

DOCUMENT 00 01 01

PROJECT MANUAL

FOR THE

**COLLEGE OF SAN MATEO BUILDING 12 AND COLONNADES
ROOF REPLACEMENT PROJECT**

**Division 00-01 and 02-23 Specifications
Bid Number 86658**

SAN MATEO COUNTY COMMUNITY COLLEGE DISTRICT

**3401 CSM DRIVE
SAN MATEO, CALIFORNIA 94402**

Designer:
Allana Buick & Bers Inc.
990 Commercial Street
Palo Alto, CA 94303

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END OF DOCUMENT

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END OF DOCUMENT

DOCUMENT 00 11 13

ADVERTISEMENT FOR BIDS

NOTICE IS HEREBY GIVEN that the San Mateo County Community College District (“**District**”) of San Mateo, California, acting through its Governing Board, hereinafter referred to as the District, will accept sealed bids for the award of the contract for the following public work:

BID NUMBER 86658
CSM Building 12 & Colonnades Roof Replacement Project
College of San Mateo
San Mateo, CALIFORNIA

Each bid must conform to and be responsive to the contract documents and be submitted on a form furnished by the District. Bids can only be submitted by those contractors holding a Type C39 California Roofing License and who are currently pre-qualified with the District for 2013 as published on the District’s website <http://www.smccd.edu/accounts/smccd/departments/facilities/PrequalCC.shtml>.

DESCRIPTION OF THE WORK. The Work generally consists of Roof Replacement of Building 12 and Colonnades. Bidding documents contain the full description of the Work.

BIDS DUE: Sealed Bids will be received by the District at College of San Mateo CSM 1700 W. Hillsdale Blvd., **Building 12 Room 177, San Mateo CA. no later than 2:00 pm, on 3/21/13.** Main contact for this project is Bill Krill, telephone 415-286-6333, fax 650-378-7333 and email: krillb@smccd.edu.

LABOR COMPLIANCE: This is a construction project in accordance with Section 1771.5 of the California Labor Code.

PREVAILING WAGE: The successful bidder shall be required to pay its workers on this project a sum not less than the general prevailing wage rate of per diem wages and not less than the general prevailing rate for holiday and overtime work for work of a similar character in the locality in which the project is performed as provided under California Labor Code section 1770 et sec. The District has determined the prevailing rate of per diem wages and the general prevailing rate for holidays and overtime work in the locality in which this project is to be performed for each craft, classification or type of work needed to execute the work.

Contractor shall be required to post, at each job site, a copy of such prevailing rate of per diem wages as determined by the Director of the California Department of Industrial Relations.

SUBSTITUTION OF SECURITIES. District will permit successful Bidder to substitute securities for retention monies withheld to ensure performance of Contract, as set forth in Document 00 43 45 (Escrow Agreement for Security Deposits in Lieu of Retention), in accordance with California Public Contract Code, Section 22300. By this reference, Document 00 43 45 (Escrow Agreement for Security Deposits in Lieu of Retention) is incorporated in full in this Document 00 11 13.

RESTRICTIONS ON SUBSTITUTIONS AND SOLE SOURCE ITEMS. As a limitation on Bidder's privilege to substitute “or equal” items, District has found that certain items are designated as District standards and certain items are designated to match existing items in use on a particular public improvement either completed or in the course of completion or are available from one source. As to such items, District will not permit substitution. Such items are described in the Bidding Documents.

PROCUREMENT OF BIDDING DOCUMENTS: Bidders may obtain copies of bid documents upon payment of a non-refundable fee to ARC starting 2/26/13 by calling 415-957-1234 or contact ARC via email at sf@e-arc.com and request “CSM Building 12 and Colonnades Roof Replacement” documents for printing. Bidders may also access the bid documents through the project web site, <http://www.smccd.edu/accounts/smccd/departments/facilities> .

MANDATORY PRE-BID CONFERENCE WILL BE HELD at 10:00 am on Thursday, March 7 at CSM Building 12 Room 177. Attendance of conference is mandatory. Prospective subcontractors and vendors are encouraged to attend. Interested parties are advised to arrive early in order to park and obtain a parking pass from parking permit machines. Doors will be locked 15 minutes after the start time of each conference. The District reserves the right, at their sole discretion, to conduct a second Pre-Bid Conference.

The San Mateo County Community College District is an equal opportunity employer.

**Board of Trustees
San Mateo County Community College District
Karen Schwarz, Vice President-Clerk**

Published: February 26, 2013
March 5, 2013

END OF DOCUMENT

DOCUMENT 00 11 19

INSTRUCTIONS TO BIDDERS

Bids are requested for a general construction contract, or work described in general, as follows:

Bid 86658 - Building 12 and Colonnades Roof Replacement Project

1. **RECEIPT OF BIDS.** Sealed Bids will be received by the District at **CSM Building 12 Room 177**. District will receive Bids from pre-qualified contractors **no later than 2:00pm, Thursday, March 21, 2013**, in a sealed envelope that is clearly labeled with the name and number of the bid. All Bids will be time stamped to reflect their submittal time. District will reject all Bids received after the specified time and will return such Bids to Bidders unopened. Bidders must submit Bids in accordance with this DOCUMENT 00 11 19.

2. CONTACT INFORMATION:

Bid submittal address:
San Mateo County Community College
c/o SMC
CSM Building 12 Room 177
San Mateo, CA 94402

Contact Name:
Bill Krill

Telephone:
(415) 286-6333

Fax:
(650) 3787333

Email (acceptable for informal communication, but not legal notice): krillb@smccd.edu

Additional contact : Peter Hempel - SMC at Hempelp@smccd.edu

3. **BID SUBMISSION.** Bidder should mark its Bid envelope as **BID FOR THE DISTRICT, BID NUMBER 86658, Building 12 and Colonnades Roof Replacement Project**. Bids shall be deemed to include the written responses of the Bidder to any questions or requests for information of District made as part of Bid prior to submission of Bid. Bidder's failure to submit all required documents strictly as required entitles District to reject the Bid as non-responsive.

4. Not used.

5. Not used.

6. **REQUIRED BID FORMS.** All Bidders must submit Bids using, where applicable, documents supplied in this Project Manual, including without limitation Document 00 41 00 (Bid Form), Document 00 43 10 (Indemnity and Release Agreement), 00 43 13 (Bond Accompanying Bid), Document 00 43 36 (Subcontractors List), Document 00 43 33 (Schedule of Major Equipment and Material Suppliers), Document 00 45 00 (Bidder Certifications), Document 00 45 14 (Key Personnel) and Document 00 45 19 (Non-collusion Affidavit). District will reject as non-responsive any Bid not submitted on the required forms. Bids must be full and complete. Bidders must complete all Bid items and supply all information required by Bidding Sections.

District reserves the right in its sole discretion to reject any Bid as non-responsive as a result of any error or omission in the Bid. Bidders may not modify the Bid Form or qualify their Bids. Bidders must submit clearly and distinctly written Bids. Bidders must clearly make any changes in their Bids by crossing out original entries, entering new entries, and initialing new entries. District reserves the right to reject any Bid not clearly written.

7. **REQUIRED BID SECURITY.** Bidders must submit with their Bids either cash, a cashier's check, or certified check from a responsible bank in the United States, or corporate surety bond furnished by a surety authorized to do business in the State of California, of not less than ten percent of amount of total Bid, including Owner's Allowance, payable to District. All Bidders choosing to submit a surety bond must submit it on the required form, Document 00 43 13 (Bond Accompanying Bid). District will reject as non-responsive any Bid submitted without the necessary Bid security.

The District may retain Bid securities and Bid bonds of other than the Apparent Low Bidder for a period of ninety (90) Days after award or full execution of the Contract, whichever first occurs. Upon full execution of the Contract, and upon request by Bidder, District will return to the respective unsuccessful Bidders their Bid securities and Bid bonds.

8. **REQUIRED SUBCONTRACTORS LIST.** All Bidders must submit with their Bids the required information on all Subcontractors in Document 00 43 36 (Subcontractors List) for those Subcontractors who will perform any portion of the Work, including labor, rendering of service, or specially fabricating and installing a portion of the Work or improvement according to detailed drawings confined in the plans and specifications, in excess of one half of one percent of total Bid. Violation of this requirement may result in Bid being deemed non-responsive and not being considered.

9. Not used.

10. **MANDATORY PRE-BID CONFERENCE and SITE VISIT.** District will conduct a Mandatory Pre-Bid Conferences and Site Visits, per Document 00 11 13 (Advertisement for Bids). District reserves the right to schedule and organize the Site Visit to minimize congestion and disruption to existing facilities and congestion. District reserves the right to schedule a second Pre-Bid Conference solely at the District's discretion. Bidders are encouraged to submit written questions in connection with the Site Visit. District will transmit to all parties recorded as having received Bidding documents such Addenda as District in its discretion considers necessary in response to written questions. Bidders shall not rely on oral statements. Oral statements will not be binding or legally effective. Other Pre-Bid Site visits may be scheduled at District's sole discretion, depending on staff availability.

11. **OTHER REQUIREMENTS PRIOR TO BIDDING.** Submission of Bid signifies Bidder's careful examination of Bidding Documents and complete understanding of the nature, extent, and location of Work to be performed. As a condition to Bidding, Bidder must complete tasks listed in Document 00 52 00 (Agreement), Article 5. Submission of Bid shall constitute Bidder's express representation to the District that Bidder has fully completed these tasks.

12. **EXISTING DRAWINGS AND GEOTECHNICAL DATA.** Bidders may examine any available existing conditions information (e.g., record documents, specifications, studies, drawings of previous work) by giving District reasonable advance notice, as well as applicable environmental assessment information (if any) regarding the Project. Document 00 31 19 (Reports, Surveys and Existing Conditions) Reports, Surveys and Existing Conditions) applies to all supplied existing conditions information and geotechnical reports and all other information supplied regarding existing conditions either above ground or below ground. Documents are available for onsite review at the Construction Planning Department field office, 3401 CSM Drive, or may be purchased at ARC Reprographics.

13. **ADDENDA.** Bidders must direct all questions about the meaning or intent of Bidding Documents to District Representative in writing (email acceptable). Interpretations or clarifications considered necessary by District in response to such questions will be issued by Addenda mailed, faxed, emailed or delivered to all parties recorded by District as having received Bidding Documents. Addenda will be written and will be issued to each bidder to

the address or fax number supplied District by Bidder. District may not answer questions received less than (8) eight Calendar Days prior to the date for opening Bids. Only questions answered by formal written Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.

- A. Addenda may also be issued to modify the Bidding Documents as deemed advisable by District.
- B. Addenda shall be acknowledged by number with signature in Document 00 41 00 (Bid Form) and shall be part of the Contract Documents. A complete listing of Addenda may be secured from District.

14. SUBSTITUTIONS. Bidders must base Bids on products and systems specified in Contract Documents or listed by name in Addenda.

- A. Except as provided in paragraph 15.c below, District will consider substitution requests on for “or equal items.” Bidders wanting to use “or equal” item(s) may submit Document 00 43 25 (Substitution Request Forms) items no later than thirty (30) days after the date of the Notice to Proceed. After that date, the District will not accept “or equal” substitution requests. To assess “or equal” acceptability of product or system, submittals of substitutions shall contain the information required in Document 00 43 25 (Substitution Request Forms) and set forth in Section 01 60 00 (Product Requirements). Insufficient information will be grounds for rejection of substitution. District shall, within a reasonable period of time after having received a request for substitution, issue in writing its decision as to whether the proposed substitute item is an “or equal” item. District’s decision shall be conclusive on all Bidders.
- B. Approved substitutions shall be listed in Addenda and become part of contact Documents.
- C. Substitutions may be requested after submitting Bids and Award of contract only in accordance with requirements specified in Section 01 60 00 (Product Requirements).
- D. As further limitation on Bidder’s privilege to substitute items, District has found that certain items are designated as District standards and certain items are designated to match existing items in use on a particular public improvement, either completed or in the course of completion, and/or are only available from one source. As to such items, District will not permit substitution. District will not permit substitutions for the following items:

1	Door Closers	LCN
2	Door lockset cores	Schlage
3	Panic door hardware	Von Duprin
4	Window shades	Mechoshade, Levelor
5	Top set base	Burke
6	Carpet	Collins & Aikman
7	Resilient Flooring	Tarkett Linoleum Altro Suprema Armstrong VCT
8	Suspended Acoustical Tile	USG
9	Ceramic Tile	Dal-Tile
10	Paint	Kelly Moore Paints Rustoleum
11	DDC BMS Controls	Schneider Electric
12	Fire Alarm	Siemens MXL fire alarm systems, supplied and installed by the local Siemens Building Technologies, Inc., Hayward direct branch office
13	Irrigation	Hunter (Skyline)(confirm with LdaSilva) Toro (Sky, CSM, CAN) (confirm with LdaSilva)
14	Toilet Partitions	Bobrick Sierra
15	Access Controls and Alarm Monitoring System	Group 4 Technologies AMAG, supplied/installed/programmed by NetVersant
16	Surveillance System Platform	ExacqVision, supplied/installed/programmed by NetVersant

- 15. WAGE RATES.** Copies of the general prevailing rates of per diem wages for each craft, classification, or type of worker needed to execute the contract, as determined by Director of the State of California Department of Industrial Relations, are available through the Department of Industrial Relations and are deemed included in the Bidding Documents. See <http://www.dir.ca.gov/dir/databases.html>. Upon request, District will make available copies to any interested party. In addition, Contractor shall post the applicable prevailing wage rates at the Site.
- 16. EQUAL EMPLOYMENT OPPORTUNITY.** Contractor shall comply with all applicable federal, state, and local laws, rules, and regulations in regard to nondiscrimination in employment because of race, color, ancestry, national origin, religion, sex, marital status, age, medical conditions, disability, or any other reason.
- 17. BID OPENING.** District will open all bidders' envelopes, initially evaluate them for responsiveness, and determine an Apparent Low Bidder as specified herein.
- 18. DETERMINATION OF APPARENT LOW BIDDER.** **The low bidder will be determined by the sum of Bid Items #A through #F contained in document 00 41 00 (Bid Form). Bidder does not need to calculate the sum of this total on this form. The District shall calculate the sum of Bid Items #A through #F and announce it at the public Bid Opening.**
- 19.** Not used.
- 20. BID EVALUATION.** District may reject any or all Bids and waive any informalities or minor irregularities in the Bids. District also reserves the right, in its discretion, to reject any or all Bids and to re-bid the Project. District reserves the right to reject any or all nonconforming, non-responsive, unbalanced, or conditional Bids, and to reject the Bid of any Bidder if District believes that it would not be in the best interest of Project to make an award to that Bidder, whether because the Bid is not responsive or the Bidder is unqualified or of doubtful financial ability or fails to meet any other pertinent standard or criteria established by District. For purposes of this paragraph, an "unbalanced Bid" is one having nominal prices for some work items and enhanced prices for other work items.
- A. In evaluating Bids, District will consider Bidders' qualifications, whether or not the Bids comply with the prescribed requirements, omit prices and other data, as may be requested in Document 00 41 00 (Bid Forms) or prior to the Notice of Award.
 - B. District may conduct reasonable investigations and reference checks of Bidder, proposed Subcontractors, suppliers and other persons and organizations as District deems necessary to assist in the evaluation of any Bid; ability qualifications, financial ability proposed Subcontractors, suppliers, and to establish Bidder's responsibility, and other persons and organizations to perform and furnish the Work in accordance with the Contract Documents to District's satisfaction within the prescribed time. Submission of a Bid constitutes Bidder's consent to the foregoing. District shall have the right to consider information provided by sources other than Bidder. District shall also have the right to communicate directly with Bidder's surety regarding Bidder's bonds.
 - C. Discrepancies between the multiplication of units of Work and limit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum. Discrepancies between written words and figures will be resolved in favor of the words.
 - D. Quantities stated in the Bidding Documents are approximate only and are subject to correction upon final measurement of the Work, and are subject further to the rights reserved by the District to increase or diminish the amount of work under any classification as advantages to design or construction needs require.
 - E. District may determine whether a Bidder is qualified in its sole discretionary judgment.
- 21. AWARD.** If the contract is to be awarded, it will be awarded to the lowest responsible responsive Bidder. Following completion of all required District procedures and receipt of all District approvals, District will issue Document 00 51 00 (Notice of Award) to successful Bidder.
- 22. BID PROTEST.** Any Bid protest must be submitted in writing to the District's offices, before **4:00** p.m. of the fifth (5) day following opening of Bidder's Envelopes.

- A. The initial protest document must contain a complete statement of the basis for the protest.
 - B. The protest must refer to the specific portion of the document that forms the basis for the protest.
 - C. The protest must include the name, address, and telephone number of the person representing the protesting party.
 - D. Only Bidders who the District otherwise determines are responsive and responsible are eligible to protest a Bid; protests from any other Bidder will not be considered. In order to determine whether a protesting Bidder is responsive and responsible, District may conduct the same investigation and evaluation as District is entitled to take regarding an Apparent Low Bidder.
 - E. The party filing the protest must concurrently transmit a copy of the initial protest document and any attached documentation to all other parties with a direct financial interest that may be adversely affected by the outcome of the protest. Such parties shall include all other Bidders who appear to have a reasonable prospect of receiving an award depending upon the outcome of the protest.
 - F. The procedure and time limits set forth in this paragraph are mandatory and are Bidder's sole and exclusive remedy in the event of Bid protest. Bidder's failure to comply with these procedures shall constitute a waiver of any right to further pursue the Bid protest, including filing a Government Code Claim or legal proceedings. A Bidder may not rely on a protest submitted by another Bidder, but must timely pursue its own protest.
 - G. Bid protests shall be submitted directly to the district at their offices located at:
 - San Mateo County Community College District
 - c/o José D. Nuñez, Vice Chancellor, Facilities Planning, Maintenance & Operations
 - 3401 CSM Drive
 - San Mateo, CA 94402
- * a copy of this protest shall be sent to Bill Krill, Construction Manager, Swinerton Management and Consulting at Bkrill@swinerton.com.

23. POST-NOTICE OF AWARD REQUIREMENTS. After Notice of Award, the successful Bidder must execute and submit the following documents as indicated below.

- A. Submit the following documents to District by 4:00 p.m. of the tenth (10) day following Notice of Award. Execution of Contract by District depends upon approval of these documents:
 - 1) Document 00 52 00 (Agreement): To be executed by successful Bidder. Submit two originals, each bearing an original signature.
 - 2) Document 00 61 00 (Construction Performance Bond): To be executed by successful Bidder and surety, in the amount set forth in Document 00 61 00 (Construction Performance Bond). Submit one original.
 - 3) Document 00 62 00 (Construction Labor and Material Payment Bond): To be executed by successful Bidder and surety, in the amount set forth in Document 00 62 00 (Construction Labor and Material Payment Bond). Submit one original.
 - 4) Insurance certificates and endorsements required by Section 00 71 00 (General Conditions) Article 4. Submit one original set.
 - 5) The Guaranty in the form set forth in Document 00 65 36 (Guaranty). Submit one original, bearing an original signature.
 - 6) Not Used.
- B. District shall have the right to communicate directly with Apparent Low Bidder's proposed performance bond surety, to confirm the performance bond. District may elect to extend the time to receive performance and labor and material payment bonds.
- C. Successful Bidder's failure to submit the documents required herein, in a proper and timely manner, entitles District to rescind its award, and to cause Bidder's Bid security to be forfeited as provided herein.

24. FAILURE TO EXECUTE AND DELIVER DOCUMENTS. If Bidder to whom contact is awarded shall, within the period described in paragraph 23A of this Document 00 11 19, fail or neglect to execute and deliver all required Contract Documents and file all required bonds, insurance certificates, and other documents, District may, in its sole discretion, foreclose on Bidder's deposit surety bond, or deposit Bidder's cashier's check or certified check for collection, and retain the proceeds thereof as liquidated damages for Bidder's failure to enter into the Contract Documents. Bidder agrees that calculating the damages District may suffer as a result of Bidder's failure to execute and deliver all required Contract Documents would be extremely difficult

and impractical and that the amount of Bidder's required Bid security shall be the agreed and presumed amount of District's damages. In addition, upon such failure District may determine the next Apparent Low Bidder and proceed accordingly.

- 25. MODIFICATION OF COMMENCEMENT OF WORK.** District expressly reserves the right to modify the date for the Commencement of Work under the Contact and to independently perform and complete work related to the Project.
- 26. WITHDRAWAL OF BIDS.** Bidders may withdraw their Bids at any time prior to the Bid opening time fixed in this Document 00 11 19, only by written request for the withdrawal of Bid filed with the District's representative. Bidder or its duly authorized representative shall execute request to withdraw Bid. The submission of a Bid does not commit the District to award a contract for the Project, to pay costs incurred in the preparation of a Bid, or to procure or contract for any goods or services.
- 27. PUBLIC RECORDS ACT REQUESTS.**
- A. Per the Public Records Act, District will make available to the public all correspondence and written questions submitted during the Bid period, all Bid submissions opened in accordance with the procedures of this Document 00 11 19, and all subsequent Bid evaluation information. All submissions not opened will remain sealed and eventually be returned to the submitter. Except as otherwise required by law, District will not disclose trade secrets or proprietary financial information submitted that has been designated confidential by Bidder. Any such trade secrets or proprietary financial information that a Bidder believes should be exempted from disclosure shall be specifically identified and identified as such. Blanket-type identification by designating whole pages or section shall not be permitted and shall be invalid. The specific information must be clearly identified as such.
 - B. Upon a request for records regarding this Bid, District shall notify Bidder involved within ten (10) Days from receipt of the request of a specific date when the records will be made available for inspection. If the Bidder timely identifies any impropriety, trade secret, or confidential commercial or financial information that Bidder determines is not subject to public disclosure and requests District to refuse to comply with the records request, Bidder shall take all appropriate legal action and defend District's refusal to produce the information in all forums; otherwise, District will make such information available to the extent required by applicable law, without restriction.
 - C. Information disclosed to the District and the attendant submissions are the property of District unless Bidder makes specific reference to data that is considered proprietary. Subject to the requirements in the Public Records Act, reasonable efforts will be made to prevent the disclosure of information except on a need-to-know basis during the evaluation process.
- 28. CONFORMED CONSTRUCTION DOCUMENTS.** Following Award of Contract, District will prepare a conformed set of Contract Documents reflecting Addenda issued during bidding, which will, failing objection, constitute the approved set of Contract Documents.
- 29. DEFINITIONS.** All abbreviations and definitions of terms used in this Document 00 11 19 are set forth in Section 01 42 00 (References and Definitions).

END OF DOCUMENT

DOCUMENT 00 31 19

REPORTS, SURVEYS AND EXISTING CONDITIONS**1. REPORT AND INFORMATION**

- 1.1 **Existence of Reports and Utility Surveys:** San Mateo County Community College District, its consultants, and prior contractors may have collected documents providing a general description of the Site and conditions of the Work. These documents may consist of geotechnical reports for and around the Site, contracts, contract specifications, tenant improvement contracts, as-built drawings, utility drawings, and information regarding Underground Facilities. These reports, documents and other information are not part of the Contract Documents and do not show new work to be constructed, rather, show existing conditions that Contractor will have to address as part of its construction planning and operations.
- 1.2 **Inspection of Reports:** Contractor may inspect geotechnical reports and information regarding existing conditions at the Site. These documents are available for review at the Construction Planning Department's Offices located at 3401 CSM Drive and copies may be obtained for the cost of reproduction and handling upon Contractor's payment for the costs. These reports, documents and other information are not part of the Contract Documents. Nevertheless, by submitting a Proposal, Contractor accepts full responsibility for reviewing, knowing and understanding the contents of all of these materials.
- 1.3 **Inclusion in Project Manual:** Geotechnical reports may be included in the Project Manual and information regarding existing conditions may also be included in the Project Manual, but neither shall be considered part of the Contract Documents, but rather "for information only."
- 1.4 **Available Documentation:** The following documentation is available for review through District :
- A. [Not used]

2. USE OF INFORMATION ON EXISTING CONDITIONS AND REQUIRED PRE-PROPOSAL INVESTIGATIONS

- 2.1 Contractor's attention is directed to Document 00 71 00 (General Conditions) including but not limited to, its Article 2 "Proposal Period Investigations" and Article 14 "Modifications of Contract Documents" [Paragraph G "Differing Site Conditions" and Paragraph H "Change Orders Related to Underground Conditions"].

3. ACCESS TO SITE FOR INVESTIGATIONS

- 3.1 During the Pre-Proposal Site Visit(s), District will provide each Contractor access to the Site to conduct such examinations, investigations, explorations, tests, and studies, as each Contractor deems necessary for submission of a Proposal. Contractor must fill all holes and clean up and restore the Site to its former conditions upon completion of such explorations, investigations, tests, and studies. Such investigations may be performed only under the provisions of Document 00 11 13 (Advertisement for Bids) and Document 00 71 00 (General Conditions) including, but not limited to, proof of insurance and obligation to indemnify against claims arising from such investigation work. Each Contractor shall supply all equipment required to perform any investigations as each Contractor deems necessary. District has the right to limit the number of pieces of machinery operating at one time due to safety concerns.

END OF DOCUMENT

DOCUMENT 00 41 00

**BID FORM
TO BE EXECUTED BY ALL BIDDERS AND SUBMITTED WITH BID**

To be submitted as part of bid by the time and date specified in Section 00 11 19 (Instructions to Bidders), para. 1.

TO THE HONORABLE BOARD OF TRUSTEES OF THE SAN MATEO COUNTY COMMUNITY COLLEGE DISTRICT

THIS BID IS SUBMITTED BY:

(Firm/Company Name)

Re: BID NUMBER 86658, Building 12 & Colonnades Roof Replacement Project

1. The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an agreement with the San Mateo County Community College District ("District") in the form included in the Contract Documents, Section 00 52 00 (Agreement), to perform and furnish all Work as specified or indicated in the Contract Documents for the Contract Sum and within the Contract Time indicated in this Bid and in accordance with all other terms and conditions of the Contract Documents.
2. Bidder accepts all of the terms and conditions of the Contract Documents, Section 00 11 13 (Advertisement for Bids), and Section 00 11 19 (Instructions to Bidders), including, without limitation, those dealing with the disposition of Bid Security. This Bid will remain subject to acceptance for sixty (60) Days after the day of Bid opening.
3. In submitting this Bid, Bidder represents:
 - (a) Bidder has examined all of the Contract Documents and the following Addenda (receipt of all of which is hereby acknowledged).

Addendum No.	Addendum Date	Signature of Bidder

- (b) Bidder has visited the Site and performed tasks, reviews, examinations, and analysis and given notices, regarding the Project and the Site, as set forth in Section 00 52 00 (Agreement), Article 5.
- (c) Bidder has received and examined copies of the following technical specifications on District-provided, Contractor-installed equipment.
 - [Not used]
- (d) Bidder has given District prompt written notice of all conflicts, errors, ambiguities, or discrepancies that it has discovered in or among the Contract Documents and as-built drawings and actual conditions and the written resolution thereof through Addenda issued by District is acceptable to Contractor.

4. Based on the foregoing, Bidder proposes and agrees to fully perform the Work within the time stated and in strict accordance with the Contract Documents for the following sums of money listed in the following Schedule of Bid Prices:

SCHEDULE OF BID PRICES

All Bid items must be filled in completely. Section 01 10 00 (Summary of Work) describes the scope of work to be performed under this contract. Quote in figures only, unless words are specifically requested.

ITEM	DESCRIPTION	ESTIMATED QUANTITY	UNIT	UNIT PRICE	TOTAL
A.	BASE BID - All Work of Contract Documents other than Work separately provided for under other Bid items	1	Lump Sum	Na	\$
B.	Owner's Allowance	\$35,000	Fixed	Na	\$ 35,000.00
C.	Alternate Item No. 1 – Roof Drains Furnish and install new cast iron roof drains to replace ALL 15 existing drains at building 12. Adjust existing piping as required to connect drains. (Note: Base bid Item A. already includes demolition and provision of strainers, clamping rings, and hardware, clean and test drain lines to achieve free flowing performance.)	1	Lump Sum	Na	TOTAL ADD \$
D.	Alternate Item No. 2 – Tapered Insulation Furnish and install ridged tapered insulation in lieu of wood cants/crickets at Building 12.	1	Lump Sum	Na	TOTAL ADD/DEDUCT \$
E.	Unit Price #1 – Roof Drain Furnish and install new cast iron roof drain to replace existing drain at Building 12. Adjust existing piping as required to connect drains. For bidding purposes AND basis of award, assume a quantity of ten (10) drains.	10	EA	\$ _____ /EA	TOTAL ADD \$ (Total is Unit Price x 10)
F.	Unit Price #2 – Walkpads Furnish and install new walkpads at Building 12. For bidding purposes AND basis of award assume a quantity of Fifty 50 LF.	50	LF	\$ _____ /LF	TOTAL ADD \$ (Total is Unit Price x 50)

5. **The low bidder will be determined by the sum of Bid Items #A through #E. Bidder does not need to calculate the sum of this total on this form. The District shall calculate the sum of Bid Items #A through #F and announce it at the public Bid Opening.**

- 6. Unit Prices: As noted above the Bidder's Base Bid includes the listed unit price(s), which the bidder must provide and the District may, at its sole discretion, utilize in valuing additive and/or deductive change orders.
- 7. Subcontractors for work included in all Bid items are listed on the attached Document 00 43 36 (Subcontractors List).
- 8. The undersigned Bidder understands that District reserves the right to reject this Bid.
- 9. If written notice of the acceptance of this Bid, hereinafter referred to as Notice of Award, is mailed or delivered to the undersigned Bidder within the time described in paragraph 2 of this Section 00 41 00 or at any other time thereafter before it is withdrawn, the undersigned Bidder will execute and deliver the documents required by Section 00 11 19 (Instructions to Bidders) within the times specified therein. These documents include, but are not limited to, Section 00 52 00 (Agreement), Section 00 61 00 (Construction Performance Bond), and Section 00 62 00 (Construction Labor and Material Payment Bond).
- 10. Notice of Award or request for additional information may be addressed to the undersigned Bidder at the address set forth below.
- 11. The undersigned Bidder herewith encloses cash, a cashier's check, or certified check of or on a responsible bank in the United States, or a corporate surety bond furnished by a surety authorized to do a surety business in the State of California, in form specified in Section 00 11 19 (Instructions to Bidders), in the amount of ten percent (10%) of the total of awarded amount and made payable to "San Mateo County Community College District".
- 12. The undersigned Bidder agrees to commence Work under the Contract Documents on the date established in Section 00 71 00 (General Conditions) and to complete all work within the time specified in Section 00 52 00 (Agreement). The undersigned Bidder acknowledges that District has reserved the right to delay or modify the commencement date. The undersigned Bidder further acknowledges District has reserved the right to perform independent work at the Site, the extent of such work may not be determined until after the opening of the Bids, and that the undersigned Bidder will be required to cooperate with such other work in accordance with the requirements of the Contract Documents.
- 13. The undersigned Bidder agrees that, in accordance with Section 00 71 00 (General Conditions), liquidated damages for failure to complete all Work in the Contract within the time specified shall be as set forth in Section 00 52 00 (Agreement).
- 14. The names of all persons interested in the foregoing Bid as principals are:

(IMPORTANT NOTICE: If Bidder or other interested person is a corporation, give the legal name of corporation, state where incorporated, and names of president and secretary thereof; if a partnership, give name of the firm and names of all individual co-partners composing the firm; if Bidder or other interested person is an individual, give first and last names in full).

NAME OF BIDDER: _____

licensed in accordance with the act for the registration of Contractors, and with

License Number: _____

Expiration: _____

Where incorporated, if applicable

Principals

I certify (or declare) under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Signature of Bidder

NOTE: If Bidder is a corporation, set forth the legal name of the corporation together with the signature of the officer or officers authorized to sign contracts on behalf of the corporation. If Bidder is a partnership, set forth the name of the firm together with the signature of the partner or partners authorized to sign contracts on behalf of the partnership.

Business Address:

Officers authorized to sign contracts:

Telephone Number(s):

Fax Number(s):

E-Mail address:

Federal ID Number:

Date of Bid:

END OF DOCUMENT

DOCUMENT 00 43 10

INDEMNITY AND RELEASE AGREEMENT

Dated _____

POTENTIAL BIDDER: _____

DISTRICT: SAN MATEO COUNTY COMMUNITY COLLEGE DISTRICT

SITE: CSM Building 12 and Colonnades

PROJECT: Bid 86658 - Building 12 and Colonnades Roof Replacement Project

In consideration of the above-referenced District's permitting the undersigned potential bidder ("Bidder") to have access to, and to conduct investigations, tests and/or inspections on, the Site, Bidder hereby agrees as follows:

1. To the greatest extent permitted by law, Bidder hereby releases, and shall defend, indemnify and hold harmless District, and its officers, employees, consultants (including without limitation Consulting Architect/Engineer), representatives, and District's Representatives, and all other parties having any other interest in the Site, against any claim or liability, including attorney's fees, arising from or relating to any Site-related access, investigation, test, inspection and/or other activity conducted by Bidder or any of Bidder's officers, employees, consultants, representatives, and/or agents, regardless of whether claim or liability is caused in part by the negligence of District or by any released and indemnified party.
2. Bidder hereby waives the provisions of California Civil Code Section 1542 which provides as follows: A general release does not extend to claims that the creditor does not now or suspect to exist in his favor at the time of executing the release, which if down by him, must have materially affected his settlement with the debtor.
3. Bidder shall repair any damage to the Site or adjacent property resulting from activities authorized hereunder, and comply with and be subject to all other requirements and obligations described or referenced in Document 00 31 19 (Reports, Surveys and Existing Conditions)
4. Attached hereto (or to be delivered separately before Bidder's visit to the Site) is a certificate for comprehensive general liability insurance satisfying the requirements of Section 00 71 00 (General Conditions)
5. Although this Indemnity and Release Agreement is not a Contract document (see Document 00 52 00, Agreement), it shall be fully effective and binding regardless of whether Bidder submits a Bid for the subject Project, is awarded a contract for the Project or otherwise.

Name of Bidder

By: _____
Signature

By: _____
Signature

Its: _____
Title (If Corporation: Chairman, President or Vice President)

Its: _____
Title (If Corporation: Secretary, Assistant Secretary, Chief Financial Officer or Assistant Treasurer)

END OF DOCUMENT

DOCUMENT 00 43 13

BOND ACCOMPANYING BID

KNOW ALL BY THESE PRESENTS:

That the undersigned _____ as Principal and the undersigned as Surety are held and firmly bound unto the SAN MATEO COUNTY COMMUNITY COLLEGE DISTRICT (“District”), as obligee, in the penal sum of _____ Dollars (\$ _____) lawful money of the United States of America being at least ten percent (10%) of the aggregate amount of said Principal _____’s base Bid, for the payment of which, well and truly to be made, we bind ourselves, our successors, executors, administrators, and assigns, jointly and severally, firmly by these presents.

WHEREAS, the said Principal is submitting a Bid for District Bid Number 86658 – Building 12 and Colonnades Roof Replacement Project.

THE CONDITION OF THIS OBLIGATION IS SUCH that if the Bid submitted by the said Principal be accepted and the Contract be awarded to said Principal and said Principal shall within the required periods enter into the Contract so awarded and provide the required Construction Performance Bond, Construction Labor and Material Payment Bond, insurance certificates, and all other endorsements, forms, and documents required under Section 00 11 19 (Instructions to Bidders), then this obligation for the Bid Bond shall be void, otherwise to remain in full force and effect.

IN WITNESS WHEREOF, the above bounden parties have executed this instrument this _____ day of _____, 200__.

(Corporate Seal)

By

Principal

(Corporate Seal)

By

Surety

Attorney in Fact

END OF DOCUMENT

DOCUMENT 00 43 25

SUBSTITUTION REQUEST FORM

To: San Mateo County Community College District

Project: **Bid No. 86658 Building 12 and Roof Replacement Project**

Contractor: _____

Subcontractor/Supplier: _____

Drawing Sheet Reference/Detail No: _____

The undersigned Bidder submits for consideration the following equipment instead of the specified item for the above project:

<u>Section</u>	<u>Paragraph</u>	<u>Specified Item</u>
_____	_____	_____
_____	_____	_____

Proposed Substitution: _____

The undersigned encloses the information required herein. If this Document 00 43 25 is being submitted by a Bidder wishing to use "or equal" item(s) as provided in Document 00 11 19 (Instructions to Bidders), the undersigned Bidder must also enclose the technical information (other than cost) otherwise required for a post-Award of Contract Request for Substitution ("RFS") under Section 01 60 00 (Product Requirements). However, if this Document 00 43 25 is being submitted under provisions of Contract Documents after Award of Contract, the undersigned Contractor must include all information required under Section 01 60 00 (Product Requirements).

The undersigned has (a) attached manufacturer's literature, including complete technical data and laboratory test results, if applicable, (b) attached an explanation of why proposed substitution is a true equivalent to specified item, (c) included complete information on changes to Drawings and Specifications that the proposed substitution will require for its proper installation, and (d) filled in the blanks below:

- A. Does the substitution affect dimensions shown on Drawings?

- B. Are the manufacturer's guarantees and warranties on the proposed substitution items identical to those on the specified items? If there are differences, please specify each and every difference in detail.

- C. What effect does the substitution have on other contractors, trades, or suppliers?

D. What are the differences between the proposed substitution and the specified item? If proposed substitution has a color or pattern, provide a color board showing proposed substitution in relation to the other adjacent colors and patterns.

E. Will granting the requested substitution cause any schedule delay? (If yes, please explain)

The undersigned Bidder certifies that the function, appearance, and quality of the proposed substitution are equivalent or superior to those of the specified item. The contractor shall be responsible for all engineering, permitting, coordination, construction, and costs to all subcontractors associated with the acceptance of the substitution regardless of when those additional costs are identified.

Submitted by:

Bidder/Contractor
[note applicable]

For Use by District:

_____ Accepted _____ Accepted as Noted

Signature

_____ Not Accepted _____ Received Too Late

Name

By: _____
District's Representative

Address

Date: _____

City/State/Zip

Remarks: _____

Telephone:

Date:

END OF DOCUMENT

DOCUMENT 00 43 33

**SCHEDULE OF MAJOR EQUIPMENT AND MATERIAL SUPPLIERS
TO BE EXECUTED BY ALL BIDDERS AND SUBMITTED WITH BID**

The undersigned Bidder represents that, if awarded the Contract, the items of major equipment and materials specified below will be supplied by the manufacturers or suppliers specified below. By so indicating, bidder warrants that the equipment and materials manufacturer and/or supplied by the named manufacturer or supplier will be provided on the Project.

Firm/Company: _____

<u>Item</u>	<u>Manufacturer or Supplier</u>
1. _____	_____
2. _____	_____
3. _____	_____
4. _____	_____
5. _____	_____
6. _____	_____
7. _____	_____
8. _____	_____
9. _____	_____
10. _____	_____
11. _____	_____
12. _____	_____

Bidder: _____

SIGNATURE

DATE

END OF DOCUMENT

DOCUMENT 00 43 36

**SUBCONTRACTORS LIST
TO BE EXECUTED BY ALL BIDDERS AND SUBMITTED WITH BID**

Bidder submits the following information as to the subcontractors Bidder intends to employ if awarded the Contract.

Full Name of Subcontractor and Address	Description of Work: Reference To Bid Items	Subcontractor's License No.

(Bidder to attach additional sheets if necessary)

END OF DOCUMENT

DOCUMENT 00 43 45

ESCROW AGREEMENT FOR SECURITY DEPOSITS IN LIEU OF RETENTION
P.C.C. §22300

THIS ESCROW AGREEMENT (“Escrow Agreement”) is made and entered into this ____ day of _____, 200[], by and between the SAN MATEO COUNTY COMMUNITY COLLEGE DISTRICT (hereinafter called the “District”), whose address is 3401 CSM Drive, San Mateo, California 94402; _____ (“Contractor”), whose place of business is located at _____; and **[District, as escrow agent ...OR... []]**, a state or federally chartered bank in the State of California, whose place of business is located at _____] (“Escrow Agent”).

