

**PALOMAR COLLEGE - WELDING
YARD IMPROVEMENTS -
DIVISION 01 - GENERAL
REQUIREMENTS**

5015037

Palomar Community College District

1140 W. Mission Rd., San Marcos, CA 92069



November 2, 2020

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SECTION 01 10 00

SUMMARY OF WORK

PART 1 - GENERAL

1.01 SUMMARY OF WORK

- A. This Contract includes work necessary for and incidental to execution and completion of
Palomar College - Welding Yard Improvements
Palomar College
Palomar, CA
- B. in accordance with Contract Documents dated November 02, 2020 prepared by HMC Architects, 3546 Concours Street, Ontario, California 91764.

1.02 GENERAL DESCRIPTION OF WORK

- A. Work under this Contract includes furnishing all labor, materials, services and transportation, except as specifically excluded which is required for completion of Project in accordance with provisions of Contract Documents.
- B. Work to be included as part of this Contract:
 - 1. Refer to Drawings for description of Scope of Work.
- C. The following restrictions apply to access and to use of site:
 - 1. Use of Site: Limit use of premises to Work in areas indicated. Confine operations to areas within Contract limits indicated. Do not disturb portions of site beyond areas in which Work is indicated. Allow for Owner occupancy and use by public.
 - 2. Driveways and Entrances: Keep driveways and entrances serving premises clear and accessible to Owner, Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on site.
 - 3. Partial Owner Occupancy: Owner reserves right to occupy and to place and install equipment in completed areas of building before Certified Completion, provided such occupancy does not interfere with completion of Work. Such placing of equipment and partial occupancy shall not constitute acceptance of total Work.

1.03 PERMISSIBLE WORKING DAYS AND HOURS

- A. Work may be conducted on regularly scheduled school attendance days between the hours of 7:00 A.M. and 4:00 P.M.
- B. Work may be conducted at any hour during Saturdays, Sundays and non-school session days, at no extra cost to the Owner, when written notification to Owner has been submitted and anticipated schedule of Work activities has been approved.

- C. Conform to Division 01, General Requirements for required payment for Inspector's services performed during overtime hours.

1.04 INTERRUPTION OF EXISTING UTILITY SERVICES

- A. When necessary to interrupt any existing utility service to make connections, minimum of 48 hours advance notice shall be given to Owner and Architect. Interruptions in utility services shall be of shortest possible duration for Work at hand and shall be approved by Architect.
- B. In event any utility service is interrupted without required 48 hours notice, Contractor shall be financially liable for all damages suffered by Owner due to unauthorized interruption.

1.05 VERIFICATION OF EXISTING CONDITIONS

- A. Contractor shall be responsible to examine site of Work and after investigation to decide for himself/herself character of materials, equipment and utilities to be encountered and all other existing conditions affecting Work. Contractor is also responsible to provide sufficient costs to cover provisions of all items of Work under existing conditions referred to herein.

PART 2 - PRODUCTS

2.01 NOT USED.

PART 3 - EXECUTION

3.01 NOT USED.

END OF SECTION

SECTION 01 20 00

PRICE AND PAYMENT PROCEDURES

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Changes in the Work.
- B. Schedule of Values.

1.02 CHANGES IN THE WORK

- A. Minor Changes in the Work: Architect will issue through Construction Manager supplemental instructions authorizing minor changes in the Work, not involving adjustment to the Contract Sum or the Contract Time, on AIA Document G710 or Architect's form, accompanied by Form DSA-141 or approved Form DSA-140.
- B. Proposal Requests
 - 1. Owner-Initiated Proposal Requests - Work Change Proposal Request (WCPR): Architect will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time, on AIA Document G709 or Architect's form. If necessary, the description will include supplemental or revised Drawings and Specifications.
 - a. Work Change Proposal Requests issued by Architect are not instructions either to stop work in progress or to execute the proposed change.
 - b. Within time specified in the General and Supplementary Conditions after receipt of Proposal Request, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.
 - 1) Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
 - 2) Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 - 3) Include costs of labor and supervision directly attributable to the change.
 - 4) Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
 - 5) Quotation Form: Use CSI Form 13.6A, "Change Order Request (Proposal)," with attachments CSI Form 13.6D, "Proposal Worksheet Summary," and Form 13.6C, "Proposal Worksheet Detail."
 - a) The CSI Forms mentioned above are available for purchase at www.cisresources.org.

2. Contractor-Initiated Proposals: If latent or changed conditions require modifications to the Contract, Contractor may initiate a claim by submitting a request for a change to Architect.
 - a. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.
 - b. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
 - c. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 - d. Include costs of labor and supervision directly attributable to the change.
 - e. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
 - f. Comply with requirements in Section 01 60 00 "Substitution Procedures" if the proposed change requires substitution of one product or system for product or system specified.
 - g. Proposal Request Form: Use CSI Form 13.6A, "Change Order Request (Proposal)," with attachments CSI Form 13.6D, "Proposal Worksheet Summary," and Form 13.6C, "Proposal Worksheet Detail."
 - 1) The CSI Forms mentioned above are available for purchase at www.cisresources.org.

C. Construction Change Directive to the Contractor

1. Construction Change Directive: Architect will issue a Construction Change Directive on AIA Document G714 or Architect's form, and completed WCPR (Work Change Proposal Request). Construction Change Directive instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order. Copy will be issued to the Project Inspector.
 - a. Construction Change Directive contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.
2. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Change Directive.
 - a. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract, using CSI Form 13.6A, "Change Order Request (Proposal)," with attachments CSI Form 13.6D, "Proposal Worksheet Summary," and Form 13.6C, "Proposal Worksheet Detail."
 - 1) The CSI Forms mentioned above are available for purchase at www.cisresources.org.

D. Change Orders Procedures: On Owner's approval of a completed Construction Change Directive, Architect will prepare and issue a Change Order for signatures of the Owner and Contractor on AIA Document G701 or Architect's form. Copies of signed Change Order will be distributed to Architect, IOR and Contractor, and submitted for Board Approval.

1. Stipulated Price Change Order: Based on Contractor's Change Order Request as approved by Architect.
2. Time and Material Change Orders: Submit itemized account and supporting data after completion of change within time limits indicated in Conditions of Contract. Architect will determine change allowable in Contract Price and Contract Time as provided in Contract Documents.
3. Maintain detailed records of work done on Time and Material basis. Provide full information required for evaluation of proposed changes, and to substantiate costs for changes in Work.
4. Refer to the General and Supplementary Conditions for additional requirements.
5. Execution of Change Orders: Architect will issue Change Orders for signature of parties as provided in Conditions of the Contract.

1.03 SCHEDULE OF VALUES

- A. Submit printed schedule on AIA Forms G702 and G703 - Application and Certificate for Payment and Continuation Sheet. Contractor's standard form or electronic media printout will be considered, submit sample forms to Architect for approval.
- B. Submit application for progress payment in accordance with the General and Supplementary Conditions.
- C. Submit Schedule of Values in duplicate within 15 calendar days after date of Owner-Contractor Agreement for Architect's approval.
- D. Format: Utilize Table of Contents of this Project Manual. Identify each line item with number and title of the major Specification Section. Identify site mobilization and bonds and insurance. On projects of more than one building, list buildings separately. List mechanical, electrical, plumbing and fire protection Work separately for each building and for site Work.
- E. Break down the plumbing and mechanical portions of the work at a minimum into a rough, finish, including air balance and electrical portion.
- F. Break out rough grading, fine grading, and underground utilities.
- G. Include separate line items, showing amount of General Contractor's overhead and profit, bonds and insurance, supervision, and then remainder of general items.
- H. Revise schedule to list approved Change Orders, with each Application for Payment.

PART 2 - PRODUCTS

2.01 NOT USED.

PART 3 - EXECUTION

3.01 NOT USED.

END OF SECTION

SECTION 01 26 10

REQUESTS FOR INFORMATION (RFI)

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Administrative requirements for Requests for Information (RFI).

1.02 DEFINITIONS

A. Request for Information:

1. Written request prepared by Contractor requesting additional information necessary to clarify an item which he believes is not clearly shown or called for in the drawings or specifications, or to address problems which have arisen under field conditions, hereinafter referred to as RFI.
2. Properly prepared request for information shall include detailed written statement that indicates specific Drawings or Specification in need of clarification and nature of clarification requested.
 - a. Drawings shall be identified by Drawing number and location on Drawing sheet.
 - b. Specifications shall be identified by Section number, page and paragraph.
3. Contractor's documents with similar titles, such as "Request for Interpretation" or "Request for Clarification" shall be considered RFIs.
4. RFIs and Architect's responses are not Changes in the Work; if a Change in the Work is required in response to an RFI, separate documents shall be issued in accordance with Section 01 20 00.

B. Improper RFIs:

1. RFIs that are not properly prepared or incomplete.
2. Improper RFIs will be processed by Architect at Architect's standard hourly rate and Architect will charge Owner, and such costs will be deducted from moneys still due the Contractor. Architect will notify Contractor before processing of improper RFIs.

C. Frivolous RFIs:

1. RFIs that request information that is clearly shown on Contract Documents.
2. Frivolous RFIs may be returned unanswered or may be processed by Architect at Architect's standard hourly rate and Architect will charge Owner, and such costs will be deducted from moneys still due Contractor. Architect will notify Contractor before processing of frivolous RFIs.

1.03 CONTRACTOR'S REQUESTS FOR INFORMATION

- A. When the Contractor is unable to determine from Contract Documents, material, process or system to be installed, Architect will be requested to make clarification of indeterminate item.

1. Whenever possible, such clarification shall be requested at next appropriate project meeting, with response entered into meeting minutes. When clarification at meeting is not possible, because of urgency of need, or complexity of item, Contractor shall prepare and submit RFI to Architect.
- B. Contractor shall endeavor to keep number of RFIs to a minimum. In the event the process becomes unwieldy, in the opinion of Architect, because of number and frequency of RFIs submitted, the Architect may require the Contractor to abandon process and submit future requests as either submittals, substitutions or requests for change.
- C. RFIs shall be submitted on form acceptable to Architect. Forms shall be completely filled in, and if prepared by hand, shall be fully legible after photocopying or transmission by facsimile (fax) or eMail scan. Each page of attachments to RFIs shall bear RFI number in lower right corner.
- D. RFI's shall be originated by Contractor:
 1. RFIs from subcontractors or material suppliers shall be submitted through, reviewed by, and signed by Contractor before submittal to Architect.
 2. RFIs sent by subcontractor or suppliers directly to Architect or Architect's consultants shall not be accepted and will be returned unanswered.
- E. Contractor shall carefully study Contract Documents to ensure that requested information is not available therein. RFIs which request information available in Contract Documents will be deemed "improper" or "frivolous" as noted above.
- F. In cases where RFIs are issued to request clarification of coordination issues, for example pipe and duct routing, clearances, specific locations of Work shown diagrammatically, and similar items, Contractor shall fully lay out suggested solution using drawings or sketches drawn to scale, and submit same with RFI. RFIs which fail to include suggested solution will be returned unanswered with requirement that Contractor submit a complete request.
 1. Contractors are encouraged to utilize photocopies of Contract Documents to completely illustrate their questions, and to provide sketches as required to communicate question, concepts and suggestions.
- G. Do not use RFIs for following purposes:
 1. To request approval of submittals.
 2. To request approval of substitutions.
 3. To request changes which entail additional cost or credit.
 4. To request changes which entail change of time of completion.
 5. To request different methods of performing Work than those drawn and specified.
- H. In event Contractor believes that clarification by Architect results in additional cost or time, Contractor shall not proceed with Work indicated by RFI until Change Order or Construction Change Directive is prepared and approved in accordance with Section 01 20 00. RFIs shall not automatically justify cost increase in Work or change in project schedule.
 1. Answered RFIs shall not be construed as approval to perform extra Work.
 2. Unanswered RFIs will be returned with stamp or notation: Not Reviewed.

- I. Contractor shall prepare and maintain log of RFIs, and at any time requested by Architect, Contractor shall furnish copies of log showing outstanding RFIs. Contractor shall note unanswered RFIs in log.
- J. Contractor shall allow up to 7 days review and response time for RFIs, however, Architect will endeavor to respond in timely fashion to RFIs.

1.04 ARCHITECT'S RESPONSE TO RFIs

- A. Architect will respond to RFIs on one of following forms:
 - 1. Properly prepared RFIs:
 - a. If no Change in the Work is required, Architect will respond in space provided on the RFI form.
 - b. If a Change in the Work is required, Architect will issue in accordance with Section 01 20 00.
 - 2. Improper or Frivolous RFIs:
 - a. Notification of Processing Fee(s).
 - b. Unanswered RFIs will be returned with stamp or notation: "Not Reviewed".
- B. Architect may opt to retain RFIs for discussion during regularly scheduled project meetings for inclusion of responses in meeting minutes in lieu of responding on written form.

PART 2 - PRODUCTS

2.01 NOT USED

PART 3 - EXECUTION

3.01 NOT USED

END OF SECTION

SECTION 01 30 00

ADMINISTRATIVE REQUIREMENTS

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Project Management and Coordination: Project Coordination, Project Meetings.
- B. Construction Progress Documentation: Construction Progress Schedule, Two-week Look Ahead Schedule, Construction Photographs.
- C. Submittal Procedures: Shop Drawings, Product Data, Samples, Deferred Approval Items, Finishes Materials Schedule, Coordinated Drawings.

1.02 PROJECT COORDINATION

- A. Coordinate scheduling, submittals, and Work of various Sections of Project Manual to ensure efficient and orderly sequence of installation of interdependent construction elements, with provisions for accommodating items installed later.
- B. Verify utility requirements and characteristics of operating equipment are compatible with building utilities. Coordinate Work of various Sections having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.
- C. Coordinate space requirements and installation of mechanical and electrical Work that are indicated diagrammatically on Drawings. Follow routing shown for pipes, ducts, and conduit, as closely as practicable; place runs parallel with line of building. Utilize spaces efficiently to maximize accessibility for other installation, for maintenance, and for repairs.
- D. In finished areas except as otherwise indicated, conceal pipes, ducts, and wiring within construction. Coordinate locations of fixtures and outlets with finish elements.
- E. Coordinate completion and clean up of Work of separate sections in preparation for Certified Completion and for portions of Work designated for Owner's occupancy.
- F. After Owner occupancy of premises, coordinate access to site for correction of defective Work and Work not in accordance with Contract Documents, to minimize disruption of Owner's activities.

