE OF DOCUMENTS AND SAMPLES

- A. Store Project record documents and samples in the Contractor's office separate from documents used for construction.
- B. Maintain record documents in order and in a clean, dry, legible condition.
- C. Do not use record documents for construction.

1.2 RECORD DOCUMENTS

- A. Record Drawings
 - 1. Contractor shall maintain on Project site at all times in an approved location and in a clean, dry legible condition, 1 set of Drawings and 1 set of all Shop Drawings. These documents shall be used to record as-built conditions on a day-to-day basis, and shall be kept current, and shall be available for inspection by the University's Representative during normal working hours.
 - 2. Record the following types of information on record drawings:
 - a. Location of Work buried under or outside the building, such as plumbing and electrical lines and conduits. Provide horizontal and vertical dimensions from fixed points. Record all locations of underground Work, points of connection, valves, manholes, catch basins, capped stubouts, invert elevations, etc.
 - b. Locations of all significant Work concealed inside the building, the locations of which were changed by the Contractor from those shown on the Drawings.
 - c. Locations of all items, not necessarily concealed but varying from the locations shown on the Drawings.
 - d. All changes in size, location, and other features of installation not shown on Drawings.
 - e. Sufficient information such that Work concealed in the building may be located with reasonable ease and accuracy. This may be accomplished by dimension or by stating the relationship to the spaces in the building near which the Work was installed. The University's Representative's decision on what constitutes sufficient information shall be final.
 - f. All electrical and control installations to indicate terminal points, wire numbers/circuit numbers, panel designations, device identification, and/or sequence of operations.
 - g. Record existing below-grade utilities if they are exposed by the project or are located within the Project boundary on the record drawings.
 - h. Provide dimension from a designated reference point for all below-grade utilities, provide and record on the record drawing the exact dimension



from an existing designated reference point relative to the University bench mark elevation.

3. Additional Drawings shall be provided as required to properly describe changes.
4. Upon completion of the Work, the record documents shall be certified by the Contractor to represent the true, as-built conditions and shall be given to the University's Representative.

B. Specifications and Addenda

1. Record the following:
 - a. Manufacturer, trade name, catalog number, and supplier of each product and item of equipment actually installed.
 - b. Changes made by Addenda, Change Order (Exhibit J), or Field Order (Exhibit I), and clarifications and interpretations made by Letter of Instruction (Exhibit 20).

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01789



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.
 - 1. 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 fly-leaf 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.
 - 2. Binders
 - a. Commercial quality three-ring binders with durable and cleanable plastic covers.
 - b. 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 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 and other identifying symbols as set forth in the Contract Documents.
- 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 the following information sheet to the University's personnel:
 - 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 4 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 O&M 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. 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 panelboards.
 - 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, 30 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 7 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 days after final inspection.

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 acceptance (whichever is earlier), fully qualified representatives of the manufacturers shall fully instruct the University's Representative and University personnel in the operation, adjustment, and maintenance of all equipment and systems.
- D. Basis of Instruction: Operating and maintenance manual. Review contents of manual with University personnel in full detail to explain all aspects of operations and maintenance.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01830



SECTION 01906 HAZARDOUS MATERIALS PROCEDURES

GENERAL

The Hazardous Material Report for the building is provided as part of the Contract Documents.

Per the report, there are no hazardous materials (with contents of an action level or greater) known to exist within the boundaries of the Scope of Work HOWEVER the Contractor shall the following information provide in this specification section.

1.1 CONTRACTOR'S RESPONSIBILITY

- A. Except as otherwise specified, in the event 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, 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 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 Contractor install materials that contain asbestos, PCB, lead or other known hazardous materials.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01906

END OF DIVISION 1