For the consideration hereinafter set forth, District, Contractor and Escrow Agent agree as follows:

1. Pursuant to Section 22300 of Public Contract Code of the State of California, Contractor has the option to deposit securities with Escrow Agent as a substitute for retention earnings required to be withheld by District pursuant to Contract Number [] entered into between District and Contractor for the Building 12 and Colonnades Roof replacement Project in the amount of [] dated [] (the “Contract”). Alternatively, on written request of Contractor, District shall make payments of the retention earnings directly to Escrow Agent. When Contractor deposits the securities as a substitute for Contract earnings, Escrow Agent shall notify District within ten (10) Days of the deposit. The market value of the securities at the time of substitution shall be at least equal to the cash amount then required to be withheld as retention under terms of Contract between District and Contractor. Securities shall be held in name of _____, and shall designate Contractor as the beneficial owner.
2. District shall make progress payments to Contractor for those funds which otherwise would be withheld from progress payments pursuant to Contract provisions, provided that Escrow Agent holds securities in form and amount specified in paragraph 1 of this Document 00 43 45.
3. When District makes payment(s) of retention earned directly to Escrow Agent, Escrow Agent shall hold said payment(s) for the benefit of Contractor until the time that the escrow created under this Escrow Agreement is terminated. Contractor may direct the investment of the payments into securities. All terms and conditions of this Escrow Agreement and the rights and responsibilities of the parties shall be equally applicable and binding when District pays Escrow Agent directly.
4. Contractor shall be responsible for paying all fees for the expenses incurred by Escrow Agent in administering the Escrow Account, and all expenses of District. Such expenses and payment terms shall be determined by District, Contractor, and Escrow Agent.
5. Interest earned on securities or money market accounts held in escrow and all interest earned on that interest shall be for sole account of Contractor and shall be subject to withdrawal by Contractor at any time and from time to time without notice to District.
6. Contractor shall have the right to withdraw all or any part of the principal in the Escrow Account only by written notice to Escrow Agent accompanied by written authorization from District to Escrow Agent that District consents to withdrawal of amount sought to be withdrawn by Contractor.
7. District shall have the right to draw upon the securities in event of default by Contractor. Upon seven (7) Days written notice to Escrow Agent from District of the default, Escrow Agent shall immediately convert the securities to cash and shall distribute the cash as instructed by District.
8. Upon receipt of written notification from District certifying that the Contract is final and complete, and that Contractor has complied with all requirements and procedures applicable to the Contract, Escrow Agent shall release to Contractor all securities and interest on deposit less escrow fees and charges of the Escrow Account. The

escrow shall be closed immediately upon disbursement of all moneys and securities on deposit and payments of fees and charges.

- 9. Escrow Agent shall rely on written notifications from District and Contractor pursuant to paragraphs 5 through 8, inclusive, of this Document 00 43 45 and District and Contractor shall hold Escrow Agent harmless from Escrow Agent's release and disbursement of securities and interest as set forth.
- 10. Names of persons who are authorized to give written notice or to receive written notice on behalf of District and on behalf of Contractor in connection with the foregoing, and exemplars of their respective signatures are as follows:

On behalf of District:

On behalf of Contractor:

 Kathy Blackwood
 Executive Vice Chancellor
 Or

Signature

Name

 Raymond Chow
 Chief Financial Officer

Title

3401 CSM Drive
 San Mateo, CA 94402

Address

City/State/Zip

On behalf of Escrow Agent:

Title

Name

Signature

Address

City/State/Zip

At the time the Escrow Account is opened, District and Contractor shall deliver to Escrow Agent a fully executed counterpart of this Document 00 43 45.

IN WITNESS WHEREOF, the parties have executed this Escrow Agreement by their proper officers on the date first set forth above.

District:

Kathy Blackwood
Executive Vice Chancellor

Signature

or

Raymond Chow
Chief Financial Officer

Signature

3401 CSM Drive
San Mateo, CA 94402

Contractor:

Name
Title

Signature

Address

City/State/Zip

Escrow Agent:

Title

Name

Signature

Address

City/State/Zip

END OF DOCUMENT

DOCUMENT 00 45 00

**BIDDER CERTIFICATIONS
TO BE EXECUTED BY ALL BIDDERS AND SUBMITTED WITH BID**

The undersigned Bidder certifies to the San Mateo Community College District ("District"), as set forth in sections 1 through 7 below.

1. CERTIFICATE OF NON-DISCRIMINATION

By my signature hereunder, on behalf of the Bidder making this Bid, the undersigned certifies that there will be no discrimination in employment with regard to race, color, religion, gender, sexual orientation, or national origin; that all federal, state, and local directives and executive orders regarding non-discrimination in employment will be complied with; and that the principle of equal opportunity in employment will be demonstrated positively and aggressively.

2. STATEMENT OF CONVICTIONS

By my signature hereunder, I hereby swear, under penalty of perjury, that no more than 1 final, unappealable finding of contempt of court by a Federal Court has been issued against Bidder within the past 2 years because of failure to comply with an order of a Federal Court or to comply with an order of the National Labor Relations Board.

3. PREVIOUS DISQUALIFICATIONS

By my signature hereunder, I hereby swear, under penalty of perjury, that the below indicated Bidder, any officer of such Bidder, or any employee of such Bidder who has a proprietary interest in such Bidder, has never been disqualified, removed or otherwise prevented from bidding on, or completing a Federal, State, or local government project because of a violation of law or a safety regulation except as indicated on the separate sheet attached hereto entitled "Previous Disqualifications." If such exceptions are attached, please explain the circumstances.

4. CERTIFICATION OF WORKER'S COMPENSATION INSURANCE

By my signature hereunder, as the Contractor, I certify that I am aware of the provisions of Section 3700 of the Labor Code which require every employer to be insured against liability for worker's compensation or to undertake self-insurance in accordance with the provisions of that Code, and I will comply with such provisions before commencing the performance of the work of this Contract.

5. CERTIFICATION OF PREVAILING WAGE RATES AND RECORDS

By my signature hereunder, as the Contractor, I certify that I am aware of the provisions of Section 1773 of the Labor Code, which requires the payment of prevailing wage on public projects. Also, that the Contractor and any subcontractors under the Contractor shall comply with Section 1776, regarding wage records, and with Section 1777.5, regarding the employment and training of apprentices, of the Labor Code. It is the Contractor's responsibility to ensure compliance by any and all subcontractors performing work under this Contract.

6. CERTIFICATION OF ADEQUACY OF CONTRACT AMOUNT

By my signature hereunder, as the Contractor, pursuant to Labor Code Section 2810(a), I certify that, if awarded the Contract based on the undersigned's Bid, the Contract will include funds sufficient to allow the Contractor to comply with all applicable local, state, and federal laws or regulations governing the labor or services to be provided. I understand that the District will be relying on this certification if it awards the Contract to the undersigned.

7. CERTIFICATION OF STATEMENT OF QUALIFICATIONS

Check and complete one:

_____ There are changes to my Statement of Qualifications submitted to the District on _____, 20__ , which are set forth on Attachment 7, attached hereto.

_____ There are no changes to any items in my Statement of Qualifications submitted to the District on _____, 20__ .

Bidder: _____
[Name of Bidder]

By: _____
[Signature]

Name: _____
[Printed Name]

Its: _____
[Title]

Dated: _____

END OF DOCUMENT

Attachment 7

Changes to Statement of Qualifications

[insert, if applicable]

DOCUMENT 00 45 14

**KEY PERSONNEL
TO BE EXECUTED BY ALL BIDDERS AND SUBMITTED WITH BID**

The Contractor for the Project has committed the following personnel to the Project. All of these personnel were prequalified with the Contractor (in Contractor's Statement of Qualifications, upon which the Contractor's status of "Prequalified to Bid on Projects with San Mateo County Community College District" is based) except as otherwise indicated. Resumes are attached for all non-prequalified personnel. All non-prequalified personnel are subject to approval from the District. Also, the Contractor acknowledges that any changes from the committed personnel are subject to pre-approval from the District. Contractor understands that Notice to Proceed may not be issued until all applicable personnel have been approved.

Project Manager: _____
(Please print)

Superintendent: _____
(Please print)

END OF DOCUMENT

DOCUMENT 00 45 19

NON-COLLUSION AFFIDAVIT
TO BE EXECUTED BY ALL BIDDERS AND SUBMITTED WITH BID
PUBLIC CONTRACT CODE §7106

NON-COLLUSION AFFIDAVIT TO BE EXECUTED BY BIDDER AND SUBMITTED WITH BID

STATE OF CALIFORNIA)
) ss.
COUNTY OF _____)

[_____], being first duly sworn, deposes and says that he or she is
[Office of Affiant] of _____ [Name of
Bidder], the party making the foregoing Bid, that the Bid is not made in the interest of, or on behalf of, any
undisclosed person, partnership, company, association, organization, or corporation; that the Bid is genuine and not
collusive or sham; that Bidder has not directly or indirectly induced or solicited any other bidder to put in a false or
sham Bid, and has not directly or indirectly colluded, conspired, connived or agreed with any bidder or anyone else
to put in a sham Bid, or that anyone shall refrain from bidding, and that the Bidder has not in any manner, directly or
indirectly, sought by agreement, communication or conference with anyone to fix the Bid price of Bidder or any
other bidder, or to fix any overhead, profit or cost element of the Bid price, or of that of any other bidder, or to
secure any advantage against the San Mateo Community College District, or anyone interested in the proposed
contract; that all statements contained in the Bid are true; and further, that Bidder has not, directly or indirectly,
submitted its Bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative
thereto, or paid, and will not pay, any fee to any corporation, partnership, company association, organization, Bid
depository, or to any member or agent thereof to effectuate a collusive or sham Bid.

Executed under penalty of perjury under the laws of the State of California:

(Name of Bidder)

(Signature of Principal)

Subscribed and sworn before me _____

This _____ day of _____, 20__

Notary Public of the State of _____
In and for the County of _____
My Commission expires _____

(Seal)

(If Bidder is a partnership or a joint venture, this affidavit must be signed and sworn to by every member of
the partnership or venture.)

(If Bidder [including any partner or venturer of a partnership or joint venture] is a corporation, this affidavit
must be signed by the Chairman, President, or Vice President and by the Secretary, Assistant Secretary,
Chief Financial Officer, or Assistant Treasurer.)

(If Bidder's affidavit on this form is made outside the State of California, the official position of the person
taking such affidavit shall be certified according to law.)

END OF DOCUMENT

DOCUMENT 00 50 00

NOTICE TO PROCEED

Dated: _____, 20__

To: _____
(Contractor)

Address: _____

CONTRACT FOR:

BID NUMBER 86658
THE BUILDING 12 AND COLONNADES ROOF REPLACEMENT PROJECT

You are notified that the Contract Time under the above Contract will commence to start on **Wednesday April 24, 2013.**

Submittals due by Friday April 26, 2013. (NTP + 1 CD)

Mobilize on-site no earlier than Tuesday May 28, 2013 (NTP + 34 CD)

Demolition completion - no later than June 14, 2013 (NTP + 51 CD)

Substantial completion – no later than July 8, 2013 (NTP + 75 CD)

Final completion - no later than July 31, 2013 (NTP + 98 CD)

Before you may start any Work at the Site, you must:

1. Submit certified Safety Program and related information, and comply with all requests of/by **José Nuñez**, the District’s safety officer.
2. Submit copies of applicable permits.
3. Submit approved fire protection plan, as required. (Required for all modernization and remodel projects.)
4. Attend preconstruction conference. The preconstruction conference shall be arranged by the Construction Manager.

SAN MATEO COUNTY COMMUNITY COLLEGE DISTRICT

By : _____
Bill Krill
SMC Construction Manager

END OF DOCUMENT

DOCUMENT 00 51 00

NOTICE OF AWARD

Dated _____

TO: _____

ADDRESS: _____

CONTRACT NO.: _____

CONTRACT FOR:

THE BUILDING 12 AND COLONNADES ROOF REPLACEMENT PROJECT

The Contract Sum of your contract is _____ Dollars (\$_____).

1. Three copies of each of the proposed Contract Documents (except Specifications and Drawings) accompany this Notice of Award. Three sets of Specifications and Drawings will be delivered separately or otherwise made available to you immediately.
2. You must comply with the following conditions by 4:00 p.m. on **Monday, April 22, 2013**.
 - a. Deliver to District two fully executed counterparts of Document 00 52 00 (Agreement).
 - b. Deliver to District one original Document 00 61 00 (Construction Performance Bond), executed by you and your surety.
 - c. Deliver to District one original Document 00 62 00 (Construction Labor and Material Payment Bond), executed by you and your surety.
 - d. Deliver to District one original set of the insurance certificates with endorsements required under Section 00 71 00 (General Conditions) and Section 00 73 17 (Insurance).
 - e. Deliver to District two original copies of Document 00 65 36 (Guaranty), each executed by you.
3. You must comply with the following conditions by 4:00 p.m. on **Friday, April 26, 2013**.
 - **Provide complete submittals as specified in the contract documents.**
4. Failure to comply with these conditions within the time specified will entitle District to consider your Bid abandoned, to annul this Notice of Award, and to declare your Bid security forfeited.
5. Within ten (10) Days after you comply with the conditions in paragraph 2 of this Document 00 51 00, District will return to you one fully signed counterpart of Document 00 52 00 (Agreement) with the Contract Documents.
6. Upon commencement of the Work, you and each of your Subcontractors shall certify and make available for inspection payroll records on forms provided by the Division of Labor Standards Enforcement, in accordance with Section 1776 of the California Labor Code.
7. Send all of the required above listed items to Swinerton Management and Consulting 3401 CSM Drive, San Mateo, Ca., to the attention of Peter Hempel.

SAN MATEO COUNTY COMMUNITY COLLEGE
DISTRICT ("District")

BY: _____
Peter Hempel
SWINERTON MANAGEMENT & CONSULTING

END OF DOCUMENT

DOCUMENT 00 52 00

AGREEMENT

THIS AGREEMENT, dated this _____ day of _____, 20____, by and between _____ [Name of Contractor] whose place of business is located at _____, _____ [Address of Contractor] (“Contractor”), and the SAN MATEO COUNTY COMMUNITY COLLEGE DISTRICT (“District”) acting under and by virtue of the authority vested in the District by the laws of the State of California.

WHEREAS, District, by action of its Board of Trustees on the _____ day of _____, 200X awarded to Contractor the following contract:

**BID NUMBER 86658
Building 12 and Colonnades Roof Replacement Project**

NOW, THEREFORE, in consideration of the mutual covenants hereinafter set forth, Contractor and District agree as follows:

Article 1. Work

1.1 Contractor shall complete all Work specified in the Contract Documents, in accordance with the Specifications, Drawings, and all other terms and conditions of the Contract Documents.

Article 2. District’s Representative, Architect/Engineer and Construction Manager

2.1 District has designated Karen Powell to act as District’s Representative(s), who will represent District in performing District’s duties and responsibilities and exercising District’s rights and authorities in Contract Documents. District may change the individual(s) acting as District’s Representative(s), or delegate one or more specific functions to one or more specific District’s Representatives, including without limitation engineering, architectural, inspection and general administrative functions, at any time with notice and without liability to Contractor. Each District’s Representative is the beneficiary of all Contractor obligations to District, including without limitation, all releases and indemnities.

2.2 District has designated Swinerton Management and Consulting to act as Construction Manager. District may assign all or part of the District Representative’s rights, responsibilities and duties to Construction Manager. District may change the identity of the Construction Manager at any time with notice and without liability to Contractor.

2.3 District has designated Allana Buick and Bers to act as Architect/Engineer. District may change the identity of the Architect/Engineer at any time with notice and without liability to Contractor.

2.4 All notices or demands to District under the Contract Documents shall be submitted to the District’s Representative at:

Peter Hempel, SMC – Construction Manager
Bid 86658 – Building 12 and Colonnades Roof Replacement Project
3401 CSM Drive
San Mateo, CA 94402

or to such other person(s) and address(es) as District shall provide to Contractor.

Article 3. Contract Time and Liquidated Damages

3.1 Contract Time.

Contractor shall commence Work at the Site on the date established in the Notice to Proceed. District reserves the right to modify or alter the Commencement Date of the Work.

Submittals due by Friday April 26, 2013 (NTP + 1 CD)

Mobilize on-site no earlier than Tuesday May 28, 2013 (NTP + 34 CD)

Demolition completion - no later than June 14, 2013 (NTP + 51CD)

Substantial completion – no later than July 8, 2013 (NTP + 75 CD) as provided in Section 00 71 00 (General Conditions)

Final completion - no later than July 31, 2013 (NTP + 98 CD) in accordance with Section 01 77 00 (Contract Closeout) and as provided in Section 00 71 00 (General Conditions).

3.2 Liquidated Damages.

District and Contractor recognize that time is of the essence of this Agreement and that District will suffer financial loss in the form of contract administration expenses (such as project management and consultant expenses), if all or any part of the Work is not completed including consequential loss of use and disruption of normal operations within the times specified above, plus any extensions thereof allowed in accordance with the Contract Documents. Consistent with Article 15 of Section 00 71 00 (General Conditions), Contractor and District agree that because of the nature of the Project, it would be impractical or extremely difficult to fix the amount of actual damages incurred by District because of a delay in completion of all or any part of the Work. Accordingly, District and Contractor agree that as liquidated damages for delay Contractor shall pay District:

- a) **Colonnade Demolition completion - \$1,000.00** for each Calendar Day that expires after the time specified herein for Contractor to achieve Demolition Completion of the entire Work, until achieved.
- b) **Substantial completion - \$1,000.00** for each Calendar Day that expires after the time specified herein for Contractor to achieve Substantial Completion of the entire Work, until achieved.

These measures of liquidated damages **shall apply cumulatively** and except as provided below, shall be presumed to be the damages suffered by District resulting from delay in completion of the Work.

- 3.2 Liquidated damages for delay shall only cover administrative, overhead, interest on bonds, and general loss of public use damages suffered by District as a result of delay or costs of substitute facilities. Liquidated damages shall not cover the cost of completion of the Work, damages resulting from defective Work, lost revenues or damages suffered by others who then seek to recover their damages from District (for example, delay claims of other contractors, subcontractors, tenants, or other third-parties), and defense costs thereof.

Article 4. Contract Sum

- 4.1 District shall pay Contractor the Contract Sum for completion of Work in accordance with Contract Documents as follows:

\$xxx.00 Contract Amount

Article 5. Contractor's Representations

In order to induce District to enter into this Agreement, Contractor makes the following representations and warranties:

- 5.1 Contractor has visited the Site and has examined thoroughly and understood the nature and extent of the Contract Documents, Work, Site, locality, actual conditions, as-built conditions, and all local conditions, and federal, State and local laws and regulations that in any manner may affect cost, progress, performance or furnishing of Work or which relate to any aspect of the means, methods, techniques, sequences or procedures of construction to be employed by Contractor and safety precautions and programs incident thereto.
- 5.2 Contractor has examined thoroughly and understood all reports of exploration and tests of subsurface conditions, as-built drawings, drawings, products specifications or reports, available for Bidding purposes, of physical conditions, including Underground Facilities, which are identified in Document 00 31 19 (Reports, Surveys and Existing Conditions), or which may appear in the Drawings. Contractor accepts the determination set forth in these Sections and Section 00 71 00 (General Conditions) of the extent of the information contained in such materials upon which Contractor may be entitled to rely.
- 5.3 Contractor has correlated its knowledge and its review of those items with the terms and conditions of the Contract Documents.
- 5.4 Contractor has given District prompt written notice of all conflicts, errors, ambiguities, or discrepancies that it has discovered in or among the Contract Documents and the written resolution thereof through Addenda issued by District is acceptable to Contractor.
- 5.5 Contractor is duly organized, existing and in good standing under applicable state law, and is duly qualified to conduct business in the State of California.
- 5.6 Contractor has duly authorized the execution, delivery and performance of this Agreement, the other Contract Documents and the Work to be performed herein. The Contract Documents do not violate or create a default under any instrument, agreement, order or decree binding on Contractor.
- 5.7 Contractor has listed the following Subcontractors pursuant to the Subcontractor Listing Law, California Public Contracting Code §4100 et seq.

SUBCONTRACTOR LIST

Name of Subcontractor and Location of Mill or Shop	Description of Work: Reference To Bid Items	Subcontractor's License No.

Article 6. Contract Documents

6.1 Contract Documents consist of the following Sections, including all changes, addenda, and modifications thereto:

- 00 01 01 Title Page
- 00 01 07 Seals Page
- 00 01 10 Table of Contents
- 00 01 15 List of Drawings (Issued by Allan Buick and Bers)

00 11 13	Advertisement for Bids
00 11 19	Instructions to Bidders
00 21 14	Bid Submittal Vicinity Map (Not used – refer sheet A101)
00 21 15	Project Site Campus Map (Not used – refer sheet A101)
00 31 19	Reports, Surveys and Existing Conditions
00 41 00	Bid Form
00 43 10	Indemnity and Release Agreement
00 43 13	Bond Accompanying Bid
00 43 25	Substitution Request
00 43 33	Schedule of Major Equipment and Materials Suppliers
00 43 36	Subcontractors List
00 43 45	Escrow Agreement for Security Deposit
00 45 00	Bidder Certifications
00 45 14	Key Personnel
00 45 19	Non-Collusion Affidavit
00 50 00	Notice to Proceed
00 51 00	Notice of Award
00 51 01	Notice of Intent to Award for Construction (Not used)
00 52 00	Agreement
00 61 00	Construction Performance Bond
00 62 00	Construction Labor and Material Payment Bond
00 65 36	Guaranty
00 65 73	Agreement and Release of Any and All Claims
00 71 00	General Conditions
00 73 00	Supplementary Conditions
00 73 05	Supplementary Conditions – Hazardous Materials (Not used)
00 73 17	Insurance
00 73 37	Apprenticeship Program
<i>00 91 01</i>	<i>Addendum No. 1 – If needed</i>
01 10 00	Summary of Work
01 21 00	Allowance
01 23 00	Alternates
01 26 00	Modification Procedures
01 29 00	Measurement and Payment
01 31 19	Project Meetings
01 31 23	Web-based Project Management System (Not used)
01 32 16	Progress Schedules and Reports
01 32 19	Submittal Procedures
01 35 00	Special Procedures
01 35 27	Project Labor Agreement (Not used)
01 35 28	Labor Compliance Program (Not used)
01 41 00	Regulatory Requirements
01 41 01	Regulatory Requirements – Hazardous Materials (Not used)
01 42 00	References and Definitions
01 45 23	Testing and Inspection
01 51 00	Temporary Facilities and Controls
01 56 00	Site Security and Safety
01 58 00	Project Identification and Signs
01 60 00	Product Requirements
01 74 00	Cleaning
01 76 01	Existing Underground Facilities (Not used)
01 77 00	Contract Closeout
01 78 39	Project Record Documents
01 91 13	General Commissioning Requirements (Not used)
02 41 22	Selective Demolition
06 10 00	Rough Carpentry

07 22 00	Roof and Deck Insulation
07 54 19	Thermoplastic Membrane Roofing
07 56 00	Fluid-Applied Roofing
07 62 00	Sheet Metal Flashing and Trim
07 72 00	Roof Accessories
07 92 00	Joint Sealants
09 91 13	Exterior Painting
22 14 00	Facility Storm Drainage
23 05 00	Rooftop Mechanical Equipment

- 6.2 There are no Contract Documents other than those listed in this Document 00 52 00, Article 6. Document 00 31 19 (Reports, Surveys and Existing Conditions), and the information supplied therein, are not Contract Documents. The Contract Documents may only be amended, modified or supplemented as provided in Section 00 71 00 (General Conditions).

Article 7. Miscellaneous

- 7.1 Terms used in this Agreement are defined in Section 00 71 00 (General Conditions) and Section 01 42 00 (References and Definitions) and will have the meaning indicated therein.
- 7.2 It is understood and agreed that in no instance are the persons signing this Agreement for or on behalf of District or acting as an employee, agent, or representative of District, liable on this Agreement or any of the Contract Documents, or upon any warranty of authority, or otherwise, and it is further understood and agreed that liability of the District is limited and confined to such liability as authorized or imposed by the Contract Documents or applicable law.
- 7.3 Contractor shall not assign any portion of the Contract Documents, and may subcontract portions of the Contract Documents only in compliance with the Subcontractor Listing Law, California Public Contracting Code §4100 *et seq.*
- 7.4 In entering into a public works contract or a subcontract to supply goods, services or materials pursuant to a public works contract, Contractor or Subcontractor offers and agrees to assign to the awarding body all rights, title and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. §15) or under the Cartwright Act (Chapter 2 (commencing with Section 16700) of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, services or materials pursuant to the public works contract or the subcontract. This assignment shall be made and become effective at the time District tenders final payment to Contractor, without further acknowledgment by the parties.
- 7.5 Copies of the general prevailing rates of per diem wages for each craft, classification, or type of worker needed to execute the Contract, as determined by Director of the State of California Department of Industrial Relations, are available through the Department of Industrial Relations and are deemed included in the Contract Documents by reference. See <http://www.dir.ca.gov/dir/databases.html> Upon request, District will make available copies to any interested party. Pursuant to Section 1861 of the Labor Code, Contractor represents that it is aware of the provisions of Section 3700 of the Labor Code which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that Code, and Contractor shall comply with such provisions before commencing the performance of the Work of the Contract Documents. In addition, Contractor shall post the applicable prevailing wage rates at the Site.
- 7.6 Contractor and each of Contractor's subcontractors agrees to complete and verify construction reports on a form prescribed by the Division of the State Architect and to file the reports no less than quarterly during construction as required by Title 24; at the completion of the Work; at the suspension of work for a period of more than one month; whenever the services of Contractor or any of Contractor's subcontractors are

terminated for any reason; and at any time a special verified report is required by the Division of the State Architect.

7.7 Should any part, term or provision of this Agreement or any of the Contract Documents, or any document required herein or therein to be executed or delivered, be declared invalid, void or unenforceable, all remaining parts, terms and provisions shall remain in full force and effect and shall in no way be invalidated, impaired or affected thereby. If the provisions of any law causing such invalidity, illegality or unenforceability may be waived, they are hereby waived to the end that this Agreement and the Contract Documents may be deemed valid and binding agreements, enforceable in accordance with their terms to the greatest extent permitted by applicable law. In the event any provision not otherwise included in the Contract Documents is required to be included by any applicable law, that provision is deemed included herein by this reference (or, if such provision is required to be included in any particular portion of the Contract Documents, that provision is deemed included in that portion).

7.8 This Agreement and the Contract Documents shall be deemed to have been entered into in the County of San Mateo, State of California, and governed in all respects by California law (excluding choice of law rules). The exclusive venue for all disputes or litigation hereunder shall be in San Mateo County. Contractor accepts the Claims Procedure in Section 00 71 00, Article 12, established under the California Government Code, Title 1, Division 3.6, Part 3, Chapter 5.

IN WITNESS WHEREOF the parties have executed this Agreement in duplicate the day and year first above written.

DISTRICT:

SAN MATEO COUNTY COMMUNITY COLLEGE DISTRICT

CONTRACTOR:

[Contractor's name]

By: _____
Kathy Blackwood
Executive Vice Chancellor

By: _____
Signature

END OF DOCUMENT

DOCUMENT 00 61 00

CONSTRUCTION PERFORMANCE BOND

THIS CONSTRUCTION PERFORMANCE BOND ("Bond") is dated _____, is in the penal sum of

_____ [which is one hundred percent of the Contract Price], and is entered into by and between the parties listed below to ensure the faithful performance of the Construction Contract listed below. This Bond consists of this page and the Bond Terms and Conditions, paragraphs 1 through 12, attached to this page. Any singular reference to _____ ("Contractor"), _____ ("Surety"), San Mateo County Community College District ("District") or other party shall be considered plural where applicable.

CONTRACTOR:

SURETY:

Name

Name

Address

Principal Place of Business

City/State/Zip

City/State/Zip

CONSTRUCTION CONTRACT:

**THE BUILDING 12 AND COLONNADES ROOF REPLACEMENT PROJECT
BID NUMBER 86658**

at San Mateo, California.

DATED _____, 20____ in the Amount of \$_____ (the "Penal Sum")

CONTRACTOR AS PRINCIPAL
Company: (Corp. Seal)

SURETY
Company: (Corp. Seal)

Signature: _____

Signature: _____

Name and Title: _____

Name and Title: _____

BOND TERMS AND CONDITIONS

1. Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to District for the complete and proper performance of the Construction Contract, which is incorporated herein by reference.
2. If Contractor completely and properly performs all of its obligations under the Construction Contract, Surety and Contractor shall have no obligation under this Bond.
3. If there is no District Default, Surety's obligation under this Bond shall arise after:
 - 3.1 District has declared a Contractor Default under the Construction Contract pursuant to the terms of the Construction Contract; and
 - 3.2 District has agreed to pay the Balance of the Contract Sum:

- 3.2.1 To Surety in accordance with the terms of this Bond and the Construction Contract; or
 - 3.2.2 To a contractor selected to perform the Construction Contract in accordance with the terms of this Bond and the Construction Contract.
4. When District has satisfied the conditions of paragraph 3, Surety shall promptly (within 30 days) and at Surety's expense elect to take one of the following actions:
 - 4.1 Arrange for Contractor, with consent of District, to perform and complete the Construction Contract (but District may withhold consent, in which case the Surety must elect an option described in paragraphs 4.2, 4.3 or 4.4, below); or
 - 4.2 Undertake to perform and complete the Construction Contract itself, through its agents or through independent contractors; provided, that Surety may not select Contractor as its agent or independent contractor without District's consent; or
 - 4.3 Undertake to perform and complete the Construction Contract by obtaining bids from qualified contractors acceptable to District for a contract for performance and completion of the Construction Contract, and, upon determination by District of the lowest responsible bidder, arrange for a contract to be prepared for execution by District and the contractor selected with District's concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract; and, if Surety's obligations defined in paragraph 6, below, exceed the Balance of the Contract Sum, then Surety shall pay to District the amount of such excess; or
 - 4.4 Waive its right to perform and complete, arrange for completion, or obtain a new contractor and with reasonable promptness under the circumstances, and, after investigation and consultation with District, determine in good faith its monetary obligation to District under paragraph 6, below, for the performance and completion of the Construction Contract and, as soon as practicable after the amount is determined, tender payment therefore to District with full explanation of the payment's calculation. If District accepts Surety's tender under this paragraph 4.4, District may still hold Surety liable for future damages then unknown or unliquidated resulting from the Contractor Default. If District disputes the amount of Surety's tender under this paragraph 4.4, District may exercise all remedies available to it at law to enforce Surety's liability under paragraph 6, below.
5. If Surety does not proceed as provided in paragraph 4, above, then Surety shall be deemed to be in default on this Bond ten (10) days after receipt of an additional written notice from District to Surety demanding that Surety perform its obligations under this Bond. At all times District shall be entitled to enforce any remedy available to District at law or under the Construction Contract including, without limitation, and by way of example only, rights to perform work, protect work, mitigate damages, advance critical work to mitigate schedule delay, or coordinate work with other consultants or contractors.
6. Surety's monetary obligation under this Bond is limited by the Amount of this Bond identified herein as the Penal Sum. This monetary obligation shall augment the Balance of the Contract Sum. Subject to these limits, Surety's obligations under this Bond are commensurate with the obligations of Contractor under the Construction Contract. Surety's obligations shall include, but are not limited to:
 - 6.1 The responsibilities of Contractor under the Construction Contract for completion of the Construction Contract and correction of defective work;
 - 6.2 The responsibilities of Contractor under the Construction Contract to pay liquidated damages, and for damages for which no liquidated damages are specified in the Construction Contract, actual damages caused by non-performance of the Construction Contract including, but not limited to, all valid and proper back charges, offsets, payments, indemnities, or other damages;

- 6.3 Additional legal, design professional and delay costs resulting from Contractor Default or resulting from the actions or failure to act of the Surety under paragraph 4, above (but excluding attorney's fees incurred to enforce this Bond).
7. No right of action shall accrue on this Bond to any person or entity other than District or its successors or assigns.
8. Surety hereby waives notice of any change, alteration or addition to the Construction Contract or to related subcontracts, purchase orders and other obligations, including changes of time. Surety consents to all terms of the Construction Contract, including provisions on changes to the Contract. No extension of time, change, alteration, modification, deletion, or addition to the Contract Documents, or of the work required there under, shall release or exonerate Surety on this Bond or in any way affect the obligations of Surety on this Bond.
9. Any proceeding, legal or equitable, under this Bond shall be instituted in any court of competent jurisdiction where a proceeding is pending between District and Contractor regarding the Construction Contract, or in the courts of the County of San Mateo, or in a court of competent jurisdiction in the location in which the work is located. Communications from District to Surety under paragraph 3.1 of this Bond shall be deemed to include the necessary agreements under paragraph 3.2 of this Bond unless expressly stated otherwise.
10. All notices to Surety or Contractor shall be mailed or delivered (at the address set forth on the signature page of this Bond), and all notices to District shall be mailed or delivered as provided in Document 00 52 00 (Agreement). Actual receipt of notice by Surety, District or Contractor, however accomplished, shall be sufficient compliance as of the date received at the foregoing addresses.
11. Any provision in this Bond conflicting with any statutory or regulatory requirement shall be deemed deleted here from and provisions conforming to such statutory requirement shall be deemed incorporated herein.
12. Definitions.
- 12.1 Balance of the Contract Sum: The total amount payable by District to Contractor pursuant to the terms of the Construction Contract after all proper adjustments have been made under the Construction Contract, for example, deductions for progress payments made, and increases/decreases for approved modifications to the Construction Contract.
- 12.2 Construction Contract: The agreement between District and Contractor identified on the signature page of this Bond, including all Contract Documents and changes thereto.
- 12.3 Contractor Default: Material failure of Contractor, which has neither been remedied nor waived, to perform or otherwise to comply with the terms of the Construction Contract including, but not limited to, "default" or any other condition allowing a termination for cause as provided in Section 00 71 00 (General Conditions).
- 12.4 District Default: Material failure of District, which has neither been remedied nor waived, to pay Contractor progress payments due under the Construction Contract or to perform other material terms of the Construction Contract, if such failure is the cause of the asserted Contractor Default and is sufficient to justify Contractor termination of the Construction Contract.

END OF DOCUMENT

DOCUMENT 00 62 00

CONSTRUCTION LABOR AND MATERIAL PAYMENT BOND

THIS CONSTRUCTION LABOR AND MATERIAL PAYMENT BOND ("Bond") is dated _____, is in the penal sum of

_____ [one hundred percent of the Contract Price], and is entered into by and between the parties listed below to ensure the payment of claimants under the Construction Contract listed below. This Bond consists of this page and the Bond Terms and Conditions, paragraphs 1 through 13, attached to this page. Any singular reference to _____ ("Contractor"), _____ ("Surety"), the San Mateo County Community College District ("District") or other party shall be considered plural where applicable.

CONTRACTOR:

SURETY:

Name

Address

City/State/Zip

Name

Principal Place of Business

City/State/Zip

CONSTRUCTION CONTRACT:

**THE BUILDING 12 AND COLONNADES ROOF REPLACEMENT PROJECT
BID NUMBER 86658**

at San Mateo, California.

DATED _____, 20____ in the Amount of \$_____ (the "Penal Sum")

CONTRACTOR AS PRINCIPAL
Company: (Corp. Seal)

SURETY
Company: (Corp. Seal)

Signature: _____

Signature: _____

Name and Title: _____

Name and Title: _____

BOND TERMS AND CONDITIONS

1. Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to District and to Claimants, to pay for labor, materials and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference.
2. With respect to District, this obligation shall be null and void if Contractor:
 - 2.1 Promptly makes payment, directly or indirectly, for all sums due Claimants; and
 - 2.2 Defends, indemnifies and holds harmless District from all claims, demands, liens or suits by any person or entity who furnished labor, materials or equipment for use in the performance of the Construction Contract, provided District has promptly notified Contractor and Surety (at the address set forth on the signature page of this Bond) of any claims, demands, liens or suits and

tendered defense of such claims, demands, liens or suits to Contractor and Surety, and provided there is no District Default.

3. With respect to Claimants, this obligation shall be null and void if Contractor promptly makes payment, directly or indirectly through its Subcontractors, for all sums due Claimants. If Contractor or its Subcontractors, however, fail to pay any of the persons named in Section 3181 of the California Civil Code, or amounts due under the Unemployment Insurance Code with respect to Work or labor performed under the Contract, or for any amounts required to be deducted, withheld, and paid over to the Employment Development Department from the wages of employees of Contractor or Subcontractors pursuant to Section 13020 of the Unemployment Insurance Code, with respect to such Work and labor, then Surety shall pay for the same, and also, in case suit is brought upon this Bond, a reasonable attorney's fee, to be fixed by the court.
4. Consistent with the California Mechanic's Lien Law, Civil Code §3082, *et seq.*, Surety shall have no obligation to Claimants under this Bond unless the Claimant has satisfied all applicable notice requirements.
5. Surety's total obligation shall not exceed the amount of this Bond, and the amount of this Bond shall be credited for any payments made in good faith by Surety under this Bond.
6. Amounts due Contractor under the Construction Contract shall be applied first to satisfy claims, if any, under any Construction Performance Bond and second, to satisfy obligations of Contractor and Surety under this Bond.
7. District shall not be liable for payment of any costs, expenses, or attorney's fees of any Claimant under this Bond, and shall have under this Bond no obligations to make payments to, give notices on behalf of, or otherwise have obligations to Claimants under this Bond.
8. Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders and other obligations. Surety further hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Construction Contract, or to the Work to be performed there under, or materials or equipment to be furnished there under or the Specifications accompanying the same, shall in any way affect its obligations under this Bond, and it does hereby waive any requirement of notice or any such change, extension of time, alteration or addition to the terms of the Construction Contract or to the Work or to the Specifications or any other changes.
9. Suit against Surety on this Bond may be brought by any Claimant, or its assigns, at any time after the Claimant has furnished the last of the labor or materials, or both, but, per Civil Code §3249, must be commenced before the expiration of six months after the period in which stop notices may be filed as provided in Civil Code §3184.
10. All notices to Surety or Contractor shall be mailed or delivered (at the address set forth on the signature page of this Bond), and all notices to District shall be mailed or delivered as provided in Document 00 52 00 (Agreement). Actual receipt of notice by Surety, District or Contractor, however accomplished, shall be sufficient compliance as of the date received at the foregoing addresses.
11. This Bond has been furnished to comply with the California Mechanic's Lien Law including, but not limited to, Civil Code §§3247, 3248, *et seq.* Any provision in this Bond conflicting with said statutory requirements shall be deemed deleted here from and provisions conforming to such statutory or other legal requirements shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory bond and not as a common law bond.
12. Upon request by any person or entity appearing to be a potential beneficiary of this Bond, Contractor shall promptly furnish a copy of this Bond or shall permit a copy to be made.
13. Definitions.

- 13.1 Claimant: An individual or entity having a direct contract with Contractor or with a Subcontractor of Contractor to furnish labor, materials or equipment for use in the performance of the Contract, as further defined in California Civil Code §3181. The intent of this Bond shall be to include without limitation in the terms "labor, materials or equipment" that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the Work of Contractor and Contractor's Subcontractors, and all other items for which a stop notice might be asserted. The term Claimant shall also include the Unemployment Development Department as referred to in Civil Code §3248(b).
- 13.2 Construction Contract: The agreement between District and Contractor identified on the signature page of this Bond, including all Contract Documents and changes thereto.
- 13.3 District Default: Material failure of District, which has neither been remedied nor waived, to pay the Contractor as required by the Construction Contract, provided that failure is the cause of the failure of Contractor to pay the Claimants and is sufficient to justify termination of the Construction Contract.