1.03 PRECONSTRUCTION MEETING

- A. Architect will schedule meeting after Notice of Award.
- B. Attendance Required: Architect, Prime Contractors, Major Subcontractors, Project Inspector and key Owner personnel.
- C. Agenda:

1. Contract Agreement:
 - a. Transmit 5 signed originals of the Agreement to the Owner.
 - b. Transmit Attachment Certifications to the Owner.
 - c. Transmit Performance and Payment Bonds to the Owner.
 - d. Contractor to transmit Certificates of Insurance to the Owner.
 - e. Owner to transmit copy of Certificates of Property Insurance to Contractor.
 - f. Review General and Supplementary Conditions.
2. Receive documentation from Contractor:
 - a. Construction Progress Schedule.
 - b. Schedule of Values.
 - c. List of Subcontractors with addresses and phone numbers.
 - d. List of Submittals and estimated date of submittal.
3. Project Administration:
 - a. Application for Payment, Stop-Notice Release, Record Drawings.
 - b. Change Order Requests, Change Orders, Request For Proposals, Construction Change Directive/Instruction Bulletins. Preparation of Change Orders by Architect.
 - c. Submittals
 - d. Substitution procedures.
 - e. Site Meetings.
 - f. Phasing.
 - g. Critical work sequencing and long-lead items.
 - h. Designation of key personnel and their duties.
 - i. Lines of communications.
 - j. Procedures for RFIs.
 - k. Procedures for testing and inspecting.
 - l. Distribution of the Contract Documents.
 - m. Sustainable design requirements.
 - n. Preparation of record documents.
 - o. Work restrictions.
 - p. Working hours.
 - q. Procedures for moisture and mold control.
 - r. Procedures for disruptions and shutdowns.
 - s. Construction waste management and recycling.
 - t. Parking availability.
 - u. Storage areas.
 - v. Equipment deliveries and priorities.
 - w. Security.
 - x. Progress cleaning.
4. Special Owner Conditions:
 - a. Temporary Facilities.
 - b. Owner Occupancy.
 - c. Work by Owner.
 - d. Access to Site - Owner Contact.
5. Construction Process:
 - a. Contractor shall discuss overview of construction.
 - b. Contractor shall identify items to be selected by Architect/Owner and date selections must be made.
 - c. Contractor shall review special requirements for equipment, safety, and noise.
6. Pre-Job Conference:

- a. Prevailing Wage Requirements.
 - b. Checklist and signatures.
 - D. Architect will record minutes and distribute copies within seven days after meeting to participants and those affected by decisions made.
- 1.04 PROGRESS MEETINGS
- A. Architect will schedule and administer meetings throughout progress of Work as needed.
 - B. Architect will make arrangement for meetings, prepare agenda with copies for participants, preside at meetings.
 - C. Attendance Required: Project Coordinator, Prime Contractors, Major Subcontractors and Suppliers, Project Inspector, key Owner personnel and Architect as appropriate to agenda topics for each meeting.
 - D. Agenda:
 - 1. Review minutes of previous meetings.
 - 2. Review of Work progress.
 - 3. Field observations, problems, and decisions.
 - 4. Identification of problems that impede planned progress.
 - 5. Review of submittals schedule and status of submittals.
 - 6. Maintenance of Construction Progress Schedule.
 - 7. Corrective measures to regain projected schedules.
 - 8. Maintenance of quality and work standards.
 - 9. Effect of proposed changes on progress schedule and coordination.
 - 10. Other business relating to Work.
 - 11. Deferred Approval submittals and timelines.
 - 12. Review of Mockup rooms and/or Assembly.
 - E. Architect will record minutes and distribute copies within seven days after meeting to participants, and those affected by decisions made.
- 1.05 PREINSTALLATION MEETING
- A. When required in individual Specification Sections, convene pre-installation meeting before starting Work of Section.
 - B. Require attendance of parties directly affecting, or affected by, Work of specific Section.
 - C. Notify Architect four days in advance of meeting date.
 - D. Prepare agenda and preside at meeting:
 - 1. Review conditions of installation, preparation and installation procedures.
 - 2. Review coordination with related Work.
 - E. Contractor shall record minutes and distribute copies within three days after meeting to participants, Architect and those affected by decisions made.

1.06 SUBMITTAL PROCEDURES

- A. Transmit separate request for EACH Section submittal directly to Architect.
 - 1. Bind submittals sturdily, neatly label covers.
 - 2. Include Architects job number as it appears on Contract Documents.
 - 3. Include Authority Having Jurisdiction application or approval number.
- B. Submittal number shall use a sequential number followed by a hyphen then the Specification Section followed by a hyphen and then the revision number (e.g., 0001-051200-0). Resubmittals shall have the original number and include the revision number as the suffix (e.g., 0001-051200-1).
- C. Identify Project, Contractor, Subcontractor or supplier; pertinent Drawing sheet and detail number(s), and Specification Section number, as appropriate.
 - 1. Provide name telephone number of individual who may be contacted for further information.
- D. Apply Contractor's dated stamp with Contractor's original signature or initials affixed thereto, certifying that review, verification of products required, field dimensions, adjacent construction Work, and coordination of information is according to requirements of Work and Contract Documents. Stamped signatures or initials are not acceptable.
- E. Schedule submittals to expedite Project. Coordinate submission of related items.
 - 1. Make submittals according to Construction Schedule and adequate enough in advance of scheduled dates of installation to provide required time for reviews for securing necessary approvals for possible revision and re-submittal and for placing orders and securing delivery.
 - 2. Schedule submittals such that related materials and assemblies that support or are affected by the submitted materials are either submitted simultaneously or in order of installation sequence such that impacts and coordination can be evaluated as part of the review.
 - 3. Late submittals, not in accordance with the "Schedule for Submission of Shop Drawings, Product Data and Samples" and the Construction Schedule, will not be considered an acceptable reason for initiating a substitution requests caused by late ordering and procurement of materials.
- F. Identify variations from Contract Documents and Product or system limitations that is detrimental to performance of completed Work.
- G. Substitutions: Submit only as approved per Section 01 60 00, state effect of approved substitution on construction schedule, and changes required in other work or products.
- H. Owner-Directed Substitution Approval: Substitution submittals specifically directed by Owner to be approved by the Architect for this project shall pertain to a specific item only. The Architect's stamped approval of Owner-Directed Substitution does not constitute approval for any other item, other projects or parts of project. A Change Order shall be prepared to effect the Owner's authorization of Owner-Directed Substitution.
- I. Provide space for Contractor and Architect review stamps.

- J. Revise and resubmit submittals in their entirety, identify changes made since previous submittal.
- K. Distribute copies of reviewed submittals to concerned parties. Instruct parties to promptly report any inability to comply with provisions.
- L. Determine and verify field dimensions and conditions, materials, catalog numbers and similar data.
- M. Coordinate as required with all trades and all public agencies involved.
- N. Unless otherwise specifically authorized by Architect, make submittals in groups containing associated items within the same Section. Architect may reject partial submittals as not complying with provisions of this Section.
- O. Where individual Sections require structural calculations, prepare submittal under direction of qualified California Licensed Structural Engineer and shall bear the Engineer's stamp and signature.
- P. Format of Submittals: Submit Electronic Submittals, including but not limited to Product Data, Shop Drawings, Schedules, Certifications, tests, logs, for ease of information distribution. At Contractor's option he may submit standard printed data on reproducible media and in number of copies required per this Section and other project Sections. Identify submitted items that are applicable to the project, including any deviations, with arrows, clouds, or other distinct graphic, or in highlighted writing that can be reproduced with black and white copiers easily discernible from background information.
- Q. Submittals for Deferred Approved Items, refer to listed items in this Section and the specific requirements therein in addition to requirements above.

1.07 CONSTRUCTION PROGRESS SCHEDULE

- A. Submit Construction Progress Schedule in duplicate within 15 calendar days after the date on the Notice to Proceed for Architect's review.
 - 1. Schedule shall reflect amount of time stipulated in Agreement.
 - 2. If the Contractor proposes an earlier completion dated than stipulated in the Agreement, Change Order will be issued reflecting revised completion date at no change in Contract Sum.
- B. Revise and resubmit as required.
- C. Scheduling may utilize programs including: Microsoft Project Schedule, Primavera Project Planner (P3), Primavera SureTrak Project Manager, Meridian Project Systems or similar programs addressing the requirements.
- D. Submit computer generated network analysis diagram in accordance with Section 01 32 16.13 using Critical Path Method, generally as outlined in Associated General Contractors of America (AGC) publication "Construction Planning and Scheduling", latest Edition.

- E. Prepare final Construction Progress Schedule. Provide separate time for each activity and vertical line to identify first workday of each week. Use same breakdown of Work indicated in Schedule of Values. As Work progresses, mark to indicate actual completion.
 - 1. Submit within 15 calendar after the date on the Notice to Proceed
 - 2. Prepare schedule on reproducible media, of width sufficient to show data for entire construction period.
 - 3. Coordinate each element with other activities. Show each activity in proper sequence. Indicate sequences necessary for completion of related Work.
 - 4. Indicate fabrication, delivery and installation activities.
 - 5. Indicate Owner-Furnish, Owner-Installed or Owner-Furnish, Contractor-Installed items in Schedule.
 - 6. Schedule Distribution: Distribute copies to Owner, Architect, subcontractor and parties required to comply with dates.
 - 7. Updating: Revise schedule after each meeting or activity where revisions have been made.
 - 8. Indicate Completion Date and allow time for Architect's procedures necessary for certifying Completion.
- F. Indicate complete sequence of construction by activity, identifying Work of separate stages and other logically grouped activities. Indicate early and late start, early and late finish, float dates and duration. Ownership of float time is shared commodity, not for exclusive use by either party. Use float time to make up Work behind schedule until float time is depleted. Submittals returned in less time than allowed by Contract, shall be used to reduce Contractor time extension requests.
- G. Indicate Milestones and target date and their activities including completion dates.
- H. No Time extensions will be granted nor delay damages paid until a delay occurs that impacts the schedule consumes all available float or contingency time available, and extends the work beyond the contract completion date.
- I. Indicate estimated percentage of completion for each item of Work at each submission.
- J. Schedule for Submission of Shop Drawings, Product Data and Samples: Incorporate "Schedule for Submission of Shop Drawings, Product Data and Samples" in Construction Progress Schedule. This schedule shall include submittal dates required for shop drawings, product data, samples and product delivery dates, including Deferred Approval Items, if any, and including those items furnished by Owner. Provide time in schedule for Architect's review of submittals according to Contract Time. Allow 21 calendar days for submittals requiring consultants' review.
- K. Submit revised schedules with each Application for Payment identifying changes since previous version.
- L. As a minimum allow 15 calendar days in schedule for final inspections before final acceptance. Include time to correct punch list items prior to final acceptance.

1.08 TWO-WEEK LOOK AHEAD SCHEDULE

- A. Submit a Two Week Look Ahead Schedule and shall contain the following:
 - 1. Prepare detailed two-week schedule projections for the Work to be performed during the following weeks beyond the week it is presented at the weekly construction meeting or at the request of the Architect during the construction period.
 - 2. Be plotted in bar chart or time scale logic format and be of such size that all activity numbers and descriptions are clearly legible.
 - 3. Be sorted by sub contractor responsibility, actual start, early start and total float.
 - 4. Include activity ID, description and float for each activity.
 - 5. Include all activities, completed, in progress and scheduled to start within the time frame of the date minus one week to the data date plus two weeks.
 - 6. Schedule shall be updated and provided at each regular progress meeting for review and comparison to approved project schedule status.

1.09 CONSTRUCTION PHOTOGRAPHS

- A. Photographer : Engage qualified photographer to take construction photographs.
- B. Digital Images: Provide images in uncompressed TIFF format, produced by a digital camera with minimum sensor size of 14 megapixels, and at an image resolution of not less than 1600 by 1200.
 - 1. Provide 2 sets (CD's or flash drives) of copies to Owner.
- C. Date Stamp: Unless otherwise indicated, date and time stamp each photographs as it is being taken so stamp is integral to photograph.
 - 1. Identify each print with job name, location from which photograph was taken, photographer's name address and photograph number.
- D. Pre-Construction Photographs: Before starting construction, take 4 color photographs of Project site and surrounding properties from different vantage points, as directed by Architect. Show existing conditions adjacent to property.
- E. Periodic Construction Photographs: Take 4 color photographs monthly, coinciding with cutoff date associated with each Application of Payment. Photographer shall select vantage points to best show status of construction and progress since last photographs were taken. Take photographs same time of day.
 - 1. Field Office Prints: Retain 1 set of prints of periodic photographs in field office at Project site available at all times for reference. Identify photographs same as for those submitted to Architect.
 - 2. Final Completion Construction Photographs: Take 8 color photographs after date of Substantial Completion for submission as Project Record Documents. Architect will direct photographer for desired vantage points.
 - 3. Submit Construction Photographs to Owner monthly, submit before Application for Payment.

1.10 SHOP DRAWINGS

- A. Within 15 days from Notice to Proceed, submit to Architect for review and acceptance, "Schedule for Submission of Shop Drawings, Product Data and Samples" (Submission Schedule) listing required submittals and review dates. Schedule shall allow sufficient time for checking by Architect. Incorporate Submission Schedule in Construction Progress Schedule. Days: Calendar Days.
 - 1. Additionally, submit all Shop Drawings, Product Data and Samples according to the following guidelines. Guidelines are provided to allow Architect and Engineers adequate time for review and is not intended to dictate contractor's means and methods:
 - a. Contract of 60 to 90 days: Submit within 15 days from acceptance of Submission Schedule. Allow Architect 15 days to respond (defined as reviewed and returned). Re-submittals: allow contractor 7 days, allow Architect 10 days to respond.
 - b. Contract of 90 to 180 days: Submit within 30 days from Notice to Proceed. Allow Architect 15 days to respond. Re-submittals: allow Contractor 10 days, and Architect 15 days to respond.
 - c. Contract of 180 to 270 days: Submit within 45 days from Notice to Proceed. Allow Architect 21 days to respond. Re-submittals: allow Contractor 10 days, and Architect 15 days to respond.
 - d. Contract of 270 to 360 days: Submit within 60 days from Notice to Proceed. Allow Architect 21 days to respond. Re-submittals: allow Contractor 10 days, and Architect 15 days to respond.
 - e. Contract of 360 to 450 days: Submit within 60 days from Notice to Proceed. Allow Architect 21 days to respond. Re-submittals: allow Contractor 15 days and Architect 21 days to respond.
 - f. Contract of 450 days and longer: Contractor to schedule submittals. Allow Architect 30 days to respond. Re-submittals: allow Contractor 15 days and Architect 21 days to respond.
- B. Submit newly prepared information, drawn to accurate scale. Highlight, encircle or otherwise indicate deviations from Contract Documents. Do not reproduce Contract Documents or copy standard information as the basis of Shop Drawings. Standard information prepared without specific reference to Project will not be approved as shop drawings.
- C. Shop drawings shall include fabrications and installation drawings, setting diagrams, schedules, patterns, templates and similar drawings. Include following information:
 - 1. Dimensions
 - 2. Identification of products and materials included.
 - 3. Compliance with specified standards.
 - 4. Notation of coordination requirements.
 - 5. Notation of dimensions established by field measurement.

- D. Contractor shall review, stamp with his approval as herein required, and submit with reasonable promptness and in orderly sequence, according to Submittal Schedule, all shop drawings required by Contract Documents or subsequently by Architect as covered by modifications. Shop drawings shall be properly identified. At time of submission Contractor shall inform Architect in writing and with highlighted annotation on shop drawings of any deviation in shop drawings from requirements of Contract Documents.
- E. Stamp: Each page of shop drawings shall bear Contractor's stamp, which shall signify Contractor's representation that he has determined and verified materials, field measurements and field construction criteria related thereto, or will do so, and has checked and coordinated information contained in shop drawings. Each stamp shall be accompanied by wet signature or initial of employee of Contractor who may be contacted for information. Stamped signatures or initials are not acceptable.
- F. Method of Review: Submit Electronic Shop Drawing Submittals. Submit standard .pdf document shop drawings. Identify submitted items that are applicable to the project, including any deviations, with arrows, clouds, or other distinct graphic, or in highlighted writing that can be reproduced with black and white copiers easily discernible from background information.
1. Comments or corrections will be noted on submittals and returned to Contractor, who shall identify all changes made since previous submittal and resubmit in same manner. When reviewed, submittals will be stamped and returned to Contractor who shall make distribution of electronic copies as required.
- G. Processing Time
1. Allow enough time for submittal review, including time for re-submittals, as follows:
 - a. Time for review shall commence on Architect's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including re-submittals.
 - b. In accordance with the Schedule for Submission of Shop Drawings, Product Data and Samples. Review of each submittal for conformance with design concept of Project and with information given in Contract Documents. Architect's review of a separate item shall not indicate acceptance of assembly in which that item functions. Allow additional time if coordination with subsequent submittals is required. Architect will advise Contractor when a submittal being processed must be delayed for coordination.
 - c. Submittals requiring Consultants' Review: Where review of submittals by Architect's consultants is required, allow minimum 21 calendar days for review of each submittal.
 2. Re-submittal Review: In accordance with the Schedule for Submission of Shop Drawings, Product Data and Samples for each re-submittal.
- H. Submittal of shop drawings to Architect, shall be made by Contractor with dated transmittal form or letter, and not by subcontractors or suppliers.