END OF DOCUMENT

DOCUMENT 00 65 36

GUARANTY

TO THE SAN MATEO COUNTY COMMUNITY COLLEGE DISTRICT for construction of

**BID 86658 - BUILDING 12 AND COLONNADES ROOF REPLACEMENT PROJECT –
SAN MATEO, CALIFORNIA.**

The undersigned guarantees all construction performed on this Project and also guarantees all material and equipment incorporated therein.

Contractor hereby grants to District for a period of one year following the date of Notice of Completion, or such longer period specified in the Contract Documents, its unconditional warranty of the quality and adequacy of all of the Work including, without limitation, all labor, materials and equipment provided by Contractor and its Subcontractors of all tiers in connection with the Work.

Neither final payment nor use or occupancy of the Work performed by the Contractor shall constitute an acceptance of Work not done in accordance with this Guaranty or relieve Contractor of liability in respect to any express warranties or responsibilities for faulty materials or workmanship. Contractor shall remedy any defects in the Work and pay for any damage resulting therefrom, which shall appear within one year, or longer if specified, from the date of Final Completion.

If within one year after the date of Final Completion, or such longer period of time as may be prescribed by laws or regulations, or by the terms of Contract Documents, any Work is found to be defective, Contractor shall promptly, without cost to District and in accordance with District’s written instructions, correct such defective Work. Contractor shall remove any defective Work rejected by District and replace it with Work that is not defective, and satisfactorily correct or remove and replace any damage to other Work or the work of others resulting therefrom. If Contractor fails to promptly comply with the terms of such instructions, or in an emergency where delay would cause serious risk of loss or damage, District may have the defective Work corrected or the rejected Work removed and replaced. Contractor shall pay for all claims, costs, losses and damages caused by or resulting from such removal and replacement. Where Contractor fails to correct defective Work, or defects are discovered outside the correction period, District shall have all rights and remedies granted by law.

Inspection of the Work shall not relieve Contractor of any of its obligations under the Contract Documents. Even though equipment, materials, or Work required to be provided under the Contract Documents have been inspected, accepted, and estimated for payment, Contractor shall, at its own expense, replace or repair any such equipment, material, or Work found to be defective or otherwise not to comply with the requirements of the Contract Documents up to the end of the guaranty period.

All abbreviations and definitions of terms used in this Agreement shall have the meanings set forth in the Contract Documents, including, without means of limitation, Section 01 42 00 (References and Definitions). The foregoing Guaranty is in addition to any other warranties of Contractor contained in the Contract Documents, and not in lieu of, any and all other liability imposed on Contractor under the Contract Documents and at law with respect to Contractor’s duties, obligations, and performance under the Contract Documents. In the event of any conflict or inconsistency between the terms of this Guaranty and any warranty or obligation of the Contractor under the Contract Documents or at law, such inconsistency or conflict shall be resolved in favor of the higher level of obligation of the Contractor.

Firm/Company

Signature

Name and Title

Address

City/State/Zip

Date

END OF DOCUMENT

WARRANTY REPORTING LOG FOLLOWS ON NEXT PAGE

EXHIBIT A

WARRANTY REPORTING LOG

BUILDING 12 AND COLONNADES ROOF REPLACEMENT **PROJECT**

Contract Number **86658**

To: The San Mateo County Community College District – Facilities Department

3401 CSM Drive, San Mateo, CA. 94402

From: _____

ITEM	WARRANTY LENGTH	WARRANTY START DATE	WARRANTY END DATE	WARRANTY GRANTOR	WARRANTY GRANTOR CONTACT INFORMATION

➤ Complete this log for all work completed as part of contract. The data shall be summarized by warranty grantor and shall be submitted to the District’s Representative as part of the contract closeout.

DOCUMENT 00 65 73

AGREEMENT AND RELEASE OF ANY AND ALL CLAIMS

THIS AGREEMENT AND RELEASE OF ANY AND ALL CLAIMS (“Agreement and Release”), made and entered into this [_____] day of [_____] , 200_, by and between the SAN MATEO COUNTY COMMUNITY COLLEGE DISTRICT (“District”), and _____ (“Contractor”), whose place of business is at _____.

RECITALS

- A. District and Contractor entered into Contract Number [_____] (the “Contract”).
- B. The Work under the Contract has been completed.

Now, therefore, it is mutually agreed between District and Contractor as follows:

AGREEMENT

- 1. Contractor will not be assessed liquidated damages except as detailed below:

Original Contract Sum	\$ _____
Modified Contract Sum	\$ _____
Payment to Date	\$ _____
Liquidated Damages	\$ _____
Payment Due Contractor	\$ _____

- 2. Subject to the provisions of this Agreement and Release, District will forthwith pay to Contractor the sum of \$ _____ Dollars and _____ Cents (\$ _____) under the Contract, less any amounts withheld under the Contract or represented by any Notice to Withhold Funds on file with District as of the date of such payment.
- 3. Contractor acknowledges and hereby agrees that there are no unresolved or outstanding claims in dispute against District arising from the Contract, except for the claims described in paragraph 4 of this DOCUMENT 00 65 73. It is the intention of the parties in executing this Agreement and Release that this Agreement and Release shall be effective as a full, final and general release of all claims, demands, actions, causes of action, obligations, costs, expenses, damages, losses and liabilities of Contractor against District, District’s Representative and all if its agents, employees, consultants (including without limitation Consulting Engineer), inspectors, representatives, assignees and transferees except for the Disputed Claims set forth in paragraph 4 of this Document 00 65 73. Nothing in this Agreement and Release shall limit or modify Contractor’s continuing obligations described in paragraph 6 of this Document 00 65 73.
- 4. The following claims are disputed (hereinafter, the “Disputed Claims”) and are specifically excluded from the operation of this Agreement and Release:

<u>Claim No.</u>	<u>Date Submitted</u>	<u>Description of Claim</u>	<u>Amount of Claim</u>
------------------	-----------------------	-----------------------------	------------------------

[Insert information, including attachment if necessary]

5. Consistent with California Public Contract Code Section 7100, Contractor hereby agrees that, in consideration of the payment set forth in paragraph 2 of this Document 00 65 73, Contractor hereby releases and forever discharges District, District’s Representative, and all of its agents, employees, consultants, inspectors, assignees and transferees from any and all liability, claims, demands, actions or causes of action of whatever kind or nature arising out of or in any way concerned with the Work under the Contract
6. Guarantees and warranties for the Work, and any other continuing obligation of Contractor, shall remain in full force and effect as specified in the Contract Documents.
7. Contractor shall immediately defend, indemnify and hold harmless the San Mateo County Community College District, District’s Representative, any of its Representatives, Architects/Engineers, and all of their agents, employees, consultants, inspectors, assignees and transferees, from any and all claims, demands, actions, causes of action, obligations, costs, expenses, damages, losses and liabilities that may be asserted against them by any of Contractor’s suppliers and/or Subcontractors of any tier and/or any suppliers to them for any and all labor, materials, supplies and equipment used, or contemplated to be used in the performance of the Contract, except for the Disputed Claims set forth in paragraph 4 of this Document 00 65 73.
8. Contractor hereby waives the provisions of California Civil Code Section 1542, which provides as follows:

A general release does not extend to claims which the creditor does not know or suspect to exist in his favor at the time of executing the release, which if known by him, must have materially affected his settlement with the debtor.
9. The provisions of this Agreement and Release are contractual in nature and not mere recitals and shall be considered independent and severable, and if any such provision or any part thereof shall be at any time held invalid in whole or in part under any federal, state, county, municipal or other law, ruling, or regulation, then such provision, or part thereof shall remain in force and effect only to the extent permitted by law, and the remaining provisions of this Agreement and Release shall also remain in full force and effect, and shall be enforceable.
10. Contractor represents and warrants that it is the true and lawful owner of all claims and other matters released pursuant to this Agreement and Release, and that it has full right, title and authority to enter into this instrument. Each party represents and warrants that it has been represented by counsel of its own choosing in connection with this Agreement and Release.
11. All rights of District shall survive completion of the Work or termination of the Contract, and execution of this Agreement and Release.

* * * CAUTION: THIS IS A RELEASE - READ BEFORE EXECUTING * * *

SAN MATEO COUNTY COMMUNITY COLLEGE DISTRICT

By: _____
Kathy Blackwood

Its: Executive Vice Chancellor

[CONTRACTOR]

By: _____

Name: _____

Its: _____

END OF DOCUMENT

DOCUMENT 00 71 00

GENERAL CONDITIONS

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GENERAL CONDITIONS**1. GENERAL****A. Documents**

Contract Documents are complementary; what is called for by one is as binding as if called for by all. Contract Documents shall not be construed to create a contractual relationship of any kind between (1) Architect/Engineer or any District Representative and Contractor; (2) District and/or its representatives and (except as provided in Article 13 below) a Subcontractor, sub-Subcontractor, or supplier of any Project labor, materials, or equipment; or (3) between any persons or entities other than District and Contractor.

B. Exercise of Contract Responsibilities

In exercising its responsibilities and authorities under the Contract Documents, District does not assume any duties or responsibilities to any Subcontractor or supplier and does not assume any duty of care to Contractor, Contractor's Subcontractors or suppliers. Except as expressly set forth in the Contract Documents, in exercising their respective responsibilities and authorities under the Contract Documents, neither Architect/Engineer nor any District Representative assume any duties or responsibilities to any Subcontractor, sub-Subcontractor or supplier nor assume any duty of care to Contractor or any Subcontractor, sub-Subcontractor or suppliers.

C. Defined Terms

Administration of construction shall include the following delineations of responsibilities pursuant to Part 1, Title 24, California Code of Regulations. Contractor shall perform as required under Section 4-343, including, but not limited to verified reports per sections 4-336 and 4-343. All abbreviations and definitions of terms used and not otherwise defined in this Document 00 71 00 are set forth in Section 01 42 00 (References and Definitions). This Document 00 71 00 subdivides at first level into Articles, then into paragraphs, and then into subparagraphs.

D. Description Of Work

1. Contractor shall provide a complete, operable and maintainable Project in accordance with the Contract Documents, including providing, furnishing, and performing all Services and providing and furnishing all necessary supplies, housing, materials and equipment, and all necessary supervision, labor, and services required for the engineering, design, procurement, quality assurance and inspection, construction, installation, startup, checkout, testing, site cleanup and for the training of District's personnel, all in conformity with the requirements, legal requirements, criteria, performance guarantees, and warranties set forth in the Contract Documents, for a complete and fully operable Project in full conformance with Contract requirements.

E. All-Inclusive Contractor Obligation

1. Without limiting the generality of paragraph 1.D hereof, Contractor shall provide, at a minimum, the following Services and materials and equipment as further specified and described in Section 01 10 00 (Summary of Work) provided, however, that these sections shall not be construed in any way to limit Contractor's obligations hereunder to furnish, construct, checkout, startup, and (except as otherwise provided in the Contract Documents) test a complete, operable and maintainable Project in accordance with the provisions of the Contract Documents.
2. Contractor shall provide all equipment and materials and furnish the services of all supervision, buyers, inspectors, expeditors, and other personnel necessary to procure all materials and equipment for the construction of the Project. Contractor shall provide, install, complete and pay for all labor, materials and equipment, tools, supplies, construction equipment and machinery, construction utilities (including all water, power and sanitary facilities), transportation (including road or other infrastructure and improvements on and off the Site), customs clearance, quality assurance, and other facilities and services (including any temporary or consumable materials, water, fuels, and electricity necessary for the proper execution and completion of the Work, including any of the utilities, as required). Contractor shall maintain all materials and equipment in accordance with manufacturer's requirements while such materials and equipment are in transit or care and custody of the Contractor. Without limiting the generality of the foregoing, Contractor shall provide any and all construction required for the temporary upgrading of any public or private road which is inadequate for the performance of the

- Work, temporarily relocate any interference in public or private roadways necessary for the transportation of equipment and materials, and repair all excessive damage to, or deterioration (other than fair wear and tear) of, any public or private road which arises out of the performance of the Work.
3. Contractor shall supervise and direct the Work, and shall furnish the services of all supervisors, foremen, skilled and unskilled labor, and all other personnel in sufficient quantities and with sufficient skills necessary to perform the Services in accordance with the Contract Documents. At District's request, Contractor shall replace, at Contractor's expense, any individual if it is determined by District and Contractor that such individual's continued presence would jeopardize the quality or timely completion of the Work.
 4. Contractor shall be responsible for all labor relations matters relative to the Work on the Site and shall at all times use all reasonable efforts to maintain harmony among all workers employed in connection with the Work on the Site. Contractor shall adopt and implement reasonable policies and practices designed to avoid work stoppage, slow downs, disputes and strikes.
 5. Contractor shall be solely responsible for all construction means, methods, techniques, sequences, and procedures and for coordinating all portions of the Work under the Contract Documents, and District shall not be responsible for or exercise any control over the actions or omissions of Contractor, any supplier, or any of their employees or agents performing any of the Work or Contractor's warranty obligations. Contractor shall prosecute the Work continuously and diligently and complete the Work in accordance with all requirements of the Contract Documents.
 6. Contractor shall coordinate ingress and egress to and from the Site so as to minimize disruption to the Work and to traffic in the vicinity of the Site.
 7. Contractor shall be responsible for the layout of the Work and shall perform all necessary surveying during the construction of the Projects. The accuracy of all grades, elevations, alignments, and plumbing of any structures and the location of all facilities described in the final plans and specifications shall be the responsibility of the Contractor. Contractor shall preserve all permanent survey construction monuments and benchmarks. Prior to the final completion date, Contractor shall accurately correct all Project documents to as-built conditions and deliver to District these as-built documents in accordance with the Contract Documents. Such documents shall show the location of the Project and shall show all related easements, improvement, utilities and rights of way above and below ground, on and off the Site, as of the date of delivery of such documents. Such documents shall also show the dimensions and the distances to the nearest benchmarks.
 8. Contractor shall provide appropriate installation and startup representatives from suppliers of major equipment and control systems, all necessary supervising personnel, all equipment, tools, construction and temporary material, and all labor for checkout, startup and testing. Contractor shall be responsible for checkout, startup and testing of the Project and shall carry out those activities in accordance with all applicable codes and legal requirements, startup and checkout requirements and procedures as set forth in the Contract Documents.
 9. Except for safety and warning signs, Contractor shall not install any signs on the Site without the express written consent of District.
 10. Contractor shall be responsible for Site security until Final Completion, or termination of the Work. Such security shall include, to the extent reasonably necessary, barriers, lighting, controlled access, and other measures required to prevent vandalism, theft, and danger to personnel, the Project, materials and equipment.
 11. Contractor shall prepare or cause to be prepared and shall furnish to District all drawing logs, drawings, manufacturer's drawings and data, supplier manuals and operating manuals in accordance with the Contract Documents.
 12. Contractor shall ensure that District and its representatives shall, at all times, have access to the Project for all purposes. In order to allow District and its representatives to be present, Contractor shall give District at least three (3) days advance notice of any system or equipment checkout or testing. If District desires access to any places where work is being performed or from which materials and equipment are being obtained, Contractor shall provide or arrange reasonable access thereto and shall provide District reasonable advanced notice of any factory tests or other off site tests. Contractor shall maintain the Site in a safe condition to permit District and any person authorized in writing by District to inspect and review all field work during working hours, including materials and equipment, installation, calibration, startup and testing.

13. As part of the procurement of equipment, Contractor shall provide to District a list of recommended operating spare parts, which list shall include all relevant costs and ordering lead time information with terms and conditions. If requested, Contractor shall procure such operating spare parts from Suppliers, as requested by District, on behalf of District. The cost of such operating spare parts shall be covered by change order.
14. When any equipment or portion of the Work is damaged, Contractor shall inform District as soon as possible and provide District a damage report detailing such occurrence, any required repairs, and the estimated duration of such repairs.
15. Contractor shall provide to District all tests and measurements, laboratory analyses, and reports made or prepared in connection with the Work.

2. BID PERIOD INVESTIGATIONS AND SUBCONTRACTORS

A. Investigation Prior To Bidding

1. Prior to submitting its Bid, Contractor must investigate fully the Work of the Contract. Contractor must visit the Site, examine thoroughly and understand fully the nature and extent of the Contract Documents, Work, Site, locality, actual conditions and as-built conditions, and all other information made available for preparing Bids. Contractor's investigation shall include, but is not limited to, a thorough examination of all reports of exploration and tests of subsurface conditions, as-built drawings, drawings, product specification(s) or reports, available for Bidding purposes, of physical conditions, including Underground Facilities and information identified in Document 00 31 19 (Reports, Surveys and Existing Conditions) or which may appear in the Contract Documents, and all local conditions, and federal, state and local laws and regulations that in any manner may affect cost, progress, performance or furnishing of Work or which relate to any aspect of the means, methods, techniques, sequences or procedures of construction to be employed by Contractor and safety precautions and programs incident thereto. Contractor shall completely and thoroughly correlate all such information and consider such information fully, prior to and as a condition of submitting its Bid. Contractor shall make inquiry as required in Document 00 31 19 (Reports, Surveys and Existing Conditions).
2. Prior to submitting its Bid, Contractor shall take care to note the existence and potential existence of Underground Facilities, in particular, above and below grade structures, drainage lines, storm drains, sewers, water, gas, electrical, chemical, hot water, and other similar items and utilities. Contractor shall carefully consider all supplied information, request additional information Contractor may deem necessary, and visually inspect the Site for above ground indications of Underground Facilities (such as, for example not by way of limitation, the existence of existing service laterals, appurtenances or other types of utilities, indicated by the presence of an underground transmission main or other visible facilities, such as buildings, new asphalt, meters and junction boxes, on or adjacent to the Site.)
3. Prior to submitting its Bid, Contractor must correlate its experience, knowledge and the results of its required investigation with the terms and conditions of the Contract Documents, and must give District prompt written notice of all conflicts, errors, ambiguities, or discrepancies of any type, that it may discover in or among the Contract Documents, as-built drawings (if any) and/or actual conditions. Contractor shall give this notice during the Bid period and submission of a Bid indicates Contractor's agreement that District responded to the notice through Addenda issued by District which is acceptable to Contractor.
4. Prior to submitting its Bid, Contractor must consider fully the fact that information supplied regarding existing Underground Facilities at or contiguous to the Site is in many cases based on information furnished to District by others (e.g., the builders of such Underground Facilities or others), and that due to their age or their chain of custody since preparation, may not meet current industry standards for accuracy. Contractor must also consider local underground conditions and typical practices for Underground Facilities, either through its own direct knowledge or through its subcontractors, and fully consider this knowledge in assessing the existing information and the reasonableness of its reliance.
5. Prior to submitting its Bid, Contractor shall conduct (or request that District have conducted) any such additional or supplementary examinations, investigations, explorations, tests, studies and data concerning conditions (surface, subsurface, and Underground Facilities) at or contiguous to the Site or otherwise, which may affect cost, progress, performance or furnishing of Work or which relate to

any aspect of the means, methods, techniques, sequences or procedures of construction to be employed by Contractor and safety precautions and programs incident thereto or which Contractor deems necessary to determine its Bid for performing and furnishing the Work in accordance with the time, price and other terms and conditions of Contract Documents.

6. Prior to submitting its Bid, Contractor may rely on District supplied information regarding existing conditions only where such conditions are underground and not subject to reasonable verification. If existing information supplied by District indicates a discrepancy or a substantial risk of inaccuracy or omission, then Contractor must request specific additional information. Contractor shall advise District in writing during the Bid period of any questions, suppositions, inferences or deductions Contractor may have, for District's review and response by Addenda, and may not assert any such matters later that were not brought forth during the Bid period.
7. During performance of the Contract, Contractor will be charged with knowledge of all information that it should have learned in performing this required pre-Bid investigation, and shall not be entitled to change orders (time or compensation) due to information or conditions that Contractor should have known as a part of this pre-Bid investigation.

B. Supplied Information on Underground Existing Conditions

1. Regarding Underground Facilities shown in the Contract Documents or supplied through Document 00 31 19, District has compiled this information in good faith, relying on its records and third party records. Because of the nature and location of District and the Project, the existence of Underground Facilities is deemed inherent in the Work of the Contract, as is the fact that Underground Facilities are not always accurately shown or completely shown on as-built records, both as to their depth and location. In Article 14 of this Document 00 71 00, this Contract establishes a heightened standard for claims involving Underground Facilities. Contractor shall consider this fact in its Bid and in its planning and execution of the Work involving Underground Facilities.
2. Regarding subsurface conditions other than Underground Facilities, shown on the Contract Documents or supplied in Document 00 31 19 (Existing Conditions), Contractor may rely only upon the general accuracy of actual reported depths, actual reported character of materials, actual reported soil types, actual reported water conditions, or actual obstructions shown or indicated in the Contract Documents. District is not responsible for the completeness of any subsurface condition information for preparing its Bid, Contractor's conclusions or opinions drawn from any subsurface condition information, or subsurface conditions that are not specifically shown. (For example, District is not responsible for soil conditions in areas contiguous to areas where a subsurface condition is shown.)

C. Supplied Information on Above Ground Existing Conditions

1. Regarding aboveground and as-built conditions shown on the Contract Documents or supplied through Document 00 31 19 (Reports, Surveys and Existing Conditions), such information has been compiled in good faith, however, Contractor must independently verify such information. District does not expressly or impliedly warrant or represent that information as to aboveground conditions or as-built conditions indicated in the Contract Documents or Document 00 31 19, is correctly shown or indicated, or otherwise complete for construction purposes.
2. As a condition to submitting its Bid, Contractor shall verify by independent investigation all such aboveground and as-built conditions, and bring any discrepancies to District's attention through written question. In submitting its Bid, Contractor shall rely on the results of its own independent investigation and shall not rely on District-supplied information regarding aboveground conditions and as-built conditions, and Contractor shall accept full responsibility for its verification work sufficient to complete the Work as intended.

D. Subcontractors

1. Consistent with Public Contract Code Sections 4101 *et seq.*, Contractor shall not substitute any other person or firm in place of any Subcontractor listed in the Bid. Subcontractors shall not assign or transfer their subcontracts or permit them to be performed by any other contractor without District's written approval. At District's request, Contractor shall provide District with a complete copy of all executed subcontracts or final commercial agreements with Subcontractors and/or suppliers.
2. Subcontract agreements shall preserve and protect the rights of District under the Contract Documents so that subcontracting will not prejudice such rights. To the extent of the Work to be performed by a Subcontractor, Contractor shall require the Subcontractor's written agreement (1) to

be bound to the terms of Contract Documents and (2) to assume vis-à-vis Contractor all the obligations and responsibilities that Contractor assumes toward District under the Contract Documents. (These agreements include for example, and not by way of limitation, all warranties, claims procedures and rules governing submittals of all types to which Contractor is subject under the Contract Documents.)

3. Contractor shall provide for the assignment to District of all rights any Subcontractor may have against any manufacturer, supplier, or distributor for breach of warranties and guarantees relating to the Work performed by the Subcontractor under the Contract Documents.
4. District shall be deemed to be an intended third-party beneficiary of all Subcontracts (of any tier) for the provision of labor, services, supplies or material to the Project, and each such agreement shall so provide.

3. CONTRACT AWARD AND COMMENCEMENT OF THE WORK

A. Award of Contract

District will make the Award of Contract by issuing a Notice of Award. As a condition to District signing Section 00 52 00 (Agreement), however, Contractor shall deliver to District the executed agreements, forms, bonds and insurance documents required by Section 00 11 19 (Instructions to Bidders) in the required quantities and within the required times.

B. Commencement of Work

The Contract Time will commence upon issuance of a Notice to Proceed, on the date indicated in the Notice to Proceed. Contractor shall not do any Work at the Site prior to Contract commencement.

4. BONDS AND INSURANCE

A. Bonds

1. At or before the date indicated in Section 00 11 19 (Instructions to Bidders), Contractor shall file with District the following bonds:
 - a. Corporate surety bond, in the form of Document 00 61 00 (Construction Performance Bond), in the penal sum of 100% of the Contractor's Bid as accepted, to guaranty faithful performance of the Work; and
 - b. Corporate surety bond, in the form of Document 00 62 00 (Construction Labor and Material Payment Bond), in the penal sum of 100% of the Contractor's Bid as accepted, to guaranty payment of wages for services engaged and of bills contracted for materials, supplies, and equipment used in performance of Contract Documents.
2. Sureties shall be satisfactory to District. Corporate sureties on these bonds and on bonds accompanying Bids shall be duly licensed to do business in the State of California and shall have an A.M. Best Company financial rating of A-IX or better.

B. Insurance

Insurance 00 73 17 (Insurance) incorporated herein by this reference.

5. DRAWINGS AND SPECIFICATIONS

A. Intent

1. Drawings and Specifications are intended to describe a functionally complete and operable Project (and all parts thereof) to be constructed in accordance with the requirements of Contract Documents. Contractor shall perform any work, provide services and furnish any materials or equipment that may reasonably be inferred from the requirements of Contract Documents or from prevailing custom or trade usage as being required to produce this intended result. Contractor shall interpret words or phrases used to describe work (including services), materials or equipment that have well-known technical or construction industry or trade meaning in accordance with that meaning. Drawings' intent specifically includes the intent to depict construction that complies with all applicable laws, codes and standards, including without limitation Title 24 of the California Code of Regulations. The Division and Sections of the Specifications and the identification on any Drawings shall not

- control the Contractor in dividing the Work among Subcontractors or suppliers or delineating the Work to be performed by any specific trade.
2. As part of the "Work," Contractor shall provide all labor, materials, equipment, machinery, tools, facilities, services, employee training and testing, hoisting facilities, shop drawings, storage, testing, security, transportation, disposal, the securing of all necessary or required field dimensions, the cutting or patching of existing materials, notices, permits, documents, reports, agreements and any other items required or necessary to timely and fully complete Work described and the results intended by Contract Documents and, in particular, Drawings and Specifications. Divisions and Specification Sections and the identification on any Drawings shall not control Contractor in dividing Work among Subcontractors or suppliers or delineating the Work to be performed by any specific trade.
 3. Contractor shall perform reasonably implied parts of Work as "incidental work" although absent from Drawings and Specifications. Incidental work includes any work not shown on Drawings or described in Specifications that is necessary or normally or customarily required as a part of the Work shown on Drawings or described in Specifications. Incidental work includes any Work necessary or required to make each installation satisfactory, legally operable, functional, and consistent with the intent of Drawings and Specifications or the requirements of Contract Documents including required tasks to be performed under Division 1 of Specifications. Contractor shall perform incidental work without extra cost to District. Incidental work shall be treated as if fully described in Specifications and shown on Drawings, and the expense of incidental work shall be included in price Bid and Contract Sum.

B. Drawing Details and Specification Descriptions

A typical or representative detail on Drawings shall constitute the standard for workmanship and material throughout corresponding parts of Work. Where necessary, and where reasonably inferable from Drawings, Contractor shall adapt such representative detail for application to such corresponding parts of Work. The details of such adaptation shall be subject to prior approval by District. Repetitive features shown in outline on Drawings shall be in exact accordance with corresponding features completely shown.

C. Interpretation of Drawings and Specifications

Should any discrepancy appear or any misunderstanding arise as to the import of anything contained in the Drawings and Specifications prepared by the Architect/Engineer, the matter shall be referred to the Architect/Engineer in writing, with a copy to the Inspector and Project Manager. Architect/Engineer shall issue with reasonable promptness such written clarifications or interpretations of the requirements of the Drawings and Specifications as Architect/Engineer may determine necessary, which shall be consistent with the intent of and be reasonably inferable from Contract Documents. Such written clarifications or interpretations shall be binding upon Contractor. If Contractor believes that a written response, clarification or interpretation justifies an adjustment in the Contract Sum or Contract Time, Contractor shall give District prompt written notice as provided in Section 01 26 00 (Modification Procedures). If the parties are unable to agree to the amount or extent of the adjustment, if any, then Contractor shall perform the Work in conformance with District's response, clarification, or interpretation and may make a written claim for the adjustment as provided in Article 12 of this Document 00 71 00.

D. Checking of Drawings

Before undertaking each part of Work, Contractor shall carefully study and compare Contract Documents and check and verify pertinent figures shown in the Contract Documents and all applicable field measurements. Contractor shall be responsible for any errors that might have been avoided by such comparison. Figures shown on Drawings shall be followed; Contractor shall not scale measurements. Contractor shall promptly report to District, with copies to the Inspector, in writing, any conflict, error, ambiguity or discrepancy that Contractor may discover. Contractor shall obtain a written interpretation or clarification from District before proceeding with any Work affected thereby. Contractor shall provide District and Inspector with a follow-up correspondence every ten days until it receives a satisfactory interpretation or clarification.

E. Standards to Apply Where Specifications are not Furnished

It is provided that the Contractor shall furnish materials or manufactured articles or shall do Work for which no detailed specifications are set forth by supplying materials or manufactured articles of the best grade, in quality and workmanship, obtainable in the market from firms of established good reputation. If not ordinarily carried

in stock, the materials or manufactured articles shall conform to industry standards for first-class materials or articles of the kind required, with due consideration of the use to which they are to be put. Work shall conform to the usual standards or codes, such as those cited in Section 01 42 00 (References and Definitions), for first-class work of the kind required. The Contractor shall specify in writing to District the materials to be used or Work to be performed under this paragraph E no later than ten (10) work days prior to furnishing such materials or performance of such Work.

F. Deviation from Specifications and Drawings

1. As set forth in Part 1, Title 24, California Code of Regulations, no modification or deviation from the Contract Documents will be permitted. Contractor must perform Work in strict accordance with Contract Documents. No order for any alteration, modification or extra which shall increase or decrease the cost of Work shall be valid unless the resulting increase or decrease in price shall have been agreed upon in writing, and the order signed by the Contractor, and certified by the authorized officer representing District. As appropriate, Change Orders changing the approved drawings and technical specifications are subject to approval by the Division of the State Architect (DSA) under the procedures prescribed in Section 4-338, Part 1, Title 24, California Code of Regulations.
2. District and/or Architect/Engineer may order that locations, lines and grades for Work vary from those shown on Drawings. Changes may be made in location, lines or grades for Work under any item of Contract. No extra payment in addition to unit price fixed in Contract for Work under respective items will be allowed on account of variations from Drawings in unit price items. In lump sum contracts, or where there are no unit price items covering Work affected by variations of locations, lines or grades, all changes in the Contract Documents will be made in accordance with Article 14 of this Document 00 71 00.

G. Deviation from Specifications and Drawings

1. Contractor shall perform Work in accordance with the approved Drawings and Specifications. Contractor may deviate from Drawings or the dimensions given in the Drawings, and may deviate from the Specifications, only upon District's advance written approval of the proposed deviation.
2. District may order that locations, lines and grades for Work vary from those shown on Drawings. Changes may be made in locations, lines or grades for Work under any item of Contract Documents. No payment in addition to unit price fixed in the Contract Documents for Work under respective items will be allowed on account of variations from Drawings in unit price items. In lump sum contracts, or where there are no unit price items covering Work affected by variations of locations, lines or grades, all changes in the Contract Documents will be made as set forth in Article 14 of this Document 00 71 00.

H. Precedence of Documents

1. In the case of discrepancy or ambiguity in the Contract Documents, the following order of precedence shall prevail:
 - a. Modifications in inverse chronological order (i.e., most recent first), and in the same order as specific portions they are modifying;
 - b. Document 00 52 00 (Agreement), and terms and conditions referenced therein;
 - c. Document 00 73 00 (Supplementary Conditions) and any other Supplementary Conditions;
 - d. Document 00 71 00 (General Conditions);
 - e. Division 1 Specifications;
 - f. Division 2 through 60 Specifications;
 - g. Drawings;
 - h. Written numbers over figures, unless obviously incorrect;
 - i. Figured dimensions over scaled dimensions;
 - j. Large-scale Drawings over small-scale Drawings.

2. Any conflict between Drawings and Division 2 through 60 Specifications will be resolved in favor of the document of the latest date (i.e., the most recent document), and if the dates are the same or not determinable, then in favor of Specifications.
3. Any conflict between a bill or list of materials shown in the Contract Documents and the actual quantities required to complete Work required by Contract Documents, will be resolved in favor of the actual quantities.
4. In the event the Specifications include divisions above Division 60 (e.g., Division 60 and above), then such divisions shall be included within the Contract Documents unless identified otherwise.

I. Ownership and Use of Drawings, Specifications and Contract Documents

1. Drawings and Specifications prepared under this Contract were prepared for use for Work of Contract Documents only. No part of the Contractor's drawings and specifications or of any other Contract Documents shall be used for any other construction or for any other purpose except with the written consent of District.
2. Any unauthorized use of said documents is prohibited. Consistent with Education Code Section 17316, any interest (including copyright interests) of Contractor or its contractors or sub-consultants (together, "Sub-consultants"), in studies, reports, memoranda, computational sheets, drawings, plans or any other documents (including electronic media) prepared by Contractor or its Sub-consultants in connection with the Services, shall become the property of District. To the extent permitted by Title 17 of the United States Code, work product produced under the Contract Documents shall be deemed works for hire and all copyrights in such works shall be the property of District. In the event that it is ever determined that any works created by Contractor or its Sub-consultants under this Agreement are not works for hire under U.S. law, Contractor hereby assigns to District all copyrights to such works. With District's prior written approval, Contractor may retain and use copies of such works for reference and as documentation of experience and capabilities. Contractor shall, however, retain the copyright in its standard details, and grants District an unlimited license to use such details for the purposes stated in the Contract Documents. Should District desire to reuse any of the items specified above and not use the services of Contractor, then the District agrees to assume any and all obligations for their reuse and, if applicable, process the same through the DSA, and District releases Contractor and its Sub-consultants from liability associated with the reuse.

6. CONSTRUCTION BY DISTRICT OR BY SEPARATE CONTRACTORS

A. District's Right To Perform Construction And To Award Separate Contracts

District may perform with its own forces, construction or operations related to the Project. District may also award separate contracts in connection with other portions of the Project or other construction or operations, on the Site or areas contiguous to the Site, under conditions similar to these Contract Documents, or may have utility owners perform other work. When separate contracts are awarded for different portions of the Project or other construction or operations on the Site, the term "Contractor" in these Contract Documents shall mean the Contractor herein.

B. Mutual Responsibility

1. Contractor shall afford all other contractors, utility owners and District (if District is performing work with its own forces), proper and safe access to the Site, and reasonable opportunity for the installation and storage of their materials. Contractor shall ensure that the execution of its Work properly connects and coordinates with others' work, and shall cooperate with them to facilitate the progress of the Work.
2. Contractor shall coordinate its Work with the work of other separate contractors, District, and utility owners. Contractor shall hold coordination meetings with other contractors, District and its representatives, and utility owners as required by Section 01 31 19 (Project Meetings).
3. Unless otherwise provided in the Contract Documents, Contractor shall do all cutting, fitting and patching of the Work that may be required to make its several parts come together properly and integrate with such other work. Contractor shall not endanger any work of other separate contractors, District or utility owners by cutting, excavating or otherwise altering their work and will only cut or alter their work with the written consent of District and the others whose work will be affected.

4. Contractor's duties and responsibilities under Article 6 of this Document 00 71 00 are for the benefit of District and also for the benefit of such other contractors and utility owners working at the Site to the extent that there are comparable provisions for the benefit of Contractor in the direct contracts between District and such other contractors and utility owners.
5. To the extent that any part of Contractor's Work is to interface with work performed or installed by other contractors or utility owners, Contractor shall inspect and measure the in-place work. Contractor shall promptly report to District in writing any defect in in-place work that will impede or increase the cost of Contractor's interface unless corrected. District will require the contractor responsible for the Defective Work to make corrections so as to conform to its contract requirements, or, if the defect is the result of an error or omission in the Contract Documents, issue a Change Order. If Contractor fails to measure, inspect and/or report to District in writing defects that are reasonably discoverable, Contractor shall bear all costs of accomplishing the interface acceptable to District. This provision shall be included in any and all other contracts or subcontracts for Work to be performed where such a conflict could exist.

C. District Authority Over Coordination

1. District will have authority over coordination of the activities of multiple contractors in cases where District performs work with its own forces or contracts with others for the performance of other work on the Project, or utilities work on the Site. District may at any time and in its sole discretion, designate a person or entity other than District to have authority over the coordination of the activities among the various contractors. District's authority with respect to coordination of the activities of multiple contractors and utility owners shall not relieve Contractor of its obligation to other contractors and utility owners to coordinate its Work with other contractors and utility owners as specified in paragraph 6.B of this Document 00 71 00. Contractor shall promptly notify District in writing when another Contractor on the Project fails to coordinate its work with the Work of Contract Documents.
2. Contractor shall suspend any part of the Work or carry on the same in such manner as directed by District when such suspension or prosecution is necessary to facilitate the work of other contractors or workers. No damages or claims by Contractor will be allowed if the suspension or Work change is due in whole or in part to Contractor's failure to perform its obligation to coordinate its Work with other contractors and utility owners. Damages or claims will be allowed only to the extent of fault by District if the suspension or Work change is due in whole or in part to another Contractor's failure to coordinate its work with Contractor, other contractors, and utility owners. District reserves the right to back charge Contractor for any damages or claims incurred by other contractors as a result of Contractor's failure to perform its obligations to coordinate with other contractors and utility owners. District may deposit the funds retained with a Court of competent jurisdiction pursuant to applicable interpleader procedures and Contractor releases District of further liability regarding such funds.

7. DISTRICT AND PAYMENT

A. District Representative(s)

District Representative(s) will have limited authority to act on behalf of District as set forth in the Contract Documents. Except as otherwise provided in these Contract Documents or subsequently identified in writing by District, District will issue all communications to Contractor through District Representative, and Contractor shall issue all communications to District through District Representative in a written document delivered to District. Should any direct communications between Contractor and District's consultants, architects or Architect/Engineers not identified in Article 2 of Document 00 52 00 (Agreement) occur during field visits or by telephone, Contractor shall immediately confirm them in a written document copied to District.

B. Means and Methods of Construction

Subject to those rights specifically reserved in the Contract Documents, District will not supervise, or direct, or have control over, or be responsible for, Contractor's means, methods, techniques, sequences or procedures of construction, or the safety precautions and programs incident thereto, or Contractor's failure to comply with laws and regulations applicable to the furnishing or performance of Work. District will not be responsible for Contractor's failure to perform or furnish the Work in accordance with Contract Documents.

C. Receipt and Processing of Applications for Payment

As required by Section 01 29 00 (Measurement and Payment), Contractor shall prepare the schedules, submit Applications for Payment and warrant title to all Work covered by each Application for Payment. District will review Contractor's Applications for Payment and make payment thereon, and Contractor shall make payments to Subcontractors, suppliers and others, as required by Section 01 29 00.

8. CONTROL OF THE WORK**A. Subcontractors**

Contractor is fully responsible for Contractor's own acts and omissions. Contractor is responsible for all acts and omissions of its Subcontractors, suppliers, and other persons and organizations performing or furnishing any of the Work, labor, materials, or equipment under a direct or indirect contract with Contractor.