- I. Architect's review of shop drawings shall not relieve Contractor of responsibility for any deviation from requirements of Contract Documents unless Contractor has informed Architect in writing of such deviation at time of submission and Architect has given written acceptance to specific deviation, nor shall Architect's review relieve Contractor from responsibility for errors or omissions in shop drawings.
- J. No portion of Work requiring shop drawings shall be commenced until shop drawings have been returned with review by Architect.
- K. At Contractor's option, he may request and if Architect approves use Architect's computer-generated drawings in electronic format. Contractor's request must be in writing with list of drawings requested and CAD format required. Contractor assumes all liability for accuracy of shop drawings if he opts to use Architect's drawings. Software for CAD formats requested by Contractor not currently available to Architect will be provided by Contractor at his own expense. Complete CAD Drawing Request Form at the end of this Section for request.
 - 1. Engineers' Drawings, CAD engineers' drawings are available only at discretion of the Engineer.

1.11 PRODUCT DATA

- A. Submit within time required by Shop Drawings.
- B. Submit electronic copies only.
- C. Mark each copy to identify applicable products, models, options and other data. Supplement manufacturers' standard data to provide information unique to this Project.
- D. After review, distribute and provide copies for Record Documents.

1.12 SAMPLES

- A. Submit within time required by Shop Drawings.
- B. Submit samples to illustrate functional and aesthetic characteristics of product with integral parts and attachment devices. Coordinate sample submittals for interfacing Work.
- C. Submit samples of finishes from the full range of manufacturers' standard colors, textures and patterns for Architect selections, or in custom colors selected.
- D. Include identification on each sample with full Project information.
- E. Submit minimum of three (3) samples or as specified in individual Sections of Specifications, two (2) of which will be retained by Architect.
- F. Reviewed samples which may be used in the Work are indicated Sections of the Specifications, two (2) of which will be retained by the Architect.
- G. Selection or rejection of samples will be determined by Architect in writing.

- H. Colors: Materials that are visually related to other finishes require that subcontractors submit their samples before normally scheduled in order that color selection can be made for other items that are scheduled to be ordered earlier in construction schedule. Complete submittal of color charts and color samples shall be made before related colors will be selected Architect. Contractor shall be responsible to coordinate submittal schedules so as not to delay Work.

1.13 MANUFACTURER'S INSTRUCTIONS

- A. When specified in individual Specification Sections, submit manufacturer's printed instruction for delivery, storage, assembly, installation, start-up, adjusting and finishing in quantities specified for product data.
- B. Identify conflicts between manufacturer's instructions and contract documents.

1.14 MANUFACTURER'S CERTIFICATIONS

- A. When specified in individual Specification Sections, submit manufacturers' certificate to Architect for review in quantities specified for product data.
- B. Indicate that material or product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits and certifications as appropriate.
- C. Certificates may be recent or previous test results on material or product, but must be acceptable to Architect.

1.15 SPECIAL PROCEDURES – ACCELERATION OF THE WORK

- A. If, in judgment of Architect or Owner, it becomes necessary at any time to accelerate Work or portion thereof, Contractor, when ordered or directed by Architect or Owner, shall deploy workers in such portions of Project where directed to enable others to properly engage and carry on their work.
 - 1. If circumstances require that entire Work or portion thereof be completed at date earlier than Contract Completion Date as adjusted by change orders, Contractor, when ordered or directed by Owner or Architect, shall increase his forces, equipment, hours of work, and/or number of shifts and shall expedite delivery of materials to meet the altered completion date or dates ordered or directed. Any increase in cost to Contractor in compliance with such orders or directives will be adjusted in accordance with Contact Documents.
- B. If, in judgment of Architect or Owner, Work is behind schedule and rate of placement of work is inadequate to regain scheduled progress so as to ensure timely completion of Work or separable portion thereof, Contractor, when so informed by Architect or Owner, shall immediately take action to increase rate of Work placement.
 - 1. This shall be accomplished by any one or combination of following or other suitable measures:
 - a. An increase in working forces,
 - b. An increase in equipment or tools,
 - c. An increase in hours of work or number of shifts,
 - d. Expediting delivery of materials.

2. Contractor shall, within ten (10) calendar days after being so informed, notify Architect of specific measures taken and/or planned to increase rate of progress together with estimate of when scheduled progress will be regained. Should plan of action be deemed inadequate by Architect or Owner, Contractor will take additional steps or make adjustments as necessary to his plan of action until it meets with Architect's or Owner's approval.
 3. Acceleration of Work will continue until scheduled progress is regained. Scheduled progress shall be established from latest revised approved progress schedule for Project.
 4. Timely completion will be understood as Contract Completion Date as revised by all time extensions granted at time acceleration is undertaken.
 5. Contractor shall not be entitled to additional compensation for additional effort he applies to Work under terms of this sub-paragraph.
- C. Any directive or order to accelerate Work will be in writing. Any directive or order terminating accelerated Work will be in writing.

1.16 PRECEDENCE

- A. The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all; performance by the Contractor shall be required only to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results.
- B. In the event of conflicts or discrepancies among the Contract Documents, interpretations will be based on the following priorities:
1. The Agreement.
 2. Addenda, with those of later date having precedence over those of earlier date.
 3. The Supplementary Conditions.
 4. The General Conditions of the Contract for Construction.
 5. Drawings and Technical Specifications.
 6. In the case of an inconsistency between Drawings and Specifications or within either Document not clarified by addendum, the better quality or greater quantity of Work shall be provided in accordance with the Architect's interpretation.
 7. Any work called for in the Drawings and not mentioned in the Specifications, or vice versa, shall be performed as though fully set forth in both.
 8. Contractor shall secure written permission from, Architect before proceeding with work affected by omission or discrepancies in the Contract.
- C. Separate sections of this Specification are arranged only for convenience of Contractor, and nothing stated herein should be misconstrued as suggesting jurisdiction over items of work by any different building trades.

PART 2 - PRODUCTS

2.01 PRODUCTS FOR PATCHING AND EXTENDING WORK

- A. Refer to Section 01 70 00 Execution Requirements.

- B. New Materials: As specified in product sections; match existing products and Work for patching and extending Work.
- C. Type and Quality of Existing Products: Determine by inspecting and testing products where necessary, referring to existing Work as standard.

PART 3 - EXECUTION

3.01 NOT USED.

END SECTION

CAD DRAWING REQUEST FORM

Date: _____

Job Number: _____

Project: _____

Project Architect: _____

We _____
Contractor

Request the following listed CAD file Sheet Numbers for use in the execution of our Work under the Contract Documents of the subject project, and hereby assume all and sole responsibility of field verification and coordination with the Work of associated trades.

The Contractor further agrees, to the fullest extent permitted by law, to indemnify and hold harmless the Architect, its officers, directors, employees and subconsultants (collectively, Architect) against any damages, liabilities or costs, including reasonable attorneys' fees and defense costs, arising from or allegedly arising from or in any way connected with the unauthorized reuse or modification of the electronic files by the Contractor or any person or entity that acquires or obtains the electronic files from or through the Contractor without the written authorization of the Architect.

Sheet No.	Dated	Sheet Title
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Requested File Format

☐ DWG (AutoCAD, 2012, 2015)

Requested File Deliverable

☐ CD Rom

☐ E-MAIL (Zipped Files)

Contractor's E-mail address

Contractors are not required to pay for the first 5 drawings (maximum). Additional drawings available at a rate of \$50.00 per drawing.

Total payment enclosed \$_____, (checks made payable to **TBD** Architects).

Signed: _____

Title: _____

Company: _____

Address: _____

Telephone: _____

Contact: _____ *HMC Architects*

END OF FORM

SECTION 01 32 16.13
NETWORK ANALYSIS SCHEDULES

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. References
- B. Quality Assurance.
- C. Format
- D. Schedule
- E. Submittals
- F. Review and Evaluation.
- G. Updating Schedule.
- H. Distribution

1.02 REFERENCES

- A. "Construction Planning and Scheduling", The Associated General Contractors of America (AGC), Washington, D.C., Latest Edition.

1.03 QUALITY ASSURANCE

- A. Scheduler: Contractor's Personnel specializing in CPM scheduling with one year minimum experience in scheduling construction Work of complexity comparable to this Project, and having use of computer facilities capable of delivering detailed graphic printout within 48 hours of request.
- B. Contractor's Administrative Personnel: One year minimum experience in using and monitoring CPM schedule on comparable projects.

1.04 FORMAT

- A. Scheduling may utilize programs (Latest Editions) including Microsoft Project, Primavera Project Planner for Windows (P3), Primavera SureTrack Project Manager, Meridian Project Systems or similar programs addressing the requirements.
- B. Listings: Reading from left to right, in ascending order for each activity. Identify each activity with applicable Specification section number.
- C. Diagram Sheet Size: 30 inches high by width required.
- D. Scale and Spacing: To allow for notations and revisions.

1.05 SCHEDULE

- A. Prepare Network Analysis Schedule and supporting mathematical analyses using Critical Path Method, under concepts and methods outlines in AGC's "Construction Planning and Scheduling".
- B. Diagrams to illustrate order and interdependence of activities and sequence of Work, how start of given activity depends on completion of preceding activities, and how completion of activity may restrain start of subsequent activities.
- C. Illustrate complete sequence of construction by activity, identifying Work of separate stages and other logically grouped activities. Indicate early and late start, early and late finish, float dates and duration. Provide dates for procurement and delivery of critical products and dates for installation and provision for testing. Provide legend for symbols and abbreviations used. Indicate fabrication, delivery and installation activities.
- D. Incorporate Schedule for Submission of Shop Drawings and Samples. Submittal dates required for shop drawings, product data, samples and product delivery dates, including those furnished by Owner. Provide time in schedule for review of submittals.
- E. Mathematical Analysis: Tabulate each activity of detailed network diagrams, using calendar dates and identifying for each activity:
 - 1. Preceding and following event number.
 - 2. Activity description.
 - 3. Estimated duration of activity, in maximum 15 day intervals.
 - 4. Earliest start date.
 - 5. Earliest finish date.
 - 6. Actual start date.
 - 7. Actual finish date.
 - 8. Latest start date.
 - 9. Latest finish date.
 - 10. Lag time, total and free float for each activity and critical path.
 - 11. Monetary value of activity, keyed to Schedule of Values.
 - 12. Manpower and cost loading of scheduled activities.
 - 13. Percentage of activity completed.
 - 14. Responsibility
- F. Analysis Program: Capable of compiling monetary value of completed and partially completed activities of accepting revised completion dates and re-computation of all dates and float.
- G. Required Sorts: List activities in sorts or groups:
 - 1. By preceding Work item or event number from lowest to highest.
 - 2. By amount of float, then in order of early start.
 - 3. By responsibility in order of earliest possible start date.
 - 4. In order of latest allowable start dates.
 - 5. In order of latest allowable finish dates.
 - 6. Contractor's periodic payment request sorted by Schedule of Values.
 - 7. Listing of basic input data that generates report.

8. Listing of activities on critical path.

H. Coordinate contents with Schedule of Values.

I. Contractor shall not sequester float through strategies including extending activity duration estimates to consume available float, using preferential logic, using extensive or insufficient crew or resource loading, use of float suppression techniques, special lead or lag logic restraints or imposed dates.

1.06 SUBMITTALS

A. PRELIMINARY Network Analysis Schedule: Within 15 days after date established in the Notice to Proceed, submit proposed PRELIMINARY Network Analysis Schedule defining planned operations for first 30 days of Work, with general outline for remainder of Work.

B. COMPLETE Network Analysis Schedule: Within 15 days after Notice to Proceed, submit Draft of proposed COMPLETE Network Analysis Schedule for review. Include written certification that major mechanical and electrical Subcontractors have reviewed and accepted proposed schedule. Make submittals in sufficient time for Architect's review.

C. PRELIMINARY Network Analysis Schedule: Within 20 days after joint review of proposed PRELIMINARY Network Analysis Schedule, submit proposed COMPLETE Network Analysis Schedule for review consisting of network diagrams and mathematical analysis. Include written certification that major, mechanical, and electrical subcontractors have reviewed and accepted proposed schedule.

D. COMPLETE Network Analysis Schedule: Within 10 days after joint review of Draft of proposed COMPLETE Network Analysis Schedule, submit COMPLETE Network Analysis Schedule consisting of network diagrams and mathematical analysis. Include written certification that major, mechanical and electrical subcontractors have reviewed and accepted proposed schedule.

E. Participate in review of Preliminary and Complete Network Analysis Schedule jointly with Architect.

F. Number of opaque reproductions Contractor requires, plus three copies which will be retained by Architect.

G. One reproducible transparency and one opaque reproduction.

H. All schedule submittals, including progress updates for duration of Work, shall include electronic submittal in original file format, by e-mail or delivered on storage media agreed to.

I. Updated network schedule with each Application for Payment.

1.07 REVIEW AND EVALUATION

- A. Participate in joint review and evaluation of network diagrams and analysis with Architect at each submittal.
- B. Evaluate project status to determine Work behind schedule and Work ahead of schedule.
- C. After review, revise as necessary as result of review and resubmit within 10 days.

1.08 UPDATING SCHEDULE

- A. Maintain schedule to record actual start and finish dates of completed activities.
 - 1. Submit updated schedule at each scheduled project meeting or monthly, whichever is more frequent.
- B. Indicate progress of each activity to date of revision with project completion date of each activity. Update diagrams to graphically depict current status of Work.
- C. Identify activities modified since previous submittal, major changes in Work, and other identifiable changes.
- D. Indicate changes required to maintain Date of Certified Completion.
- E. Submit sorts required to support recommended changes.
- F. Provide narrative report to define problem areas, anticipated delays and impact on Schedule. Report corrective action taken, or proposed and its effect including effect of change on schedule of separate contractors.

1.09 DISTRIBUTION

- A. Following joint review, distribute copies of updated schedule to Contractor's project site file, to Subcontractors, Suppliers, Architect, Owner and other concerned parties.
- B. Instruct recipients to promptly report, in writing, problems anticipated by projections shown in schedule.

PART 2 - PRODUCTS

2.01 NOT USED.

PART 3 - EXECUTION

3.01 NOT USED.

END OF SECTION

SECTION 01 35 16
ALTERATION PROJECT PROCEDURES

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Products and installation for patching and extending Work.
- B. Transition and adjustments.
- C. Repair of damaged surfaces, finishes and cleaning.

PART 2 - PRODUCTS

2.01 PRODUCTS FOR PATCHING AND EXTENDING WORK

- A. New Materials: As specified in products Sections, match existing products and work for patching and extending Work. Maintain fire-rated construction.
- B. Type and Quality of Existing Products: Determine by inspection and testing of products where necessary, referring to existing Work as standard.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Verify that demolition is complete and areas are ready for installation of new Work.
- B. Beginning of restoration Work means acceptance of existing conditions.

3.02 PREPARATION

- A. Cut, move or remove items as necessary for access to alterations and renovation Work. Replace and restore at completion.
- B. Remove unsuitable material not marked for salvage, such as rotted wood, corroded metals and deteriorated masonry and concrete. Replace materials as specified for finished Work.
- C. Remove debris and abandoned items from work area and from concealed spaces.
- D. Prepare surface and remove surface finishes to provide for proper installation of new Work and finishes.
- E. Close openings in exterior surfaces to protect existing Work and salvage items from weather and extremes of temperature and humidity. Insulate ductwork and piping to prevent condensation in exposed areas.

3.03 INSTALLATION

- A. Coordinate Work of alterations and renovations to expedite completion sequentially and to accommodate Owner occupancy.
- B. Remove, cut and patch Work in manner to minimize damage and to provide means of restoring products and finishes to original or specified condition.
- C. Refinish visible existing surfaces to remain in renovated rooms and spaces, to specified conditions for each material with neat transition to adjacent finishes.
- D. Restore existing systems including fire alarm systems to their full operating condition(s) at no additional cost that were damaged and/or removed during the scope of this contractor's work. Advise Architect of any deficiencies and/or pre-existing deficient conditions prior to starting work.
- E. Install products as specified in individual Sections and Drawings.

3.04 TRANSITIONS

- A. Where new Work abuts or aligns with existing, perform smooth and even transition. Patch Work to match existing adjacent Work in texture and appearance.
- B. When finished surfaces are cut so that smooth transition with new Work is not possible, terminate existing surface along straight line at natural line of division and make recommendation to Architect.

3.05 ADJUSTMENTS

- A. Where change of plane of 1/4 inch or more occurs, request instructions from Architect.
- B. Trim existing doors as necessary to clear new floor finish. Refinish trim as required.
- C. Work at penetrations in fire-rated assemblies to maintain required fire rating assembly.

3.06 REPAIR OF DAMAGED SURFACES

- A. Patch or replace portions of existing surfaces that are damaged, lifted, discolored or showing other imperfections. Maintain fire-rated construction.
- B. Repair substrate prior to patching finish.

3.07 FINISHES

- A. Finish surfaces to match existing.
- B. Finish patches to produce uniform finish and texture over entire area. When finish cannot be matched, refinish entire surface to nearest Intersections.

3.08 CLEANING

- A. Conform to Division 01, General Requirements and Section 01 70 00, Execution Requirements.

END OF SECTION

SECTION 01 40 00
QUALITY REQUIREMENTS

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Reference Standards.
- B. Quality Assurance and Control of Installation.
- C. Field Samples.
- D. Mock-up
- E. Project Inspector and Inspections.
- F. Permits and Fees.
- G. Manufacturers' Field Services and Reports.
- H. Laboratory Testing Services.

1.02 REFERENCE STANDARDS

- A. Conform to reference standards by date of issue current on date of Contract Documents.
- B. For products or workmanship specified by Association, Trade or Federal Standards, comply with requirements of standard, except when more rigid requirements are specified or are required by applicable codes.
- C. Obtain copies of standards when required by Contract Documents.
- D. Maintain copy of standards at jobsite during submittals, planning and progress of the specified Work until Certified Completion.
- E. Should specified reference standards conflict with Contract Documents, request clarification from the Architect before proceeding.
- F. The contractual relationship of the parties to the Contract shall not be altered from the Contract Documents by mention or inference otherwise in any reference document.

1.03 QUALITY ASSURANCE/CONTROL OF INSTALLATION

- A. Monitor quality control over suppliers, products, services, site conditions and workmanship to produce Work of specified quality.
- B. Comply fully with manufacturers' instructions including each step in sequence.

- C. Should manufacturers' instructions conflict with Contract Documents, request clarification from Architect before proceeding.
- D. Perform Work by persons qualified to produce workmanship of specified quality.
- E. Where experience minimums for workmen, applicators, companies or manufacturers are required in individual Sections, written certification and documentation substantiating such minimums shall be submitted and approved by the Architect, when requested.
- F. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion or disfigurement.
- G. Field Samples
 - 1. Obtain field samples for review by Architect.
- H. Mock-Up
 - 1. Test will be performed under provisions identified in this Section.
 - 2. Assemble and erect specified items with specified attachment and anchorage devices, flashings, seals and finishes.
 - 3. Where mock-ups are specified in individual Sections, shall be removed after approval per this Section unless are to remain as part of the Work.

1.04 PROJECT INSPECTOR

- A. An Inspector, herein referred to as the "Project Inspector", "Job Inspector", or "Inspector of Record" (IOR) will be employed by the Owner approved by the Architect, Structural Engineer.
- B. The Work of construction in all stages of progress shall be subject to the personal continuous observation of the Project Inspector. He shall have free access to any or all part of the Work at any time. The Contractor shall furnish the Inspector reasonable facilities for obtaining such information as may be necessary to keep him fully informed respecting the progress and manner of the Work and the character of the materials. Inspection of the Work shall not relieve the Contractor from any obligation to fulfill this Contract.

1.05 PERMITS AND FEES

- A. Where required by the provisions of individual sections of the Specifications, and where required to carry out construction operations, Contractor shall obtain and pay for permits and fees, including, but not limited to, Demolition, Grading, Disposals, requirements of Water, Gas, Sewer, Flood and Sanitary Districts, Municipal and County Building Departments having jurisdiction.
 - 1. Fees for final utility connections shall be paid by the Contractor and reimbursed to the Contractor by the Owner at direct cost.
 - 2. Building Permits or approvals issued by AHJ requiring fees will be obtained and paid by the Owner.

1.06 MANUFACTURERS' FIELD SERVICES AND REPORTS

- A. When specified in individual Specification Sections, require material or product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, test, adjust and balance of equipment and as applicable and to initiate instructions when necessary.
- B. Manufacturers' representatives shall report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.
- C. Submit report of observation to Architect for review.

1.07 CODES AND REGULATIONS

- A. All work pertaining to and all materials supplied for executing and completing this Contract shall comply with provisions specified in the Contract Documents and with all applicable laws, regulations and ordinances governing Work including, but not necessarily limited to, those of:
 - 1. California Code of Regulations (CCR), Title 24, California Building Standards Code
 - a. CAC - 2019 California Administrative Code, 24 CCR Part 1
 - b. CBC - 2019 California Building Code, 24 CCR Part 2, Volumes 1 and 2
 - c. CEC - 2019 California Electrical Code, 24 CCR Part 3
 - d. CMC - 2019 California Mechanical Code, 24 CCR Part 4
 - e. CPC - 2019 California Plumbing Code, 24 CCR Part 5
 - f. 2019 California Energy Code, 24 CCR Part 6
 - g. CFC - 2019 California Fire Code, 24 CCR Part 9
 - h. CRSC - 2019 California Reference Standards Code, 24 CCR Part 12
 - 2. California Code of Regulations (CCR), Title 19, Public Safety, Division 1, State Fire Marshal.
- B. ADA – Americans with Disabilities Act of 1990, as amended
 - 1. Standards – ADA Title III Regulations and the 2010 ADA Standards for Accessible Design.
- C. Enforcement includes all other codes, regulations, or standards referenced in the above listed codes.
- D. The preceding listed codes, regulations and ordinances of the regulatory agencies are hereby made a part of this Contract. Nothing in the Contract shall be construed as allowing any violation of any provision of any of above listed documents. Maintain copies of Codes listed above at the construction site.

1.08 VARIATIONS WITH LAWS

- A. If Contractor, his subcontractors or suppliers, or any of their employees ascertain at any time that requirements of this Contract conflict with or are in violation of applicable laws, codes, regulations and ordinances he shall not proceed with Work in question, except at his own risk. Contractor shall be required to remove that Work from site and replace such Work with all complying Work at no additional cost to Owner.

1.09 SELECTION AND PAYMENT - TESTING LABORATORY AND SPECIAL INSPECTORS

- A. Owner will employ and pay for services of independent Testing Laboratory and Special Inspectors to perform testing where required by the CBC and this Section.
- B. Offsite fabrication requiring Inspection and Testing: submit the qualifications of Inspectors and laboratory, including proposals for services, to the Owner and Architect for approval of qualifications and costs.
- C. Inspector of Record (IOR) / Testing Laboratory Travel Expenses
 - 1. Initial Testing. For initial testing required by this Manual, Owner shall pay IOR, Testing Laboratory or both, for travel expenses, including mileage, room and board, when travel for inspection and testing of products purchased by the Contractor exceeds 50 miles or 2 hours from the project site.
 - 2. Additional Testing. When initial testing fails, IOR and Testing Laboratory travel expenses, as described above, attributable to required retesting shall be borne by the Contractor and will be deducted by Change Order from funds due and payable, or that become due and payable to Contractor.
 - 3. IOR, Testing Laboratory or both, as applicable, shall forward billings and records of such expenses to the Owner.
- D. When tests and inspections are required on an overtime basis, initial payment will be made by Owner. At termination of Work or completion of Project, all costs for overtime testing and inspections will be deducted from Contractor's final payment (or any funds due and payable) by Change Order.
- E. Before the Testing Laboratory files testing and inspection billings with Owner, they shall be billed indicating segregated straight time from overtime costs. All overtime costs shall be substantiated with detailed explanation for necessity of such work costs.
- F. When materials tested fail to meet requirements herein specified, they shall be promptly corrected or removed and replaced, re-inspected and retested in a manner required by the Architect. Costs involved in re-inspection and retesting will be paid by the Owner and deducted from Contractor's final payment (or any funds due and payable) by Change Order.
- G. Employment of testing laboratory shall in no way relieve Contractor of obligation to perform work in accordance with requirements of Contract Documents.

1.10 LABORATORY RESPONSIBILITIES

- A. Laboratory shall be licensed to conduct testing and inspection operations in California. It shall be supervised by a State Licensed Civil Engineer who shall certify and sign all reports.
- B. Provide qualified personnel at site. Cooperate with Architect, Project Inspector and Contractor in performance of services.
- C. Perform specified inspection, sampling and testing of products in accordance with standards specified herein.
- D. Ascertain compliance of materials and mixes with requirements of Contract Documents.
- E. Promptly notify Architect, Project Inspector and Contractor by letter of observed irregularities or non-conformance of Work or products.
- F. Perform additional inspections and test required by Architect or governing agencies.
- G. Immediately upon Testing Laboratory determination of a test failure, the laboratory shall telephone the results of test to Architect. On the same day, laboratory shall send written test results to those named on the distribution list below.

1.11 LABORATORY REPORTS

- A. After each inspection and test, promptly submit one copy of laboratory report to the following:
 - 1. Owner
 - 2. Contractor
 - 3. Inspector of Record (IOR)
 - 4. Architect
 - 5. Structural Engineer
 - 6. Mechanical and Electrical Engineers (Related Tests and Inspections).
- B. Include:
 - 1. Date issued.
 - 2. Project title, Architect's number
 - 3. Name of inspector.
 - 4. Date and time of sampling and Specifications Section.
 - 5. Identification of product and Specifications Section.
 - 6. Location in the Project.
 - 7. Type of inspection or tests.
 - 8. Date of test and ambient conditions at time of test.
 - 9. Results of tests.
 - 10. Conformance with Contract Documents.
 - 11. Signature by Registered Professional Engineer licensed in California.
 - 12. Statement that tests were conducted in accordance with Parts 1 and 2, Title 24, California Code of Regulations.

- C. Test reports shall include tests made, whether such tests indicate that the material performed satisfactorily or not. Samples taken but not tested shall be reported. Reports shall show that the materials were sampled and tested in accordance with the requirements of the approved Specifications. Reports shall show the specified design strength and shall state whether or not the materials tested comply with requirements. Report special sampling operations where required.
- D. Submit a report verifying that tests and inspections herein specified and otherwise required have been completed and material and workmanship complies with the Contract Documents. Such verification reports shall be submitted at the completion of the Project and at any time the Project is suspended. Parties to receive such reports are the same as listed above.
- E. When requested by Architect, provide interpretation of test results.

1.12 LIMITS ON TESTING LABORATORY AUTHORITY

- A. Laboratory may not release, revoke, alter or enlarge on requirements of Contract Documents.
- B. Laboratory may not approve or accept any portion of the Work.
- C. Laboratory may not assume any duties of Contractor.
- D. Laboratory has no authority to stop the Work.
- E. Laboratory shall not interpret code in relation to the design of the building.

1.13 CONTRACTOR RESPONSIBILITIES

- A. Deliver to laboratory at designated location, adequate samples of materials proposed to be used which require testing. Selection of materials required to be tested shall be by the Lab or Owner's Representative and not by the Contractor.
- B. Cooperate with laboratory personnel, Owner's Representative, Project Inspector and the Architect, and provide access to the Work including weekends and after work hours and to manufacturer's facilities.
- C. Provide incidental labor materials and facilities to provide at all times, safe access to Work to be tested, to obtain and handle samples at the site or at source of products to be tested, to facilitate tests and inspections, storage and curing of test samples.
- D. Notify Architect, Project Inspector and laboratory 24 hours prior to expected time for operations requiring inspection and testing services. Contractor shall pay for costs incurred if testing or inspections are cancelled and are required to be rescheduled due to the Contractor's failure to notify the Project Inspector in advance as required. Also, notify Owner in advance of manufacturer of materials to allow testing at source of supply.

- E. In accordance with CBC-17, Section 1706, Contractor shall execute and submit a Statement of Responsibility regarding special inspections and testing required for principal wind- and seismic-load bearing systems to the Inspector of Record and the Owner.
- F. The Owner, Project Inspector, or the Architect shall have the right to reject materials and workmanship that are defective or to require their correction. Rejected workmanship shall be satisfactorily corrected and rejected materials shall be removed from the premises without cost to the Owner. If the Contractor fails to correct such rejected Work within a reasonable time, fixed by written notice, the Owner will correct same and charge the expense to the Contractor by Change Order.
- G. Should it be considered necessary or advisable by the Owner at any time before date of completion of the entire Work to make an examination of Work already completed by removing or tearing out the same, the Contractor shall on request promptly furnish all necessary facilities, labor and materials. If such Work is found to be defective in any respect due to fault of the Contractor or his subcontractor, all extra expenses shall be charged to the Contractor by Change Order. If however such Work is found to meet the requirements of the Contract Documents, the additional cost of labor and materials involved in the examination and for replacement costs shall be allowed to the Contractor by Change Order.
- H. When changes of construction schedule are necessary during construction, coordinate such changes with the Testing Laboratory as required.
- I. When the Testing Laboratory is ready to test according to the established schedule, but is prevented from testing or taking specimens due to incompleteness of the Work, extra charges for testing attributable to the delay shall be charged to the Contractor by Change Order.
- J. Inspecting and testing performed exclusively for the Contractor's convenience shall be the sole responsibility of the Contractor.
- K. Selection of materials to be tested shall be made by the Testing Laboratory or the Project Inspector and not by the Contractor.
- L. Any material shipped by the contractor from the source of supply prior to having satisfactorily passed such testing and inspection or prior to the receipt of notice from said representative that such testing and inspection will not be required, shall not be incorporated in the Work.