B. Supervision of Work by Contractor

1. During construction, reconstruction, repair, alteration of or addition to any school building, the DSA, as provided by the Field Act, sections 39140 -39159 and sections 81130 - 81147 of the Education Code, shall make such inspection as in its judgment is necessary or proper for enforcement of the Act, and the protection of the safety of pupils, teachers and the public. If at any time as the Work progresses, prior to the issuance of the certificate of compliance, it shall be found that modifications or changes are necessary to secure safety or to comply with code requirements, District or DSA may provide notice of the necessity for such modifications or changes, and Contractor shall perform all necessary modifications and changes. Additionally, if District or DSA finds that any construction work is being performed in a manner contrary to the provisions of Title 24, California Code of Regulations that would compromise the structural integrity of any building, and issues a stop work order, Contractor shall comply with the stop work order as required by law. Refer to sections 4-334 and 4-334.1, Part 1, Title 24, California Code of Regulations.
2. Contractor shall supervise, inspect, and direct Work competently and efficiently, devoting the attention and applying such personal skills and expertise as may be required and necessary to perform Work in accordance with Contract Documents. Contractor shall be solely responsible for and have control and charge of construction means, methods, techniques, sequences and procedures, safety precautions and programs in connection with the Work. Contractor shall be responsible to see that the completed Work complies accurately with Contract Documents.
3. Contractor shall designate and keep on the Site at all times during Work progress a competent resident Superintendent or Project Manager, who, once designated, shall not be replaced without District's express written consent. The Superintendent or Project Manager shall be Contractor's representative at the Site and shall have complete authority to act on behalf of Contractor. All communications to and from the Superintendent or Project Manager shall be as binding as if given to or by Contractor.

C. Observation of Work by District's Representative and Architect/Engineer

1. Work shall be performed under District's Representative's general observation and administration. Contractor shall comply with District's Representative's directions and instructions in accordance with the terms of Contract Documents, but nothing contained in these General Conditions shall be taken to relieve Contractor of any obligations or liabilities under the Contract Documents. District's Representative's failure to review or, upon review, failure to object to any aspect of Work reviewed, shall not be deemed a waiver or approval of any non-conforming aspect of Work.
2. District's Representative will provide administration of Contract and observation of the Work as hereinafter described.
3. District's Representative will advise and consult with Architect/Engineer and consult with District. District's Representative will have authority to act on behalf of District only to extent provided in the Contract Documents or as set forth in writing by District.
4. District's Representative will visit the Site at intervals appropriate to stage of construction to become familiar generally with the progress and quality of Work and to determine in general if Work is proceeding in accordance with Contract Documents. However, neither the District's Representative nor Architect/Engineer will be required to make exhaustive or continuous on-site inspections to check quality or quantity of Work. On the basis of on-site observations, the District's Representative

and the Architect/Engineer will be informed of progress of Work, and will keep District informed of the Work's progress.

5. Neither the District's Representative nor Architect/Engineer will be responsible for or have control or charge of construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the Work.
6. Neither the District's Representative nor Architect/Engineer will be responsible for or have control over the acts or omissions of Contractor, Subcontractors or their agents or employees, or any other persons performing Work.
7. Architect/Engineer will review Contractor's submittals, such as Shop Drawings, Product Data, and Samples, but only for conformance with design concept of Work and with information given in the Contract Documents as set forth in this Section 00700. Such action will be taken within fourteen (14) days.
8. The District's Representative and the Architect/Engineer will observe to recommend to District the dates that Contractor has achieved Substantial Completion and Final Completion, and will receive and forward to District for review written warranties and related documents required by Contract Documents and assembled by Contractor.
9. Architect/Engineer will issue with reasonable promptness such written clarifications or interpretations of the requirements of the Contract Documents (in the form of Drawings and Specifications or otherwise) as Architect/Engineer may determine necessary, which shall be consistent with the intent of and reasonably inferable from the Contract Documents. Such written clarifications and interpretations will be binding on the Contractor, unless District in its discretion directs otherwise.
10. Based on its observations, Architect/Engineer may recommend to District that it disapprove or reject Work that Architect/Engineer believes to be defective or will not produce a complete Project that conforms to Contract Documents or will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. District will also have authority to require special inspection or testing of Work, whether or not the Work is fabricated, installed or completed.

D. Access To Work

1. During performance of Work, District and its agents, officers, consultants, and employees may at any time enter upon Work, shops or studios where any part of the Work may be in preparation, or factories where any materials for use in Work are being or are to be manufactured, and Contractor shall provide proper and safe facilities for this purpose, and shall make arrangements with manufacturers to facilitate inspection of their processes and products to such extent as District's interests may require. Other contractors performing work for District may also enter upon Work for all purposes required by their respective contracts. Subject to the rights reserved in the Contract Documents, Contractor shall have sole care, custody, and control of the Site and its Work areas.
2. District may, at any time, and from time to time, during the performance of the Work, enter the Work Site for the for the purpose of installing any necessary work by District labor or other contracts, and for any other purpose in connection with the installation of facilities. In doing so, District shall endeavor not to interfere with Contractor and Contractor shall not interfere with other work being done by or on behalf of District.
3. If, prior to completion and final acceptance of all the Work, District takes possession of any structure or facility (whether completed or otherwise) comprising a portion of the Work with the intent to retain possession thereof (as distinguished from temporary possession contemplating return to Contractor), then, while District is in possession of the same, Contractor shall be relieved of liability for loss or damage to such structure other than that resulting from the Contractor's fault or negligence. Such taking of possession by District shall not relieve the Contractor from any provisions of the Contract respecting such structure, other than to the extent specified in the preceding sentence, nor constitute a final acceptance of such structure or facility. See also Section 01 10 00 (Summary of Work).
4. Not used.
5. If, following installation of any equipment or facilities furnished by Contractor, defects requiring correction by Contractor are found, District shall have the right to operate such unsatisfactory

equipment or facilities and make reasonable use thereof until the equipment or facilities can be shut down for correction of defects without injury to District.

9. CONTRACTOR'S WARRANTY, GUARANTY, AND INSPECTION OF WORK

A. Warranty And Guaranty

1. General Representations and Warranties: Contractor represents and warrants that it is and will be at all times fully qualified and capable of performing every Phase of the Work and to complete Work in accordance with section 4-341, 4-343 and 4-344 of Part 1, Title 24, California Code of Regulations and terms of Contract Documents. Contractor warrants that all construction services shall be performed in accordance with generally accepted professional standards of good and sound construction practices and all requirements of Contract Documents. Contractor warrants that Work, including but not limited to each item of materials and equipment incorporated therein, shall be new, of suitable grade of its respective kind for its intended use, and free from defects in design, engineering, materials, construction and workmanship. Contractor warrants that Work shall conform in all respects with all applicable requirements of federal, state and local laws, applicable construction codes and standards, licenses, and permits, Drawings and Specifications and all descriptions set forth therein, and all other requirements of Contract Documents. Contractor shall not be responsible, however, for the negligence of others in the specification of specific equipment, materials, design parameters and means or methods of construction where that is specifically shown and expressly required by Contract Documents.
2. Extended Guarantees: Any guaranty exceeding one year provided by the supplier or manufacturer of any equipment or materials used in the Project shall be extended for such term. Contractor expressly agrees to act as co-guarantor of such equipment and materials and shall supply District with all warranty and guaranty documents relative to equipment and materials incorporated in the Project and guaranteed by their suppliers or manufacturers.
3. Environmental and Toxics Warranty: The covenants, warranties and representations contained in this subparagraph are effective continuously during Contractor's Work on the Project and following cessation of labor for any reason including, but not limited to, Project completion. Contractor covenants, warrants and represents to District that:
 - a. To Contractor's knowledge after due inquiry, no lead or asbestos-containing materials were installed or discovered in the Project at any time during Contractor's construction thereof. If any lead or asbestos-containing materials were discovered, Contractor made immediate written disclosure to District.
 - b. To Contractor's knowledge after due inquiry, no electrical transformers, light fixtures with ballasts or other equipment containing PCBs are or were located on the Project at any time during Contractor's construction thereof.
 - c. To Contractor's knowledge after due inquiry, no storage tanks for gasoline or any other toxic substance are or were located on the Project at any time during Contractor's construction thereof. If any such materials were discovered, Contractor made immediate written disclosure to District.
 - d. Contractor's operations concerning the Project are and were not in violation of any applicable environmental federal, state, or local statute, law or regulation dealing with hazardous materials substances or toxic substances and no notice from any governmental body has been served upon Contractor claiming any violation of any such law, ordinance, code or regulation, or requiring or calling attention to the need for any work, repairs, construction, alteration, or installation on or in connection with the Project in order to comply with any such laws, ordinances, codes, or regulations, with which Contractor has not complied. If there are any such notices with which Contractor has complied, Contractor shall provide District with copies thereof.

B. Inspection Of Work

1. Contractor acknowledges DSA inspection requirements, frequency, protocols and practices, applicable to this Project, and shall schedule, coordinate, plan and execute the Work consistent with all such practices.
2. All materials, equipment, and workmanship used in Work shall be subject to inspection and testing at all times during construction and/or manufacture in accordance with the terms of Contract Documents. Work and materials, and manufacture and preparation of materials, from beginning of

construction until final completion and acceptance of Work, shall be subject to inspection and rejection by District, its agents, representatives or independent contractors retained by District to perform inspection services, or governmental agencies with jurisdictional interests. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's Site safety procedures and program so that they may comply therewith as applicable. Upon request or where specified, District shall be afforded access for inspection at the source of supply, manufacture or assembly of any item of material or equipment, with reasonable accommodations supplied for making such inspections.

3. Contractor shall give District a minimum of two business days notice of readiness of Work for all required inspections, tests or approvals, and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.
4. District will hire through separate contract, a DSA-certified Inspector of Record for this Project, and a Special Inspection and Materials Testing Laboratory. Upon advance notice per subparagraph 9.B.2 above, District will endeavor to schedule required inspections, but if resources are not available, Contractor may need to reschedule the Work at no additional cost to the District.
5. In the event that a scheduled inspection is canceled in less than 24 hours notice by Contractor and the District incurs costs associated with the cancellation, Contractor will reimburse District for the actual costs of the canceled inspections. The amount will be deducted from payment owed Contractor.
6. If applicable laws or regulations of any public body (other than DSA) having jurisdiction require any Work (or part thereof) specifically to be inspected, tested or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests or approvals, and furnish District with the required certificates of inspection, or approval. District will pay the cost of initial testing and Contractor shall pay all costs in connection with any follow-up or additional testing. Contractor shall also be responsible for arranging and obtaining and shall pay all costs in connection with any inspections, tests or approvals required for the acceptance of materials or equipment to be incorporated in the Work, or of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work.
7. If Contractor covers any Work, or the work of others, prior to any required inspection, test or approval without written approval of District, Contractor shall uncover the Work at District's request. Contractor shall bear the expense of uncovering Work and replacing Work.
8. In any case where Contractor covers Work contrary to District's request, Contractor shall uncover Work for District's observation or inspection at District's request. Contractor shall bear the cost of uncovering Work.
9. Whenever required by District, Contractor shall furnish tools, labor and materials necessary to make examination of Work that may be completed or in progress, even to extent of uncovering or taking down portions of finished Work. Should Work be found unsatisfactory, cost of making examination and of reconstruction shall be borne by Contractor. If Work is found to be satisfactory, District, in manner herein prescribed for paying for alterations, modifications, and extra Work, except as otherwise herein specified, will pay for examination.
10. District shall select testing agencies approved by DSA to conduct required tests and inspections for the Project. A list of required structural tests and inspections prepared by the Architect/Engineer and approved by the DSA shall be provided to the designated testing agency, District's representative and Inspector prior to the start of construction. Refer to section 4-335(a), Part 1, Title 24, California Code of Regulations, provided that notwithstanding section 4-335(a) Contractor may not waive any tests without District consent.
11. The testing agency shall forward the test results to DSA, Contractor, District and the Project Inspector within fourteen (14) days of the date of the test. The testing agency shall forward to the Division of the State Architect a verified report covering all the tests required to be made by that agency during the progress of the Project.
12. Inspection of the Work by or on behalf of District, or District's failure to do so, shall not under any circumstances be deemed a waiver or approval of any non-conforming aspect of the Work. Contractor shall have an absolute duty, in the absence of a written Change Order signed by District, to perform Work in conformance with the Contract Documents.
13. Any inspection, evaluation, or test performed by or on behalf of District relating to the Work is solely for the benefit of District, and shall not be relied upon by Contractor. Contractor shall not be

relieved of the obligation to perform Work in accordance with the Contract Documents, nor relieved of any guaranty, warranty, or other obligation, as a result of any inspections, evaluations, or tests performed by District, whether or not such inspections, evaluations, or tests are permitted or required under the Contract Documents. Contractor shall be solely responsible for testing and inspecting Work already performed to determine whether such Work is in proper condition to receive later Work.

C. Correction Of Defective Work

1. Contractor shall correct Defective Work promptly upon knowledge of it. If Contractor fails to supply sufficient skilled workers, suitable materials or equipment, or to furnish or perform the Work in such a way that the completed Work will conform to Contract Documents, District may order Contractor to replace any Defective Work, or stop any portion of Work to permit District (at Contractor's expense) to replace such Defective Work. These District rights are entirely discretionary on the part of District, and shall not give rise to any duty on the part of District to exercise the rights for the benefit of Contractor or any other party.
2. District may direct Contractor to correct any Defective Work or remove it from the Site and replace it with Work that is not defective and satisfactorily correct or remove and replace any damage to other Work or the work of others resulting from the correction or removal. Contractor shall be responsible for any and all claims, costs, losses and damages caused by or resulting from such correction or removal. A Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work and the Contract Sum. If the parties are unable to agree to the amount of an appropriate decrease in the Contract Sum, District may decide the proper amount or, in its discretion may elect to leave the Contract Sum unchanged and deduct from moneys due Contractor, all such claims, costs, losses and damages caused by or resulting from the correction or removal. If Contractor disagrees with District's calculations, it may make a claim as provided in Article 12 of this Document 00 71 00. (District's exercise of its rights under this paragraph 9.C shall be entirely discretionary and, like all other District rights and remedies under the Contract Documents, in addition to any other rights and remedies it may have under the Contract Documents or by law.
3. Correction Period:
 - a. With respect to equipment and machinery supplied by Contractor and incorporated into the Work, if within one year after the date of Final Completion of the portion of the Work incorporating the equipment and/or machinery (or, to the extent expressed by Change Order or Certificate of Final Completion, one year after District's written acceptance of such equipment), or such longer period as may be prescribed by laws or regulations, or by the terms of the Contract Documents, any equipment or machinery is found to be defective, Contractor shall promptly, without cost to District and in accordance with District's written instructions, correct such Defective Work.
 - b. With respect to structures within the scope of Work, if within one year after the date of Final Acceptance of the Work, or the portion or Phase of the Work as provided in these Contract Documents, or such longer period of time as may be prescribed by laws or regulations, or by the terms of Contract Documents, any Work is found to be defective, Contractor shall promptly, without cost to District and in accordance with District's written instructions, correct such Defective Work.
 - c. Contractor shall remove any Defective Work rejected by District and replace it with Work that is not defective, and satisfactorily correct or remove and replace any damage to other Work or the work of others resulting therefrom. If Contractor fails to promptly comply with the terms of such instructions, or in an emergency where delay would cause serious risk of loss or damage, District may have the Defective Work corrected or the rejected Work removed and replaced.
 - d. Contractor shall pay for all claims, costs, losses and damages caused by or resulting from such removal and replacement. Where Contractor fails to correct Defective Work, or defects are discovered outside the correction period, District shall have all rights and remedies granted by law.
4. Additionally, in special circumstances where a part of the Work is occupied or a particular item of equipment is placed in continuous service before Final Acceptance of all the Work, the correction

period for that part of Work or that item may start to run from an earlier date if so provided by Change Order or as provided by elsewhere in these Contract Documents.

5. Where Defective Work or rejected Work (and damage to other Work resulting therefrom) has been removed and replaced under this provision after the commencement of the correction period, the correction period hereunder with respect to such Work shall be extended for an additional period of one year after such removal and replacement has been satisfactorily completed.
6. If following installation of any equipment, machinery, or facilities furnished by Contractor, defects requiring correction by Contractor are found, District shall have the right to operate such defective equipment or facilities and make reasonable use thereof until the equipment, machinery, or facilities can be shut down for correction of defects without causing injury to District.

D. Acceptance And Correction Of Defective Work By District

1. District may accept Defective Work. Contractor shall pay all claims, costs, losses and damages attributable to District's evaluation of and determination to accept such Defective Work. If District accepts any Defective Work prior to final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work and the Contract Sum. If the parties are unable to agree to the amount of an appropriate decrease in the Contract Sum, District may deduct from moneys due Contractor, all claims, costs, losses, damages, expenses and liabilities attributable to the Defective Work. If Contractor disagrees with District's calculations, Contractor may make a claim as provided in Article 12 of this Document 00 71 00. If District accepts any Defective Work after final payment, Contractor shall pay to District, an appropriate amount as determined by District.
2. District may correct and remedy deficiency if, after fifteen (15) Days' written notice to Contractor (or lesser notice if the deficiency poses a direct danger to persons or property at or about the Site or if required to comply with any DSA requirement), Contractor fails to correct Defective Work or to remove and replace rejected Work in accordance with paragraph 9.C of this Document 00 71 00; or provide a plan for correction of Defective Work acceptable to District; or perform Work in accordance with Contract Documents. In connection with such corrective and remedial action, District may, to the extent reasonably necessary: exclude Contractor from, and take possession of, all or part of the Site and Work and suspend Contractor's Work related thereto; take possession of all or part of Contractor's tools, appliances, construction equipment and machinery at the Site; and incorporate in Work any materials and equipment stored at the Site or for which District has paid Contractor but which are stored elsewhere. Contractor shall allow District, its representatives, agents, employees, and other contractors and District's consultants access to the Site to enable District to exercise the rights and remedies under this paragraph. Contractor shall be responsible for all claims, costs, losses, damages, expenses and liabilities incurred or sustained by District in exercising such rights and remedies. A Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to Work and the Contract Sum. If the parties are unable to agree to the amount of an appropriate decrease in the Contract Sum, District may deduct from moneys due Contractor, all claims, costs, losses and damages caused by or resulting from the correction or removal. If Contractor disagrees with District's calculations, Contractor may make a claim as provided in Article 12 of this Document 00 71 00.
3. District's decisions to accept Defective Work or correct Defective Work are subject to approval of DSA, and all other requirements of Title 24, California Code of Regulations.

E. Rights Upon Inspection Or Correction

1. Contractor shall not be allowed an extension of Contract Time because of any delay in the performance of Work attributable to the exercise by District of its rights and remedies under this Article 9. Where District exercises its rights under this Article 9, it retains all other rights it has by law or under the Contract Documents including, but not limited to, the right to terminate Contractor's right to proceed with the Work under the Contract Documents and/or make a claim or back charge where a Change Order cannot be agreed upon.
2. Inspection by District shall not relieve Contractor of its obligation to have furnished material and workmanship in accordance with Contract Documents. Payment for Work completed through periodic progress payments or otherwise shall not operate to waive District's right to require full compliance with Contract Documents and shall in no way be deemed as acceptance of the Work paid

therefor. Contractor's obligation to complete the Work in accordance with Contract Documents shall be absolute, unless District agrees otherwise in writing.

F. Samples And Tests Of Materials And Work

1. Contractor shall furnish, in such quantities and sizes as may be required for proper examination and tests, samples or test specimens of all materials to be used or offered for use in connection with Work. Contractor shall prepare samples or test specimens at its expense and furnish them to District. Contractor shall submit all samples in ample time to enable District to make any necessary tests, examinations, or analyses before the time it is desired to incorporate the material into the Work.
2. Test samples or specimens of material for testing shall be taken by the Architect/Engineer, his or her representative, Project Inspector or representative of the testing agency. In no case shall Contractor or vendor select the sample. Refer to section 4-335, Part 1, Title 24, California Code of Regulations.

G. Proof Of Compliance Of Contract Provisions

In order that District may determine whether Contractor has complied or is complying with requirements of Contract Documents not readily enforceable through inspection and tests of Work and materials, Contractor shall at any time, when requested, submit to District properly authenticated documents or other satisfactory proofs of compliance with all applicable requirements.

H. Acceptance

Inspection by District or its authorized agents or representatives, any order or certificate for the payment of money, any payment, acceptance of the whole or any part of Work by District, any extension of time, any verbal statements on behalf of District or its authorized agents or representatives shall not operate as a waiver or modification of any provision of the Contract Documents, or of any power reserved to District herein or therein or any right to damages provided in the Contract Documents. Any waiver of any breach of the Contract Documents shall not be held to be a waiver of any other subsequent breach.

10. CONTRACTOR'S ORGANIZATION AND EQUIPMENT

A. Contractor's Legal Address

Address and facsimile number given in Contractor's Bid are hereby designated as Contractor's legal address and facsimile number. Contractor may change its legal address and facsimile number by notice in writing, delivered to District, which in conspicuous language advises District of a change in legal address or facsimile number, and which District accepts in writing. Delivery to Contractor's legal address or depositing in any post office or post office box regularly maintained by the United States Postal Service, in a wrapper with postage affixed, directed to Contractor at legal address, or of any drawings, notice, letter or other communication, shall be deemed legal and sufficient service thereof upon Contractor. Facsimile to Contractor's designated facsimile number of any letter, memorandum, or other communication on standard or legal sized paper, with proof of facsimile transmission, shall be deemed legal and sufficient service thereof upon Contractor.

B. Contractor's Office At The Work Site

Contractor shall maintain an office at the Site, which office shall be headquarters of a Contractor representative authorized to transmit to and receive from District, communications, instructions or Drawings. Communications, instructions, or Drawings given to Contractor's representative or delivered at the Site office in representative's absence shall be deemed to have been given to Contractor.

C. Contractor's Superintendents Or Forepersons

Contractor shall at all times be represented on Site by one or more superintendents, project managers or forepersons authorized and competent to receive and carry out any instructions that District may give, and shall be liable for faithful observance of instructions delivered to Contractor or to authorized representative or representatives on Site.

D. Proficiency In English

Supervisors, security guards, safety personnel and employees who have unescorted access to the Site shall possess proficiency in the English language in order to understand, receive and carry out oral and written communications or instructions relating to their job functions, including safety and security requirements.

E. Site Decorum: Contractor's And Subcontractors' Employees

1. Contractor shall employ, and shall permit its Subcontractors to employ, only competent and skillful personnel to do Work. If District notifies Contractor that any of its employees, or any of its Subcontractors' employees on Work is incompetent, unfaithful, disorderly, disruptive or profane, or fails to observe customary standards of conduct or refuses to carry out any provision of the Contract Documents, or uses threatening or abusive language to any person on Work representing District, or violates sanitary rules, or is otherwise unsatisfactory, and if District requests that such person be discharged from Work, then Contractor or its Subcontractor shall immediately discharge such person from Work and the discharged person shall not be re-employed on the Work except with consent of District.
2. Contractor shall control the conduct of its employees and subcontractors so as to prevent unwarranted interaction initiated by Contractor's employees or subcontractors with individuals, (except those associated with the Project) at the college campus. Without limitation, unwarranted interaction by Contractor's employees or subcontractors would include includes whistling at or initiating conversation with passers -by. In the event that any employee or subcontractor of the Contractor initiates such any unwarranted interaction, Contractor shall, either upon request of District's Representative or on its own initiative, replace said employee or subcontractor employee with another of equivalent technical skill at no cost to the District.
3. There shall be no smoking outside of the construction site or within any of the District's buildings, including those buildings under construction by the Contractor.
4. The playing of radios, televisions and other portable audio or video players on the Project Site is prohibited at all times.

F. Contractor To List Trades Working

Contractor shall list the trades working on the Site and their scheduled activities on a daily basis, and provide a copy of that list to District

G. Contractor's Use Of The Site

Contractor shall not make any arrangements with any person to permit occupancy or use of any land, structure or building within the limits of the Work, for any purpose whatsoever, either with or without compensation, in conflict with any agreement between District and any owner, former owner or tenant of such land, structure or buildings. Contractor may not occupy District-owned property outside the limit of the Work as indicated on the Drawings unless it obtains prior written approval from District.

11. PROSECUTION AND PROGRESS OF THE WORK**A. Contractor to Submit Required Schedules**

1. Contractor shall submit schedules and reports, Shop Drawings and Submittals in the appropriate quantity and within the required time, arrange conferences and meetings and proceed with the Work in accordance with Contract Documents, including Sections 01 31 19 (Project Meetings), 01 32 16 (Progress Schedules and Reports), and 01 32 19 (Submittal Procedures).
2. Contractor shall submit to District for review and discussion at the Preconstruction Conference documentation described in Section 01 31 19 (Project Meetings):
 - a. Progress schedules and reports as required by Sections 01 32 16 (Progress Schedules and Reports), and 01 32 19 (Submittal Procedures). Contractor shall utilize Progress Schedule in planning, scheduling, coordinating, performing and controlling Work (including all activities of Subcontractors, assigned contractors, equipment vendors and suppliers). Contractor shall update Progress Schedule on a monthly basis to depict accurately the actual progress of Work and for evaluating and preparing Contractor's monthly progress payments. Contractor's failure to submit and maintain an acceptable progress schedule may, in District's discretion, and without

- limiting the materiality of Contractor's other obligations under the Contract Documents, constitute grounds to declare Contractor in material breach of the Contract Documents
- b. Prior to receiving a Notice to Proceed with Construction, a preliminary Schedule of Submittals that shall list each required submittal and the times for submitting, reviewing and processing such submittal, as required by Section 01 32 19 (Submittal Procedures). If no such schedule is agreed upon, then all Shop Drawings, Samples and product data submittals shall be completed and submitted within 30 Days after receipt of Notice to Proceed with Construction from District.
 - c. Within 60 Days after issuance of Notice of Award, a preliminary Schedule of Values for all the Work, including detailed breakdown of all design phases to serve as the basis for progress payments during design. At least 30 Days before commencing construction, Contractor shall submit an updated Schedule of Values including additional detail regarding construction activities, as provided in Section 01 29 00 (Measurement and Payment), paragraph 1.7. The updated Schedule of Values shall include quantities and prices of items aggregating the Contract Sum and shall subdivide into component activities in sufficient detail to serve as the basis for progress payments during construction. Each Schedule of Values shall include an appropriate amount of overhead and profit applicable to each item of Work, a line item for Project Record Documents, and a line item for Project scheduling, and shall conform to Section 01 29 00.
3. Unless otherwise provided in the Contract Documents, at least 15 Days before submission of the first application for payment, a conference attended by Contractor, District, and others as appropriate, will be held to review for acceptability the schedules submitted in accordance with subparagraph 11.A.2 of this Document 00 71 00 and first reviewed at the Preconstruction Conference. Contractor shall have an additional seven Days to make corrections and adjustments and to complete and resubmit the schedules. Schedules shall be updated and completed as required by Sections 01 29 00 (Measurement and Payment), 01 32 16 (Progress Schedules and Reports) and 01 32 19 (Submittal Procedures). No progress payment shall be due or owing to Contractor until the schedules are submitted to and acceptable to District and/or Architect/Engineer as meeting the requirements of the Contract Documents, including Sections 01 29 00 (Measurement and Payment), 01 32 16 (Progress Schedules and Reports) and 01 32 19 (Submittal Procedures). District's acceptance of Contractor's schedules will not create any duty of care or impose on District any responsibility for the sequencing, scheduling or progress of Work nor will it interfere with or relieve Contractor from Contractor's full responsibility therefor.
 4. Before commencing any phase of Work, Contractor shall inform District in writing as to time and place at which Contractor wishes to commence Work, and nature of Work to be done, in order that proper adjustments to College operations and notices to occupants may be made, proper provision for inspection of Work may occur, and to assure measurements necessary for record and payment. Information shall be given to District a reasonable time in advance of time at which Contractor proposes to begin Work, so that District may complete necessary preliminary work without inconvenience or delay to Contractor.

B. Contractor to Submit Submittals and Shop Drawings

1. Contractor shall submit submittals and shop drawings to District (or Architect/Engineer if District so designates) for review in strict accordance with Section 01 32 19 (Submittal Procedures). Submission of a Shop Drawing shall constitute Contractor's representation that all requirements of Section 01 32 19 (Submittal Procedures) have been complied with. All submittals will be identified as District may require and in the number of copies specified in Section 01 32 19 (Submittal Procedures).
2. Contractor shall not perform Work that requires submission of a Shop Drawing or Sample or other submittal prior to submission and favorable review of the Shop Drawing or Sample or submittal. Where a Shop Drawing or Sample or other submittal is required by Contract Documents or the final Schedule of Submittals accepted by District, any related Work performed prior to District's approval of the pertinent submittal shall be at the sole expense, responsibility and risk of Contractor.
3. District's review of shop drawings, samples and submittals shall not relieve Contractor of its responsibility for a complete design complying with the requirements of the Contract Documents; but rather, such review shall be in furtherance of District's monitoring and accepting the design as developed and issued by the Contractor, consistent with these Contract Documents.

C. Cost Data

1. Contractor shall maintain full and correct information as to the number of workers employed in connection with each subdivision of Work, the classification and rate of pay of each worker in form of certified payrolls, the cost to Contractor of each class of materials, tools and appliances used by Contractor in Work, and the amount of each class of materials used in each subdivision of Work. Contractor shall provide District with monthly summaries of this information. If Contractor maintains or is capable of generating summaries or reports comparing actual Project costs with Bid estimates or budgets, and if the actual cost comparisons become necessary (in District's sole judgment) in connection with claims or Contract Modifications, Contractor shall provide District with a copy of such report upon District's request.
2. Contractor shall maintain daily job reports recording all significant activity on the job, including the number of workers on Site, Work activities, problems encountered and delays. Contractor shall provide District with copies for each Day Contractor works on the Project, to be delivered to District either the same Day or the following morning before starting work at the Site. Contractor shall take monthly progress photographs of all areas of the Work. Contractor shall maintain copies of all correspondence with Subcontractors and records of meetings with Subcontractors.
3. District shall have the right to audit and copy Contractor's books and records of any type, nature or description relating to the Project (including but not limited to financial records reflecting in any way costs claimed on the Project), and to inspect the Site, including Contractor's trailer, or other job Site office, and this requirement shall be contained in the subcontracts of Subcontractors working on Site. By way of example, District shall have the right to inspect and obtain copies of all Contract Documents, planning and design documents, Bid and negotiation documents records and job cost variance reports, design modification proposals, value engineering or other cost reduction proposals, revisions made to the original design, job progress reports, photographs, and as-built drawings maintained by Contractor. District and any other applicable governmental entity shall have the right to inspect all information and documents maintained under this paragraph 11.C at any time during the Project and for a period of five years following Final Completion. This right of inspection shall not relieve Contractor of its duties and obligations under the Contract Documents. This right of inspection shall be specifically enforceable in a court of law, either independently or in conjunction with enforcement of any other rights in the Contract Documents.
4. Contractor shall maintain in a safe place at the Site one record copy of all Drawings, Specifications, Addenda, Contract Modifications, Change Orders, Work Directives, Force Account orders, and written interpretations and clarifications in good order and annotated to show all changes made during construction. These Project Record Documents, together with all approved Samples and a counterpart of all approved Shop Drawings, shall be maintained and available to District for reference. Upon completion of the Work, Contractor shall deliver to District, the Project Record Documents, Samples and Shop Drawings and as-built drawings.

D. Contractor To Supply Sufficient Workers And Materials

1. Unless otherwise required by District under the terms of Contract Documents, Contractor shall at all times keep on the Site materials and employ qualified workers sufficient to prosecute Work at a rate and in a sequence and manner necessary to complete Work within the Contract Time. This obligation shall remain in full force and effect notwithstanding disputes or claims of any type.
2. At any time during progress of Work should Contractor directly or indirectly (through Subcontractors) refuse, neglect, or be unable to supply sufficient materials or employ qualified workers to prosecute the Work as required, then District may require Contractor to accelerate the Work and/or furnish additional qualified workers or materials as District may consider necessary, at no cost to District. If Contractor does not comply with the notice within three (3) Business Days of date of service thereof, District shall have the right (but not a duty) to provide materials and qualified workers to finish the Work or any affected portion of Work, as District may elect. District may, at its discretion, exclude Contractor from the Site, or portions of the Site or separate work elements during the time period that District exercises this right. District will deduct from moneys due or which may thereafter become due under the Contract Documents, the sums necessary to meet expenses thereby incurred and paid to persons supplying materials and doing Work. District will deduct from funds or appropriations set aside for purposes of Contract Documents the amount of such payments and

charge them to Contractor as if paid to Contractor. Contractor shall remain liable for resulting delay, including liquidated damages and indemnification of District from claims of others.

3. Exercise by District of the rights conferred upon District in this subparagraph is entirely discretionary on the part of District. District shall have no duty or obligation to exercise the rights referred to in this subparagraph and its failure to exercise such rights shall not be deemed an approval of existing Work progress or a waiver or limitation of District's right to exercise such rights in other concurrent or future similar circumstances. (The rights conferred upon District under this subparagraph are, like all other such rights, cumulative to District's other rights under any provision of the Contract Documents.)

E. Contractor to Locate Underground Facilities.

1. During construction, Contractor shall comply with Government Code Sections 4216 to 4216.9, and in particular Section 4216.2 which provides, in part: "Except in an emergency, every person planning to conduct any excavation shall contact the appropriate regional notification center at least two *working* days, but no more than 14 *calendar* days, prior to commencing that excavation, if the excavation will be conducted in an area which is known, or reasonably should be known, to contain subsurface installations other than the underground facilities owned or operated by the excavator, and, if practical, the excavator shall delineate with white paint or other suitable markings the area to be excavated. The regional notification center shall provide an inquiry identification number to the person who contacts the center and shall notify any member, if known, who has a subsurface installation in the area of the proposed excavation."
2. Contractor shall contact USA, and schedule the Work to allow ample time for the center to notify its members and, if necessary, for any member to field locate and mark its facilities. Contractor is charged with knowledge of all subsurface conditions reflected in USA records. Prior to commencing excavation or trenching work, Contractor shall provide District with copies of all USA records secured by Contractor. Contractor shall advise District of any conflict between information provided in Document 00 31 19 (Reports, Surveys and Existing Conditions), Drawings and that provided by USA records. Contractor's excavation shall be subject to and comply with the Contract Documents, including without limitation Articles 2 and 8 of this Document 00 71 00.
3. Contractor shall also investigate the existence of existing service laterals, appurtenances or other types of utilities, indicated by the presence of an underground transmission main or other visible facilities, such as buildings, new asphalt, meters and junction boxes, on or adjacent to the Site, even if not shown or indicated in Document 00 31 19 (Reports, Surveys and Existing Conditions), the Drawings or that provided by USA records. Contractor shall immediately secure all such available information and notify District and the utility owner, in writing, of its discovery.

F. Contractor to Protect Underground Facilities.

1. At all times during construction, all operating Underground Facilities shall remain in operation, unless the Contract Documents expressly indicate otherwise. Contractor shall maintain such Underground Facilities in service where appropriate; shall repair any damage to them caused by the Work; and shall incorporate them into the Work, including reasonable adjustments to the design location (including minor relocations) of the existing or new installations. Contractor shall take immediate action to restore any in service installations damaged by Contractor's operations.
2. Prior to performing Work at the Site, Contractor shall lay out the locations of Underground Facilities that are to remain in service and other significant known underground installations indicated by the Underground Facilities Data. Contractor shall further locate, by carefully excavating with small equipment, potholing and principally by hand, all such utilities or installations that are to remain and that are subject to damage. If additional utilities whose locations are unknown are discovered, Contractor shall immediately report to District for disposition of the same. Additional compensation or extension of time on account of utilities not shown or otherwise brought to Contractor's attention, including reasonable action taken to protect or repair damage, shall be determined as provided in this Document 00 71 00.
3. The cost of all of the following will be included in the Contract Sum and Contractor shall have full responsibility for (a) reviewing and checking all available information and data including, but not limited to, Document 00 31 19 (Reports, Surveys and Existing Conditions) and information on file at USA; (b) locating all Underground Facilities shown or indicated in the Contract Documents, available information, or indicated by visual observation including, but not limited to, and by way of

example only, engaging qualified locating services and all necessary backhoeing and potholing; (c) coordination of the Work with the owners of such Underground Facilities during construction; and (d) the safety and protection of all such Underground Facilities and repairing any damage thereto resulting from the Work.

G. Contractor to Not Disrupt District Operation.

1. Contractor shall schedule and execute all Work in a manner that does not interfere with or disrupt District operations, including but not limited to, parking, utilities (electricity, gas, water), noise, access by students, faculty, other employees and administration, access by vendors and any other person or entity using District facilities or doing business with District. Contractor shall produce and supply coordination plans and requests to District, following District procedures, for all necessary interference of construction with District, which District will reasonably cooperate with.
2. Academic Calendar/Events: Without limiting the foregoing, the academic dates/events are furnished for Contractor's information. Construction activities which may be disrupted due to these events are to be accounted for in all applicable Schedules, and Contract Time shall not be extended thereby. Contractor is advised to consult District's website for any updates to the academic calendar. Refer to Section 01 10 00 Summary of Work for additional information.

12. CLAIMS BY CONTRACTOR/NON-JUDICIAL SETTLEMENT PROCEDURE

A. Scope

1. The claim notice and documentation procedure described in this Article 12 applies to all claims and disputes arising under the Contract Documents, including without limitation any claim or dispute by any Subcontractor or material supplier, and any claims arising under tort law as well as contract law. All Subcontractor and supplier claims of any type shall be brought only through Contractor as provided in this Article 12. Under no circumstances shall any Subcontractor or supplier make any direct claim against District.
2. "Claim" means a written demand or written assertion by Contractor seeking, as a matter of right, the payment of money, the adjustment or interpretation of Contract Documents terms, or other relief arising under or relating to Contract Documents. In order to qualify as a "claim," the written demand must state that it is a claim submitted under this Article 12. A voucher, invoice, proposed change, Application for Payment, cost proposal, RFI, change order request, or other routine or authorized form of request for payment is not a claim under the Contract Documents. If such request is disputed as to liability or amount, then the disputed portion of the submission may be converted to a claim under the Contract Documents by submitting a separate notice and claim in compliance with claim submission requirements herein.
3. The provisions of this Article 12 constitute a non-judicial claim settlement procedure, and also step one of a two step claim presentment procedure by agreement under Section 930.2 of the California Government Code. Specifically, step one is compliance with this contract claims procedure and filing/administering timely contract claims in accordance with the Contract Documents. Step two is filing a timely Government Code Section 910 claim in accordance with the California Government Code. Any Government Code Section 910 claims shall be presented in accordance with the Government Code and shall affirmatively indicate Contractor's prior compliance with the claims procedure herein and previous dispositions under this Article.
4. The provisions of this Article 12 shall survive termination, breach or completion of the Contract Documents. Contractor shall bear all costs incurred in the preparation and submission of a claim.

B. Procedure

1. Disputed Work. Should any clarification, determination, action or inaction by District or Architect/Engineer, Work, third party, or any other event whatsoever, in the opinion of Contractor, exceed the requirements of or not comply with Contract Documents in any way, or otherwise result in Contractor seeking additional compensation in time or money or damages for any reason (collectively "Disputed Work"), then Contractor shall so notify District. Contractor and District shall make good faith attempts to resolve informally any and all such issues, claims and/or disputes.
2. Duty to Work During Disputes. Notwithstanding any dispute or Disputed Work, Contractor shall continue to prosecute the Work and the Disputed Work in accordance with the determinations of

District. Contractor's sole remedy for Disputed Work is to pursue the remedies in this Article 12 and follow the determinations of District.