PART 2 - PRODUCTS

2.01 NOT USED.

PART 3 - EXECUTION

3.01 NOT USED.

END OF SECTION

SECTION 01 50 00

TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Temporary Utilities: Electricity, lighting, heat, ventilation, telephone service, water and sanitary facilities.
- B. Temporary Controls: Barriers, enclosures, fencing, protection of Work and security.
- C. Construction Facilities: Access roads, parking, progress cleaning, and field office trailer.
- D. Special Controls: Waste disposal facilities, Water Control, Dust Control, Erosion and Sediment Control, Noise Control, Pollution Control.
- E. Comply with Title 24, Part 9, California Fire Code, Chapter 33 Fire Safety During Construction and Demolition, during all Phases of project.

1.02 SUBMITTALS

- A. Site Plan: Show temporary facilities, utility hookups, staging areas, and parking areas for construction personnel.
- B. Phasing Plan: Submit Phasing Plan to confirm understanding of phasing work required and in coordination with Architect's Phasing Plan indicating horizontal routing of pedestrian traffic, entryways, barrier plans and signage plan. Include schedule or time of day when Owner's use of facilities will be affected by construction Work.

1.03 TEMPORARY ELECTRICITY

- A. Provide temporary electrical service suitable to conduct construction operations.
- B. Connect to existing power service. Power consumption shall not disrupt Owner's need for continuous service.
- C. Contractor shall pay cost of energy used. Exercise measures to conserve energy.
- D. Provide power outlets for construction operations with branch wiring and distribution boxes located where needed. Provide flexible power cords as required.
- E. Provide feeder switch at source distribution equipment.
- F. Permanent existing convenience receptacles may be utilized during construction.

1.04 TEMPORARY LIGHTING

- A. Provide and maintain adequate lighting for construction operations.

- B. Maintain lighting and provide routine repairs.
- C. Permanent building lighting may be utilized during construction.

1.05 TEMPORARY HEAT

- A. Provide heating devices and heat as required to maintain specified conditions for construction operations.
- B. Utilize Owner's existing heat plant, extend and supplement with temporary heating devices as required to maintain specified conditions for construction operations.
- C. Contractor shall pay cost of energy used. Exercise measures to conserve energy.

1.06 TEMPORARY VENTILATION

- A. Ventilate enclosed areas to assist cure of materials to dissipate humidity and noxious fumes and to prevent accumulation of dust, fumes, vapors or gases.

1.07 TELEPHONE SERVICE

- A. Provide, maintain and pay for two separate telephone service lines and telephone service to field office and Project Inspector's field office at time of project mobilization. Project Inspector's telephone shall be equipped with exterior, clearly audible bell.
- B. Provide and pay for cellular telephone service for Project Inspector's use at time of project mobilization.
- C. Provide, maintain, and pay for copy machine with 11 by 17 inch capability.

1.08 TEMPORARY WATER SERVICE

- A. Provide for suitable quality water service.
- B. Contractor shall pay cost of water used. Exercise measures to conserve water.
- C. Extend branch piping with outlets located so water is available by hose with threaded connections.

1.09 TEMPORARY SANITARY FACILITIES

- A. Provide and maintain required facilities and enclosures. Existing facilities shall not be used.

1.10 TEMPORARY FIRE PROTECTION

- A. Provide fire protection during construction according to CFC Chapter 33, including but not limited to fire extinguisher requirements and exit access requirements.
- B. Conform to Title 24, Part 9, California Fire Code, Chapter 33, , Fire Safety During Construction/Demolition.

1.11 BARRIERS

- A. Provide barriers to prevent unauthorized entry to construction areas and to protect existing facilities and adjacent properties from damage from construction operations and demolition.
- B. Provide barricades required by governing authority for public rights-of-way and for public access to existing facilities.
- C. Provide protection for plant life designated to remain. Replace damaged plant life.
- D. Protect non-owned vehicular traffic, stored materials, site and structures from damage.
- E. Provide steel trench plates, orange mesh fencing, construction site marker and other protective means to keep site and users, Owner's personnel, visitors and students safe, protected, and separated from ongoing construction operations. Provide temporary access at all paths of travel. Yellow warning tape is not acceptable means of separation and protection. At all open trenching operations, enclose entire trenching operation area including stockpiled backfill within orange mesh construction fencing. Provide steel trench plate "bridges" at all walkways.
 - 1. Notify Fire Marshall at least 48-hours prior to beginning utility work in the existing Fire Lane.
 - 2. Allow Fire Marshall access at reasonable times during progress of the work for inspections.

1.12 FENCING FOR CONSTRUCTION OPERATIONS

- A. Construction: Commercial grade chain link fence, 1-3/4 inch mesh, 11 gauge, top and bottom knuckled selvage (closed end).
 - 1. Provide screen full height of fence, 1-3/4 inch mesh, 11 gauge, woven open mesh 100% polypropylene with 78 percent wind break, reinforced tape at grommets at 18 inches centers at perimeter, attach screen to chain link fence with 11 gauge hog rings by Roxford Fordell, Los Angeles, CA.
- B. Provide 6 foot high fence around construction site; equip with vehicular and pedestrian gates with locks.
- C. Submit detailed fencing and construction traffic plan for review and approval by Architect.
- D. At completion of project repair concrete or A.C. substrate.

1.13 STAGING AREAS

- A. Coordinate with Owner for location, extent and type of construction staging area.

1.14 PROTECTION OF INSTALLED WORK

- A. Protect installed Work and provide special protection where specified in individual Specification Sections.

- B. Provide temporary and removable protection for installed products. Control activity in immediate work area to minimize damage.
- C. Provide protective coverings at walls, projections, jambs, sills and openings. Provide protective and removal coverings for metal finishes intended to be exposed.
- D. Protect finished floors and other surfaces from traffic, dirt, wear, damage or movement of heavy objects by protecting with durable sheet materials.
- E. Prohibit traffic or storage upon waterproofed or roofed surfaces.
- F. Prohibit traffic from landscaped areas.
- G. Provide sticky track mats at transition areas to minimize footprints and distribution of dirt from construction areas through occupied corridors, classrooms, and adjacent workspaces. At carpet floors provide "Velcro Brand Carpet" protection in lieu of sticky mats.

1.15 SECURITY

- A. Provide security and facilities to protect Work, existing facilities and Owner's operations from unauthorized entry, vandalism or theft.
- B. Coordinate with Owner's security program.
- C. Within 48 hour period, replace or repair, to Architect's satisfaction, all surfaces or items damaged by graffiti during course of construction.
- D. Where security or fire detection systems are disabled for any reason, including where Owner has given approval for such system shutdown, provide fire watch or security guard service as directed by Owner at no additional cost to Owner.

1.16 ACCESS ROADS

- A. Construct and maintain temporary roads accessing public thoroughfares to serve construction area.
- B. Extend and relocate as Work progress requires. Provide detours necessary for unimpeded traffic flow.
- C. Provide and maintain access to fire hydrants, free of obstructions. Where required by local fire authority, provide and maintain a 26 foot wide fire apparatus access road.
- D. Provide means of removing mud from vehicle wheels before entering streets.
- E. Designated existing on-site roads may be used for construction traffic.
- F. Where construction traffic occurs when students and staff are on campus, provide "spotter" responsible for leading construction traffic through site areas.

- G. Route construction equipment, trucks, and similar vehicles via existing public streets to and from site as approved by governing authorities.

1.17 PARKING

- A. Arrange for temporary parking areas to accommodate construction personnel.
- B. When site space is not adequate, provide additional off-site parking.

1.18 PROGRESS CLEANING

- A. Refer to Section 01 70 00 Execution Requirements and the requirements of this Section.
- B. Maintain areas free of waste materials, debris and rubbish. Maintain site in a clean and orderly condition.
- C. Remove debris and rubbish from closed or remote spaces, prior to enclosing space.
- D. Broom and vacuum clean interior areas prior to start of surface finishing and continue cleaning to eliminate dust. Clean substrate; remove dirt, oil, grease, construction markings, and foreign matter that could adversely affect surface finish appearance or performance.
- E. Remove waste materials, debris and rubbish from site weekly and dispose off-site.
- F. Maintain public streets free of mud, dust and debris and as required by jurisdictional authority.

1.19 FIELD OFFICE TRAILER(S)

- A. Owner will provide space for office and project meetings.
- B. Field Office Trailer: Provide field office trailer, weather tight with lighting, electrical outlets, communications capabilities, heating, cooling and ventilating equipment and equipped to adequately conduct meetings for construction operations, minimum size; 480 sq. ft. Provide restroom: facilities within trailer.
 - 1. In SAME Field Office trailer provide separate private office similarly equipped and furnished with desk, 2 drawer file cabinet, a table and two chairs for use by Project Inspector, Owner and Architect including plan rack suitable for 30 by 42 inch drawings, minimum size 120 square feet. Inspector's office must be lockable and have direct access to outside, provide private telephone line and access to the Internet to inspector's office.
 - 2. Provide a SECOND separate Field Office Trailer similarly equipped as Contractor's office trailer and furnished desk, 2 drawer file cabinet, table, chairs and lockable for use by Project Inspector, Architect and Owner, provide private telephone line and access to the Internet to inspector's office, minimum size 480 sq. ft. (For Project Inspector's office trailer only, size 240 sq. ft.)
- C. Cost of use permits, occupancy permits and related fees, if any required by Governing Authorities for temporary construction facilities, shall be paid by Contractor.

- D. Provide 4 by 8 feet conference table, 6 conference chairs and 3 by 6 feet white markerboard at conference room.
- E. Install no closer than 45 feet from project buildings in accordance with NFPA 241.
- F. Maintain facility until Substantial Completion of entire project. Remove within 1 week of Substantial Completion.
- G. Provide property insurance and protection.

1.20 REMOVAL OF UTILITIES, FACILITIES AND CONTROLS

- A. Remove temporary above grade or buried utilities, equipment, facilities, materials prior to Certified Completion inspection.
- B. Remove temporary underground or overhead installations.
- C. Clean and repair damage caused by installation or use of temporary Work.
- D. Restore permanent facilities used during construction to original condition. Restore permanent facilities used during construction to specified condition.

1.21 RELOCATION OF UTILITIES

- A. Contractor shall not have responsibility of timely removal, relocation or protection of public utility facilities that are not identified by Owner in Drawings and Specifications, in accordance with California Government Code 4215. Owner shall compensate Contractor for costs of locating and repairing damage not due to failure of Contractor to exercise reasonable care in removing and relocating such public utility facilities. If Contractor, while performing Contract, discovers public utility facilities not identified by Owner in Contract Drawings or Specifications, he shall immediately notify Owner and utility in writing. Contractor shall not be assessed liquidated damages for delay when delay was caused by failure of Owner to provide for relocation for utility facilities.

1.22 WATER CONTROL

- A. Do not permit surface, rainwater or subsurface water or other liquids to accumulate in or about premises and vicinity thereof. Should such conditions be encountered or develop, control water or other liquid shall be suitably disposed of by means of temporary pumps, piping, drainage lines, troughs, ditches, dams or other methods as reviewed by Architect and approved by authority having jurisdiction.
- B. Reference Section 01 57 23 for Storm Water Pollution Prevention Plan Requirements.
- C. Dewatering Facilities and drains: Comply with requirements of authorities having jurisdiction. Maintain Project site, excavations and construction free of water.
- D. Dispose of rainwater in lawful manner that will not result in flooding Project or adjoining properties nor endanger permanent Work or temporary facilities.

- E. Pools: Provide all necessary measures to remove all ground water and rain water from pool excavation.

1.23 DUST CONTROL

- A. Conduct earthwork operations in a manner to prevent windblown dust and dirt from interfering with progress of Work, Owner's activities and existing occupied structures in areas immediately adjacent as well as adjacent properties.
- B. Periodically water construction areas as required minimizing accumulation of dust and dirt.
- C. Water spray or cover with tarpaulins truck loads of soil to additionally minimize generation of dust and dirt from construction operations.
- D. Prevent dust and dirt from accumulating on walks, roadways, parking areas and from washing into sewer and storm drain lines.

1.24 EROSION AND SEDIMENT CONTROL

- A. Plan and execute construction by methods to control surface drainage from cuts and fills from borrow and waste disposal areas. Prevent erosion and sedimentation.
- B. Minimize amount of bare soil exposed at one time.
- C. Provide temporary measures such as berms, dikes and drains to prevent water flow over adjacent properties or City rights-of-way.
- D. Construct fill and waste areas by selective placement to avoid erosive surface silts or clays.
- E. Periodically inspect earthwork to detect evidence of erosion and sedimentation; promptly apply corrective measures.

1.25 NOISE CONTROL

- A. Avoid excessive noise where adjacent Owner's functions may be detrimentally affected.
- B. Refer to requirements in Section 01 57 20, Control of Construction Noise.

1.26 POLLUTION CONTROL

- A. Provide methods, means and facilities to prevent contamination of soil, water and atmosphere from discharge of noxious, toxic substances and pollutants produced by construction operations.
- B. Burning of refuse, debris or other materials will not be permitted on Site.
- C. Comply with regulatory requirements and anti-pollution ordinances during course of construction and disposal operations.

1.27 WASTE DISPOSAL FACILITIES

- A. Comply with requirements of Authorities Having Jurisdiction. Remove loose refuse and dispose off site legally.
- B. Provide waste-collection containers in sizes adequate to handle waste from construction operations.
- C. Provide and maintain trash bins on the Project site. Trash bins shall be serviced on an as needed basis.

1.28 PROTECTION OF EXISTING FACILITIES AND SITEWORK

- A. Provide site plan of proposed route of construction equipment for approval by Owner.
- B. Use caution to minimize disturbance and damage to existing landscaped areas and sitework.
- C. Protect sidewalks, curbs, entry areas and utilities.
- D. The Contractor shall preserve and protect all structures, equipment, and vegetation (such as trees, shrubs, and grass) and irrigation on or adjacent to the work site, which are not to be removed and which do not unreasonably interfere with the work required under this contract. The Contractor shall only remove trees when specifically authorized to do so, and shall avoid damaging vegetation that will remain in place. If any limbs or branches of trees are broken during contract performance, or by the careless operation of equipment, or by workmen, the Contractor shall trim those limbs or branches with a clean cut and paint the cut with a tree-pruning compound as directed by the Contracting Officer.
- E. Protect from damage all existing improvements and utilities at or near the work site and on adjacent property of a third party, the locations of which are made known to or should be known by the Contractor. Repair any damage to those facilities, including those that are the property of a third party, resulting from failure to comply with the requirements of this contract or failure to exercise reasonable care in performing the work.
- F. Repair landscaped areas, irrigation and sidewalks and any other damaged facilities where trucks, erection equipment or other construction equipment was used in removal and replacement of the HVAC units during construction. Repair damaged areas to match existing construction to satisfaction of the Owner, and at no additional cost to the Owner.

1.29 CONTRACTOR CONDUCT AND DRESS CODE

- A. Contractor's and subcontractors' personnel shall observe and abide by Owner requirements concerning appropriate conduct, loud noise (unrelated to construction activities) and dress requirements for a safe and un-disturbing work place. Conduct work activities in a professional manner at all times.