3. **Timely Notice of Disputed Work Required.** Before commencing any Disputed Work, or within ten (10) Days after Contractor's first knowledge of the Disputed Work, whichever is earlier, Contractor shall file a written notice and preliminary cost proposal for the Disputed Work with District stating clearly and in detail its objection and reasons for contending the Disputed Work is outside or in breach of the requirements of Contract Documents. The written notice must identify the subcontractors, vendors, suppliers effected, if any, sufficient for District to visit the site to inspect the work and/or conduct a telephonic interview of the persons involved, and/or to photograph the work in question; and Contractor is encouraged to supply digital photographs by email if possible. The preliminary cost proposal must provide a good faith preliminary estimate of the labor (workers, crews), equipment and/or materials involved, and a corresponding good faith preliminary estimate of cost. If a written notice and preliminary cost proposal for Disputed Work is not issued within this time period, or if Contractor proceeds with the Disputed Work without first having given the notice of the Disputed Work, Contractor shall waive its rights to further claim on the specific issue.
4. **Timely Notice of Potential Claims Required.** District will review Contractor's timely notice and preliminary cost proposal for Disputed Work and provide a decision. If, after receiving the decision, Contractor disagrees with it or still considers the Work required of it to be outside of the requirements of Contract Documents, then Contractor shall so notify District, in writing, within ten (10) Days after receiving the decision, by submitting a notice of potential claim, stating that a formal claim will be issued. (If District should fail to provide a decision on a notice and preliminary cost proposal within thirty (30) days, then Contractor shall submit a notice of potential claim within ten days following the thirtieth (30th) day, i.e., or by the 40th day following the notice and preliminary cost proposal.) Contractor shall continue to prosecute the Disputed Work to completion.
5. **Quarterly Claims Required.** At the end of each calendar year quarter (March 31, June 30, September 30 and December 31) of each year, for each and every notice of potential claim that Contractor may have submitted in that quarter, Contractor shall submit a formal claim in the form specified herein. Contractor may file a single consolidated claim each quarter, or may file separate claims each quarter, as Contractor sees fit, provided Contractor complies with the requirements below. (Contractor may defer until the next reporting period the filing of a formal claim for any notices of potential claim timely issued within the last 15 days of the prior quarter.) The formal claim(s) shall include all arguments, justification, cost or estimates, schedule analysis, and detailed documentation supporting the Contractor's position, for each notice of potential claim that Contractor intends to pursue as a formal claim (further described below).
6. **Claim Updates Required.** If Disputed Work persists longer than a single calendar quarter, then Contractor shall, every quarter until the Disputed Work ceases, submit to District a document titled "Claim Update" that shall update and quantify all elements of the claim as completely as possible. Contractor's failure to submit a Claim Update or to quantify costs every quarter shall result in waiver of the claim for that period. Claims or Claim Updates stating that damages, total damages (direct and indirect), schedule impact and/or any time extension will be determined at a later date shall not comply with this subparagraph and shall result in Contractor waiving its claim(s). Contractor shall also maintain a continuing "claims log" that shall list all outstanding claims and their value, and provide such log to District quarterly.
7. **Claim Negotiations Required.** Upon receipt of Contractor's formal claim(s) including all arguments, justifications, cost or estimates, schedule analysis, and documentation supporting its position as required herein, District or its designee will review the issue and render a final determination. Contractor and District may mutually agree upon a claims resolution protocol, a neutral facilitator or mediator, or other alternative dispute resolution procedures, as appropriate. District may in its discretion conduct an administrative hearing on Contractor's claim, in which case Contractor shall appear, participate, answer questions and inquiries, and present any further document, schedules or analysis requested by District to evaluate and decide Contractor's claim.

C. Claim Format

1. Contractor shall submit the formal claim(s) with a cover letter and certification of the accuracy of the formal claim.

2. The formal claim(s) shall list separately each notice of potential claim that Contractor intends to pursue as a formal claim(s), and for each such item separately, Contractor shall provide the following:
 - a. Summary of the claim, including underlying facts, entitlement, schedule analysis, quantum calculations, contract provisions supporting relief;
 - b. List of documents relating to claim including Specifications, Drawings, clarifications/requests for information, schedules, notices of delay, and any others;
 - c. Chronology of events and correspondence;
 - d. Analysis of claim merit;
 - e. Analysis of claim cost; and
 - f. Attach supporting cost and schedule documents as required in this Article and elsewhere in the Contract Documents (e.g., Section 01 32 16).
3. For each notice of potential claim that Contractor intends to pursue as a formal claim, Contractor shall establish in the formal claim a direct causal link between the separate item of cost/time requested, the separate notices of potential claim timely issued, and the specific changed Work asserted. Total cost claims shall not be allowed.
4. Claims shall be calculated in the same manner as Change Orders per Section 01 26 00 (Modification Procedures). EXCEPT WHERE PROVIDED BY LAW, OR ELSEWHERE IN THESE CONTRACT DOCUMENTS (IF APPLICABLE), DISTRICT SHALL NOT BE LIABLE FOR SPECIAL OR CONSEQUENTIAL DAMAGES, AND CONTRACTOR SHALL NOT INCLUDE THEM IN ITS CLAIMS. CONTRACTOR SHALL BE LIMITED IN ITS RECOVERY ON CLAIMS TO THE CHANGE ORDER CALCULATIONS SET FORTH IN SECTION 01 26 00 (MODIFICATION PROCEDURES).

D. Mediation

1. If Contractor's claims submitted in accordance with this Article 12 at Project completion total less than \$375,000, then claims resolution shall first proceed in the manner prescribed by Article 1.5, Chapter 1, Part 3 of Division 2 of the California Public Contract Code, found in Section 01 41 00 (Regulatory Requirements).
2. If Contractor's claims submitted in accordance with this Article 12 at Project completion exceed \$375,000, then, as a condition precedent to litigation (or if otherwise permitted by the Contract Documents, arbitration) thereon, such claims must first be mediated. Mediation shall be non-binding and utilize the services of a mediator mutually acceptable to the parties and, if the parties cannot agree, a mediator selected by the American Arbitration Association from its panel of approved mediators trained in construction industry mediation, having a minimum of twenty (20) years experience in the construction industry. All statutes of limitation shall be tolled from the date of the demand for mediation until a date two weeks following the mediation's conclusion. All unresolved Contractor claims shall be submitted to the same mediator. The cost of mediation shall be equally shared.

E. Subcontractor Claims

1. Contractor shall present as its claims all Subcontractor, sub-Subcontractor and supplier claims of any type, and prove them under the terms of the Contract Documents. District shall not be directly liable to any Subcontractor, any supplier, or any other person or organization, or to any surety for or employee or agent of any of them, for damages or extra costs of any type arising out of or resulting from the Project.

F. Waiver.

1. If Contractor fails to comply with this Article 12 as to any claim, then Contractor shall waive its rights to such claim.
2. All claim(s), Disputed Work items or issue(s) not raised in a timely notice, timely notice of potential claim and then timely claim submitted under this Article 12, may not be asserted in any subsequent Government Code section 910 claim, litigation or legal action.
3. Contractor may request an extension of time to comply with the claims procedure herein, but must do so in advance of time periods expiring and District must give its approval in writing (which approval may be withheld in District discretion.) As to any other feature of the claim procedure herein (and its

claims waiver feature), it may not be waived or altered absent a written change order signed by both parties and approved as to form by their legal counsel.

4. District shall not be deemed to waive or alter any provision under this Article 12, if at District's sole discretion, a claim is administered in a manner not in accord with this Article 12.

13. LEGAL AND MISCELLANEOUS

A. Laws And Regulations

1. Contractor shall keep fully informed of and shall comply with all laws, ordinances, regulations and orders of any properly constituted authority affecting the Contract Documents, Work and persons connected with Work, and shall, to the greatest extent permitted by law, protect and indemnify District and its officers, employees, consultants and agents against any claim or liability, including attorney's fees, arising from or based on violation of law, ordinance, regulation or order, whether by Contractor or by Subcontractors, employees or agents. Authorized persons may at any time enter upon any part of Work to ascertain compliance of all applicable laws, ordinances, regulations and orders.
2. Contractor shall comply with applicable portions of Title 19 and Title 24, California Code of Regulations (Uniform Building Code) (most recent edition), and Public Contract Code. Whenever Contract Documents require larger sizes or higher standards than are required by any applicable law, ordinance, regulation or order, Contract Documents shall govern. Whenever Contract Documents require something that will violate such laws, ordinances, regulations or orders, then such laws, ordinances, regulations or orders shall govern.
3. Contractor shall maintain in the Project Office a current copy of Title 19 and 24 of the California Code of Regulations at all times during construction.

B. Permits And Taxes

Contractor shall procure all permits and licenses applicable to the Work (including environmental matters to the extent applicable), pay all charges and fees, including fees for street opening permits, comply with, implement and acknowledge effectiveness of all permits, initiate and cooperate in securing all required notifications or approvals therefore, and give all notices necessary and incident to due and lawful prosecution of Work, unless otherwise provided herein. District will pay applicable building permits, school, sanitation and water fees, except as otherwise provided in the Contract Documents. If, under federal excise tax law, any transaction hereunder constitutes a sale on which a federal excise tax is imposed, and the sale is exempt from such excise tax because it is a sale to a state or local government for its exclusive use, the District, upon request, will execute a certificate of exemption which will certify (1) that the District is a political subdivision of the state for the purpose of such exemption, and (2) that the sale is for the exclusive use of the District. No excise tax for such materials shall be included in any bid price. Contractor shall pay all sales and/or use taxes levied on materials, supplies, or equipment purchased and used on or incorporated into Work, and all other taxes properly assessed against equipment or other property used in connection with Work, without any increase in the Contract Sum. Contractor shall make necessary arrangements with proper authorities having jurisdiction over roads, streets, pipelines, navigable waterways, railroads, and other works in advance of operations, even where District may have already obtained permits for the Work.

C. Responsibility Of Contractor And Indemnification

1. Except to the extent caused by their sole negligence, willful misconduct or active negligence, District and each of its officers, employees, consultants and agents including, but not limited to the Board, Architect/Engineer, and each District Representative, shall not be liable or accountable in any manner for loss or damage that may happen to any part of the Work; loss or damage to materials or other things used or employed in performing the Work; injury, sickness, disease, or death of any person; or damage to property resulting from any cause whatsoever, attributable to performance or character of the Work, and Contractor releases all of the foregoing persons and entities from any and all such claims.
2. To the furthest extent permitted by law (including without limitation California Civil Code Section 2782 and, if and to the extent applicable, California Civil Code Section 2782.8, Contractor shall assume defense of (with counsel approved by District), and indemnify and hold harmless, District and each of its officers, employees, consultants and agents, including but not limited to the Board,

Architect/Engineer, and each District representative, from claims, suits, actions, and liability of every kind, nature and description, including but not limited to claims and fines of regulatory agencies and attorney's fees and consultant's fees, directly or indirectly arising out of, connected with or resulting from performance of the Work, failure to perform the Work, or condition of the Work which is caused in whole or part by any act or omission of Contractor, Subcontractors, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, regardless of whether it is caused in part by the negligence of District or by any person or entity required to be indemnified hereunder.

3. With respect to third-party claims against Contractor, Contractor waives any and all rights to any type of express or implied indemnity against District and each of its officers, employees, consultants and agents including, but not limited to District, the Board, Architect/Engineer and each District representative.
4. Approval or purchase of any insurance contracts or policies shall in no way relieve from liability nor limit the liability of Contractor, its Subcontractors of any tier, or the officers or agents of any of them.
5. To the furthest extent permitted by law (including, without limitation, Civil Code Section 2782 and, if and to the extent applicable, Civil Code Section 2782.8, the indemnification provisions, releases of liability and limitations of liability, claims procedures, and limitations of remedy expressed throughout Contract Documents shall apply even in the event of breach of contract, negligence (active or passive), fault or strict liability of the party(is) indemnified, released, or limited in liability, and shall survive the termination, rescission, breach, abandonment, or completion of the Work or the terms of the Contract Documents. If Contractor fails to perform any of these defense or indemnity obligations, District may in its discretion back charge Contractor for District's costs and damages resulting therefrom and withhold such sums from progress payments or other contract moneys which may become due.
6. The indemnification provisions of this Contract as reflected in the Contract Documents shall not apply to any indemnified party to the extent of its sole negligence or willful misconduct; nor shall they apply to District or other indemnified party to the extent of its active negligence.

D. Suspension Of Work

1. District may, without cause, order Contractor in writing to suspend, delay or interrupt Work in whole or in part for such period of time as District may determine. An adjustment shall be made for increases in cost of performance of Work of the Contract Documents caused by any such suspension, delay or interruption, calculated using the measures set forth in Section 01 26 00 (Modification Procedures). No adjustment shall be made to extent that:
 - a. Performance is, was or would have been so suspended, delayed or interrupted by another cause for which Contractor is responsible; or
 - b. An equitable adjustment is made or denied under any other provision of Contract Documents; or
 - c. The suspension of Work was the direct or indirect result of Contractor's failure to perform any of its obligations hereunder. Adjustments made in cost of performance may have a mutually agreed fixed or percentage fee; if the parties cannot agree, Contractor may file a claim under Article 12 of this Document 00 71 00.
2. In addition to the foregoing, if applicable, Contractor shall receive a time extension for the actual period of time Contractor proves it was delayed by District's order to suspend, delay or interrupt Work. For example, and not by way of limitation, if precipitation exceeding the specified parameters does not in fact delay Contractor's progress on the critical path, then no time extension shall be recognized; and conversely, if Contractor proves to District's satisfaction that precipitation exceeding the specified parameters causes delay to Contractor for a period longer than the number of precipitation days incurred (e.g., if it rains or snows during grading work), then Contractor shall be entitled to a time extension equal to the actual period of such delay.

E. Termination Of Contract For Cause

1. District may declare Contractor in default of Contract Documents and District may terminate Contractor's right to proceed under the Contract Documents for cause:
 - a. Should Contractor make an assignment for the benefit of creditors; admit in writing its inability to pay its debts as they become due; file a voluntary petition in bankruptcy; be adjudged a

- bankrupt or insolvent; be the subject of an involuntary petition in bankruptcy which is not dismissed within sixty (60) Days; file a petition or answer seeking for itself any reorganization, arrangement, composition, readjustment, liquidation, dissolution, or similar relief under any present or future statute, law, or regulation; file any answer admitting or not contesting the material allegations of a petition filed against Contractor in any such proceeding; or seek, consent to, or acquiesce in, the appointment of any trustee, receiver, custodian or liquidator of Contractor or of all or any substantial part of its properties or if Contractor, its directors or shareholders, take action to dissolve or liquidate Contractor; or
- b. Should Contractor commit a material breach of the Contract Documents. If District declares Contractor in default due to material breach, however, District must allow Contractor an opportunity to cure such breach within ten (10) Days of the date of notice from District to Contractor providing notice of the default; or, if such breach is curable but not curable within such ten-Day period, within such period of time as is reasonably necessary to accomplish such cure. (In order for Contractor to avail itself of a time period in excess of ten (10) Days, Contractor must provide District within the ten-Day period with a written plan (“cure plan”) acceptable to District to cure said breach which includes, for example, evidence of necessary resources, actual Subcontractor commitments, actual labor commitments, schedules and recovery schedules meeting Contract Document requirements and showing a realistic and achievable plan to cure the breach. Contractor must then diligently commence and continue such cure according to the written cure plan); or
 - c. Should Contractor violate or allow (by a Subcontractor or other person or entity for which Contractor is responsible) a violation of any valid law, statute, regulation, rule, ordinance, permit, license or order of any governmental agency applicable to the Project or Work and does not cure (or cause to be cured) such violation within ten (10) Days of the date of the notice from District to Contractor demanding such cure; or, if such violation is curable but not curable within such ten-Day period, within such period of time as is reasonably necessary to accomplish such cure. (In order for Contractor to avail itself of a time period in excess of ten (10) Days, Contractor shall provide District within the ten-Day period with a written plan to cure said violation acceptable to District, and then diligently commence and continue performance of such cure according to the written plan.)
2. If District at any time reasonably believes that Contractor is or may be in default under the Contract Documents as provided above, then District may in its sole discretion notify Contractor of this fact and request written assurances from Contractor of performance of Contract Documents and a written plan from Contractor to remedy any default under the terms of Contract Documents which District may advise Contractor of in writing. Contractor shall, within ten (10) Days of District’s request, deliver a written cure plan which meets the requirements of the written cure plan as defined above. Failure of Contractor to provide such written assurances of performance and the required written cure plan within ten (10) Days of request will constitute a material breach of Contract Documents sufficient to justify termination for cause.
 3. In event of termination for cause, District will immediately serve written notice thereof upon Surety and Contractor. Surety shall have the rights and obligations set forth in Document 00 61 00 (Construction Performance Bond). Subject to the Surety’s rights under the Performance Bond (which rights are waived upon a default there under), District may take over the Work and prosecute it to completion by contract or by any other methods it may deem advisable.
 4. In the event of termination by District for cause:
 - a. District will compensate Contractor for the value of the Work delivered to District upon termination as determined in accordance with the Contract Documents, subject to all rights of offset and back charges, and provided that Contractor provides District with updated as-builts and Project Record Documents showing the Work performed up to the date of termination. However, District will not compensate Contractor for its costs in terminating the Work or any cancellation charges owed to third parties.
 - b. Contractor shall deliver to District possession of the Work in its then condition including, but not limited to, all designs, engineering, Project records, Project Record Documents, cost data of all types, Drawings and Specifications and contracts with vendors and Subcontractors, all other documentation associated with the Project, and all construction supplies and aids dedicated solely to performing the Work which, in the normal course of construction, would be consumed or only have salvage value at the end of the construction period. Contractor shall remain fully liable for the failure of any Work completed and materials and equipment provided through the

date of such termination to comply with the provisions of the Contract Documents. The provisions of this subparagraph shall not be interpreted to diminish any right which District may have to claim and recover damages for any breach of Contract Documents or otherwise, but rather, Contractor shall compensate District for all loss, cost, damage, expense, and/or liability suffered by District as a result of such termination and failure to comply with Contract Documents.

- c. District's rights under this subparagraph shall be specifically enforceable to the greatest extent permitted by law. District shall, to the extent applicable, have all other rights and remedies set forth in any Bidding Document.
- 5. District may terminate portions or parts of the Work for cause, provided these portions or parts (1) have separate geographic areas from parts or portions of the Work not terminated or (2) are limited to the work of one or more specific trades or Subcontractors. In such case, Contractor shall cooperate with a completing Contractor as required under Article 6 of this Document 00 71 00.
- 6. In the event a termination for cause is later determined to have been made wrongfully or without cause, then Contractor shall have no greater rights than if a termination for convenience had been effected (to include, as appropriate, the recovery rights specified therefore. Any Contractor claim arising out of a termination for cause, however, shall be made in accordance with Article 12 of this Document 00 71 00. No other loss cost, damage, expense or liability may be claimed, requested or recovered by Contractor.

F. Termination Of Contract For Convenience

- 1. District may terminate for convenience performance of the Work under the Contract Documents in accordance with this clause in whole, or from time to time in part, whenever District shall determine that termination is in District's best interest. Termination for convenience may only be effected by District delivering to Contractor written "Notice of Termination for Convenience" specifying the extent to which performance of the Work under the Contract Documents is terminated and the effective date of the termination.
- 2. After receiving a notice of termination for convenience under this subparagraph, and except as otherwise directed by District, Contractor shall:
 - a. Stop Work under the Contract Documents on date and to extent specified in notice of termination for convenience;
 - b. Place no further orders or subcontracts for materials, services, or facilities except as necessary to complete portion of Work under the Contract Documents which is not terminated;
 - c. Terminate all orders and subcontracts to extent that they relate to performance of Work terminated by the notice of termination;
 - d. Assign to District in manner, at times, and to extent directed by District, all right, title, and interest of Contractor under orders and subcontracts so terminated. District shall have the right, in its sole discretion, to settle or pay any or all claims arising out of termination of orders and subcontracts;
 - e. Settle all outstanding liabilities and all claims arising out of such termination of orders and subcontracts, with approval or ratification of District to extent District may require. District's approval or ratification shall be final for purposes of this subparagraph;
 - f. Transfer title to District, and deliver in the manner, at the times, and to the extent, if any, directed by District, all fabricated or unfabricated parts, Work in process, completed Work, supplies, and all other material produced as part of, or acquired in connection with performance of, Work terminated by the notice of termination, and completed or partially completed drawings, drawings, specifications, information, and other property which, if the Project had been completed, would have been required to be furnished to District;
 - g. Use its best efforts to sell, in manner, at times, to extent, and at price or prices that District directs or authorizes, any property of types referred to in subparagraph, but Contractor shall not be required to extend credit to any purchaser, and may acquire any such property under conditions prescribed and at price or prices approved by District. Proceeds of transfer or disposition shall be applied to reduce payments to be made by District to Contractor under the Contract Documents or shall otherwise be credited to the price or cost of Work covered by Contract Documents or paid in such other manner as District may direct;
 - h. Complete performance of the part of the Work which was not terminated by the notice of termination; and

- i. Take such action as may be necessary, or as District may direct, to protect and preserve all property related to Contract Documents which is in Contractor's possession and in which District has or may acquire interest.
3. After receipt of a notice of termination for convenience, Contractor shall submit to District its termination for convenience claim, in form and with all certifications required by Article 12 of this Document 00 71 00. Contractor's termination claim shall be submitted promptly, but in no event later than 6 months from effective date of the termination. Contractor and District may agree upon the whole or part of the amount or amounts to be paid to Contractor because of a total or partial termination of Work for convenience. If Contractor and District fail to agree on the whole amount to be paid to Contractor because of the termination of the Work under this subparagraph, District's total liability to Contractor by reason of the termination shall not exceed the total (without duplication of any items) of:
 - a. The reasonable cost to Contractor, without profit, for all Work performed prior to the effective date of the termination, including Work done to secure the Project for termination. Reasonable cost may not exceed the applicable percentage completion values derived from the progress schedule and the schedule of values. Deductions shall be made for cost of materials to be retained by Contractor, cost of Work defectively performed, amounts realized by sale of materials, and for other appropriate credits against cost of Work. Reasonable cost will include reasonable allowance for Project overhead and general administrative overhead not to exceed a total of ten percent of direct costs of such Work. When, in District's opinion, the cost of any item of Work is excessively high due to costs incurred to remedy or replace defective or rejected Work, reasonable cost to be allowed will be the estimated reasonable cost of performing the Work in compliance with requirements of Contract Documents and excessive actual cost shall be disallowed.
 - b. A reasonable allowance for profit on actual and allowable cost of Work performed as determined under this subparagraph, provided that Contractor establishes to District's satisfaction that Contractor would have made a profit had the Project been completed, and provided further that the profit allowed shall not exceed 5 percent of cost.
 - c. Reasonable costs to Contractor of handling material returned to vendors, delivered to District or otherwise disposed of as directed by District.
 - d. A reasonable allowance for Contractor's internal administrative costs in preparing termination claim.
 - e. Except as provided in this subparagraph, District shall not be liable for costs incurred by Contractor or Subcontractors after receipt of a notice of termination. Such non-recoverable costs include, but are not limited to, anticipated profits on Work not performed as of the date of termination, post-termination employee salaries, post-termination general administrative expenses, post-termination overhead or unabsorbed overhead, costs of preparing and submitting Contractor's Bid, attorney's fees of any type, and all costs relating to prosecution of claim or lawsuit.
 - f. District shall have no obligation to pay Contractor under this subparagraph unless and until Contractor provides District with updated and acceptable as-builts and Project Record Documents for Work completed prior to termination.
4. In arriving at the amount due Contractor under this clause, there shall be deducted in whole (or in the appropriate part[s] if the termination is partial):
 - a. All unliquidated advances or other payments on account previously made to Contractor, including without limitation all payments applicable to the terminated portion of Contract Documents;
 - b. Any claim which District may have against Contractor in connection with Contract Documents; and
 - c. The agreed price for, or proceeds of sale of, any materials, supplies, or other things kept by Contractor or sold under provisions of this subparagraph, and not otherwise recovered by or credited to District.

G. Contingent Assignment Of Subcontracts

1. Contractor hereby assigns to District each Subcontract for a portion of the Work (including Services), provided that:

- a. The assignment is effective only after District's termination of Contractor's right to proceed under the Contract Documents (or portion thereof relating to that Subcontract) pursuant to the termination for cause subparagraphs herein.
- b. The Assignment is effective only for the Subcontracts which District expressly accepts by notifying the Subcontractor in writing;
- c. The assignment is subject to the prior rights, if any, of the Surety, obligated by Document 00 61 00 (Construction Performance Bond) provided under the Contract Documents, where the Surety exercises its rights to complete the Contract;
- d. After the effectiveness of an assignment, Contractor shall, at its sole cost and expense, sign all instruments and take all actions reasonably requested by District to evidence and confirm the effectiveness of the assignment in District; and
- e. Nothing in this subparagraph shall modify or limit any of Contractor's obligations to District arising from acts or omissions occurring before the effectiveness of any Subcontract assignment, including but not limited to all defense, indemnity and hold-harmless obligations arising from or related to the assigned Subcontract.

H. Remedies and Contract Integration

1. Subject to Contract Documents provisions regarding Contractor claims, claim review, and claim resolution, and subject to the limitations therein, the exclusive jurisdiction and venue for resolving all claims, counter-claims, disputes and other matters in question between District and Contractor arising out of or relating to Contract Documents, any breach thereof or the Project shall be the applicable court of competent jurisdiction located in the County of San Mateo. All District remedies provided in the Contract Documents shall be taken and construed as cumulative and not exclusive; that is, in addition to each and every other remedy herein provided; and in all instances District shall have any and all other equitable and legal rights and remedies which it would have according to law.
2. The Contract Documents, any Contract Modifications and Change Orders shall represent the entire and integrated agreement between District and Contractor regarding the subject matters hereof and thereof and shall constitute the exclusive statement of the terms of the parties' agreement. The Contract Documents, and any Contract Modifications and Change Orders, shall supersede any and all prior negotiations, representations or agreements, written or oral, express or implied, that relate in any way to the subject matter of the Contract Documents or written modifications. District and Contractor represent and agree that, except as otherwise expressly provided in the Contract Documents, they are entering into the Contract Documents and any subsequent written modification in sole reliance upon the information set forth or referenced in the Contract Documents or Contract Modifications and the parties are not and will not rely on any other information.
3. In any proceeding to enforce the Contract Documents, Contractor and District agree that the finder of fact shall receive detailed instructions on the meaning and operation of the Contract Documents, including their conditions, limitations of liability, claims and time extension procedures and any other provisions impacting major defenses and theories of liability of the parties. Detailed findings of fact shall be requested, to verify Contract enforcement.
4. Either party's waiver of any breach or failure to enforce any of the terms, covenants, conditions or other provisions of the Contract Documents at any time shall not in any way affect, limit, modify or waive that party's right thereafter to enforce or compel strict compliance with every term, covenant, condition or other provision hereof, any course of dealing or custom of the trade or oral representations notwithstanding.

I. Patents

Fees or claims for any patented invention, article or arrangement that may be used upon or in any manner connected with performance of the Work or any part thereof shall be included in the Bid price for doing the Work. To the greatest extent permitted by law, Contractor shall defend, indemnify and hold harmless District and each of its officers, employees, consultants and agents, including, but not limited to, the Board, Architect/Engineer and each District representative, from all damages, claims for damages, costs or expenses in law or equity, including attorney's fees, arising from or relating to any claim that any article supplied or to be supplied under the Contract Documents infringes on the patent rights, copyright, royalties, trade name, trademark, service mark, trade secret or other intellectual property right of any person or persons or that the person or entity supplying the article does not have a lawful right to sell the same. Such costs or expenses for which Contractor agrees to indemnify and hold harmless the above indemnities include but are not limited to

any and all license fees, whether such fees are agreed by any indemnitee or ordered by a court or administrative body of any competent jurisdiction.

J. Substitution For Patented And Specified Articles

Except as noted specifically in Specifications, whenever in Specifications, material or process is designated by patent or proprietary name or by name of manufacturer, such designation shall be deemed to be used for purpose of facilitating description of material and process desired, and shall be deemed to be followed by the words "or equal." Contractor may offer any substitute material or process that Contractor considers equal in every respect to that so designated and if material or process offered by Contractor is, in opinion of District, equal in every respect to that so designated, its use will be approved. However, Contractor may utilize this right only by timely submitting Document 00 43 25 (Substitution Request Form) as provided in Section 00 11 19 (Instructions to Bidders). A substitution will be approved only if it is a true "equal" item in every aspect of its design and quality, including but not limited to its dimensions, weights, service requirements, durability, functioning, impact on contiguous construction elements, overall schedule and design.

1. The foregoing limited right to an "or equal" substitution shall not apply to any material or process which is designated in the approved Drawings and Specifications by patent or proprietary name or by name of manufacturer. Any such substitution is a deviation subject to District's advance written approval as provided in subparagraph 5.F.1 above.
2. Additionally, any substitution under this paragraph may require DSA approval.

K. Interest Of Public Officers

No representative, officer, or employee of District, no member of the governing body of the locality in which the Project is situated, no member of the locality in which District was activated, and no other public official of such locality or localities who exercises any functions or responsibilities with respect to the Project, during the tenure of the official or for one year thereafter, shall, as principal, agent, attorney or otherwise, be directly or indirectly interested, in the Contract Documents or the proceeds thereof.

L. Limit Of Liability

DISTRICT, AND EACH OF ITS OFFICERS, BOARD MEMBERS, EMPLOYEES, CONSULTANTS AND AGENTS INCLUDING, BUT NOT LIMITED TO, ARCHITECT/ENGINEER AND EACH OTHER DISTRICT REPRESENTATIVE, SHALL HAVE NO LIABILITY TO CONTRACTOR FOR SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES, EXCEPT TO THE LIMITED EXTENT THAT THESE CONTRACT DOCUMENTS OR APPLICABLE PUBLIC CONTRACTING STATUTES MAY SPECIFY THEIR RECOVERY.

M. Severability

Any provisions or portions thereof of Contract Documents that are prohibited by, unlawful, or unenforceable under any applicable law of any jurisdiction shall as to such jurisdiction be ineffective without affecting other provisions or portions thereof in the Contract Documents.

N. Ownership Of Results/Works For Hire

Any and all artwork, copy, posters, billboards, photographs, videotapes, audiotapes, systems designs, software, reports, diagrams, surveys, source codes or any original works of authorship created by Contractor or its Subcontractors or designers in connection with services performed under this Contract shall be works for hire as defined under Title 17 of the United States Code, and all copyrights in such works are the property of District. In the event that it is ever determined that any works created by Contractor or its Subcontractors or designers under this Contract are not works for hire under U.S. law, Contractor hereby assigns all copyrights to such works to District. With the prior written approval of District, Contractor may retain and use copies of such works for reference and as documentation of its experience and capabilities.

14. MODIFICATIONS OF CONTRACT DOCUMENTS

A. Alterations, Modifications And Force Account Work

1. As provided in the latest edition of Part 1 of Title 24, California Code of Regulations, no modification or deviation from the DSA approved Drawings and Specifications will be permitted except by written addenda, written Change Order or written Supplemental Instruction. As

- appropriate, Change Orders are subject to approval by the Division of State Architect. Refer to section 4-338, Part 1, Title 24, California Code of Regulations. Contractor shall aggressively plan and schedule its work, and coordinate with District and DSA, schedule RFI's and work inspections and progress, to avoid any delays or disruptions to the Work resulting from DSA requirements.
2. District may, without notice to the sureties, make alterations, deviations, additions to, or deletions from Contract Documents; increase or decrease the quantity of any item or portion of the Work; expand, contract or otherwise change the Contract Time; delete any item or portion of the Work; and require extra Work. Contractor shall perform such Work under applicable provisions of the Contract Documents, unless specifically provided otherwise at the time the change is ordered. As appropriate, such Change Orders are subject to approval by DSA. Refer to Section 4-338, Part 1, Title 24, California Code of Regulations. In the case of any ordered extra Work, District reserves the right to furnish all or portions of associated labor, material, and equipment, which Contractor shall accept and use without payment for costs, markup, profit, or otherwise for such District-furnished labor, materials, and equipment.
 3. District may make changes to the Work during the course of construction to bring the Work into compliance with environmental requirements or standards established by state and federal statutes and regulations enacted after the Contract has been awarded. Contractor shall be compensated for changes affecting the Contract Time or Contract Sum of the Work as set forth in this Article 14 and in Section 01 26 00 (Modification Procedures).
 4. Changes affecting the Contract Time or Contract Sum of the Work shall be set forth in a written Change Order that shall specify:
 - a. The Work performed in connection with the change to be made;
 - b. The amount of the adjustment of the Contract Sum, if any, and the basis for compensation for the Work ordered; and
 - c. The extent of the adjustment in the Contract Time, if any.
 5. A Change Order will become effective when signed by District. If District exercises its right to decide disputed issues pertaining to changed Work as set forth in Articles 12 and 14 of this Document 00 71 00, then the resulting Change Order shall be effective when signed by District, notwithstanding that Contractor has not signed it.
 6. Changes not affecting the Contract Time or Contract Sum of the Work, in District's discretion, may be set forth in a written RFI-Reply executed by District. Execution of such an RFI-Reply constitutes Contractor's agreement to make the specified change without change to the Contract Sum or the Contract Time.
 7. Changes or deviations from Contract Documents affecting the Contract Time or Contract Sum of the Work shall not be made without the authority of an effective Change Order or Construction Change Directive as provided in Section 01 26 00 (Modification Procedures), except in cases of emergency discussed in this Document 00 71 00.
 8. If changes ordered in design, workmanship or materials are of such a nature as to increase or decrease the cost of any part of the Work, the price fixed in the Contract Documents shall be increased or decreased by the amount that Contractor and District may agree upon as a reasonable and proper allowance for the cost increase or decrease. If an agreement cannot be reached, then District will reach a determination, which shall be final, subject to Contractor's rights under Article 12 of this Document 00 71 00. In all cases Contractor shall perform the changed Work as directed by District subject to Contractor's rights under Article 12 of this Document 00 71 00.
 9. Contractor shall, upon District's request, permit inspection of the original unaltered Bid estimate, subcontract agreements, purchase orders relating to the change, and documents substantiating all costs associated with its cost Bid or claims arising from changes in the Work.
 10. Changes in the Work made pursuant to this Article 14 and extensions of Contract Time necessary by reason thereof shall not in any way release the guarantees and warranties given by Contractor pursuant to provisions of the Contract Documents, nor shall such changes in the Work relieve or release the Sureties of bonds executed pursuant to said provisions. The Sureties, in executing such bonds, shall be deemed to have expressly agreed to any such change in the Work and to any extension of time made by reason thereof.
 11. Procedures for Modifications of Contract Documents and for calculating the cost of extra Work are given in Section 01 26 00 (Modification Procedures). Regarding delay and impact costs of any nature, Contractor may not seek delay compensation for on-Site or off-Site costs based on formulas,

e.g., “Eichlay” or other formula. Rather, Contractor shall prove actual costs resulting from such delays. If Contractor requests compensation for delay to the construction, then Contractor shall prove and document actual costs plus markup per the cost categories and procedures in Section 01 26 00 (Modification Procedures) in order to request, claim or prove compensation for delay.

12. A performance bond rider covering changed Work must be executed before proceeding with the changed Work.

B. Entitlement to Change Of Contract Time

1. Contract Time may only be changed by Change Order or by Contract Modification, and all time limits stated in the Contract Documents are of the essence of Contract Documents.
2. Contract Time will be adjusted in an amount equal to the time lost due to:
 - a. Changes in the Work ordered by District;
 - b. Acts or neglect by District, Architect/Engineer, any District representative, utility owners or other contractors performing other work, provided that Contractor has fully and completely performed its responsibilities under the Contract Documents;
 - c. District ordered suspension, delay or interruption of Work which is otherwise compensable as provided in paragraph 13.D above; or
 - d. Fires, floods, epidemics, weather conditions beyond the parameters otherwise set forth in this agreement, earthquakes, civil or labor disturbances, strikes or acts of God, provided damages resulting therefrom are not the result of Contractor’s failure to protect the Work as required by Contract Documents.
3. Contract Time shall not be extended for any cause identified immediately above, however, unless:
 - a. Contractor actually has been prevented from completing any part of the Work within the Contract Time due to delay that is beyond Contractor’s control and due to reasons for which Contractor is not responsible (delays attributable to and within the control of a Subcontractor, or its subcontractors, or supplier shall be deemed to be delays within the control of Contractor);
 - b. A claim for delay is made as provided herein; and
 - c. Contractor submits a Time Impact Evaluation as required under Section 01 32 16 (Progress Schedules and Reports) that demonstrates actual delay to critical Work activities that actually delay the progress of the Work in the amount of time requested.

C. Notice Of Delay

Within seven Days of the beginning of any delay, Contractor shall notify District in writing, by submitting a notice of delay, describing all anticipated delays resulting from the delay event in question. Any request for extension of time include a written schedule document that demonstrates delay to the critical path using a Time Impact Evaluation as specified in Section 01 32 16 (Progress Schedules and Reports). District will determine all claims and adjustments in the Contract Time. No claim for an adjustment in the Contract Time will be valid and such claim will be waived if not submitted in accordance with the requirements of this subparagraph.

D. Non-Compensable Time Extensions; Adverse Weather Parameters

1. Delays due to adverse weather conditions will only be permitted if Contractor can verify that adverse weather caused critical path delays exceeding **(3) three work days**. Contractor shall include an activity in the critical path of the “baseline schedule” entitled “Weather delays” with duration of **(3) three** work days. The sole successor to “Weather delays” (with zero lag) shall be “Final Completion” and the sole predecessor (with zero lag) shall be “punchlist.” The duration of the “weather delays” activity shall be reduced by the number of approved work days of actual weather delay, and included in the monthly schedule updates. If the actual weather delays approved by the District are less than the original duration of the “weather delays” activity, the un-used days shall be considered “float” as defined by the General Conditions.
2. Where Contractor is prevented from completing any part of the Work within the Contract Time due to delay beyond the control of both District and Contractor (including, but not limited to, adverse weather conditions exceeding Contract Documents parameters, earthquakes, Acts of God, epidemics, and acts of other contractors or utilities) an extension of Contract Time, in an amount equal to the time lost due to such delay (without compensation) shall be Contractor’s sole and exclusive remedy for such delays.

3. Contractor shall give written notice of intent to claim an adverse weather day within one Day of the adverse weather day occurring. Rain parameters are identified in Document 00 73 00 (Supplementary Conditions).
4. Adverse weather delay for precipitation shall be recognized for the actual period of time Contractor proves it was delayed by precipitation exceeding the specified parameters. For example, and not by way of limitation, if precipitation exceeding the specified parameters does not in fact delay Contractor's progress on the critical path, then no time extension shall be recognized; and conversely, if Contractor proves to District's satisfaction that precipitation exceeding the specified parameters causes delay to Contractor for a period longer than the number of precipitation days incurred (e.g., if it rains or snows during grading work), then Contractor shall be entitled to a time extension equal to the actual period of such delay beyond the specified weather days included in the base contract critical path..
5. Contractor shall take reasonable steps to mitigate potential weather delays, such as dewatering the Site, and covering Work and material that could be affected adversely by weather. Failure to do so shall be cause for District to not grant a time extension due to adverse weather, where Contractor could have avoided or mitigated the potential delay by exercising reasonable care.

E. Compensable Time Extensions

1. Contractor may receive a time extension and be compensated for delays caused directly and solely by District or, except as provided in subparagraph 3.b below, DSA. Provided Contractor provides proper notice and documentation under Section 01 32 16, such compensation may include extended field or home office overhead, field supervision, escalation charges, acceleration costs and extended subcontractor costs.
2. Contractor shall not be entitled to any time extension or compensation, however, for any delays caused in whole or in part by Contractor's failure to perform its obligations under the Contract Documents, or during periods of delay concurrently caused by Contractor and either District or others.
3. Contractor shall not be entitled to damages for delay to the Work caused by the following reasons:
 - a. District's right to sequence the Work in a manner which would avoid disruption to District's tenants and their contractors or other prime contractors and their respective subcontractors, exercised as a result of Contractor's failure to perform its cooperation and coordination responsibilities required by Contract Documents; District's enforcement of any government act or regulation; or the provisions of the Contract Documents;
 - b. Extensive requests for clarifications to Contract Documents or Contract Modifications thereto, provided such clarifications or Contract Modifications are processed by District or its consultants in a reasonable time commensurate with Contract Documents requirements.