- B. Dress Code requirements: contractor's personnel shall wear traditional work attire or uniforms without logos, graphics or wording detrimental to work or school environment; unless logos, graphics or wording are for business identification purposes.
- C. Contractors and subcontractors shall wear orange safety vests along with other required safety attire including hard hats and safety glasses.
- D. Identification badges issued by the Owner shall be worn at all times, worn on the left side shirt-pocket area, displayed in full view and not concealed.
- E. No radios or music permitted on the job site.
- F. Owner reserves the right to remove any person(s) not observing conduct and dress requirements specified herein.
- G. Animals: Contractors' and worker's pets or animals of any kind are not permitted on the Campus, including being retained in a vehicle.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Materials for temporary work may be new or used.
 - 1. Use materials that are adequate in capacity for the required use and loads.
 - 2. Do not use materials that would create unsafe conditions.
 - 3. Do not violate requirements of authorities having jurisdiction.
- B. Electrical Materials
 - 1. Power Receptacles: 15 ampere, 120 volt, duplex grounding type with ground fault circuit interrupters. Furnish in suitable boxes with hinged cover plates.
 - 2. Light Fixtures and Lamps: Medium-base, rubber pigtail, type lamp sockets or porcelain lampholders furnish with boxes, and lamps.
 - 3. Conductors: insulated copper or aluminum, with phase conductor insulation rated for the circuit voltage, and insulation or jacketing suitable for the conditions, and branch circuit conductors - No. 12 AWG minimum size, except No. 10 AWG where length of branch circuit exceeds 100 feet.
- C. Mechanical Materials
 - 1. Portable Equipment may be new or used, temporary units that will not damage construction materials or processes, that will not create unhealthy conditions for workers, and that can be operated with approval from the authorities having jurisdiction.
 - 2. Fixed Equipment may be new or used, temporary or permanent, devices including any heat generating or cooling equipment that can be operated in a safe manner and with approval from the authorities having jurisdiction.

PART 3 - EXECUTION

3.01 REMOVAL

- A. Remove all temporary control measures in accordance with regulatory requirements at completion of construction.

END OF SECTION

SECTION 01 55 00
VEHICULAR ACCESS AND PARKING

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Signs, Signals and devices.
- B. Construction Parking Control.
- C. Flagmen
- D. Flares and Lights.
- E. Haul Routes.
- F. Traffic Signs and Signals.
- G. Removal

1.02 SIGNS, SIGNALS AND DEVICES

- A. Post-Mounted and Wall-Mounted Traffic Control and Informational Signs as required to maintain adequate standards of safety and control of vehicular movement on and off construction site.
- B. Traffic Control Signals: As approved by local jurisdictions.
- C. Traffic Cones and Drums, Flares and Lights: As approved by local jurisdictions.
- D. Flagmen Equipment: As approved by local jurisdictions.

1.03 CONSTRUCTION PARKING CONTROL

- A. Control vehicular parking to prevent interference with public traffic and parking, access by emergency vehicles and Owner's operations.
- B. Monitor parking of construction personnel's vehicles. Maintain vehicular access to and through parking areas.
- C. Prevent parking on or adjacent to access roads or in non-designated areas.

1.04 FLAGMEN

- A. Provide trained and equipped flagmen to regulate traffic when construction operations or traffic encroach on public traffic lanes.

1.05 FLARES AND LIGHTS

- A. Use flares and lights during hours of low visibility to delineate traffic lanes and to guide traffic.

1.06 HAUL ROUTES

- A. Consult with authority having jurisdiction in establishing public thoroughfares to be used for haul routes and site access.
- B. Confine construction traffic to designated haul routes.
- C. Provide traffic control at critical areas of haul routes to regulate traffic, to minimize interference with public traffic.
- D. Consult with Owner to establish construction traffic haul route.

1.07 TRAFFIC SIGNS AND SIGNALS

- A. At approaches to site and on site, install at crossroads, detours, parking areas and elsewhere as needed to direct construction and affected public traffic.
- B. Install and operate traffic control devices as are necessary to direct and maintain orderly flow of traffic in areas under Contractor's control and areas affected by Contractor's operations.
- C. Relocate as Work progresses to maintain effective traffic control.

1.08 REMOVAL

- A. Remove equipment and devices when no longer required.
- B. Repair damage caused by installation.
- C. Remove post settings to full depth.

PART 2 - PRODUCTS

2.01 NOT USED.

PART 3 - EXECUTION

3.01 NOT USED.

END OF SECTION

SECTION 01 57 20

CONTROL OF CONSTRUCTION NOISE

PART 1 - GENERAL

1.01 DESCRIPTION

- A. This section specifies the control of noise arising from construction operations and associated activities. Noise control measures specified are an obligation of the Contractor with the costs included within the various contract items of work.

1.02 QUALITY ASSURANCE

- A. Establish and maintain quality assurance program for the control of noise.

1.03 SUBMITTALS

- A. Noise Control Plan: After the contract is awarded, prior to the commencement of the Work, the Contractor shall meet with the Owner to discuss the proposed Noise Control Plan and to develop mutual understanding relative to details of the Plan.
 - 1. The Noise Control shall comply with the constraints set forth by the Owner, and be in compliance with the noise control regulations of the Owner and the City of Palomar.
 - 2. Submit a description of the instruments to be used in monitoring noise.
 - 3. Show the areas and boundaries where noisy work will occur.
 - 4. Approval of the Contractor's Noise Control Plan will not relieve the Contractor of responsibility for proper and continuing control of noise throughout the project site.

1.04 NOISE CONTROL

- A. General: Take every practicable precaution and action to eliminate or minimize noise emanating from the construction operations.
- B. Timing: Perform noise-producing work in less-sensitive hours of the day or week as directed by the Owner.
- C. Constraints: Control and abate noise produced by the Work at or below the decibel levels and within the time periods specified.
 - 1. Repetitive, high level impact noise will be permitted only between 7:00 a.m. and 4:00 p.m. unless otherwise permitted by the Owner. Repetitive impact noise on the property shall not exceed the following dB limitations:

Time Duration of Impact Noise	Sound Level in dB
More than 12 minutes in any hour	70
Less than 30 seconds of any hour	85
Less than three minutes of any hour	80
Less than 12 minutes of any hour	75

2. Provide equipment, sound-deadening devices, and take noise abatement measures that are necessary to comply with the requirements specified, and comply with the following:
 - a. Maximum permissible construction equipment noise levels within 50 feet of any building on the premises shall be 75 decibels.
 - b. Provide shields or other physical barriers to restrict the transmission of noise.
 - c. Provide soundproof housings or enclosures for noise-producing machinery.
 - d. Use intake and exhaust mufflers on internal combustion engines that are maintained to have equipment perform below noise levels specified.
 - e. Line hoppers and bins with sound deadening material.
 - f. Conduct truck loading, unloading and hauling operations so that noise is kept to a minimum.
3. At least once every five successive working days while work is being performed, above 55 dBA noise level, measure sound level for noise exposure due to the construction. Measure noise exposure at the property line or 50 feet from the noise source, whichever is greater. Measure the sound levels on the A weighing network of a General Purpose sound level meter at slow response. To minimize the effect of reflective sound waves at buildings, measurements may be taken three to six feet in front of any building face. Submit the recorded information to the Architect noting any problems and the alternatives for mitigating actions.

PART 2 - PRODUCTS

2.01 NOT USED.

PART 3 - EXECUTION

3.01 NOT USED.

END OF SECTION

SECTION 01 57 23

TEMPORARY STORM WATER POLLUTION CONTROL

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes development and implementation of Storm Water Pollution Prevention Plan (SWPPP) written specifically for this Project

1.02 ADMINISTRATIVE REQUIREMENTS

- A. SWPPP Compliance. Each contractor, sub-contractor, and material supplier, at any tier, and their employees or agents must follow the procedures in the SWPPP.
 - 1. Personnel or agents that handle or use materials or equipment, that in such handling or use could cause storm-water pollution or soil contamination, shall take precautions to prevent that contamination.
 - 2. Personnel or agents that conduct any activity that may disturb or damage barriers of any nature that are in place to protect stormwater drainage systems from pollution shall protect such barriers during and repair any damage to such barriers promptly upon completion of the activity.
 - 3. Complete SWPPP Compliance Activity Log upon completion of each activity.
- B. Construction Waste Management. Each contractor, sub-contractor and material supplier, at any tier, shall participate in Project's Construction Waste Management Plan to foster material recovery and re-use and to minimize disposal in landfills.
 - 1. Each contractor, sub-contractor and material supplier shall take measures to minimize the production of construction debris on Site, by minimizing packaging, and production of surplus and waste materials.
 - 2. Personnel that handle, unpack or use materials shall collect and separate waste materials for distribution to recycling, reuse and disposal facilities.
 - 3. Waste Management objective for this Project is to divert at least 50-percent of non-hazardous construction debris from landfill disposal to recycling, reuse and salvage facilities.
 - 4. Complete a Waste Management Report (Section 01 74 19, Attachment B) upon completion of each activity.

1.03 SUBMITTALS

- A. Action Submittals
 - 1. Notice of Intent
- B. Information Submittal
 - 1. Certification of timely Notification of Authorities Having Jurisdiction
 - 2. Copy of Storm-Water Pollution Prevention Plan, accompanied, upon request of Owner, with contractor's certification of compliance with the relevant rules, regulations, and laws
 - 3. SWPPP Compliance Activity Logs
 - 4. Waste Management Logs

- C. Closeout Submittals
 - 1. Certificates of Compliance with the SWPPP
 - 2. Certified Copy of notification of Agencies of completion of operations

1.04 QUALITY ASSURANCE

- A. SWPPP shall satisfy the mandates of Federal Clean Water Act as enforced by State of California Water Resources Control Board and its Regional Water Quality Boards.
 - 1. The plan shall identify potential sources of pollutants which may enter the storm water system, and describe steps that will be taken during construction to minimize the risk of storm water contamination.
 - 2. The plan shall address management procedures that will be used during construction to prevent pollution discharges such as spills, leaking, and dumping.
 - 3. Additional information regarding SWPPP requirements can be obtained from State Water Resources Control Board
- B. If Owner is cited for violation of Clean Water Act due to failure of SWPPP to address requirement, Contractor shall be liable for any fines or penalties that might be imposed by regulatory agency, he shall be obligated to perform mandated corrective measures at his own expense.
 - 1. If Owner, Architect, or Owner's Inspector becomes aware of violations of SWPPP, they will immediately inform Contractor in writing. Contractor shall immediately cease violation and shall restore site, at his own expense, to same conditions it was in before violation, to approval of Owner.
 - 2. Should Contractor continue to violate requirements of SWPPP, or refuse to comply, or refuse to repair results of violation to Owner's approval, for purposes of this Contract it shall be considered as any other violation of Contract. Owner will take necessary measures as set forth in General Conditions.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Provide temporary and permanent storm water pollution prevention equipment, material, and facilities as required by or as necessary to comply with SWPPP.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Verify Site conditions are ready for the work of this Section.
- B. Do not begin until unsatisfactory conditions are corrected. Beginning SWPPP installations means acceptance of existing conditions including preparatory work of others, if any.

3.02 IMPLEMENTATION

- A. Execute measures required by SWPPP as directed by SWPPP itself.

- B. Prepare and submit Notice of Intent in accordance with terms of the General Permit prior to commencement of construction activity. Copies of General Permit and Notice of Intent form may be obtained from California Regional Water Control Board.
 - 1. Send Notice of Intent accompanied by fee to
 - State Water Resources Control Board (SWRCB)
 - Division of Water Quality
 - Attention: Storm Water Section, Permit Unit
 - P.O. Box 1977
 - Sacramento, CA 95812-1977
- C. During construction, make changes as necessary for proper functioning of SWPPP measures.
- D. At completion of work, Contractor shall remove temporary SWPPP measures and dispose of any pollutants in legal manner offsite, or as otherwise required by SWPPP.

END OF SECTION

SECTION 01 60 00
PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Products
- B. Transportation and handling.
- C. Storage and protection.
- D. Product options.
- E. Substitutions

1.02 PRODUCTS

- A. Product: means new material, machinery, components, equipment, fixtures and systems forming Work. Does not include machinery and equipment used for preparation, fabrication, conveying and erection of Work. Products may also include existing materials or components required for reuse.
- B. Do not use materials and equipment removed from existing premises, except as specifically permitted by Contract Documents.
- C. Provide interchangeable components from the same manufacturer.

1.03 TRANSPORTATION AND HANDLING

- A. Transport and handle products in accordance with manufacturer's instructions.
- B. Promptly inspect shipments to assure that products comply with requirements, quantities are correct and products are undamaged.
- C. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement or damage.

1.04 STORAGE AND PROTECTION

- A. Store and protect products in accordance with manufacturer's instructions, with seals and labels intact and legible. Store sensitive products in weather-tight, climate controlled enclosures.
- B. For exterior storage of fabricated products, place on sloped supports, above ground and protect as necessary to prevent deterioration or damage to the product.

- C. When approved by the Owner, provide off-site storage and protection in a bonded warehouse approved by Owner when site does not permit on-site storage or protection at no cost to Owner.
- D. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to avoid condensation.
- E. Store loose granular materials on solid flat surfaces in well-drained area. Prevent mixing with foreign matter.
- F. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement or damage.
- G. Arrange storage of products to permit access for inspection. Periodically inspect to ensure products are undamaged and are maintained under specified conditions.

1.05 PRODUCT OPTIONS

- A. Where products are specified by reference standards or by description only, provide products meeting those standards or that description, made by a manufacturer acceptable to Architect.
- B. Where products are specified by naming one or more manufacturers, provide products of one of the named manufacturers that meets or exceeds specifications.
- C. Where any specific article, device, equipment, product, material, fixture, patented process, form, method, or type of construction is indicated or specified by name, make, trade name, or catalog number, whether with or without the phrase "or equal," such specification shall be deemed to establish the minimum qualities of function, dimension, appearance, and performance (collectively the Basis of Design) for that material, process, or article. Such specification shall be deemed to be followed by the phrase "or equal."
- D. If a named product, or named manufacturer's equivalent product does not fully meet the specification, that manufacturer shall provide a custom or modified product to meet the specification.
- E. Where expressly noted "no substitutions" in individual Sections, no product options are permitted.
- F. When the phrase "or equal" is used or implied, it shall mean "an equivalent product, approved by the Architect in accordance with the requirements of this Section."
- G. Products, proposed as substitutions, shall conform to requirements listed in the respective Section of this Manual and have at least 10 successful installations in commercial projects similar in scale and complexity to those required for this Project that have been in service for minimum of 5 years and remain in satisfactory condition.