F. Liquidated Damages

1. Time is of the essence. Execution of Contract Documents by Contractor shall constitute acknowledgement by Contractor that Contractor understands, has ascertained and agrees that District will actually sustain damages in the amount fixed in the Contract Documents for each and every Day during which completion of Work required is delayed beyond expiration of time fixed for completion or extensions of time allowed pursuant to provisions hereof. Contractor and District agree that specified measures of liquidated damages shall be presumed to be the damages actually sustained by District as defined below, and that because of the nature of the Project, it would be impracticable or extremely difficult to fix the actual damages.
2. Liquidated damages shall be considered not as a penalty but as agreed monetary damage sustained by District for increased Project administration expenses, including extra inspection, construction management and architectural and engineering expenses related to the Project and Contract Documents because Contractor failed to perform and complete Work within time fixed for completion or extensions of time allowed pursuant to provisions hereof. Except as otherwise provided in Document 00 73 00 (Supplementary Conditions), liquidated damages shall also include lost revenues, interest expenses and cost of substitute facilities. However, liquidated damages shall not be deemed to include within their scope additional damages or administrative costs arising from Defective Work, cost of completion of the Work, claims and fines of regulatory agencies, damages suffered by others or other forms of liability claimed against District as a result of delay (e.g., delay

or delay related claims of other contractors, subcontractors or tenants), and defense costs thereof. Contractor shall be fully responsible for the actual amount of any such damages it causes, in addition to the liquidated damages otherwise due District.

3. District may deduct from any money due or to become due to Contractor subsequent to time for completion of entire Work and extensions of time allowed pursuant to provisions hereof, a sum representing then-accrued liquidated damages. Should Contractor fall behind the approved Progress Schedule in circumstances where it is substantially likely that District will be entitled to assess liquidated damages, District may deduct liquidated damages based on its estimated period of late completion. District need not wait until Final Completion to withhold liquidated damages from Contractor's progress payments. Should money due or to become due to Contractor be insufficient to cover aggregate liquidated damages due, then Contractor forthwith shall pay the remainder of the assessed liquidated damages to District.

G. Differing Site Conditions

1. In the event that Contractor encounters underground conditions that exceed the scope of the Work, then Contractor shall promptly give District written notice of the condition, and shall give such notice before the conditions are disturbed, to include: (1) material that the Contractor believes may be material that is hazardous waste, as defined in Section 25117 of the Health and Safety Code, that is required to be removed to a Class I, Class II, or Class III disposal site in accordance with provisions of existing law, and is not within the scope of Work; (2) subsurface or latent physical conditions at the Site differing from those indicated by information about the Site made available to Contractors prior to the deadline for submitting Bids, that Contractor did not and could not have known about by performing its required pre-Bid investigations; or (3) unknown physical conditions at the site of any unusual nature, different materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for the contract, that Contractor did not and could not have known about by performing its required pre-Bid investigations.
 - a. District shall promptly investigate the conditions, and if it finds that (i.) the conditions do materially so differ in a manner Contractor did not anticipate and could not have anticipated, or do involve hazardous waste outside the scope of the Work, and (ii.) cause a decrease or increase in the Contractor's cost of, or the time required for, performance of any part of the Work, then (iii.) District shall initiate a change order under the procedures described in the Contract, including but not limited to, issuing either a Request for Proposal or a Construction Change Directive under the procedures described in the Contract Documents, including without limitation Section 01 26 00 (Modification Procedures).
 - b. If District determines that physical conditions at the Site are not Latent or are not materially different from those indicated in Contract Documents or do not involve hazardous waste, or that Contractor should have anticipated the same through its required pre-Bid investigations, or for any other reason that that no change in terms of the Contract Documents is justified, District will so notify Contractor in writing, stating reasons.
 - c. In the event that a dispute arises between District the Contractor whether the conditions do materially so differ, or involve hazardous waste, and cause a decrease or increase in the Contractor's cost of, or the time required for, performance of any part of the Work, the Contractor shall not be excused from any scheduled completion date provided for by the Contract, but shall proceed with all Work to be performed under the Contract. The Contractor shall retain any and all rights provided either by Contract or by law which pertain to the resolution of disputes and protests between contracting parties.
2. Contractor shall not be entitled to any adjustment in the Contract Sum or Contract Time regarding claimed hazardous waste or materials, claimed Latent or materially different Site conditions (whether above or below grade) if:
 - a. Contractor knew of the existence of such conditions at the time Contractor submitted its Bid; provided, that this requirement shall not apply if the condition results from the District's failure to timely address a known condition which is expressly outside the scope of Contractor's Work;
 - b. Contractor should have known of the existence of such conditions at the time Contractor submitted its Bid, or should have learned of such conditions and mitigated their impact, as a result of having complied with the requirements of Contract Documents, including without limitation, the investigation requirements herein at Articles 2 and 10 of Document 00 71 00;

- c. The information or conditions claimed by Contractor to be Latent or materially different consist of information, conclusions, opinions or deductions made from underground conditions reports, of the kind that this Document 00 71 00 precludes reliance upon; or,
 - d. Contractor was required to give written notice and failed to do so within the time required.
3. If, because of a differing site condition as defined herein, Contractor does not agree to continue with the Work based on a reasonable belief that it is unsafe, or does not agree to resume Work under special conditions, District may order the disputed portion of Work deleted from the Work, or performed by others, or District may invoke its right to terminate Contractor's right to proceed under the Contract Documents in whole or in part, for convenience or for cause as the facts may warrant. If Contractor does not agree with District's determination of any adjustment in the Contract Sum or Contract Time as a result, Contractor may make a claim as provided in Article 12 of this Document 00 71 00.

H. Change Orders Related to Underground Facilities.

1. If an Underground Facility is uncovered or revealed at or contiguous to the Site which was not shown or indicated in the materials supplied by District or in information on file at USA or is not otherwise reasonably known to Contractor by performing its obligations in Articles 2 and 10 of this Document 00 71 00, then Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby (and in no event later than seven Days), and prior to performing any Work in connection therewith (except in an emergency as required by Article 15 of this Document 00 71 00), identify the owner of such Underground Facility and give written notice to that owner and to District. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.
2. Contractor shall be allowed an increase in the Contract Sum or an extension of the Contract Time, or both, for Underground Facilities either not shown or inaccurately shown in the Contract Documents, the information supplied pursuant to Document 00 31 19 (Reports, Surveys and Existing Conditions) or in information on file at USA, only where the inaccuracy was (i.) material and outside of the normal experience on projects of this nature, (ii.) was not reasonably inferable from existing information, and (iii.) directly results in a material, justifiable and actual increase in the cost of Contractor's work. For example, if surface conditions such as pavement repairs, valve covers, or other markings, indicate the presence of an Underground Facility, or if the Underground Facility could be determined or its cost impact mitigated by performing the obligations in Articles 2 and/or 10 of this Document 00 71 00, then an increase in the Contract Price or an extension of the Contract Time will not be due, even if the Underground Facility was not indicated or was shown at a different place or a different elevation in the Contract Documents, in the information supplied to Contractor pursuant to Document 00 31 19 (Reports, Surveys and Existing Conditions), or in information on file at USA.
3. Main Line and Trunk Line Utilities (Government Code Section 4215). Consistent with Government Code Section 4215, as between District and Contractor, District will be responsible for the timely removal, relocation, or protection of existing main or trunk line utility facilities located on the Site only if such utilities are not identified in the Contract Documents or Document 00 31 19 (Reports, Surveys and Existing Conditions). District will compensate for the cost of locating and repairing damage not due to Contractor's failure to exercise reasonable care, removing and relocating such main or trunk line utility facilities not indicated in the Contract Documents or Document 00 31 19 (Reports, Surveys and Existing Conditions) with reasonable accuracy, and equipment on the Project necessarily idled during such work.

15. WORKING CONDITIONS AND PREVAILING WAGES

A. Use Of Site/Sanitary Rules

1. All portions of the Work shall be maintained at all times in neat, clean and sanitary condition. Contractor shall furnish toilets for use of Contractor's and Subcontractors' employees on the Site where needed, and their use shall be strictly enforced. All toilets shall be properly secluded from public observation, and shall be located, constructed and maintained subject to District's approval.
2. Contractor shall confine construction equipment, the storage of materials and equipment and the operations of workers to the Site and land areas identified in and permitted by Contract Documents and other land and areas permitted by applicable laws and regulations, rights of way, permits and

easements or as designated by District, and shall not unreasonably encumber the premises with construction equipment or other materials or equipment. Contractor shall assume full responsibility for any damage to any such land or area, any improvement located thereon, or to the owner or occupant thereof resulting from the performance of Work.

3. During the progress of the Work, Contractor shall keep the Site and the Project free from accumulations of waste materials, rubbish and other debris resulting from the Work. At the completion of the Work, Contractor shall remove all waste materials, rubbish and debris from and about the Site as well as all tools, appliances, construction equipment and machinery and surplus materials. Contractor shall leave the premises clean and ready for occupancy by District at Substantial Completion of Work. Contractor shall restore to original condition all property not designated for alteration by Contract Documents.
4. Contractor shall not load nor permit any part of any structure or pavement to be loaded in any manner that will endanger the structure or pavement, nor shall Contractor subject any part of Work or adjacent property to stresses or pressures that will endanger it. Contractor shall conduct all necessary existing conditions investigation regarding structural, mechanical, electrical or any other system existing, shall perform Work consistent with such existing conditions, and shall have full responsibility for insufficiencies or damage resulting from insufficiencies of existing systems, equipment or structures to accommodate performing the Work.

B. Protection Of Work, Persons, Property And Operations

1. Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with Work. Contractor shall comply with all safety requirements specified in any safety program established by District, or required by state, federal or local laws and ordinances. Contractor shall be responsible for all damage to Work, property or structures, all injuries to persons, and all damage and interruptions to District's operations, arising from the performance of Work of the Contract Documents. Except as otherwise expressly approved by District in writing, Contractor shall at all times perform all Work in a manner which does not interrupt, damage or otherwise adversely impact any facilities, operations, or real or personal property of District, its officers, employees, agents, invitees, licensees, lessees or contractors.
2. Contractor shall comply with all applicable laws and regulations of any public body having jurisdiction for safety of persons or property or to protect them from damage, injury or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify owners of adjacent property and of Underground Facilities and utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation and replacement of their property.
3. Contractor shall remedy all damage, injury, loss or interruption to any property or operations of District or contiguous property owners, caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, supplier, or any other person or organization directly or indirectly employed by any of them to perform or furnish any Work or anyone for whose acts any of them may be liable. Contractor's duties and responsibility for safety and for protection of Work shall continue until such time as all the Work is completed and Final Acceptance of the Work. District and its agents do not assume any responsibility for collecting any indemnity from any person or persons causing damage to Contractor's Work. Contractor shall give all notices required by potentially responsible insurance carriers and require that its Subcontractors and suppliers do the same.
4. Contractor shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.
5. District may, at its option, retain such moneys due under the Contract Documents as District deems necessary until District receives satisfactory evidence that any and all suits or claims against Contractor for injury to persons, property or operations are either settled, or adequately provided for (such as by insurance or otherwise).

C. Responsibility For Safety And Health

1. Contractor shall ensure that its and each tier of Subcontractors' employees, agents and invitees comply with applicable health and safety laws while at the Site. These laws include the Occupational Safety and Health Act of 1970 and rules and regulations issued pursuant thereto, and

District's safety regulations as amended from time to time. Contractor shall comply with all District directions regarding protective clothing and gear.

2. Contractor shall be fully responsible for the safety of its and its Subcontractors' employees, agents and invitees on the Site. Contractor shall notify District, in writing, of the existence of hazardous conditions, property or equipment at the Site that are not under Contractor's control. Contractor shall be responsible for taking all the necessary precautions against injury to persons or damage to the property of Contractor, Subcontractors or persons from recognized hazards until the responsible party corrects the hazard. Contractor shall provide protective clothing and gear to all visitors to the Site.
3. Contractor shall confine all persons acting on its or its Subcontractors' behalf to that portion of the Site where Work under the Contract Documents is to be performed: District designated routes for ingress and egress thereto and any other District designated area. Except those routes for ingress and egress over which Contractor has no right of control, within such areas, Contractor shall provide safe means of access to all places at which persons may at any time have occasion to be present.

D. Emergencies

In emergencies affecting the safety or protection of persons or Work or property at the Site or adjacent thereto, Contractor, without special instruction or authorization from District, is obligated to act to prevent threat and damage, injury or loss, until directed otherwise by District. Contractor shall give District prompt written notice if Contractor believes that any significant changes in Work or variations from Contract Documents have been caused thereby. If District determines that a change in the Contract Documents is required because of the action taken by Contractor in response to such an emergency, a Change Order or Construction Change Directive will be issued to document the consequences of such action. Emergency contact names & phone numbers, where Contractor's Superintendent and Project Manager can be reached at any time, are to be provided to the District, within 10 days after issuance of a Notice to Proceed with Construction.

E. Use Of Roadways And Walkways

Contractor shall not unnecessarily interfere with use of any roadway, walkway or other facility for vehicular or pedestrian traffic. Before beginning any interference and only with District's prior concurrence, Contractor may provide detour or temporary bridge for traffic to pass around or over the interference, which Contractor shall maintain in satisfactory condition as long as interference continues. Unless otherwise provided in the Contract Documents, Contractor shall bear the cost of these temporary facilities.

F. Nondiscrimination

No person or entity shall discriminate in the employment of persons upon public works because of race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, marital status, sexual preference, or gender of such persons, except as provided in Section 12940 of the Government Code. Every Contractor for public works violating the provisions of Section 1735 of the Labor Code is subject to all the penalties imposed for a violation of Chapter 1, Part 7, Division 2 of the Labor Code.

G. Prevailing Wages

1. Contractor shall pay to persons performing labor in and about Work provided for in the Contract Documents an amount equal to or more than the general prevailing rate of per diem wages for (1) work of a similar character in the locality in which the Work is performed and (2) legal holiday and overtime work in said locality. The per diem wages shall be an amount equal to or more than the stipulated rates contained in a schedule that has been ascertained and determined by the Director of the State Department of Industrial Relations and District to be the general prevailing rate of per diem wages for each craft or type of workman or mechanic needed to execute this Contract. Contractor shall also cause a copy of this determination of the prevailing rate of per diem wages to be posted at each Site.
2. Contractor shall forfeit, as a penalty to District, Fifty Dollars (\$50.00) for each laborer, workman, or mechanic employed in performing labor in and about the Work provided for in the Contract Documents for each Day, or portion thereof, that such laborer, workman or mechanic is paid less than the said stipulated rates for any work done under the Contract Documents by him or her or by any Subcontractor under him or her, in violation of Articles 1 and 2 of Chapter 1 of Part 7 of Division II of the California Labor Code. The sums and amounts which shall be forfeited pursuant to this subparagraph and the terms of the Labor Code shall be withheld and retained from payments due

to Contractor under the Contract Documents, pursuant to this Document 00 71 00 and the Labor Code, but no sum shall be so withheld, retained or forfeited except from the final payment without a full investigation by either the State Department of Industrial Relations or by District. The Labor Commissioner pursuant to Labor Code Section 1775 shall determine the final amount of forfeiture.

3. Contractor shall insert in every subcontract or other arrangement which Contractor may make for performance of work or labor on Work provided for in the Contract, provision that Subcontractor shall pay persons performing labor or rendering service under subcontract or other arrangement not less than the general prevailing rate of per diem wages for work of a similar character in the locality in which the Work is performed, and not less than the general prevailing rate of per diem wages for holiday and overtime work fixed in the Labor Code.
4. Contractor stipulates that it shall comply with all applicable wage and hour laws, including without limitation Labor Code Section 1813. Failure to so comply, including without limitation Labor Code Section 1776, shall constitute a default under this Contract.
5. Contractor and its Subcontractors shall be responsible for compliance with Labor Code Section 1776.
 - a. Contractor and Subcontractors must keep accurate payroll records, showing the name, address, social security number, Work classification, straight time and overtime hours worked each Day and week, and the actual per diem wages paid to each journeyman, apprentice, worker, or other employee employed by him or her in connection with the Work of the Contract documents. Each payroll record shall contain or be verified by a written declaration as required by Labor Code Section 1776.
 - b. The payroll records enumerated above must be certified and shall be available for inspection at all reasonable hours at the principal office of Contractor as required by Labor Code Section 1776.
 - (X) Contractor shall inform District of the location of records enumerated above, including the street address, city and county, and shall, within five working Days, provide a notice of a change of location and address.
 - (Y) Contractor or Subcontractor has 10 Days in which to comply subsequent to receipt of a written notice requesting the records enumerated above. In the event that Contractor or Subcontractor fails to comply with the ten-Day period, he or she shall, as a penalty to District on whose behalf the contract is made or awarded, forfeit \$25.00 for each calendar Day, or portion thereof, for each worker, until strict compliance is effectuated. Upon the request of the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement, these penalties shall be withheld from progress payments then due. Contractor is not subject to a penalty assessment pursuant to this subparagraph due to the failure of a Subcontractor to comply with this subparagraph.
 - c. Contractor shall also deliver certified payrolls to District with each Application for Payment as described in Section 01 29 00 (Measurement & Payment).

H. Environmental Controls

1. Contractor shall comply with all rules, regulations, ordinances, and statutes that apply to any work performed under the Contract Documents including, without limitation, any toxic, water and soil pollution controls and air pollution controls specified in Government Code, Section 11017 and as required by Bay Area Air Quality Management District, water quality Best Management Practices. Contractor shall be responsible for insuring that Contractor's employees, Subcontractors and the public are protected from exposure to airborne hazards or contaminated water, soil or other toxic materials used during or generated by activities on the Site or associated with the Project.

I. Shoring Safety Plan

1. At least five Days in advance of excavating any trench five feet or more in depth, Contractor shall submit to District a detailed plan showing the shoring, bracing and sloping design and other provisions to be made for worker protection from the hazard of caving ground during the excavation, as required by Labor Code Section 6705. A civil or structural engineer registered in California shall prepare and sign any plan that varies from the shoring system standards established by the State Construction Safety Orders.
2. During the course of Work, Contractor shall be responsible for determining where sloping, shoring, and/or bracing is necessary and the adequacy of the design, installation, and maintenance of all

shoring and bracing for all excavation, including any excavation less than five feet in depth. Contractor will be solely responsible for any damage or injuries that may result from excavating or trenching. District's acceptance of any drawings showing the shoring or bracing design or work schedule shall not relieve Contractor of its responsibilities under this subparagraph.

3. DSA must review and approve shoring of structures prior to commencement of shoring operations. Contractor shall submit shoring design sufficiently in advance of the Work as necessary to avoid delay.
4. Cal/OSHA Permit. Contractor shall comply with Labor Code 6500 and shall obtain, as applicable, a permit as required by Cal/OSHA for each of the following:
 - a. Construction of trenches or excavations that are five feet or more in depth and into which a person is required to descend.
 - b. Construction or demolition of any building, structure, or scaffolding for falsework more than three stories high, or the equivalent height (36 feet).
 - c. Erection or dismantling of vertical shoring systems more than three stories high, or the equivalent height (36 feet).
 - d. The underground use of diesel engines in mines or tunnels.

END OF DOCUMENT

SECTION 00 73 00

SUPPLEMENTARY CONDITIONS

1. SUMMARY

This document includes requirements that supplement the paragraphs of Document 00 71 00 (General Conditions).

2. SUPPLEMENT TO PARAGRAPH 7.1 GENERAL CONDITIONS, SECTION 00 71 00

For the purposes of this contract [editable] is the District's Representative.

3. SUPPLEMENT TO 11.A.4 Prosecution & Progress of the Work

All work shall be coordinated with District Representative by the Contractor so as to mitigate and minimize impact to campus operations. For example (but not limited to), noisy disruptive work shall not be scheduled to occur during final examinations, commencement exercises, key events in Building 10 (private events, speakers, etc.) Work likely to disrupt campus utility services, including but not limited to utility shut-downs and / or cut-overs shall be scheduled between semesters, over holiday periods or at other times that will insure continuous utility service to support college operational activities.

The Contractor is advised to consult the College's website for any updates to the College activities and events.

4. SUPPLEMENT TO 11.E Contractor to Locate Underground Facilities

Before commencing work of digging trenches or excavation, Contractor shall meet with the College's Chief Facilities Engineer and the District's Information Technology staff to ascertain if the maintenance staff have knowledge of underground utilities in the vicinity of the trench or excavation, which are not shown on drawings or indicated by USA.

5. SUPPLEMENT TO 14.D Non-Compensable Time Extensions; Adverse Weather Parameters

Refer General Conditions 00 71 00.

6. Supplement to Paragraph 1.4.A SITE SECURITY AND SAFETY, SECTION 01 56 00

In addition, refer Exhibit "A1-4" Site Logistics Plan

7. Supplement to Paragraph 1.9 SITE SECURITY AND SAFETY, SECTION 01 56 00

- a. On a project by project basis, Contractor shall ascertain presence of hazardous materials, including but not limited to lead based paint, asbestos containing building materials, and other potentially hazardous substances. Contractor shall establish safety protocols concerning such materials.

End of Document

SECTION 00 73 17

CONTRACTOR-PROVIDED INSURANCE

- A. At or before the date specified in Section 00 11 19 (Instructions to Bidders), Contractor shall furnish to District satisfactory proof that Contractor has taken out for the entire period covered by the Contract the following classes of insurance in the form and with limits and deductibles specified below:
1. Workers' Compensation Insurance for all persons whom the Contractor may employ in carrying out Work contemplated under Contract Documents, in accordance with the Act of Legislature of State of California, known as "Workers' Compensation Insurance and Safety Act," approved May 26, 1913, and all acts amendatory or supplemental thereto, in the statutory amount. Employers Liability Limit shall be not less than \$1,000,000.
 2. Comprehensive General Liability Insurance covering claims for personal injury, bodily injury and property damage arising out of the Work and in a form providing coverage not less than that of a standard Commercial General Liability Insurance policy ("Occurrence Form"). Such insurance shall provide for all operations and include independent contractors, products liability, completed operations for one year after Final Completion of the last Phase to be completed and acceptance of the final payment for the Work, contractual liability, and coverage for explosion, collapse and underground hazards. The limits of such insurance shall be not less than [**\$2,000,000**] each occurrence, [**\$4,000,000**] general aggregate limit, and [**\$4,000,000**] aggregate for products and completed operations. The policies shall be endorsed to provide Broad Form Property Damage Coverage.
 3. Excess Liability Insurance, on an "Occurrence" form Coverage should apply and follow form over primary coverages shown above. Limits must apply per any one occurrence and general aggregate annually; and Annual Aggregate Products and Completed Operations. The following are required excess limits of liability:
 - a. \$5,000,000 Bodily Injury and Property Damage Liability
 - b. \$5,000,000 General Aggregate
 - c. \$5,000,000 Products and Completed Operations
 4. Contractor's Pollution Liability, on a "Claims Made" or "occurrence"
 - a. \$5,000,000 Each Loss/Annual Aggregate
 5. All-Risk Builders' Risk aka 'Course of Construction' Insurance for physical loss or damage to the Work, temporary buildings, false work, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, damage to adjacent buildings, partial or total collapse of structure(s), debris removal, demolition occasioned by enforcement of Laws, water damage, damage caused by frost and freezing in the amount of 100 percent of the completed value of the Work to be performed under this Contract. Each loss shall be borne by Contractor.
 6. Comprehensive Automobile Liability Insurance covering all owned, non-owned, and hired vehicles. Such insurance shall provide coverage not less than the standard Comprehensive Automobile Liability policy with limits not less than [**\$1,000,000**] each person Bodily Injury, [**\$1,000,000**] each occurrence Bodily Injury, and [**\$1,000,000**] each occurrence Property Damage.
- B. All policies of insurance shall be placed with insurers acceptable to District. The insurance underwriter(s) must have an A. M. Best Company rating of [**A-IX**] or better. Required minimum amounts of insurance may be increased should conditions of Work, in opinion of District, warrant such increase. Contractor shall increase required insurance amounts upon direction by District.

Required Endorsements:

1. Name San Mateo County Community College District, its Board of Trustees, and their employees, representatives, consultants, agents and Architect/Engineer as additional insured ATIMA (As Their Interest May Appear) on the Commercial General Liability Policy and Automobile Policy but only with respect to liability arising out of the activities of the Named Insured..

2. Commercial General Liability additional insured endorsement shall be ISO version CG 20 10 (11/85 edition) or its equivalent.
 3. Each such policy shall apply separately to each insured against which claim is made or suit is brought, except with respect to the limit of the insurance company's liability required under paragraphs A.1, A3 & A6 of this Section 00 73 17.
 4. Insurance shall be primary and no other insurance or self-insured retention carried or held by District shall be called upon to contribute to a loss covered by insurance for the named insured.
 5. Insurance shall contain a provision requiring the insurance carriers to waive their rights of subrogation against District and all additional insured, as well as other insurance carriers for the Work.
 6. Insurance certificates shall be addressed to: San Mateo County Community College District, 3401 CSM Drive, San Mateo, 94402, Attention Facilities Planning and Operations Department.
- C. Certificates of insurance and endorsements shall have clearly typed thereon District Bid Number and title of Contract Documents. Written notice of cancellation, non-renewal, or reduction in coverage of any policy shall be mailed to District (Attention: Contract Administration/Inspection) at the address listed in Section 00 52 00 (Agreement), sixty (60) Days in advance of the effective date of the cancellation, non-renewal, or reduction in coverage. Contractor shall maintain insurance in full force and effect during entire period of performance of Contract Documents. Contractor shall keep insurance in force during warranty and guarantee periods, except that Contractor may discontinue All-Risk Course of Construction Insurance after Final Payment. At time of making application for extension of time, and during all periods exceeding the Contract Time resulting from any cause, Contractor shall submit evidence that insurance policies will be in effect during requested additional period of time. Upon District's request, Contractor shall submit to District, within thirty (30) Days, copies of the actual insurance policies or renewals or replacements.
- D. Contractor shall pay all insurance premiums, including any charges for required waivers of subrogation or the endorsement of additional insured. If Contractor fails to maintain insurance, District may take out comparable insurance, and deduct and retain amount of premium from any sums due Contractor under Contract Documents.
- E. If injury occurs to any employee of Contractor, Subcontractor or sub-subcontractor for which the employee, or the employee's dependents in the event of employee's death, is entitled to compensation from District under provisions of the Workers' Compensation Insurance and Safety Act, as amended, or for which compensation is claimed from District, District may retain out of sums due Contractor under Contract Documents, amount sufficient to cover such compensation, as fixed by the Act, as amended, until such compensation is paid, or until it is determined that no compensation is due. If District is compelled to pay compensation, District may, in its discretion, either deduct and retain from the Contract Sum the amount so paid, or require Contractor to reimburse District.
- F. Nothing in this Section 00 73 17 shall be construed as limiting in any way the extent to which Contractor or any Subcontractor may be held responsible for payment of damages resulting from their operations.
- G. Except that Subcontractors need obtain only **[\$1,000,000]** of Comprehensive General Liability insurance, all Subcontractors shall maintain the same insurance required to be maintained by Contractor with respect to their portions of the Work, and Contractor shall cause the Subcontractors to furnish proof thereof to District within ten (10) Days of District's request.
- H. The following provisions apply to any licensed professional engaged by Contractor to perform portions of the Work ("Professional").
1. Each Professional shall maintain the following insurance at its sole cost and expense:
 - a. Provided such insurance is customarily required by District when professionals engaged in the profession practiced by Professional directly contract with District, Professional Liability Insurance, insuring against professional errors and omissions arising from Professional's work on the Project, with a limit of not less than **[\$1,000,000]** for each claim. If Professional cannot provide an occurrence policy, Professional shall provide insurance covering claims made as a result of performance of Work on this Project and shall maintain such insurance in effect for not less than two years following Final Completion of the Project.
 - b. All insurance required by paragraphs A.1, A.2 and A.6 of this Section 00 73 17. Professional shall satisfy all other provisions of paragraphs A, B, C, D, E and F of this Section 00 73 17 relating to that insurance,

including without limitation providing required insurance certificates (containing the required endorsements) before commencing its Work on the Project.

END OF SECTION

SECTION 00 73 37

APPRENTICESHIP PROGRAM

Contractor and Subcontractors shall comply with the requirements of California Labor Code Sections 1776, 1777.5, and 1777.6 concerning the employment of apprentices by Contractor or Subcontractors. Willful failure to comply may result in penalties, including loss of the right to Bid on or receive public works contracts.

Section 1777.5, as amended, requires a Contractor or Subcontractor employing tradespersons in any apprenticeable occupation to apply to the joint apprenticeship committee nearest the site of a public works project and which administers the apprenticeship program in that trade for a certification of approval. The certificate shall also fix the ratio of apprentices to journeypersons that will be used in performance of the Contract. The ratio of work performed by apprentices to journeypersons in such cases shall not be less than one hour of apprentices work for every five hours of labor performed by journeypersons (the minimum ratio for the land surveyor classification shall not be less than one apprentice for each five journeypersons), except:

- A. When unemployment for the previous three-month period in the area exceeds an average of 15 percent;
- B. When the number of apprentices in training in the area exceeds a ratio of one to five;
- C. When a trade can show that it is replacing at least 1/30 of its membership through apprenticeship training on an annual basis state-wide or locally; or
- D. Assignment of an apprentice to any work performed under a public works contract would create a condition which would jeopardize his or her life or the life, safety, or property of fellow employees or the public at large or if the specific task to which the apprentice is to be assigned is of such a nature that training cannot be provided by a journeyperson.

Contractor is required to make contributions to funds established for administration of apprenticeship programs if Contractor employs registered apprentices or journeypersons in any apprenticeable trade on such contracts and if other contractors on the public works site are making such contributions.

Information relative to apprenticeship standards, wage schedules, and other requirements may be obtained from the Director of the California Department of Industrial Relations, or from the Division of Apprenticeship Standards and its branch offices.

In the event this Contract is governed by the District's Program Stabilization Agreement, and the Program Stabilization Agreement conflicts with this Section 00 73 37, the Program Stabilization Agreement will control to the extent permitted by law.

END OF SECTION

SECTION 01 10 00

SUMMARY OF WORK

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes summary of Work including:
 - 1. Project Information
 - 2. Work Covered By Contract Documents
 - 3. Bid Items, Allowances, and Alternates
 - 4. Work Under Other Contracts
 - 5. Future Work (N/A)
 - 6. Work Sequence
 - 7. Business Days and Hours
 - 8. Cooperation of Contractor and Coordination with Other Work
 - 9. Maintenance, Product Handling, and Protection
 - 10. Partial Occupancy/Utilization Requirements
 - 11. Contractor Use of Premises
 - 12. Lines and Grades
 - 13. Protection of Existing Structures and Utilities
 - 14. Damage to Existing Property
 - 15. Dust Control
 - 16. Parking
 - 17. Laydown/Staging Area
 - 18. Permits
 - 19. Punch List Verification
 - 20. Actual Damages for Violations
 - 21. Unfavorable Construction Conditions
 - 22. Construction Site Access
 - 23. Specification Data Sheets and Schedules
 - 24. Site Administration
 - 25. Products Ordered In Advance
 - 26. District-Furnished Products
 - 27. CEQA Mitigations
 - 28. Storm Water Pollution Program- *See Section 01 35 00*

1.2 WORK COVERED BY CONTRACT DOCUMENTS

- A. Project Identification: College of San Mateo – Building 12 and Colonnades Roof Replacement Project.
- B. Project location: 1700 W. Hillsdale Blvd., San Mateo, CA. 94402
- C. Owner: San Mateo County Community College District, 3401 CSM Drive, San Mateo, CA. 94402
- D. Consultant: Allana Buick and Bers, Inc., 990 Commercial St., Palo Alto, CA. 94303
- E. Construction Manager: Swinerton Management and Consulting
- F. Furnish all labor, materials, equipment, services, permits, temporary controls and construction facilities, and all general conditions, seismic requirements, general requirements and incidentals required to complete the Work in its entirety as described in the Contract Documents. The Work includes, but is not necessarily limited to the following:
 - 1. Hazardous abatement of existing roofing materials. Refer Specification section XXX for procedures and hazardous reports for type and scope.
 - 2. Protection: Furnish and install all protection necessary to prevent damage to building components and grounds and protect the worksite from the general public. Refer hazardous materials specification for additional protection measures.
 - 3. Test 100 percent of drains at Building 12 within (5) five calendar days of Notice to Proceed.

4. Demolition: Refer to selective demolition schedule in section 02 41 22 "Selective demolition" and the Contract Documents.
 5. Provide felt-backed thermoplastic roofing fully adhered to substrate board fully adhered to existing deck at building 12.
 6. Provide framing and plywood crickets at building 12 to achieve minimum ¼ inch per foot slope to drains. Secure framing to existing concrete deck.
 7. Provide cast iron strainer, clamping ring, and hardware typical, clean existing drain bowls and test all drains. Clean drain lines as required to achieve free flowing performance.
 8. Alternate: Provide cast iron roof drains to replace 100 percent of the existing drains at building 12. Base bid includes demolition and provision of strainers, clamping rings, and hardware. Adjust existing piping as required to connect drains. Test and clean drain lines as required for drains to achieve free flowing performance.
 9. Provide Unit Price to demolish and provide single drain.
 10. Provide walkway pads where indicated and provide Unit Price for addition or deletion of walkway pads per lineal foot.
 11. Provide blocking as required to achieve minimum 8 inch flashing heights.
 12. Demolish and dispose of existing roof hatch and ladder. Provide new roof hatch and ladder and large wood platform for hatch where indicated.
 13. Core drill existing concrete and provide overflow drains, overflow piping, and hardware to secure pipe to substrate. X-ray existing concrete to locate existing reinforcing steel prior to drilling thru concrete. Drilling through existing reinforcing is not permitted. Cores taken through concrete that expose existing reinforcing shall be patched at no cost to the Owner.
 14. Provide fluid-applied roofing at colonnades indicated in the Contract documents.
 15. Provide paint at concrete under edge metal, exposed metal in project, and where indicated.
 16. Provide expansion joint continuing down sides of fascia and integrated into roofing, existing roofing, and fascia's at building 2 and 4 colonnades. Contractor to vacuum out existing joints and thoroughly clean prior to installing expansion joints.
 17. Provide sheet metal flashing and trim, joint sealants, rough carpentry as indicated and as required to complete the work.
 18. Temporarily disconnect/reconnect, relocate, raise, and reinstall existing roof-mounted mechanical equipment, including related systems such as piping, electrical wiring and conduit and their related supports, as needed to complete the Work of this Project. Electrical work to be completed by an electrician licensed in the State of California.
 19. Provide other work shown or noted in the Contract Documents.
 20. Remove all construction debris, tools, equipment and construction fencing from site and restore landscaping to condition prior to start of construction.
 21. Concrete reinforcing is not shown in details for clarity. If reinforcing is encountered during installation of fasteners, relocate fasteners to miss reinforcing.
 22. Provide scaffold barricades with four (4) foot high screen walls compliant with all applicable codes to protect public from falling or hazardous debris. Locations as shown in Exhibit A1-4.
 23. Coordination with other contractors working at the site and its Subcontractors, coordination with local utility owners and **[PG&E]** and the District, obtaining necessary permits and complying with permit and environmental conditions, project startup and testing, site restoration and cleanup.
- G. The Work of this Contract comprises construction of all the Work indicated, described in the Specifications, or otherwise required by the Contract Documents.
- H. Unless provided otherwise in the Contract Documents, all risk of loss to Work covered by Contract Documents shall rest with Contractor until Final Acceptance of the Work.
- I. Contractor's use of the premises for Work and storage is limited to the area indicated.
- J. Contractor shall be solely responsible for all utilities (including without limitation electricity, water, gas, etc.) at the Site.
- K. Contractor shall carefully remove, in a manner to prevent damage, all materials and equipment specified or indicated to be salvaged and reused or to remain the property of District. Contractor shall store and protect salvaged items specified or indicated to be reused in the Work.
- a. Contractor may furnish and install new items instead of those specified or indicated to be salvaged and reused, in which case such removed items will become Contractor's property.
- L. Existing materials and equipment removed by Contractor shall not be reused in the Work, except where so specified or indicated.

- M. Salvaged items not to be reused in the Work, but to remain District's property, shall be delivered by Contractor in good condition to District at the Facilities Maintenance Center, 4200 Farm Hill Blvd., Redwood City or 1700 West Hillsdale Blvd, San Mateo or 3300 College Drive, San Bruno.
- a. Any items specified or indicated to be salvaged which are damaged in removal, storage, or handling through carelessness or improper procedures shall be replaced by Contractor in kind or with new items.

1.3 BID ITEMS, ALLOWANCES, AND ALTERNATES

- A. Any Bid Item may be deleted from the Work and Contract Sum, in total or in part, prior to or after award of Contract without compensation in any form or adjustment of other Bid Items or prices therefore.
- B. Payment of all items is subject to provisions of Contract Documents, including without limitation Section 01 29 00 (Measurement and Payment).
- C. For all Bid Items, furnish and install all work indicated and described in Specifications and all other Contract Documents, including connections to existing systems. Work and requirements applicable to each individual Bid Item, or unit of Work, shall be deemed incorporated into the description of each Bid Item..
- D. Bid items are not intended to be exclusive descriptions of work categories and Bidder shall determine and include in its pricing all materials, labor, and equipment necessary to complete each Bid Item as shown and specified:
- E. Allowances:
1. Allowance work shall be done as Change Orders and as specified in Section 01 26 00 (Modification Procedures). Identify Allowance Items (See Document 00 41 00 [Bid Form]) work on the Progress Schedules and on Applications for Payment.
 2. The Amount given on Document 00 41 00 (Bid Form) under each Allowance Item is the sum of money set aside for each Allowance Item. These amounts shall be included in the Contract Sum on the Bid Form.
 3. If the cost of work done under any Allowance Item is less than the amount given on the Bid Form under that Allowance Item, the Contract Sum shall be reduced by the difference between the amount given in the Bid Form and the cost of work actually done.
- F. Alternates – refer Bid form 00 41 00.

1.4 WORK UNDER OTHER CONTRACTS

Work at the site performed by others includes the following:

Building 12 interior remodel will be in progress during part or all of the work under this contract.

1.5 WORK SEQUENCE

- A. Construct Work in one stage.

1.6 BUSINESS DAYS AND HOURS

- A. The District's Regular Business Days and hours for construction personnel, such as facilities managers, architects, inspectors, and maintenance personnel, are Monday-Friday inclusive, 7:30 a.m. - 4:30 p.m. local time.
- B. Contractor is advised that District, students and faculty are on campuses Monday – Friday, 8:00 a.m. - 10:00 p.m., with generally less activity between 1:00 p.m. and 6:00 p.m., and Saturday 8:00 a.m. – 1:00 p.m.
- C. Contractor may work at the Site on weekends or holidays if it notifies District in writing at least 48 hours in advance. In the case of Work by Contractor after normal working hours or on weekends or holidays, Contractor shall be responsible for any additional inspection costs incurred by the District. Such costs may be withheld from any succeeding monthly progress payment.
- D. See Section 00 73 00 Supplementary Conditions for College Activities and Events which may also result in Contractor's inability to work.
- E. Contractor shall protect facilities against deleterious substances and damage.