1.06 SUBSTITUTIONS

- A. Manufacturers and products listed in Specifications form basis for design and quality intended. Bidders may propose substitutions of equal design and quality and must be accompanied by completed Request Form included at end of this Section, other forms not permitted. Submit separate form for each proposed substitution.
1. Substitution requests, if any, shall be submitted to Architect 10 calendar days prior to Bid Opening Date. Architect will issue Addenda if accepted.
- B. Substitutions must clearly be in Owner's best interest because of quality, cost, performance, conformity to code requirements or availability. Architect will make decision as to acceptance of proposed substitution.
1. Submittal of proposed substitutions shall be made only by Prime Contractor(s). Architect will not review direct submittal by manufacturers, suppliers or subcontractors.
 2. Burden of proof as to equality of any material, process or article shall rest with Contractor. Provision authorizing submissions of "or equal" justification data shall not in any way authorize an extension of time for performance of this Contract.
 3. Substitutions shall, without exception, be manufactured of same basic materials and comply with or exceed all Specification requirements of dimension, function, structure and appearance, without deviation. Provide itemized comparison of quality and performance.
 4. Use of approved substitutions shall in no way relieve Contractor from responsibility for compliance with Contract Documents after installation. Contractor shall assume all extra costs caused by use of approved substitute materials.
 5. Statement indicating why specified material or product cannot be provided.
 6. Coordination information, including list of changes or modifications needed to other parts of Work and to construction performed by Owner and separate contractors that will be necessary to accommodate proposed substitution.
 7. Detailed side by side comparison of significant qualities of proposed substitution with those of the Work specified. Mark clearly affected specification Section for any differences from item specified. Significant qualities may include attributes such as performance, weight, size, durability, visual effect and specific features and requirements indicated.
 8. Product Data Samples, including drawings and descriptions of products and fabrication and installation procedures.
 9. List of similar installations for completed projects with project names and addresses and names and addresses of Architects and Owners.
 10. Material test reports from qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
 11. Cost information, including a proposal of change, if any, in the Contract Sum.
 12. Substitutions for specified product, brand or manufacture that have been submitted and disapproved by Architect shall not be resubmitted in any modified form.
 13. In case materials are substituted and installed without proper authorization, Contractor shall remove such materials and install those specified at his own expense.
 14. Contractor shall determine effect approved substitutions will have on other portions of Work and so inform his subcontractors and employees of these effects.

15. Acceptance of proposed substitution shall be determined solely by specifying Architect. The final decision shall be the Architect's in accordance with the General Conditions.
- C. Substitutions may be considered when product becomes unavailable through no fault of Contractor. Provide letter from manufacturer, on manufacturer's letterhead, stating lack of availability.
 - D. Unacceptable Substitutions: substitution requests initiated by late submittals that have caused materials to become unavailable due to delay in ordering and procurement will not be acceptable reason for substitutions.
 - E. Provide same warranty for substitution as for specified product.
 - F. Contractor shall pay costs for time required by Architect for review and for any redesign services associated with substitutions and for costs of re-approval by Regulatory Agencies.
 - G. Substitutions will not be considered when they are indicated or implied on shop drawing or product data submittals, without separate written request.
 - H. Each subcontractor is responsible for providing products and construction methods compatible with products and construction methods of other subcontractors. If dispute arises between subcontractors over concurrently selectable but incompatible products, Architect will determine which products shall be used.
 - I. Substitution Submittal Procedure: In accordance with Division 01, General Requirements for Administrative Requirements and this Section.
- 1.07 OWNER-FURNISHED, OWNER-INSTALLED WORK (OFOI)
- A. Indicate in construction progress schedule owner-furnish owner-installed items and schedule time for installation.
 - B. Items indicated on Drawings as OFOI will be furnished by Owner and installed by Owner. Work indicated as OFOI will be performed under separate contract employees by Owner at its discretion. Where work of this Contract adjoins or conflicts with OFOI, work, Contractor shall cooperate with Owner and its employees in manner that will provide for reasonable and accurate completion of this Contract and work under separate contract.
 - C. Coordinate with OFOI work affecting this contract. Including verification and interfacing of this contract with OFOI work.
- 1.08 OWNER-FURNISHED, CONTRACTOR-INSTALLED WORK (OFCI)
- A. Indicate in the construction progress Schedule Owner-Furnish Contractor-Installed items and schedule time for their installation.

- B. Contractor shall verify exact sizes and services required for each item of equipment indicated on Drawings or in Project Manual as OFCI and shall obtain from Owner rough-in drawings, diagrams, setting templates and other necessary information to ensure proper mating of assemblies.
- C. Contractor shall receive at project site each item of equipment from Owner and from that time on shall assume full responsibility for items and equipment until one year from date of Certified Completion.
- D. Contractor shall give Owner 15 days prior notice of requirements for delivery to site of all OFCI equipment.
- E. Contractor shall be responsible for receiving OFCI items and equipment and shall uncrate, inspect and notify Owner in writing within 7 days of receiving said items or equipment of acceptance or rejection of items or equipment. Owner, after receiving notice, will take appropriate action to have items or equipment made acceptable for Contractor's use. Rejected items shall be carefully stored and protected from damage by Contractor until Owner takes appropriate action.
- F. Contractor shall be responsible for final placing, installation, connection, start-up, checking, testing and demonstrated satisfactory operation. Owner will provide names of manufacturer's representatives, who shall assist the Contractor in checking, testing and demonstrating equipment.

PART 2 - PRODUCTS

2.01 NOT USED

PART 3 - EXECUTION

3.01 NOT USED

END OF SECTION

SUBSTITUTION REQUEST FORM

Project: _____ Substitution Request Number: _____
To: HMC Architects, Inc. From: _____
Re: _____ Date: _____
Architect's Project Number: _____ Contract For: _____
Specification Title: _____ Description: _____
Section: _____ Page: _____ Article/Paragraph: _____
Proposed Substitution: _____
Manufacturer: _____ Address: _____
Trade Name: _____

Attached data shall include: product description, specifications, drawings, photographs, and performance and test data adequate for evaluation of the request; applicable portions of the data are clearly identified.

Attached data also includes a description of changes to the Contract Documents that the proposed substitutions will require for its proper installation, at no cost to the Owner.

The Undersigned Certifies:

- Proposed substitution has been fully investigated and determined shall be equal or superior in respects to specified product.
- Same warranty will be furnished for proposed substitution as for specified product.
- Same maintenance service and source of replacement parts, as applicable, is available.
- Proposed substitution will have no adverse effect on other trades and will not affect or delay progress schedule.
- Proposed substitution does not affect dimensions and functional clearances.
- Payment will be made for changes to building design, including A/E design, detailing and construction costs caused by the substitutions.
- Reason(s) why substitution is being submitted.
 - ☐ Specified product or material is not available. Explain in detail as attachment.
 - ☐ Cost savings to Owner. Indicate comparative cost analysis as attachment.
 - ☐ Other. Explain:

Submitted by _____

Signed by: _____

Firm: _____

Address: _____

Telephone: _____

A/E's REVIEW AND ACTION

- ☐ Substitution Approved
- ☐ Substitution Rejected as marked below:
 - ☐ Insufficient information submitted
 - ☐ Submitted late.
 - ☐ Information not clearly marked.
 - ☐ Full line product information (Binder not provided).
 - ☐ Does not meet performance / design requirements of Paragraph _____
 - ☐ Comparisons not properly identified on product data sheets.

Signed by: _____ Date: _____

Substantiating Data Required:

- | | |
|--|---|
| <input type="checkbox"/> Drawings | <input type="checkbox"/> Tests if required in individual sections |
| <input checked="" type="checkbox"/> Product Data | <input type="checkbox"/> Reports if required in individual sections |
| <input checked="" type="checkbox"/> Samples | <input type="checkbox"/> Other: _____ |

SECTION 01 70 00

EXECUTION AND CLOSEOUT REQUIREMENTS

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Field engineering and surveying.
- B. Requirements and limitations for cutting and patching of Work.
- C. Cleaning throughout construction period.
- D. Project Record Documents.
- E. Closeout procedures.
- F. Adjusting
- G. Operation and maintenance data.
- H. Warranty and Guarantee.
- I. Spare parts and maintenance materials.
- J. Instruction to Owner's personnel.

1.02 FIELD ENGINEERING QUALITY CONTROL

- A. Employ Land Surveyor registered in the State of California and acceptable to Architect.
- B. Submit name, address and telephone number of Surveyor before starting survey work.
- C. Maintain complete and accurate log of control and survey Work as it progresses.
- D. On completion of foundation walls, floor slabs and major site improvements, prepare a certified survey illustrating dimensions, locations, angles and elevations of construction.

1.03 SURVEY REFERENCE POINTS

- A. Contractor to locate and protect survey control and reference points.
- B. Control datum for survey is that established by Owner provided survey.
- C. Protect survey control points prior to starting site Work; preserve permanent reference points during construction.
- D. Promptly report to the Architect loss or destruction of any reference point or relocation required because of changes in grades or other reasons.

- E. Replace dislocated survey control points based on original survey control. Make no changes without prior written notice to the Architect.

1.04 SURVEY REQUIREMENTS

- A. Provide field engineering services. Use recognized engineering survey practices.
- B. Establish a minimum of two permanent 3-inch diameter brass plate benchmarks on site, referenced to established control points. Record locations, with horizontal and vertical data on Project Record Documents. Establish additional temporary benchmarks at all floor levels.
- C. Establish elevations, lines and levels. Locate and lay out by instrumentation and similar appropriate means, make use of laser instrumentation. Contractor shall arrange and pay for Field Engineering and Staking.
 - 1. Site improvements including pavements; stakes for grading, fill placement; utility locations, slopes, invert elevations and batter boards.
 - 2. Grid or axis for structures.
 - 3. Building foundation, column locations, ground floor elevations.
 - 4. Floor elevations of existing structures that relate to project.
 - 5. Partition layouts on rough floor as a guide to all trades.
- D. Periodically verify layouts by same means.

1.05 LAYOUT MARKINGS

- A. Layout markings shall not be made with xylene-based inks, paint, or dyes, or with other solvent-based products that may bleed through finishes.

1.06 EXISTING CONDITIONS

- A. Before beginning Work, investigate and verify existence and location of mechanical, drainage, and electrical systems and other construction affecting Work, including underground utilities.
 - 1. Before construction, survey and record points of connection of utility services.
 - 2. Locate invert elevation at points of connection to existing sanitary and storm drain, water-service piping, and underground electrical services.
 - 3. Employ a utility service locator company to locate underground utilities.
 - 4. Verify Owner's Record Drawings.
 - 5. Furnish survey of existing utilities.

1.07 CUTTING AND PATCHING

- A. Where Work requires that particular existing building element such as partition, wall, paving, window, or similar element of existing building construction be removed, it is the intention of this Specification that such Work be part of the Demolition Section and not part of Cutting and Patching.
- B. New Work required to replace such removals is considered as part of separate sections of Specifications covering similar new construction.

- C. Where incidental cutting and patching is required for installation of a specific item or piece of equipment (including piping, ductwork, conduit, etc.), such cutting and patching is considered to be specified as part of that Section.
- D. Contractor shall verify and check areas to be cut and patched and shall coordinate Work of various trades involved.
- E. Where doubt exists as to size, location, or method of cutting concrete or any other structural element, including metal stud framing, Contractor shall contact Architect before proceeding.
- F. Where doubt exists, Contractor shall distinguish between "cutting" and "demolition".
- G. Unless specifically indicated otherwise, existing Work cut, altered, or revised to accommodate new Work shall be patched to duplicate undisturbed adjacent finishes, colors, textures, and profiles. New Work in existing portions shall also be finished to match adjacent existing Work unless noted otherwise.
- H. Submit written request in advance of cutting or alteration which affects any of the following.
 - 1. Structural integrity of any element of Project
 - 2. Integrity of weather-exposed or moisture-resistant element
 - 3. Efficiency, maintenance or safety of any operational element
 - 4. Visual qualities of sight exposed elements
 - 5. Work of Owner or separate Contractor`
- I. Include in request:
 - 1. Identification of Project.
 - 2. Location and description of affected Work.
 - 3. Necessity for cutting or alteration.
 - 4. Description of proposed Work and products to be used.
 - 5. Alternatives to cutting and patching.
 - 6. Effect on Work of Owner or separate Contractor.
 - 7. Written permission of affected separate Contractor.
 - 8. Date and time Work will be executed.

1.08 QUALITY ASSURANCE - CLEANING

- A. Inspection: Conduct daily inspection, and more often if necessary, to verify that requirements of cleanliness are being met.
- B. Codes and Standards: In addition to requirements specified herein, comply with pertinent requirements of authorities having jurisdiction.
- C. For final cleaning, use only professional cleaning company experienced in commercial cleaning.

1.09 PAYMENT WITHHELD - CLEANING

- A. Architect reserves right to withhold certification of payment requests for failure on part of Contractor to regularly clean Project in conformance with Requirements of this Section.

1.10 CLOSEOUT PROCEDURES

- A. Owner Occupancy:
 - 1. In conjunction with Project Inspector, Contractor shall prepare list of items (Punchlist) to be completed or corrected. List may be developed by areas when approved by Architect.
 - 2. Within time specified in the Certificate for Substantial completion after receipt of list, Architect will inspect to determine status of completion.
 - 3. Should Architect determine that Work is not complete:
 - a. Architect will promptly notify Contractor in writing, giving reasons for his determination.
 - b. Contractor shall remedy deficiencies and notify Architect when Work is ready for re-inspection.
 - c. Architect will re-inspect Work.
 - 4. When Architect concurs that Work is substantially complete and ready for occupancy.
 - a. Architect will prepare a Certificate of Substantial Completion accompanied by Contractor's list (Punchlist) of items to be completed or corrected as verified by Architect.
 - b. Contractor shall provide consent by insurer for Partial or Beneficial Occupancy.
- B. Final Completion:
 - 1. Prepare and submit notice that Work is ready for final inspection and acceptance.
 - 2. Verify Work is complete.
 - 3. Clarify that:
 - a. Work has been inspected by all governing agencies and is in compliance with Contract Documents.
 - b. Work has been completed in accordance with Contract Documents.
 - c. Equipment and systems have been tested as required and are operational.
 - d. Work is completed and ready for final inspection.
 - 4. Architect will make an inspection to verify status of completion.
 - 5. Should Architect determine Work is incomplete or defective:
 - a. Architect will promptly notify Contractor in writing, listing incomplete or defective Work.
 - b. Contractor shall remedy deficiencies promptly and notify Architect when ready for re-inspection.
 - 6. When Architect determines Work is acceptable under the Contract Documents, he will request Contractor to make closeout submittals.
- C. Closeout Submittals include, but are not necessarily limited to:
 - 1. Project Record Documents.
 - 2. Operation and maintenance data for items so listed in pertinent Sections of these Specifications and for other items when so approved by Architect.
 - 3. Warranties and Guarantees.

4. Keys and keying schedule.
5. Spare parts, materials, extra stock to be turned over to Owner.
6. Evidence of payment and release of Stop Notices , when requested by Owner.
7. List of subcontractors, service organizations and principal vendors, including names, addresses and telephone numbers, where they may be contacted for emergency service at all times, including nights, weekends and holidays.
8. Final Site Survey.
9. Notification of insurer for completion of Project.
- 10.

D. Final Payment:

1. Submit Final Payment Request, showing all adjustments to Contract Sum.
2. Retention will be released no sooner than 35 days after Notice of Completion has been recorded with County Records Office.

1.11 ADJUSTING

- A. Adjust operating products and equipment to ensure smooth and unhindered operation.

1.12 PROJECT RECORD DOCUMENTS

- A. Record Documents: As-Built Drawings, Project Manual with Specifications including but not limited to the documents required herein.
- B. Owner will provide one set of drawings and one copy of Project Manual for use during construction to record changes made during construction.
- C. Record Documents: As-Built drawings and Project Manual, record in concise manner using industry-standard drafting techniques on drawings, on weekly basis all actual revisions to Work and transfer as built information to Auto CAD drawings at the completion of the project.
1. Changes made on Drawings, including Clarification Drawings.
 2. Changes made to Specifications.
 3. Changes made by Addenda.
 4. Changes made by Construction Change Directives/Instruction Bulletins, Architect's Supplemental Instructions, minor changes.
 5. Change Orders or other authorized Modifications to Contract.
 6. Revisions made to shop drawings, product data and samples.
- D. Store Record Documents separate from documents used for construction. Replace soiled or illegible documents.
- E. Record information concurrent with construction progress.
- F. Specifications: Legibly mark and record at each product Section description of actual products installed, including following:
1. Manufacturer's name, trade name, product model and number and supplier.
 2. Authorized product substitutions or alternates utilized.
 3. Changes made by Addenda and Modifications.

- G. Record Documents and Shop Drawings: Legibly mark each item to record actual construction including:
 - 1. Measured depths of foundations in relation to finish first floor datum.
 - 2. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements. Identify drains and sewers by invert elevation.
 - 3. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of Work. Identify ducts, dampers, valves, access doors and control equipment wiring.
 - 4. Field changes of dimension and detail.
 - 5. Details not on original drawings.
- H. Obtain Architect's signed certification that Record Documents have been fully updated prior to submitting monthly payment requests. Compliance is mandatory before payment will be made.
- I. Submit Record Documents certified by Inspector to Architect with claim for final Application for Payment. Fully completed Record Documents are a prerequisite to final payment.

1.13 OPERATION AND MAINTENANCE DATA

- A. Submit six (6) sets prior to final inspection, bound in 8-1/2 by 11 inch text pages, in binders with durable covers. Include operation and maintenance data for all items for which submittals are requested in individual Sections of Specifications.

1.14 WARRANTY AND GUARANTEE

- A. Contractor, manufacturer's warranties and guarantees notwithstanding, warrants entire Work against defects in materials and workmanship for twelve (12) months from date of Certified Substantial Completion. Warranties and guarantees between Contractor and manufacturers and Contractor and suppliers shall not affect warranties or guarantees between Contractor and Owner. Refer to General and Supplementary Conditions for additional requirements.
- B. Execute and assemble documents from subcontractors, suppliers and manufacturers.
- C. Submit prior to final Application for Payment.
- D. For items of Work delayed beyond date of Notice of Completion, provide updated submittal within ten days after acceptance, listing date of acceptance as start of Guarantee Period.

1.15 WARRANTIES - FORM OF SUBMITTALS

- A. Bind in commercial quality, 8-1/2 by 11 inch, three-ring side binders with hardback, cleanable, plastic covers.
- B. Label cover of each binder with typed or printed title WARRANTIES AND BONDS, with title of Project; name, address and telephone number of Contractor and equipment supplier; and name of responsible principal.

- C. Table of Contents: Neatly typed, in sequence of Table of Contents of Project Manual, with each item identified with number and title of Specification Section in which specified, and name of product or Work item.
- D. Separate each warranty or bond with index tab sheets keyed to Table of Contents listing. Provide full information, using separate typed sheets as necessary. List subcontractor, supplier, and manufacturer, with name, address, and telephone number of responsible principal.

1.16 WARRANTIES – PREPARATION OF SUBMITTALS

- A. Obtain warranties and bonds, executed in duplicate by responsible subcontractors, suppliers, and manufacturers, within ten days after completion of applicable item or Work. Except for items put into use with Owner's permission, leave date of beginning of time of warranty until date of Certified Substantial Completion is determined.
- B. Verify that documents are in proper form, contain full information, and are notarized.
- C. Co-execute submittals when required.
- D. Retain warranties and bonds until time specified for submittal.

1.17 WARRANTIES – TIME OF SUBMITTALS

- A. For equipment or component parts of equipment put into service during construction with Owner's permission submit documents within ten days after acceptance.
- B. Make other submittals within ten days after date of Certified Substantial Completion, prior to final Application for Payment.
- C. For items of Work when acceptance is delayed beyond date of Notice of Completion, submit within ten days after acceptance, listing date of acceptance as beginning of warranty period.

1.18 SPARE PARTS AND MAINTENANCE MATERIALS

- A. Provide products, spare parts, maintenance and extra materials in quantities specified in individual Specification Sections.
- B. Deliver to project site location as directed by Owner.

1.19 INSTRUCTIONS TO OWNER'S PERSONNEL

- A. Instruct Owner's personnel in proper operation and maintenance of all systems, equipment and similar items which were provided as part of Work. Provide maintenance and inspection schedules that conform to manufacturer's recommendations.
- B. Contractor shall provide schedule to Owner for approval for each of instruction periods required.

- C. Instruction sessions will be held in Owner designated area on project site and at Owner's convenience.
- D. Prepare and submit to Architect a sign-in sheet with subject, date and time, signed by all participants for each session.
- E. Instructors shall be qualified by product manufacturer in subject matter presented at each session.

PART 2 - PRODUCTS

2.01 MATERIALS - CUTTING AND PATCHING

- A. Primary Products: Those required for original installation.

2.02 PRODUCTS FOR PATCHING AND EXTENDING WORK

- A. New Materials: As specified in product sections; match existing products and Work for patching and extending Work.
- B. Type and Quality of Existing Products: Determine by inspecting and testing products where necessary, referring to existing Work as standard.

2.03 CLEANING MATERIALS AND EQUIPMENT

- A. Provide required personnel, equipment and materials needed to maintain specified standard of cleanliness.

2.04 COMPATIBILITY

- A. Use cleaning materials and equipment that are compatible with surfaces being cleaned, as recommended by manufacturer of material to be cleaned.

PART 3 - EXECUTION

3.01 EXAMINATION – CUTTING AND PATCHING

- A. Inspect existing conditions prior to commencing Work, including elements subject to damage or movement during cutting and patching. Confirm status and current warranties and guarantees.
- B. Indicate proposed routing of utilities in Coordinated Drawings and submit to Architect. Do not commence coring cutting operations prior to approval of Coordinated Drawings.
- C. After uncovering existing Work, inspect conditions affecting performance of Work.
 - 1. Prior to cutting, boring or drilling through new or existing structural members or elements including reinforcing bars not specifically detailed, Contractor shall prepare detailed drawings for review and approval by Architect, Structural Engineer of Record. Agency approvals will be obtained by Architect not Contractor.

- D. Beginning of cutting or patching means acceptance of existing conditions.

3.02 PREPARATION - CUTTING AND PATCHING

- A. Provide temporary support to ensure structural integrity of Work. Provide devices and methods to protect other portions of Project from damage.
- B. Provide protection from elements for areas that may be exposed by uncovering Work.
- C. Maintain excavations free of water.

3.03 CUTTING AND PATCHING

- A. Execute cutting, fitting, and patching to complete Work.
- B. Fit products together, to integrate with other Work.
- C. Uncover Work to install ill-timed Work.
- D. Remove and replace defective non-conforming Work.
- E. Provide openings in Work for penetration of mechanical and electrical Work.

3.04 PERFORMANCE - CUTTING AND PATCHING

- A. Execute Work by methods to avoid damage to other Work and which will provide appropriate surfaces to receive patching and finish.
- B. Cut rigid materials using masonry saw or core drill. Pneumatic tools not allowed without prior approval. Torches or other flame cutting equipment shall not be used to cut metal studs without prior approval of the Architect.
- C. Restore Work with new products in accordance with requirements of Contract Documents.
- D. Fit Work air tight to pipes, sleeves, ducts, conduits and other penetrations through surfaces.
- E. At penetrations of fire-rated walls, partitions, ceiling or floor construction, completely seal voids with UL-approved fire-rated devices to full thickness of penetrated element.
- F. Refinish surfaces to match adjacent finish. For continuous surfaces, refinish to nearest intersection or natural break. For an assembly, refinish entire unit.
- G. Extend patching to point where patching is not evident unless directed otherwise by Architect.

3.05 SLEEVES AND HANGERS

- A. Provide conduit, outlets, piping sleeves, boxes, inserts or other materials or equipment necessary to be built into Work. Promptly furnish same and set such sleeves or other materials as construction program required.

- B. In event delays occur in delivery of sleeves or other materials, arrange to have boxes or other forms set at locations where piping or other material is to pass through or into slabs or other Work.
- C. Upon subsequent installation of sleeves or other material, install fill materials as required. Necessary expenditures incurred for boxing out or filling shall be without extra cost to Owner.

3.06 PROGRESS CLEANING

- A. General:
 - 1. Comply with all requirements of Owner's Storm Water Pollution Prevention Plan, Section 01 57 23.
 - 2. Retain stored items in orderly arrangement allowing maximum access, not impeding drainage or traffic, and providing required protection of materials.
 - 3. Do not allow accumulation of scrap, debris, waste material, and other items not required for construction of this Work.
 - 4. At least twice each month, and more often if necessary, remove scrap, debris, and waste material from jobsite.
 - 5. Provide adequate storage for items waiting removal from jobsite, observing requirements for fire protection and protection of ecology.
- B. Site:
 - 1. Daily, and more often if necessary, inspect site and pick up all scrap, debris, and waste material. Remove items to place designated for their storage. Combustible waste shall be removed from site. Flammable waste shall be kept in sealed metal containers until removed from site.
 - 2. Weekly, and more often if necessary, inspect, arrangements of materials stored on site, re-stack, tidy, or otherwise service arrangements to meet requirements specified above.
 - 3. Maintain site in neat and orderly condition.

3.07 FINAL CLEANING

- A. Definition: Except as otherwise specifically provided, "clean", for purpose of Article, shall be interpreted as meaning level of cleanliness generally provided by skilled cleaners using commercial quality building maintenance equipment and materials, i.e., "scrub and polish clean".
- B. General: Complete following cleaning operations before requesting inspection for certification of Substantial Completion.
 - 1. Prior to completion of Work, remove from jobsite all tools, surplus materials, equipment, scrap, debris, and waste, conduct final progress cleaning as described above.
 - 2. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
 - a. Unless otherwise specifically directed by Architect, water and broom clean paved areas on site and public paved areas directly adjacent to site. Remove resultant debris.

3. Rake grounds that are neither planted nor paved to smooth, even-textured surface.
4. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.

C. Structures:

1. Exterior: In areas affected by Work under this Contract, visually inspect exterior surfaces and remove traces of soils, waste material, smudges and other foreign matter. Remove traces of splashed material from adjacent surfaces. If necessary to achieve uniform degree of exterior cleanliness, hose down exterior of structure. In event of stubborn stains not removable with water, Architect may require light sandblasting or other cleaning at no additional cost to Owner.
2. Touch up and otherwise repair and restore marred, exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration.
 - a. Do not paint over "UL" and similar labels, including mechanical and electrical nameplates.

D. Mechanical and Electrical Systems

1. Wipe surfaces of mechanical and electrical equipment, and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
2. Replace parts subject to unusual operating conditions.
3. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
4. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.
5. Clean ducts, blowers, and coils if units were operated without filters during construction.
6. Clean light fixtures, lamps, globes, and reflectors to function with full efficiency. Replace burned-out bulbs, and those noticeably dimmed by hours of use and defective and noisy starters in fluorescent and mercury vapor fixtures to comply with requirements for new fixtures.

- E. Timing: Schedule final cleaning acceptable to the Architect to enable Owner to accept completely clean project.

3.08 CLEANING DURING OWNER'S OCCUPANCY

- A. Should Owner occupy Work or any portion thereof prior to its completion by Contractor and acceptance by Owner, responsibilities for interim and final cleaning of occupied spaces shall be determined by Architect in accordance with General Conditions of the Contract.

END OF SECTION

SECTION 01 74 19

CONSTRUCTION WASTE MANAGEMENT

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes: Preparation and implementation, including reporting and documentation, of a Waste Management Plan for reusing, recycling, salvage or disposal of non-hazardous waste materials generated during demolition and/or new construction (Construction & Demolition (C&D) Waste), to foster material recovery and re-use and to minimize disposal in land fills.
- B. Related Sections
 - 1. Section 01 30 00 Administrative Requirements

1.02 REFERENCES

- A. California Integrated Waste management Act of 1989 (AB 939)
- B. California Code of Regulations Title 14, Section 18700

1.03 ACTION SUBMITTALS

- A. Waste Management Plan (Appendix A): Within 10 calendar days after the Notice to Proceed and prior to any waste removal, submit the following to the Architect for review and approval. Update quarterly. Include:
 - 1. Materials to be recycled, reused, or salvaged, either onsite or offsite.
 - 2. Estimates of construction waste quantity (in tons) by type of material. (If waste is measured by volume, give factors for conversion to weight in tons.)
 - 3. Procedures for recycling/ reuse program.
 - 4. Permit or license and location of Project waste-disposal areas.
 - 5. Site plan for placement of waste containers.
- B. Waste Management Monthly Progress Report (Appendix B): Summary of waste generated by Project, monthly with Application for Payment. Include:
 - 1. Firms accepting the recovered or waste materials.
 - 2. Type and location of accepting facilities (landfill, recovery facility, used materials yard, etc.). If materials are reused or recycled on the Project site, location should be designated as "on-site reuse / recycling".
 - 3. Type of materials and net weight (tons) of each.
 - 4. Value of the materials or disposal fee paid.
 - 5. Attach weigh bills and other documentation confirming amount and disposal location of waste materials.
- C. Waste Management Final Compliance Report: Final update of Waste Management Plan to provide summary of total waste generated by Project.

PART 2 - PRODUCTS

2.01 SYSTEM DESCRIPTION

- A. Collection and separation of all construction waste materials generated on-site, reuse or recycling on-site, transportation to approved recyclers or reuse organizations, or transportation to legally designated landfills, for the purpose of recycling salvaging and/or reusing a minimum of 75% of the construction waste generated.

PART 3 - EXECUTION

3.01 IMPLEMENTATION

- A. Implement approved Waste Management Plan including collecting, segregating, storing, transporting and documenting each type of waste material generated, recycled or reused, or disposed in landfills.
- B. Designate an on-site person to be responsible for instructing workers and overseeing the sorting and recording of waste/recyclable materials.
- C. Include waste management and recycling in worker orientation and as an agenda item for regular Project meetings.
- D. Recyclable and waste bin areas shall be limited to areas approved on the Waste Management Plan. Keep recycling and waste bins neat and clearly marked to avoid contamination of materials.

3.02 ATTACHMENTS

- A. Appendix A: Waste Management Plan
- B. Appendix B: Waste Management Monthly Progress Report

END OF SECTION

APPENDIX A

WASTE MANAGEMENT PLAN

Date: _____

Within 10 calendar days after the Notice to Proceed and prior to any waste removal, the Contractor [Construction Manager] shall submit the following to the Architect for review and approval. Update quarterly.

PROJECT:

OWNER:

CONTRACTOR [CONSTRUCTION MANAGER]

Name:

Address:

Telephone, fax, email:

Material Type (1)	Estimated Tons Recycled (2)	Estimated Tons Reused (3)	Estimated Tons Salvaged (4)	Estimated Tons Landfilled (5)	Proposed Disposal or Recycling Facility (6)
Total					
Diversion Rate: Columns [(2)+(3)+(4)] / [(2)+(3)+(4)+(5)]					

Provide type of material targeted for recycling, reuse, and/or salvage, either on or off site, and include a category for general waste materials requiring landfill disposal.

(2) through (4) Provide estimated quantities (in tons) of recyclable, reusable, or salvageable waste materials anticipated to be generated.

Provide estimated quantities (in tons) of material to be disposed in landfill.

Provide destination of recycled, salvaged, and disposed materials (i.e. onsite, recycling facility, etc.)

General: Attach proposed Recycling & Waste Bin Location Plan.

Attach name and contact data for each recycling or disposal destination to be used.