1.7 COOPERATION OF CONTRACTOR AND COORDINATION WITH OTHER WORK

- A. Coordinate with District and any District forces, or other contractors and forces, as required by Document 00 71 00 (General Conditions), paragraph 6.
- B. Contractor shall coordinate the construction schedule with the regular daily operations schedule of the District and Campus for minimal interruption during utility service installations/modifications. All shut-downs required to perform the work and temporary facilities/utilities to affected District constituencies or other

projects shall be coordinated by the Contractor and included in the base scope/cost of the project for normal power service installation.

- C. Noise: Construction activities are to comply with applicable local noise ordinance and applicable Cal-OSHA regulations.
- D. Connections to Existing Facilities. Unless otherwise specified or indicated, Contractor shall make all necessary connections to existing facilities, including structures, drain lines, and utilities such as water, sewer, gas, telephone, and electric. In each case, Contractor shall receive permission from District or the owning utility prior to undertaking connections.

1.8 MAINTENANCE, PRODUCT HANDLING, AND PROTECTION

- A. Transport, deliver, handle, and store materials and equipment at the Site in such a manner as to prevent the breakage, damage or intrusions of foreign matter or moisture, and otherwise to prevent damage.
- B. Hazardous substance compliance: Provide District with copies of the OSHA Material Safety Data Sheets (MSDS) for all products containing a hazardous substance, examples: Adhesives, paints, sealants, and the like.
- C. Packaging: Provide packaged material in manufacturer's original containers with seals unbroken and labels intact until incorporated into the Work.
- D. Remove all damaged or otherwise unsuitable material and equipment promptly from the Site.
- E. Protection: Protect all finished surfaces.
- F. Asbestos Removal: If, during the progress of the Work, suspected asbestos-containing products are identified, Contractor shall stop work in the affected area and immediately notify the Owner. Owner shall either directly engage an asbestos removal contractor to verify the materials and, if necessary, encapsulate, enclose, or remove and dispose of all asbestos in accordance with current regulations of the Environmental Protection Agency and the U. S. Department of Labor – Occupational Safety and Health Administration, the state asbestos regulating agency, and any local government agency; or Owner shall direct Contractor to do the same as a Change Order to the contract. The Contractor shall take all measures to avoid and/or mitigate delays due to Hazardous Materials/Waste finds such as: avoiding the area of the find and proceeding with other work on the project; developing "work around" plans; and documenting his best efforts to avoid and/or mitigate delays.
 - 1. Asbestos Removal Subcontractor's Qualifications. The Subcontractor for asbestos removal shall be regularly engaged in this type of activity and shall be familiar with the regulations that govern this work. The Subcontractor shall demonstrate to the satisfaction of District that it has successfully completed at least three asbestos removal projects that it has the necessary staff and equipment to perform the work, and that it has an approved site for disposal of the asbestos. Liability insurance covering the asbestos abatement work shall be provided as specified in the Supplementary Conditions.
 - 2. Asbestos Removal Methods. The asbestos removal Subcontractor shall submit a work plan of its proposed removal procedure to District before beginning work and shall certify that the methods are in full compliance with the governing regulations. The work plan shall cover all aspects of the removal, including health and safety of employees and building occupants, hygiene facilities, employee certification, clearance criteria, transportation and disposal, enclosure techniques, and other techniques appropriate for the proposed work.
- G. Cost of maintenance of systems and equipment prior to either Substantial Completion or filing of a Notice of Completion will be considered as included in prices bid and no direct or additional payment will be made therefore.
- H. Maintenance logs and all related contract close-out documentation will be submitted to the District's Representative no more than thirty (23) days after the date of Substantial Completion. A Notice of Completion will not be filed until all contract close-out documents are submitted and approved.

1.9 PARTIAL OCCUPANCY/UTILIZATION REQUIREMENTS

- A. Allow District to take possession of and use any completed or partially completed portion of the Work during the progress of the Work as soon as is possible without interference to the Work.
- B. Possession, use of Work, and placement and installation of equipment by District shall not in any way evidence the completion of the Work or any part of it.
- C. Contractor shall not be held responsible for damage to the occupied part of the Work resulting from District occupancy.
- D. Make available, in areas occupied, on a 24-hour per day and 7-day per week basis if required, any utility services, heating, and cooling in condition to be put in operation at the time of occupancy.

1. Responsibility for operation and maintenance of said equipment shall remain with Contractor.
 2. Make, and District shall certify, an itemized list of each piece of equipment so operated with the date operation commences.
 3. Itemized list noted above shall be basis for commencement of warranty period for equipment.
 4. District shall pay for utility cost arising out of occupancy by District during construction.
- E. Use and occupancy by District prior to acceptance of Work does not relieve Contractor of its responsibility to maintain insurance and bonds required under the Contract until entire Work is completed and accepted by District.
- F. Prior to date of Final Acceptance of the Work by District, all necessary repairs or renewals in Work or part thereof so used, not due to ordinary wear and tear, but due to defective materials or workmanship or to operations of Contractor, shall be made at expense of Contractor, as required in Document 00 71 00 (General Conditions).
- G. Use by District of Work or part thereof as contemplated by this Section 01 10 00 shall in no case be construed as constituting acceptance of Work or any part thereof. Such use shall neither relieve Contractor of any responsibilities under Contract, nor act as waiver by District of any of the conditions thereof.
- H. District may specify in the Contract Documents that portions of the Work, including electrical and mechanical systems or separate structures, shall be substantially completed on dates described in paragraph 1.6 of this Section 01 10 00, if any, prior to substantial completion of all of the Work. Contractor shall notify District's Representative and Architect/Engineer in writing when Contractor considers any such part of the Work ready for its intended use and substantially complete and request District to issue a Certificate of Substantial Completion for that part of the Work.

1.10 CONTRACTOR USE OF PREMISES

- A. Confine operations at Site to areas permitted by Contract Documents, permits, ordinances, and laws.
- B. Do not unreasonably encumber Project Site with materials or equipment.
- C. Assume full responsibility for protection and safekeeping of products stored on premises.
- D. Move any stored products that interfere with operations of District or other contractor.
- E. Parking, storage, staging, and work areas shall be coordinated with the District, and comply with all other Contract documents requirements.

1.11 LINES AND GRADES

- A. All Work shall be done to the lines, grades, and elevations indicated on the Drawings.
- B. District shall provide basic horizontal and vertical control points to be used as datums for the Work. All additional survey, layout, and measurement work shall be performed by Contractor as a part of the Work.
- C. Contractor shall provide at its cost an experienced instrument person, competent assistants, and such instruments, tools, stakes and other materials required to complete the survey, layout, and measurement work. In addition, Contractor shall furnish at its cost competent persons and such tools, stakes, and other materials as District (and/or any Architect/Engineer) may require in establishing or designating control points, or in checking survey, layout, and measurement work performed by Contractor.
- D. Contractor shall keep District informed, a reasonable time in advance, of the times and places at which it wishes to do survey/layout work, so that any checking deemed necessary by District may be done with minimum inconvenience to District and minimum delay to Contractor.
- E. Contractor shall remove and reconstruct Work which is improperly located.

1.12 PROTECTION OF EXISTING STRUCTURES AND UTILITIES

- A. The Drawings may indicate existing above- and below-grade structures, drainage lines, storm drains, sewers, water, gas, electrical, hot water, and other similar items and utilities that are known to District.
- B. Contractor shall locate these known existing installations before proceeding with trenching or other operations which may cause damage, shall maintain them in service where appropriate, and shall repair any damage to them caused by the Work, at no increase in Contract Sum.
- C. Additional utilities whose locations are unknown to District are suspected to exist. Contractor must be alert to their existence. If additional utilities are encountered, Contractor must immediately report to District for disposition.
- D. In addition to reporting, if a utility is damaged, Contractor must take appropriate action as provided in Document 00 71 00 (General Conditions).

- E. Additional compensation or extension of time on account of utilities not indicated or otherwise brought to Contractor's attention including reasonable action taken to protect or repair damage shall be determined as provided in Document 00 71 00 (General Conditions).

1.13 DAMAGE TO EXISTING PROPERTY

- A. Contractor will be responsible for any damage to existing structures, Work, materials, or equipment because of its operations and shall repair or replace any damaged structures, Work, materials, or equipment to the satisfaction of, and at no additional cost to, District.
- B. Contractor shall protect all existing structures and property from damage and shall provide bracing, shoring, or other work necessary for such protection.
- C. Contractor shall be responsible for all damage to streets, roads, curbs, sidewalks, highways, shoulders, ditches, embankments, culverts, bridges, or other public or private property, which may be caused by transporting equipment, materials, or workers to or from the Work. Contractor shall make satisfactory and acceptable arrangements with the agency having jurisdiction over the damaged property concerning its repair or replacement.

1.14 DUST CONTROL

- A. Contractor shall take reasonable measures to prevent unnecessary dust. The following items shall be specifically implemented to control dust:
 - 1. All construction locations with active excavation shall be watered at least twice daily.
 - 2. Cover all trucks hauling soil, sand, and other loose materials; or require all trucks to maintain at least two feet of freeboard.
 - 3. Pave, apply water daily, or apply non-toxic soil stabilizers on all un-paved access roads, parking areas, and staging areas at construction site.
 - 4. Sweep daily with water sweepers all paved access roads, parking areas, and staging areas at construction sites during earthwork activities.
 - 5. Enclose, cover, water twice daily, or apply non-toxic soil binders to exposed stockpiles (dirt, sand, etc.)
 - 6. Limit the speed of all construction vehicles to 5 miles per hour while on un-paved roads at the Site.
- B. Buildings or operating facilities which may be affected adversely by dust shall be adequately protected from dust. Existing and new machinery, motors, instrument panels, or similar equipment shall be protected by suitable dust screens. Proper ventilation shall be included with dust screens.
- C. Building Interiors: provide dust barriers, walk-off pads, etc. to minimize dust infiltration in buildings. If required, the Contractor will clean interior common areas (e.g., corridors, lobbies) as needed during each work day.

1.15 PARKING

Parking will be provided in designated areas at no cost to the Contractor.

1.16 LAYDOWN/STAGING AREA

Contractor shall utilize the area indicated on the Drawings for storage of all construction materials. This area shall be fenced and locked by Contractor for security purposes.

1.17 PUNCH LIST VERIFICATION

A punch list examination will be performed upon Substantial Completion of Work. One follow-up review of punch list items for each discipline will be provided. If further Site visits are required to review punch list items due to incompleteness of the Work by Contractor, at District's discretion, Contractor shall reimburse District for these visits.

1.18 UNFAVORABLE CONSTRUCTION CONDITIONS

During unfavorable weather, wet ground, or other unsuitable construction conditions, Contractor shall confine its operations to Work which will not be affected adversely by such conditions. No portion of the Work shall be constructed under conditions which would affect adversely the quality or efficiency thereof, unless special means or precautions are taken by Contractor to perform the Work in a proper and satisfactory manner. The Contractor will employ BEST practices to manage the construction site during inclement weather.

1.19 CONSTRUCTION SITE ACCESS

Contractor shall at all times limit access to the Site to necessary personnel only. All personnel associated with construction of the Project shall enter the site through Contractor's access gate, at the location indicated on the Drawings. Access for construction personnel shall be limited to regular work hours, unless prior approval is obtained from the District. All mail and deliveries (Federal Express, equipment, etc.) shall be sent to a separate address (at Contractor's gate), specifically arranged by Contractor for the Project. Contractor is responsible for providing adequate signage (subject to District approval) to alert delivery persons to the project site. The District will not receive or forward Contractor mail or deliveries.

1.20 SPECIFICATION DATA SHEETS AND SCHEDULES

Specifications may have data sheets and schedules as part of specific specification sections. Locations for data entries on the data sheets and schedules may be left blank intentionally. Each line where data may be entered on the data sheet has a selection box in the column "Chk". When the box for a line is checked and no data is entered in the respective line, this indicates that no data is required for that line of the data sheet.

Other standard codes which apply to the Work are designated in the Specifications.

1.21 SITE ADMINISTRATION

Contractor shall be responsible for all areas of the Site used by it and by all Subcontractors in the performance of the Work. Contractor shall exert full control over the actions of all employees and other persons with respect to the use and preservation of property and existing facilities, except such controls as may be specifically reserved to District or others. Contractor shall have the right to exclude from the Site all persons who have no purpose related to the Work or its inspection, and may require all persons on the Site to observe the same regulations as Contractor requires of its employees.

1.22 EROSION CONTROL

A. SCOPE OF WORK

1. General: Provide all materials, equipment and labor necessary to furnish and install straw wattles, silt fence barriers, hydroseed, or other Best Management Practices (BMP's) at locations shown on the Contractors Storm Water Pollution Prevention Plan. See Section 01 35 00 for further detail.
2. Storm Water Pollution Prevention Plan: Prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) tailored to the Contractor's operations, methods and equipment. Comply with State Water Resources Control Board requirements. The SWPPP shall be reviewed and approved by the authority having jurisdiction prior to the start of work. The SWPPP shall be tailored to the contractor's approach to the work in this contract. The Contractor shall as a minimum address:
 - a. Cut and fill operations
 - b. Temporary stockpiles
 - c. Vehicle and equipment storage, maintenance and fueling operations
 - d. Concrete, plaster, mortar and paint disposal
 - e. Dust control
 - f. Tracking of dirt and mud, on and off of site, and adjacent streets.
 - g. Pipe flushing and protection of drainage facilities both new and existing, on and off site as required by State Water Resources Control Board.

B. QUALITY ASSURANCE

General: Comply with governing codes and regulations of the State Water Resources Control Board.

1.03 SUBMITTALS

- A. ~~Notice Of Intent (NOI): The Contractor shall submit a NOI to the State Water Resources Control Board in the name of San Mateo County Community College District prior to beginning work on site if required.~~

PART 2 PRODUCTS

2.1 RESPONSIBILITIES FOR DISTRICT-FURNISHED PRODUCTS

- A. District's Responsibilities:
 - 1. Arrange for and deliver District-reviewed Shop Drawings, Product Data, and Samples, to Contractor.
 - 2. Arrange and pay for delivery to site.
 - 3. On delivery, inspect products jointly with Contractor.
 - 4. Submit claims for transportation damage and replace damaged, defective, or deficient items.
 - 5. Arrange for manufacturers' warranties, inspections, and service.
- B. Contractor's Responsibilities:
 - 1. Review District-reviewed Shop Drawings, Product Data, and Samples.
 - 2. Receive and unload products at site; inspect for completeness or damage jointly with District.
 - 3. Handle, store, install, and finish products.
 - 4. Repair or replace items damaged after receipt.
 - 5. Install into Project per Contract Documents.

PART 3 EXECUTION – NOT USED

PART 4 PRODUCTS

4.1 SPECIFICATION AND DRAWING CONVENTIONS

- 1. The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:
 - a. Imperative mood and streamlined language are generally used in the Specifications. The words “shall”, “shall be”, or “shall comply with”, depending on the context, are implied where a colon (:) is used within a sentence or phrase.
 - b. Specification requirements are to be performed by Contractor unless specifically stated otherwise.
- 2. Division 00 and 01 requirements apply to the work of all Sections in the Specifications.
- 3. Drawing coordination: Requirements for materials and products identified on the Drawings are described in detail in the Specifications. One or more of the following are used on the Drawings to identify materials and products:
 - a. Terminology: Materials and products are identified by abbreviations scheduled on Drawings.
 - b. Abbreviations: Materials and products are identified by abbreviations scheduled on drawings.
 - c. Keynoting: Materials and products are identified by reference keynotes referencing Specification Section numbers found in this Project Manual.

END OF SECTION

SECTION 01 21 00

OWNER'S ALLOWANCE

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Non-specified work to be performed only at the determination and direction of the Owner/District. Allowance costs are authorized solely by the District and are not otherwise included in the contract documents.

1.2 RELATED SECTIONS

- A. Section 01 29 00 - Measurement and Payment.
- B. Section 01 32 19 – Submittal Procedures.

1.3 NON-SPECIFIED WORK ALLOWANCE

- A. Include in the Contract, a stipulated sum/price of for non-specified items. Refer bid form 00 41 00.
- B. Contractor's costs for products, delivery, installation, labor, insurance, payroll, taxes, bonding and equipment rental will be included in Change Orders authorizing expenditure of funds from this Allowance.
- C. Funds will be drawn from Allowance only by approval of the Owner and authorization of Change Orders by the Architect.
- D. At closeout of Contract, funds remaining in Allowance will be credited to Owner by Change Order.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

END OF SECTION

SECTION 01 23 00

ALTERNATES**PART 1 GENERAL****1.1 SUMMARY**

- A. Section Includes:
1. This Section identifies generally the work of each alternate and includes a non-technical description of the basic changes to be incorporated into the Work when each alternate is made a part of the Work.
 2. Unless otherwise specifically provided, the work described in Alternates shall be completed with no increase in Contract Time.

1.2 PROCEDURES

- A. Coordination: Modify or adjust affected adjacent work as necessary to completely integrate work of the Alternate into Project.
1. Include as part of each Alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.
- B. Refer to the Specifications for the full scope of work in each Alternate.
- C. Coordinate related Work and modify surrounding Work as required to integrate the various elements of the alternates in the complete Work, when acceptance is designated in the Contract or added by Change Order.
- D. All alternate prices shall include all costs, including insurance, bonds, overhead, and profit.

1.3 DETAIL REQUIREMENTS

- A. Definitions: Alternates are defined as products, materials, equipment, systems, methods, units of work or major elements of the construction, which may, at District's option and under the terms established by the Request for Proposals and in the Contract, be selected for the Work in lieu of other requirements of the Contract Documents. Selection may occur prior to commencement of Contract Time, or District may defer for possible selection as provided in paragraph B. Below.
- B. District reserves the right to make decisions on Alternates for **[Thirty (30)]** Calendar Days after the commencement of Contract Time. The District reserves the right to adjust the total funds available to complete the Project in order to accept any or all Alternates. Contractor shall hold prices of those Alternates for that time period.

1.4 SCHEDULE OF ALTERNATES

- A. General: Description for each Alternate listed below is recognized to be abbreviated but implies that each change shall be complete for the scope of work affected. Refer to applicable Contract Documents for specific requirements for each Alternate.
1. Indicate price for Alternates described below and listed in the Document 00 41 00 (Bid Form).
 2. Bids will be evaluated on the base bid price and price of Alternates.
 3. Alternate No. 1 – Building 12 Roof Drains

[Etc.]

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION – NOT USED

END OF SECTION

SECTION 01 26 00

MODIFICATION PROCEDURES**PART 1 GENERAL****1.1 SUMMARY**

- A. Section includes:
 - 1. Description of general procedural requirements for alterations, modifications, and extras.
- B. Reference
 - 1. Public Contract Code Section 7105(d)(2).

1.2 GENERAL

- A. Any change in scope of Work or deviation from Contract Documents including, without limitation, extra work, or alterations or additions to or deductions from the original Work, shall not invalidate the original Contract, and shall be performed under the terms of the Contract Documents.
- B. Only Contractor or District may initiate changes in scope of Work or deviation from Contract Documents.
 - 1. Contractor may initiate changes by submitting RFIs, Notice of Concealed or Unknown Conditions, or Notice of Hazardous Waste Conditions.
 - a. RFIs shall be submitted to seek clarification of or request changes in the Contract Documents. RFIs shall not be submitted to District seeking clarification to any errors or omissions on behalf of the Contractor's preparation of the Construction Documents or any other Contract Documents prepared by Contractor.
 - b. Notices of Concealed or Unknown Conditions shall be submitted in accordance with Document 00 71 00 (General Conditions).
 - c. Notices of Hazardous Waste Conditions shall be submitted in accordance with Document 00 71 00 (General Conditions).
 - 2. Contractor shall be responsible for its costs to implement and administer RFIs throughout the Contract duration. Regardless of the number of RFIs submitted, Contractor shall not be entitled to additional compensation. Contractor shall be responsible for both District and its consultant's administrative costs for answering RFIs where the answer could reasonably be found by reviewing the Contract Documents, as determined by District; at District's discretion, such costs may be deducted from progress payments or final payment.
 - 3. District may initiate changes by issuing a Supplemental Instruction, which may revise, add to or subtract from the Work.
 - 4. District may initiate changes in the Work or Contract Time by issuing RFPs to Contractor. Such RFPs will detail all proposed changes in the Work and request a quotation of changes in Contract Sum and Contract Time from Contractor.
 - 5. District may also, by Construction Change Directive ("CCD"), order changes in the Work within the general scope of the Contract consisting of additions, deletions, or other revisions, the Contract Sum and Contract Time being adjusted accordingly. A CCD shall be used in the absence of total agreement on the terms of a Change Order and may, upon notice, consist of a Change Order executed by District only.
 - 6. Not used.
 - 7. It is the responsibility of the Contractor to notify the District within 14 days if there is a cost change. Notifications beyond this time limit may result in future claims being time barred.

1.3 PROCEDURES

- A. **Cost Proposal and Procedures:** Whenever Contractor is required in this Section 01 26 00 to prepare a Cost Proposal, and whenever Contractor is entitled to submit a Cost Proposal and elects to do so, Contractor shall prepare and submit to District for consideration a Cost Proposal using the form attached to this Section 01 26 00, or other similarly prepared form previously approved by the District. All Cost Proposals must contain a complete breakdown of costs of credits, deducts and extras; itemizing materials, labor, taxes, overhead and profit. All Subcontractor Work shall be so indicated. Individual entries on the Cost Proposal form shall be determined as provided in paragraphs 1.4 and 1.5 of this Section 01 26 00. After receipt of a Cost Proposal with a detailed breakdown, District will act promptly thereon.
1. If District accepts a Cost Proposal, District will prepare Change Order for District and Contractor signatures.
 2. If Cost Proposal is not acceptable to District because it does not agree with cost and/or time included in Cost Proposal, District will submit in a response what it believes to be a reasonable cost and/or adjustment, if any. Except as otherwise provided in this Section 01 26 00, Contractor shall have seven Days in which to respond to District with a revised Cost Proposal.
 3. When necessity to proceed with a change does not allow the District sufficient time to conduct a proper check of a Cost Proposal (or revised Cost Proposal), District may order Contractor to proceed on basis to be determined at earliest practical date. In this event, value of change, with corresponding equitable adjustment to Contract, shall not be more than increase or less than decrease proposed.
- B. **Request for Information:** Whenever Contractor requires information regarding the Project or Contract Documents or receives a request for information from a Subcontractor, Contractor may (except as provided in paragraph 1.2.B.1.a above), prepare and deliver an RFI to District. Contractor shall not submit an RFI to the District if it pertains to a Subcontractor's request for clarification of the Construction Documents or any other Contract Documents prepared by Contractor. Contractor shall use RFI format provided by District. Contractor must submit time critical RFIs at least 30 days before scheduled start date of the affected Work activity. Contractor shall reference each RFI to an activity of Progress Schedule and shall note time criticality of the RFI, indicating time within which a response is required. Contractor's failure to reference RFI to an activity on the Progress Schedule and note time criticality on the RFI shall constitute Contractor's waiver of any claim for time delay or interruption to the Work resulting from any delay in responding to the RFI.
1. District will endeavor to respond within seven Days from receipt of RFI with a written response to Contractor, provided that the RFI complies with paragraph B. above and is time critical. Additionally, District may return RFI requesting additional information should original RFI be inadequate in describing condition. Contractor shall distribute response to all appropriate Subcontractors.
 2. If Contractor is satisfied with the response and does not request change in Contract Sum or Contract Time, then the response shall be executed without a change.
 3. If Contractor believes the response is incomplete, Contractor shall issue another RFI (with the same RFI number with the letter "A" indicating if it is a follow-up RFI) to District clarifying original RFI.
 4. If Contractor believes that the response results in change in Contract Sum or Contract Time, Contractor shall notify District in writing within seven Days after receiving the response. If District disagrees with Contractor, then Contractor may give notice of intent to submit a Claim as described in Article 12 of Document 00 71 00 (General Conditions), and submit its Claim within 30 days of District's response. If District agrees with Contractor, then Contractor must submit a Cost Proposal within 21 Days of District's response to the RFI. Contractor's failure to deliver either the foregoing notice of Claim or Cost Proposal by the respective deadlines stated in the foregoing sentences shall result in waiver of the right to file a Cost Proposal or Claim.
- C. **Supplemental Instruction:** District may issue Supplemental Instruction to Contractor.
1. If Contractor is satisfied with Supplemental Instruction and does not request change in Contract Sum or Contract Time, then Supplemental Instruction shall be executed without a Change Order.
 2. If Contractor believes that Supplemental Instruction results in change in Contract Sum or Contract Time, then Contractor shall notify District in writing within seven Days after receiving the

- response. If District disagrees with Contractor, then Contractor may give notice of intent to submit a Claim as described in Article 12 of Document 00 71 00 (General Conditions), and submit its Claim within 30 days of District's response. If District agrees with Contractor, then Contractor must submit a Cost Proposal within 21 Days of District's response to the RFI. Contractor's failure to deliver either the foregoing notice of Claim or Cost Proposal by the respective deadlines stated in the foregoing sentences shall result in waiver of the right to file a Cost Proposal or Claim.
- D. Construction Change Directives: If at any time District believes in good faith that a timely Change Order will not be agreed upon using the foregoing procedures, District may issue a CCD with its recommended cost and/or time adjustment. Upon receipt of CCD, Contractor shall promptly proceed with the change of Work involved and concurrently respond to District's CCD within 10 Days.
1. Contractor's response must be any one of following:
 - a. Return CCD signed, thereby accepting District's response, time and cost.
 - b. Submit a (revised if applicable) Cost Proposal with supporting documentation (if applicable, reference original Cost Proposal number followed by letter A, B, etc. for each revision), if District so requests.
 - c. Give notice of intent to submit a Claim as described in Article 12 of Document 00 71 00 (General Conditions), and submit its Claim with 30 days.
 2. If the CCD provides for an adjustment to the Contract Sum, the adjustment shall be based on one of the following methods:
 - a. Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation.
 - b. Unit prices stated in the Contract Documents or subsequently agreed upon.
 - c. Force account.
 - d. Cost to be determined in a manner agreed.
 3. CCD signed by Contractor indicates the agreement of Contractor therewith, including adjustment in Contract Sum and Contract Time or the method for determining them. Such agreement shall be effective immediately and shall be recorded as a Change Order.
 4. If Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, the method and the adjustment shall be determined by District on the basis of reasonable expenditures and savings of those performing the Work attributable to the change including, in case of an increase in the Contract Sum, a reasonable allowance for overhead and profit. If the parties still do not agree on the price for a CCD, Contractor may file a Claim per Article 12 of Document 00 71 00 (General Conditions). Contractor shall keep and present, in such form as District may prescribe, an itemized accounting together with appropriate supporting data. Unless otherwise provided in the Contract Documents, costs for the purposes of this paragraph shall be limited to those provided in paragraphs 1.4 and 1.5 of this Section 01 26 00.
 5. Pending final determination of cost to District, amounts not in dispute may be included in Applications for Payment. The amount of credit to be allowed by Contractor to District for a deletion or change which results in a net decrease in the Contract Sum shall be actual net cost as confirmed by District. When both additions and credits covering related Work or substitutions are involved in a change, the allowance for overhead and profit shall be figured on the basis of net increase, if any, with respect to that change.
- E. District Requested RFP: Contractor shall furnish a Cost Proposal within 21 Days of District's RFP. Upon approval of RFP, District will issue a Change Order directing Contractor to proceed with extra Work. If the parties do not agree on the price for an RFP, District may either issue a CCD or decide the issue per Article 12 of Document 00 71 00 (General Conditions). Contractor shall perform the changed Work notwithstanding any claims or disagreements of any nature.
- F. Differing Site Conditions: Contractor shall submit Notices of Differing Site Conditions to resolve problems regarding differing underground Site conditions encountered in the execution of the Work pursuant to paragraph 13.4 of Document 00 71 00 (General Conditions), which shall govern. If District determines that a change in Contract Sum or Contract Time is justified, District will issue RFP or CCD.
- G. Hazardous Waste Conditions: Contractor shall submit Notices of Hazardous Waste Conditions to resolve problems regarding hazardous materials encountered in the execution of the Work pursuant to paragraph 13.5 of Document 00 71 00 (General Conditions), which shall govern. If District determines that a change in Contract Sum or Contract Time is justified, District will issue RFP or CCD.

- H. All Changes:
1. Documentation of Change in Contract Sum and Contract Time:
 - a. Contractor shall maintain detailed records of Work performed on a time-and-material basis.
 - b. Contractor shall document each proposal for a change in cost or time with sufficient data to allow evaluation of the proposal.
 - c. Contractor shall, on request, provide additional data to support computations for:
 - 1) Quantities of products, materials, labor and equipment.
 - 2) Taxes, insurance, and bonds.
 - 3) Overhead and profit.
 - 4) Justification for any change in Contract Time and new Progress Schedule showing revision due, if any.
 - 5) Credit for deletions from Contract, similarly documented.
 - d. Contractor shall support each claim for additional costs, and for Work performed on a cost-and-percentage basis, with additional information including:
 - 1) Credit for deletions from Contract, similarly documented.
 - 2) Origin and date of claim.
 - 3) Dates and times Work was performed and by whom.
 - 4) Time records and wage rates paid.
 - 5) Invoices and receipts for products, materials, equipment and subcontracts, similarly documented.
 - I. Correlation of Other Items:
 1. Contractor shall revise Schedule of Values and Application for Payment forms to record each authorized Change Order or CCD as a separate line item and adjust the Contract Sum as shown thereon prior to the next monthly pay period.
 2. Contractor shall revise the Progress Schedules prior to the next monthly pay period.
 3. Contractor shall enter changes in Project Record Documents prior to the next monthly pay period.
 - J. Responses: For all responses for which the Contract Documents, including without limitation this Section 01 26 00, do not provide a specific time period, recipients shall respond within a reasonable time.
 - K. Disputes: For all disputes arising from the procedures herein, Contractor shall follow Article 12 of Document 00 71 00.

1.4 COST DETERMINATION

- A. Total cost of extra Work or of Work omitted shall be the sum of construction labor costs, material costs, equipment rental costs, design professional costs and specialist costs as defined herein plus overhead and profit as allowed herein. This limit applies in all cases of claims for extra Work, whether calculating Cost Proposals, Change Orders or CCDs, or calculating claims of all types, and applies even in the event of fault, negligence, strict liability, or tort claims of all kinds, including strict liability or negligence. Contractor may recover no other costs arising out of or connected with the performance of extra Work, of any nature. No special, incidental or consequential damages may be claimed or recovered against District, its representatives or agents, whether arising from breach of contract, negligence or strict liability, unless specifically authorized in the Contract Documents.

Design Professional costs shall be calculated by multiplying the number of hours per design professional by the hourly rate established in the bid form.

- B. Overhead and Profit: (Overhead shall be as defined in paragraph 1.8 of this Section 01 26 00)
1. Overhead and profit on labor for extra Work shall not exceed 15 percent.
 2. Overhead and profit on materials for extra Work shall not exceed 15 percent.
 3. Overhead and profit on equipment rental for extra Work shall not exceed 10 percent.
 4. When extra Work is performed by a first tier Subcontractor or a Design Professional, Contractor shall receive a 5 percent markup on Subcontractors' or Design Professional's total costs of extra Work. First tier Subcontractor's markup on its Work shall not exceed 15 percent.
 5. When extra Work is performed by a lower tier Subcontractor, Contractor shall receive a total of 5 percent markup on the lower tier Subcontractors' total costs of extra Work. First tier

- Subcontractors and lower tier Subcontractors shall divide the 20 percent markup as mutually agreed.
6. Notwithstanding the foregoing, in no case shall the total markup on any extra Work exceed 25 percent of the direct cost, notwithstanding the actual number of contract tiers.
 7. On proposals covering both increases and decreases in Contract Sum, overhead, profit, and commission shall be allowed on the net increase only as determined in paragraph 1.4 above. When the net difference is a deduction, no percentage for overhead, profit and commission shall be allowed, but rather a deduction shall apply.
 8. The markup shall include profit and overhead. No markup will be allowed on permits, fees, taxes, insurance, and bonds.
- C. Taxes:
1. All State sales and use taxes, San Mateo County and applicable City sales taxes, shall be included.
 2. Federal and Excise tax shall not be included.
- D. Accord and Satisfaction: Every Change Order and accepted CCD shall constitute a full accord and satisfaction, and release, of all Contractor (and if applicable, Subcontractor) claims for additional time, money or other relief arising from or relating to the subject matter of the change including, without limitation, impacts of all types, cumulative impacts, inefficiency, overtime, delay and any other type of claim. Contractor may elect to reserve its rights to disputed claims arising from or relating to the changed Work at the time it signs a Change Order or approves a CCD, but must do so expressly in a writing delivered concurrently with the executed Change Order or approved CCD, and must also submit a Claim for the reserved disputed items pursuant to Article 12 of Document 00 71 00 no later than 30 days of Contractor's first written notice of its intent to reserve rights.

1.5 COST BREAKDOWN

- A. Labor: Contractor will be paid cost of labor for workers (including forepersons when authorized by District) used in actual and direct performance of extra Work. Labor rate, whether employer is Contractor, Subcontractor or other forces, will be sum of following:
1. Actual Wages: Actual wages paid shall include any employer payments to or on behalf of workers for health and welfare, pension, vacation, and similar purposes.
 2. Labor surcharge: Payments imposed by local, county, state, and federal laws and ordinances, and other payments made to, or on behalf of, workers, other than actual wages as defined in paragraph 1.5A.1 of this Section 01 26 00, such as taxes and worker's compensation insurance. Such labor surcharge shall not exceed that set forth in California Department of Transportation official labor surcharges schedule which is in effect on date upon which extra Work is accomplished and which schedule is incorporated herein by reference as though fully set forth herein.
- B. Material: Only materials furnished by Contractor and necessarily used in performance of extra Work will be paid for. Cost of such materials will be cost, including sales tax, to purchaser (Contractor, Subcontractor or other forces) from supplier thereof, except as the following are applicable:
1. If cash or trade discount by actual supplier is offered or available to purchaser, it shall be credited to District notwithstanding fact that such discount may not have been taken.
 2. For materials salvaged upon completion of extra Work, salvage value of materials shall be deducted from cost, less discounts, of materials.
 3. If cost of a material is, in opinion of District, excessive, then cost of material shall be deemed to be lowest current wholesale price at which material is available in quantities concerned delivered to Site, less any discounts as provided in paragraph 1.5B.1 of this Section 01 26 00.
- C. Equipment Rental: For Contractor- or Subcontractor-owned equipment, payment will be made at rental rates listed for equipment in California Department of Transportation official equipment rental rate schedule which is in effect on date upon which extra Work is accomplished and which schedule is incorporated herein by reference as though fully set forth herein. If there is no applicable rate for an item of equipment, then payment shall be made for Contractor- or Subcontractor-owned equipment at rental rate listed in the most recent edition of the Association of Equipment Distributors (AED) book. For rented equipment, payment will be made based on actual rental invoices. Equipment used on extra Work shall be of proper size and type. If, however, equipment of unwarranted size or type and cost is used, cost of use of equipment shall be calculated at rental rate for equipment of proper size and type, as determined by District. Rental rates paid shall be deemed to cover cost of fuel, oil, lubrication, supplies, small tools, necessary attachments, repairs and maintenance of any kind, depreciation,

- storage, insurance, and all incidentals. Unless otherwise specified, manufacturer's ratings, and manufacturer-approved modifications, shall be used to classify equipment for determination of applicable rental rates. Individual pieces of equipment or tools not listed in said publication and having a replacement value of \$100 or less, whether or not consumed by use, shall be considered to be small tools and no payment will be made therefore as payment is included in payment for labor. Rental time will not be allowed while equipment is inoperative due to breakdowns.
1. For equipment on Site, rental time to be paid for equipment shall be time equipment is in operation on extra Work being performed or on standby as approved by District. The following shall be used in computing rental time of equipment:
 - a. When hourly rates are listed, less than 30 minutes of operation shall be considered to be ½ hour of operation.
 - b. When daily rates are listed, less than four hours of operation shall be considered to be ½ Day of operation.
 2. For equipment that must be brought to Site to be used exclusively on extra Work, cost of transporting equipment to Site and its return to its original location shall be determined as follows:
 - a. District will pay for costs of loading and unloading equipment.
 - b. Cost of transporting equipment in low bed trailers shall not exceed hourly rates charged by established haulers.
 - c. Cost of transporting equipment shall not exceed applicable minimum established rates of California Public Utilities Commission.
 - d. District will not make any payment for transporting and loading and unloading equipment if equipment is used on Work in any other way than upon extra Work.
 3. Rental period may begin at time equipment is unloaded at Site of extra Work and terminate at end of the performance of the extra Work or Day on which District directs Contractor to discontinue use of equipment, whichever first occurs. Excluding Saturdays, Sundays, and District's legal holidays, unless equipment is used to perform extra Work on such Days, rental time to be paid per Day shall be four hours for zero hours of operation, six hours for four hours of operation and eight hours for eight hours of operation, time being prorated between these parameters. Hours to be paid for equipment that is operated less than eight hours due to breakdowns, shall not exceed eight less number of hours equipment is inoperative due to breakdowns.
- D. Work Performed by Special Forces or Other Special Services: When District and Contractor, by agreement, determine that special service or item of extra Work cannot be performed by forces of Contractor or those of any Subcontractors, service or extra Work item may be performed by specialist. Invoices for service or item of extra Work on basis of current market price thereof may be accepted without complete itemization of labor, material, and equipment rental costs when it is impracticable and not in accordance with established practice of special service industry to provide complete itemization. In those instances wherein Contractor is required to perform extra Work necessitating a fabrication or machining process in a fabrication or machine shop facility away from Site, charges for that portion of extra Work performed in such facility may, by agreement, be accepted as a specialist billing. District must be notified in advance of all off-Site Work. In lieu of overhead and profit provided in paragraph 1.4B of this Section 01 26 00, 15 percent will be added to specialist invoice price, after deduction of any cash or trade discount offered or available, whether or not such discount may have been taken.

1.6 FORCE-ACCOUNT WORK

- A. If it is impracticable because of nature of Work, or for any other reason, to fix an increase or decrease in price definitely in advance, the Contractor may be directed to proceed at a not-to-exceed (NTE) maximum price which shall not under any circumstances be exceeded. Subject to such limitation, such extra Work shall be paid for at actual necessary cost for Force-Account Work or at the negotiated cost, as determined by District. The cost for Force-Account Work shall be determined pursuant to paragraphs 1.4 and 1.5 of this Section 01 26 00.
- B. Force-Account Work shall be used when it is not possible or practical to price out the changed Work prior to the start of that Work. In these cases, Force-Account Work will be utilized during the pricing and negotiation phase of the change. Once negotiations have been concluded and a bilateral agreement has been reached, the tracking of the Work under Force-Account is no longer necessary. Force-Account Work shall also be used when negotiations between District and Contractor have broken apart

and a bilateral agreement on the value of the changed Work cannot be reached. District may approve other uses of Force-Account Work.

- C. Whenever any Force-Account Work is in progress, definite price for which has not been agreed on in advance, Contractor shall report to District each Business Day in writing in detail amount and cost of labor and material used, and any other expense incurred in Force-Account Work on preceding Day, by using the Cost Proposal form attached hereto. No claim for compensation for Force-Account Work will be allowed unless report shall have been made and acknowledged by District.
- D. Whenever Force-Account Work is in progress, definite price for which has not been agreed on in advance, Contractor shall report to District when 75 percent of the NTE amount has been expended.
- E. Force-Account Work shall be paid as extra Work under this Section 01 26 00. Methods of determining payment for Work and materials provided in this paragraph 1.6 shall not apply to performance of Work or furnishings of material that, in judgment of District, may properly be classified under items for which prices are otherwise established in Contract Documents.

1.7 DISTRICT-FURNISHED MATERIALS

- A. District reserves right to furnish materials as it deems advisable, and Contractor shall have no claims for costs and overhead and profit on such materials.

1.8 OVERHEAD DEFINED

- A. The following constitutes charges that are deemed included in overhead for all Contract Modifications, including Force-Account Work or CCD Work, whether incurred by Contractor, Subcontractors, or suppliers, and Contractor shall not invoice or receive payment for these costs separately:
 - 1. Drawings: field drawings, Shop Drawings, etc., including submissions of drawings
 - 2. Routine field inspection of Work proposed
 - 3. General Superintendence, including Project Management or Construction Management services provided by Contractor
 - 4. General administration and preparation of cost proposals, schedule analysis, change orders and other supporting documentation as necessary
 - 5. Computer services
 - 6. Reproduction services
 - 7. Salaries of, superintendent, timekeeper, storekeeper and secretaries
 - 8. Janitorial services
 - 9. Temporary on-Site facilities, including for any extended periods of Contract Time:
 - a. Offices
 - b. Telephones
 - c. Plumbing
 - d. Electrical: Power, lighting
 - e. Platforms
 - f. Fencing, etc.
 - g. Water
 - 10. Home office expenses
 - 11. Insurance and Bond premiums
 - 12. Procurement and use of vehicles and fuel used coincidentally in Work otherwise included in the Contract Documents
 - 13. Surveying
 - 14. Estimating
 - 15. Protection of Work
 - 16. Handling and disposal fees
 - 17. Final cleanup
 - 18. Small tools
 - 19. Warranty
 - 20. Other incidental Work

1.9 RECORDS AND CERTIFICATION

- A. Force-Account (cost reimbursement) charges shall be recorded daily and summarized in Cost Proposal form attached hereto. Contractor or authorized representative shall complete and sign form each Day.

- Contractor shall also provide with the form: the names and classifications of workers and hours worked by each; an itemization of all materials used; a list by size type and identification number of equipment and hours operated; and an indication of all Work performed by specialists.
- B. No payment for Force-Account Work shall be made until Contractor submits original invoices substantiating materials and specialists charges.
 - C. District shall have the right to audit all records in possession of Contractor relating to activities covered by Contractor's claims for modification of Contract, including Force-Account Work and CCD Work.
 - D. Further, District will have right to audit, inspect, or copy all records maintained in connection with this Contract, including financial records, in possession of Contractor relating to any transaction or activity occurring or arising out of, or by virtue of, the Contract. If Contractor is a joint venture, right of District shall apply collaterally to same extent to records of joint venture sponsor, and of each individual joint venture member. This right shall be specifically enforceable, and any failure of Contractor to voluntarily comply shall be deemed an irrevocable waiver and release of all claims then pending that were or could have been subject to the Article 12 of Document 00 71 00.

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION – NOT USED

SAMPLE OF COST PROPOSAL FORM FOLLOWS ON NEXT PAGE

END OF SECTION

COST PROPOSAL (CP)

<input type="text" value="PROJECT/Contract Number"/>	CP Number: _____
To: The San Mateo County Community College District	Date: _____
Attention: [Point of Contact]	In Response To: (RFP#, etc.) _____
[Insert POC address]	
Telephone: (650) [_____]	
[Insert POC address]	
Fax: (650) [_____]	

From: _____ REQUESTED CHANGE IN CONTRACT TIME (DAYS) _____

Brief description of change(s): _____

	Contractor	First-Tier Subcontractors			Lower-Tier Subs		Totals
		Sub A	Sub B	Sub C	Sub A1	Sub B1	
LABOR							
Cost	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Mark-up							
%	15%	15%	15%	15%	15%	15%	
\$\$	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Taxes	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Labor Total Including Taxes							\$ -
MATERIALS							
Cost	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Mark-up							
%	15%	15%	15%	15%	15%	15%	
\$\$	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Taxes	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Materials Total Including Taxes							\$ -
RENTALS							
Cost	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Mark-up							
%	10%	10%	10%	10%	10%	10%	
\$\$	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Taxes	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Rentals Total Including Taxes							\$ -
DESIGN SERVICES							
Cost	\$ -	\$ -	\$ -	\$ -			\$ -
Mark-up							
%	15%	15%	15%	15%			
\$\$	\$ -	\$ -	\$ -	\$ -			\$ -
Design Services Total							\$ -
SPECIALTY WORK							
Cost	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Discount	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Mark-up							
%	15%	15%	15%	15%	15%	15%	
\$\$	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Taxes	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Specialty Work Total							\$ -
Total All Costs n.i.c. Sales Tax	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Contractor Mark-up on Sub Costs		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
1st Tier Subcontractor Mark-up on Lower-tier Subs					\$ -	\$ -	\$ -
Total All Contractor Mark-ups							\$ -
Total Mark-up as a % of Costs							0.00%
Total Sales Tax							\$ -
GRAND TOTAL							\$ -
Print Name & Title: _____				Signature: _____		Date: _____	

Notes:

- 1 Contractor figures are to include only self-performed work. Do not include the value of work performed by first or lower-tier subs

SECTION 01 29 00

MEASUREMENT & PAYMENT**PART 1 GENERAL****1.1 SUMMARY**

Section includes description of all "payment to complete" requirements and procedures for determining amount of Work performed and for obtaining payment for Work performed.

1.2 REFERENCES

- A. California Public Contract Code
- B. Code of Civil Procedures
- C. Government Code
- D. Specification 01320

1.3 SCOPE OF WORK

Work under Contract Documents, or under any Bid Item, allowance, or alternate, shall include all labor, materials, taxes, transport, handling, storage, supervision, administration, and all other items necessary for the satisfactory completion of Work, whether or not expressly specified or indicated.

1.4 DETERMINATION OF QUANTITIES

Quantity of work to be paid for under any item for which a unit price is fixed in Contract Documents shall be number, as determined by District, of units of work satisfactorily completed in accordance with Contract Documents or as directed by District. Unless otherwise provided, determination of number of units of work so completed will be based, so far as practicable, on actual measurement or count within prescribed or ordered limits, and no payment will be made for work done outside of limits. Measurements and computations will be made by methods set forth in Contract Documents, including without limitation this Section 01 29 00. If methods are not so set forth, measurements shall be made in any manner which District considers appropriate for class of Work measured (e.g., pre-assigned values, percentage completion, units completed or incremental milestones). Contractor must immediately inform District of any disputes regarding quantity measurements and shall immediately supply District with any documentation supporting the disputed measurements.

1.5 SCOPE OF PAYMENT

- A. Except as otherwise expressly stated in Section 01 10 00 (Summary of Work), payment to Contractor at the lump sum price fixed in the Contract Documents for performing all Work required under Contract Documents may be adjusted pursuant to any approved Change Order or Construction change directive, shall be full compensation for completing, in accordance with Contract Documents, all Work required under the item or under Contract Documents, and for all expense incurred by Contractor for any purpose in connection with the performance and completion of said Work, including all incidental work necessary for completion of the Work.
- B. The Contract Sum shall be deemed to include all costs necessary to complete required Work, all costs (if any) for loss or damage arising from nature of Work or prosecution of the Work, and from action of elements. Unless Contract Documents expressly provide otherwise, the Contract Sum shall be deemed to include:
 - 1. Any and all costs arising from any unforeseen difficulties which may be encountered during, and all risks of any description connected with, prosecution of Work or prosecution of Bid Item until acceptance by District;
 - 2. Escalation to allow for cost increases between time of Contract Award and completion of Work or completion of Bid Item.
- C. Whenever it is specified herein that Contractor is to do work or furnish materials in Contract Documents, it shall be understood that Contractor is to do such work or furnish such materials without extra charge or allowance or direct payment of any sort, and that cost of doing work or furnishing materials is to be included in

price Bid, unless it is expressly specified herein, in particular cases, that work or material is to be paid for as extra work.

- D. No payment shall be made for materials or equipment not yet incorporated into the Work, except as specified in Section 01 10 00 (Summary of Work).
- E. The District may, in its discretion, where Contractor requests payment on the basis of materials and equipment not incorporated in the Work, Contractor must satisfy the following conditions:
 - 1. The materials and/or equipment shall be delivered and suitably stored at the Site or at another local location agreed to in writing, for example, a mutually acceptable bonded warehouse;
 - 2. Full title to the materials and/or equipment shall vest in District at the time of delivery to the Site, bonded warehouse or other bonded storage location;
 - 3. Obtain a negotiable warehouse receipt, endorsed over to District for materials and/or equipment stored in and off-site warehouse. No payment will be made until such endorsed receipts are delivered to District;
 - 4. Stockpiled materials and/or equipment shall be available for District inspection, but District shall have no obligation to inspect them and its inspection or failure to inspect shall not relieve Contractor of any obligations under the Contract Documents. Materials and/or equipment shall be segregated and labeled or tagged to identify these specific Contract Documents;
 - 5. After delivery of materials and/or equipment, if any inherent or acquired defects are discovered, defective materials and/or equipment shall be removed and replaced with suitable materials and/or equipment at Contractor's expense;
 - 6. At Contractor's expense, insure the materials and/or equipment against theft, fire, flood, vandalism, and malicious mischief, as well as any other coverages required under the Contract Documents;
 - 7. Contractor's Application for Payment shall be accompanied by a bill of sale, invoice or other documentation warranting that District has received the materials and equipment free and clear of all liens and evidence that the materials and equipment are covered by appropriate property insurance and other arrangements to protect District's interest therein, all of which must be satisfactory to District. This documentation shall include, but not be limited to, conditional releases of mechanics' liens and stop notices from all those providing materials and equipment as to which the Application for Payment relates, as well as unconditional releases of the same from the same as to the previous Application for Payment for which they have not already been provided. In addition, for each piece of major equipment listed in Section 01 10 00 (Summary of Work) the Contractor is to submit a sample of the maintenance log (See paragraph 1.6.H.11 of Section 01 60 00) that will be used during the project with the Application for Payment.
- F. Amounts previously paid for materials and equipment prior to incorporation into the Work shall be deducted from amounts otherwise due Contractor as they are incorporated.

1.6 BASIS OF PAYMENT

- A. Lump Sum: When estimated quantity for specific portion of Work is not indicated and unit is designated as lump sum, payment will be on a lump sum basis for Work satisfactorily completed in accordance with Contract Documents.
- B. Allowances: Allowance items (if any) will be paid for as provided in Section 01 10 00 (Summary of Work). Funds authorized for Allowance work will not be released for Contract payments unless District has authorized Allowance work in writing.
- C. District does not expressly, or by implication, agree, warrant, or represent in any manner, that actual amount of Work will correspond with amount shown or estimated and reserves right to increase or decrease amount of any class or portion of Work, to leave out entire Bid Item or Items, or to add work not originally included in Bid or Contract Documents, when in its judgment such change is in best interest of District. No change in Work shall be considered a waiver of any other condition of Contract Documents.

1.7 PROGRESS PAYMENTS

- A. If requested by Contractor, progress payments will be made monthly.
- B. Schedule of Values:
 - 1. Within ten (10) Days from issuance of Notice of Award and prior to the Contractor's first Application for Payment, submit a detailed breakdown of its Bid by scheduled Work items and/or activities, including coordination responsibilities and Project Record Documents responsibilities. Where more than one Subcontractor comprises the work of a Work item or activity, the Schedule of Values shall show a separate line item for each subcontract. Furnish such breakdown of the total Contract Sum by assigning dollar values (cost estimates) to each applicable Progress Schedule network activity, which cumulative sum

- equals the total Contract Sum. See Specification 01320. The format and detail of the breakdown shall be as directed by District to facilitate and clarify future progress payments to Contractor for direct Work under Contract Documents. This breakdown shall be referred to as the Schedule of Values.
2. Contractor's overhead, profit, insurance, cost of bonds (except to the extent expressly identified in a Bid Item) and/or other financing, as well as "general conditions costs," (e.g., Site cleanup and maintenance, temporary roads and access, off-Site access roads, temporary power and lighting, security, and the like), shall be prorated through all activities so that the sum of all the Schedule of Values line items equals Contractor's total Contract Sum, less any allowances designated by District. Scheduling, record documents and quality assurance control shall be separate line items.
 3. District will review the breakdown in conjunction with the Progress Schedule to ensure that the dollar amounts of this Schedule of Values are, in fact, fair market cost allocations for the Work items listed. Upon favorable review by District, District will accept this Schedule of Values for use. District shall be the sole judge of fair market cost allocations.
 4. District will reject any attempt to increase the cost of early activities, i.e., "front loading," resulting in a complete reallocation of moneys until such "front loading" is corrected. Repeated attempts at "front loading" may result in suspension or termination of the Work for default, or refusal to process progress payments until such time as the Schedule of Values is acceptable to District.
- C. Applications for Payment: Contractor shall establish and maintain records of cost of the Work in accordance with generally accepted accounting practices. In addition:
1. On or before the 20th Day of each month (but after receipt of District's approval of the updated Schedule as required by Section 01 32 16 (Progress Schedules and Reports)), Contractor shall submit to District one copy of an Application for Payment for the cost of the Work put in place during the period from the 1st Day of the previous month to the Last Day of the previous month. Such Applications for Payment shall be for the total value of activities completed or partially completed, including approved activity costs, based upon Schedule of Values prices of all labor and materials incorporated in the Work up until midnight of the last Day of that one month period, less the aggregate of previous payments. Accumulated retainage shall be shown as separate item in payment summary. Contractor shall submit in a form similar in format to AIA form G702 and G703 an itemized cost breakdown of Contractor's record of Cost of the Work together with supporting data and any certification required by District. If Contractor is late submitting its Application for Payment, that Application may be processed at any time during the succeeding one-month period, resulting in processing of Contractor's Application for Payment being delayed for more than a Day for Day basis.
 2. Applications for Payment may include, but are not necessarily limited to the following:
 - a. Material, equipment, and labor incorporated into the Work, less any previous payments for the same;
 - b. Up to 75 percent of the cost of equipment identified in paragraph 1.5E of this Section 01 29 00 (if any), if purchased and delivered to the Site or stored off Site, as may be approved by District.
 - c. Up to 50 percent of the cost of materials identified in paragraph 1.5E of this Section 01 29 00 (if any), specifically fabricated for the Project that are not yet incorporated into the Work.
 3. At the time any Application for Payment is submitted, certify in writing the accuracy of the Application and that Contractor has fulfilled all scheduling requirements of Section 00 71 00 (General Conditions) and Section 01 32 16 (Progress Schedules and Reports), including updates and revisions. A responsible officer of Contractor shall execute the certification.
 4. No progress payment will be processed prior to District receiving all requested, acceptable schedule update information. Failure to submit a schedule update complying with Section 01 32 16 (Progress Schedules and Reports) justifies denying the entire Application for Payment. Should Contractor fail to submit timely or accurate schedule updates the District has the right to impose a Withhold of funds in the amount up to \$10,000 per occurrence until the contractor demonstrates compliance with timely, acceptable and accurate schedule update submittals. In the sole judgment of the District if it is determined that the contractor is not capable of delivering timely and accurate updates these Withheld monies may be converted to a back charge to Contractor to offset the costs to the District associated with providing the schedule update function. See also Section 01 32 16 (Progress Schedules and Reports), paragraph 1.2.J.
 5. If Contractor fails or refuses to participate in work reconciliations or other construction progress evaluation with District, Contractor shall not receive current payment until Contractor has participated fully in providing construction progress information and schedule update information to District.
 6. Each Application for Payment shall list each Change Order and Construction change directive ("CCD") executed prior to date of submission, including the Change Order/CCD Number, and a description of the

- work activities, consistent with the descriptions of original work activities. Submit a monthly Change Order/CCD status log to District.
7. If District requires substantiating data, submit information requested by District, with cover letter identifying Project, Application for Payment number and date, and detailed list of enclosures. Submit one copy of substantiating data and cover letter for each copy of Application for Payment submitted.
 8. With each Application for Payment the following reports and logs shall be submitted:
 - a. Copies of completed maintenance logs for each piece of major equipment listed in Section 01 10 00 (Summary of Work) shall be submitted according to the requirements specified in Section 01 60 00 (Product Requirements).
 - b. Copies of up-to-date Waste Reporting Log per Section 01 74 00 (Cleaning) paragraph 1.2.E.5 Contractor's Application for Payment will be deemed incomplete without these documents.
- D. Progress Payments
1. District will review Contractor's Application for Payment following receipt. If adjustments need to be made to percent of completion of each activity, District will make appropriate notations and return to Contractor. Contractor shall revise and resubmit. All parties shall update percentage of completion values in the same manner, i.e., express value of an accumulated percentage of completion to date.
 2. Each Application for Payment may be reviewed by District and/or inspectors to determine whether the Application for Payment is proper, and shall be rejected, revised, or approved by District pursuant to the Schedule of Values prepared in accordance with this Section 01 29 00.
 3. If it is determined that the Application for Payment is not proper and suitable for payment, District will return it to the Contractor as soon as practicable, but no later than seven (7) Days after receipt, together with a document setting forth in writing the reasons why the Application for Payment is not proper. If District determines that portions of the Application for Payment are not proper or not due under the Contract Documents, then District may approve the other portions of the Application for Payment, and in the case of disputed items or defective Work not remedied, may withhold up to 150 percent of the disputed amount from the progress payment.
 4. Pursuant to Public Contract Code Section 20104.50, if District fails to make any progress payment within 30 Days after receipt of an undisputed and properly submitted Application for Payment from Contractor, District shall pay interest to the Contractor equivalent to the legal rates set forth in subdivision (a) of Section 685.010 of the Code of Civil Procedure. The 30-Day period shall be reduced by the number of Days by which District exceeds the seven (7) Day return requirement set forth herein.
 5. As soon as practicable after approval of each Application for Payment for progress payments, District will pay to Contractor in manner provided by law, an amount equal to 95 percent of the amounts otherwise due as provided in the Contract Documents, or a lesser amount if so provided in Contract Documents, provided that payments may at any time be withheld if, in judgment of District, Work is not proceeding in accordance with Contract, or Contractor is not complying with requirements of Contract, or to comply with stop notices or to offset liquidated damages accruing or expected.
 6. Before any progress payment or final payment is due or made, Contractor shall submit satisfactory evidence that Contractor is not delinquent in payments to employees, Subcontractors, suppliers, or creditors for labor and materials incorporated into Work. This specifically includes, without limitation, conditional lien release forms for the current progress payment and unconditional release forms for past progress payments. District also may elect in its sole discretion to pay progress payments by joint check to Contractor and each Subcontractor having an interest in that progress payment in such amount.
 7. District reserves and shall have the right to withhold payment for any equipment and/or specifically fabricated materials that, in the sole judgment of District, are not adequately and properly protected against weather and/or damage prior to or following incorporation into the Work.
 8. Granting of progress payment or payments by District, or receipt thereof by Contractor, shall not be understood as constituting in any sense acceptance of Work or of any portion thereof, and shall in no way lessen liability of Contractor to replace unsatisfactory work or material, though unsatisfactory character of work or material may have been apparent or detected at time payment was made.
 9. When District shall charge sum of money against Contractor under any provision of Contract Documents, amount of charge shall be deducted and retained by District from amount of next succeeding progress payment or from any other moneys due or that may become due Contractor under Contract. If, on completion or termination of Contract, such moneys due Contractor are found insufficient to cover District's charges against it, District shall have right to recover balance from Contractor or Sureties.

1.8 SUBSTITUTION OF SECURITIES IN LIEU OF RETENTION

- A. In accordance with the provisions of Public Contract Code Section 22300, substitution of securities for any moneys withheld under Contract Documents to ensure performance is permitted under following conditions:
1. At request and expense of Contractor, securities listed in Section 16430 of the Government Code, bank or savings and loan certificates of deposit, interest bearing demand deposit accounts, standby letters of credit, or any other security mutually agreed to by Contractor and District which are equivalent to the amount withheld under retention provisions of Contract shall be deposited with Controller or with a state or federally chartered bank in California, as the escrow agent, who shall then pay such moneys to Contractor. Upon satisfactory completion of Contract, securities shall be returned to Contractor.
 2. Alternatively, Contractor may request and District shall make payment of retentions earned directly to the escrow agent at the expense of Contractor. At the expense of Contractor, Contractor may direct the investment of the payments into securities and receive the interest earned on the investments upon the same terms provided for in this Section 01 29 00 for securities deposited by Contractor. Upon satisfactory completion of Contract Documents, Contractor shall receive from escrow agent all securities, interest, and payments received by the escrow agent from District, pursuant to the terms of this Section 01 29 00. Pay to each Subcontractor, not later than twenty (20) Days after receipt of the payment, the respective amount of interest earned, net of costs attributed to retention withheld from each Subcontractor, on the amount of retention withheld to insure the performance of Contractor.
 3. Contractor shall be beneficial owner of securities substituted for moneys withheld and shall receive any interest thereon.
 4. Enter into escrow agreement with Controller according to Document 00 43 45 (Escrow Agreement for Security Deposits in Lieu of Retention), as authorized under Public Contract Code Section 22300, specifying amount of securities to be deposited, terms and conditions of conversion to cash in case of default of Contractor, and termination of escrow upon completion of Contract Documents.
 5. Public Contract Code Section 22300 is hereby incorporated in full by this reference.

1.9 FINAL PAYMENT

- A. As soon as practicable after all required Work is completed in accordance with Contract Documents, including punchlist, testing, record documents and Contractor maintenance after Final Acceptance, District will pay to Contractor, in manner provided by law, unpaid balance of Contract Sum of Work (including without limitation retentions), or whole Contract Sum of Work if no progress payment has been made, determined in accordance with terms of Contract Documents, less sums as may be lawfully retained under any provisions of Contract Documents or by law.
- B. Prior progress payments shall be subject to correction in the final payment. District's determination of amount due as final payment shall be final and conclusive evidence of amount of Work performed by Contractor under Contract Documents and shall be full measure of compensation to be received by Contractor.
- C. Contractor and each assignee under an assignment in effect at time of final payment shall execute and deliver at time of final payment, and as a condition precedent to District's obligation to make final payment, Document 00 65 73 (Agreement and Release of Any and All Claims) discharging District, its officers, District's Representative, employees, and consultants of and from liabilities, obligations, and claims arising under Contract Documents.

1.10 EFFECT OF PAYMENT

- A. Payment will be made by District, based on District's observations at the Site and the data comprising the Application for Payment. Payment will not be a representation that District has:
1. Made exhaustive or continuous on-Site inspections to check the quality or quantity of Work;
 2. Reviewed construction means, methods, techniques, sequences, or procedures;
 3. Reviewed copies of requisitions received from Subcontractors and material suppliers and other data requested by District to substantiate Contractor's right to payment; or
 4. Made examination to ascertain how or for what purpose Contractor has used money previously paid on account of the Contract Sum.

1.11 CONTINGENCY RESERVE

- A. District will authorize and direct Contractor regarding provisions in this paragraph.
- B. Contingency Reserve Amount: as listed in Document 00 52 00 (Agreement).

- C. District shall determine in its sole discretion which, if any, costs it will authorize in writing to be paid from the Contingency Reserve. Generally, Contingency Reserve will be used only for District-initiated changes in scope of Work of Contract Documents.
- D. Cost shall be determined as for CCD work as provided in Section 01 26 00 (Modification Procedures).
- E. Prior to final payment, an appropriate Change Order will be issued to reflect actual amounts due Contractor on account of Work covered by this Contingency Reserve, and the Contract Sum will be correspondingly adjusted

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION – NOT USED

END OF SECTION

SECTION 01 31 19

PROJECT MEETINGS**PART 1 GENERAL****1.1 SUMMARY**

A. Section Includes:

1. Descriptions of the required Project meetings for the Work. These meetings include:
 - a. Preconstruction Conference.
 - b. Not used.
 - c. Weekly Progress Meetings.
 - d. Not used.
 - e. Special Meetings.

1.2 PRECONSTRUCTION CONFERENCE

- A. District will call for and administer Preconstruction Conference at time and place to be announced.
- B. Contractor, all major Subcontractors, Construction Scheduler, and major suppliers shall attend Preconstruction Conference.
- C. Agenda will include, but not be limited to, the following items.
 1. Schedules
 2. Personnel and vehicle permit procedures
 3. Use of premises
 4. Location of the Contractor's on-Site facilities
 5. Security
 6. Housekeeping
 7. Waste Reporting
 8. Safety/HAZMAT/Regulatory Agencies
 9. Site Conduct and Procedures
 10. Submittal and RFI procedures
 11. Inspection and testing procedures, on-Site and off-Site
 12. Utility shutdown procedures
 13. Control and reference point survey procedures
 14. Injury and Illness Prevention Program
 15. Contractor's Initial Schedule
 16. Contractor's Schedule of Values
 17. Contractor's Schedule of Submittals
 18. Contract Administrative Processes
 - a. Video tape existing conditions prior to start of all work
 19. Project Directory
 20. Contractor's Emergency Contact List
 21. Other Project Specific Issues as required
- D. District's Representative will distribute copies of minutes to attendees. Attendees shall have five (5) Workdays to submit comments or additions to minutes. Minutes will constitute final memorialization of results of Preconstruction Conference.

1.3 NOT USED**1.4 WEEKLY PROGRESS MEETINGS**

- A. District will schedule and administer weekly progress meetings throughout duration of Work. Progress meetings will be held weekly unless otherwise directed by District.

1. Meetings shall be held at location directed by District.
2. The District representative will prepare agenda and distribute it two (2) Workdays in advance of meeting to Contractor.
3. The District will record meeting notes of the Weekly Progress Meeting. Within two (2) Workdays after the meeting, District will distribute minutes to Contractor though e-mail, who will distribute to those affected by decisions made at meeting. Attendees can either submit comments or additions to minutes prior to the next progress meeting, or may attend the next progress meeting and submit comments or additions there. Minutes will constitute final memorialization of results of meeting.
- B. Progress meetings shall be attended by Contractor's job superintendent, major Subcontractors and suppliers, District, and others as appropriate to agenda topics for each meeting.
- C. Agenda will contain the following items, as appropriate:
 1. Review, revise as necessary, and approve previous meeting minutes
 2. Review of Work progress since last meeting
 3. Status of Construction Work Schedule, delivery schedules, adjustments
 4. Submittal, RFI, and Change Order status
 5. Review of the Contractor's safety program activities and results, including report on all serious injury and/or damage accidents
 6. Other items affecting progress of Work
 7. Progress billings.

1.5 NOT USED

1.6 SPECIAL MEETINGS

- A. Any party may call special meetings by notifying all desired participants and District five (5) Workdays in advance, giving reason for meeting. Special meetings may be held without advance notice in emergency situations.
- B. At any time during the progress of Work, District shall have authority to require Contractor attend meeting of any or all of the Subcontractors engaged in Work or in other work, and notice of such meeting shall be duly observed and complied with by Contractor.
- C. Contractor shall schedule and conduct coordination meetings as necessary to discharge coordination responsibilities in Document 00 71 00 (General Conditions). Contractor shall give District five (5) Workdays written notice of coordination meetings. Contractor shall maintain minutes of coordination meetings. Attendees shall have five (5) Workdays to submit comments or additions to minutes. Minutes will constitute final memorialization of results of coordination meetings.

1.7 GUARANTEES/WARRANTIES, BONDS, AND SERVICE AND MAINTENANCE CONTRACTS REVIEW MEETING/INSPECTION

- A. Eleven months following date of Final Completion of entire work, Contractor to conduct an inspection with the District, or District's Representative, to review and act upon guarantees/warranties, bonds, and service and maintenance contracts for materials and equipment. Implement repair or replacement of defective items, and extend service and maintenance contracts, as desired by District.

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION – NOT USED

END OF SECTION

SECTION 01 32 16

PROGRESS SCHEDULES AND REPORTS

PART 1 – GENERAL

1.1 DESCRIPTION

- A. This Section is in addition to the Contract General Conditions and Supplementary General Conditions.
- B. Contractor shall develop a network plan and schedule for the project demonstrating complete fulfillment of all contract requirements, shall keep the network plans up to date in accordance with the requirements of this section and shall utilize the Critical Path Method (CPM) in planning, coordinating, performing and reporting the work under this contract, including all activities of Subcontractors, equipment vendors, and suppliers, and in assisting District and District’s Project Manager in monitoring the progress of the Work.
- C. The CPM schedule shall be prepared using Primavera Project Planner 3.0, Primavera SureTrak 4.0, or Microsoft Project. Equivalency of a proposed substitute CPM program shall be determined by the District.
- D. The principles and definition of CPM in terms used herein shall be as follows:
 - 1. CPM network is a graphic description of the Contractor’s construction plan, showing the sequential steps needed to reach the completion of the Work within the prescribed Contract Time. It shall depict events and tasks as activities, and their interrelationships, and shall recognize the progress that must be made on one activity before subsequent activities can begin. These activities shall be logically represented in a CPM network showing their interrelationships in a chronological fashion. As each activity has a time allocation, the completed network shows the critical path of activities that must be completed on time if the entire Project is not to be delayed. It shall also be possible to identify the earliest and latest start and finish times for each activity if the overall Project is not to be delayed. Therefore, the CPM network shall be comprehensive and shall include all interdependencies and interactions required to perform the Work of the Project.

1.2 SUBMITTALS

- A. Refer to Section 01 32 19 (Submittal Procedures), for procedures.
- B. NOT USED
- C. A “Draft” Contract Schedule shall be submitted no later than the pre-construction kick-off meeting date followed by the Final Contract Schedule submittal based upon District’s comments. Once approved by District, Contract Schedule shall be known as the Baseline Schedule. Contractor shall submit an Updated Contract Schedule whenever the Baseline Contract Schedule does not represent the actual or anticipated progress of the work.
- D. Contractor shall submit submittal schedule to District no later than 10 days following the Notice to Proceed.
- E. NOT USED
- F. Submit Final As-Built Schedule per paragraph 1.9 below.
- G. NOT USED
- H. All other required reports referenced herein, typically three (3) copies each per occurrence.
- I. Submit one (1) copy in 8 ½” X 11” size of each required schedule and one (1) copy of all required reports. Contractor shall also submit a digital copy of these documents.

- J. In addition to all other District rights and remedies in the Contract Documents, including without limitation those in Section 01 29 00 (Measurement and Payment), paragraph 1.7.C.4, should Contractor fail to submit timely or accurate schedule updates the District has the right, in addition to all other rights under the Contract Documents, to impose a withhold of funds in the amount up to \$500 per occurrence, until the Contractor demonstrates compliance with timely, acceptable and accurate schedule update submittals. In the sole judgment of the District, if it is determined that the Contractor is not capable of delivering timely and accurate updates, these withheld monies may be converted to a back charge to Contractor to offset the costs to the District associated with providing the schedule update function.

1.3 ACCEPTANCE

- A. N/A
- B. Acceptance of the Contractor's Contract Schedule by the District will be a condition precedent to the making of any progress payment for work performed.
- C. The required schedules and reports shall be prepared and submitted for review and approval in accordance with the General Conditions, Supplemental General Conditions and this Section.
- D. The required updating of the Contract Schedule and reports shall be an integral part and basic element of the estimate upon which progress payments will be made. Submittal, review and approval by District of these items shall be a condition precedent to the making of progress payments. If, in the judgment of District, Contractor fails or refuses to provide a complete updated Contract Schedule or reports, as specified, the Contractor will be deemed to have not provided the required estimate upon which progress payments may be made, and shall not be entitled to such progress payments unless or until it has furnished the aforesaid schedules.
- E. In the event the contractor submits a viable, contractually compliant construction schedule which indicates project completion at a date earlier than the contractually provided contract duration, the acceptance of such a schedule will not change the contract time. In such an event, a schedule activity entitled "project float", of a duration equal to the difference between the proposed construction duration and the contract duration, will be added to the schedule. All project float is a project resource for the contractor and the District, and is not for the exclusive use of either party.

1.4 CONSTRUCTION ANALYSIS

- A. Contractor shall use Primavera Project Planner 3.0, Primavera SureTrak Project Manager 4.0, or Microsoft Project or substitute at sole discretion of District. Contractor shall coordinate with District to produce the following minimum information with the Contract Schedule:
1. Activity identification;
 2. Activity description;
 3. Status date and original/remaining duration;
 4. Activity percentage complete;
 5. Activity duration;
 6. N/A ;
 7. Total float;
 9. The predecessor and successor activities for each individual activity;
 10. A comparison between the current update and the baseline schedule;
 11. Designation of the planned work day/work week for each activity;
 12. A near critical item list of activities with ten (10) days or less total float;
 13. Scheduled and actual manpower loading for each activity; and
 14. Scheduled and actual progress payment for each activity.

1.5 N/A

1.6 CONTRACT DELIVERABLES

- A. Draft Contract Schedule:
1. Submission:

- a. Contractor shall submit a “draft” Contract Schedule to District no later than the date of the project preconstruction conference as scheduled by the District. The draft Contract Schedule will include all activities that are required or anticipated to be completed.
- b. N/A
2. Form:
 - a. Prepare the “draft” Contract Schedule as a time-scaled CPM network showing continuous flow from left to right. Durations and specific calendar dates shall be clearly and legibly shown for the start and finish of each work activity in sufficient detail to demonstrate preliminary planning for the Work and to represent a practical plan to complete the Work within the Contract Time. The “draft” Contract Schedule shall also be submitted to the District in electronic format.
3. The “draft” Contract Schedule shall include but not be limited to:
 - a. A legend of scheduled activities.
 - b. Scheduled work activities that clearly indicate the scope of work to be completed.
 - c. Major milestones, which are critical to the completion of the work, including but not limited to the following: NTP date; mobilization; coordination review and detailing activities; contractor quality control review activities; substantial completion and contract completion.
 - d. Major work activity categories to be included in the Initial Contract Schedule
 - e. Submittals Section, containing submission, review, procurement and delivery of all project materials
 - f. OFCI/OFOI items
 - g. Substantial Completion
 - h. Punch list formulation (District’s, etc.) and correction
 - i. Contractor closeout documentation and training.
 - j. Contractor punch list corrective work.
 - k. Demobilization and project completion.
 - m. Inclement weather days per Section 00 71 00 (General Conditions).
 - n. A clearly highlighted critical path.
 - o. Calendar designations identifying all holidays and non-working days.
 - p. This “draft” Contract Schedule shall be formatted to accept manpower, resource and cost loading (i.e., resource dictionaries and cost codes, etc.) when fully developed. The cost loading shall be derived from the initial Schedule of Values submitted by the Contractor. Once an accepted Contract Schedule has been achieved, the costs reflected therein will be the official Schedule of Values for the project and utilized for payment application.
 - q. The “draft” Contract Schedule shall contain an activity code structure sufficient to allow future sorting/grouping by responsibility or subcontractor, area/location, CSI division, SOV identification, Milestones and a code entitled “Update” that will identify the schedule submission when specific activities were added to the network (new activities, Change Orders, RFI’s, etc.).

B. Baseline Contract Schedule:

1. N/A
2. N/A
3. The work activities comprising the Initial Contract Schedule shall be of sufficient detail to ensure adequate planning and execution of the Work and such that the schedules provide an appropriate basis for monitoring and evaluating the progress of the Work. A work activity is defined as a singular task that requires time and resources (manpower, equipment, and/or material) to complete in a continuous operation (excepting submittal activities, review/approval activities, and fabrication and procurement activities). No activity shall be less than one (1) nor more than fifteen (15) days in duration for any on-site operation. All holidays and non-working days shall be identified by way of calendar designations.
4. Failure by Contractor to include any element of the work required for the performance of this Contract and completion of the Project shall not excuse Contractor from completing all work required within the time for completion, notwithstanding District's acceptance of the Initial Contract Schedule.
5. No more than 20% of the total number of activities shown on the schedule shall be critical or near critical. Near critical is defined as float less than ten (10) days.
6. The schedule shall indicate the sequence and interdependency of all work activities. All activities shall be linked by finish-to-start (FS) relationships only. No other relationships shall be permitted without the prior written permission of the District. Constraints on activities shall be kept to a minimum and subject to the written permission of the District.

7. N/A
 8. Critical Work activities are defined as Work activities which, if delayed or extended, will delay the scheduled completion date of the Work. All other Work activities are defined as non-critical Work activities and are considered to have float.
 9. Float is defined as the time that a non-critical Work activity can be delayed or extended without delaying the scheduled completion of milestones specified in this Section or the scheduled completion date of the Work, or both. Float time is not for the exclusive use or benefit of either District or Contractor. The Project owns the float. As such, liability for delay of any Substantial Completion or Final Completion date rest with the party whose actions, last in time, actually cause delay to a Substantial Completion or Final Completion date. Document the effect on the updated Contract Schedule whenever float has been used.
 10. Delays of any non-critical Work shall not be the basis for an extension of Contract Time until the delays consume the float associated with that non-critical Work activity and cause the Work activity to become critical.
 11. Contractor shall not sequester float through strategies including extending activity duration estimates to consume available float, using preferential logic, using extensive or insufficient crew/resource loading, use of float suppression techniques like Zero Total Float constraints, special lead/lag logic restraints or imposed dates. Use of float time disclosed or implied by the use of alternate float suppression techniques shall be shared to the benefit of both District and Contractor.
 12. Include a critical path activity titled "Remaining Inclement Weather Days" on the Initial Contract Schedule. This activity shall have an initial duration of the number of days indicated in Section 00 71 00 (General Conditions), paragraph 14.D.2.
 13. The Baseline Schedule shall be used by Contractor for executing the Work of the Contract, including planning, organizing and directing the Work, and reporting its progress until subsequently revised. No unilateral changes shall be made to the Baseline Schedule without the prior approval and consent of the District, excepting only the reporting of Actual Start, Actual Finish, and Activity Progress.
- C. Baseline Schedule Updating and Progress Payments:
1. N/A Contractor shall meet with District weekly to review actual progress made to date, activities started and completed to date, and the percentage of work completed to date on each activity started but not completed. Upon completion of the joint review, Contractor shall prepare the updated Baseline Schedule as needed and submit it to District.
 2. The updated Baseline Schedule shall incorporate all changes mutually agreed upon by Contractor and District during preceding periodic reviews and all changes resulting from approved Change Orders and Field Orders. Unauthorized, unilateral contractor changes to logic or activities shall not be allowed.
 3. Prior to submission of the payment application, the Contractor shall submit to the District a report generated from the approved schedule that reflects the percent of completion by activity. The Contractor and the District shall walk the project to verify the percentage of completion of each activity. Once the percent of completion of each activity is agreed upon the Contractor shall incorporate this data into the schedule update and these percentages shall be the basis for development of that month's payment application.
 4. Acceptance of the updated Baseline Schedule will be a condition precedent to the making of any progress payments for work performed.
- D. Reports:
1. The Initial Schedule submittal shall include the following:
 - A. N/A
 - B. N/A
 - C. N/A
 - D. N/A
 - E. N/A .
 - F. Submittal Schedule:
 1. Contractor, within ten (10) days after Notice to Proceed, shall prepare and submit to District for approval a comprehensive Submittal Schedule which shall be maintained in the Contract Schedule. Contractor shall identify on the Submittal Schedule all of the submittal items required by the Contract Documents governing the Work, listing shop drawings and product data or literature separately. Contractor shall indicate for each submittal item on the Submittal Schedule:
 - a. The date by which that item will be submitted to District.

- b. Whether the submittal is for review, substitution, or for record only.
- c. The date by which response by District is required.
- d. The date by which the material or equipment must be on the Site in order not to delay the progress of the Work.
- G. N/A
- 2. N/A
 - A. N/A
 - B. N/A
 - C. N/A
 - D. N/A
- 3. Submittal of the reports and schedule updates by Contractor are required regardless of the approval status of the Contract Baseline Schedule or any revision to the Baseline Schedule.

1.7 RESPONSIBILITY FOR COMPLETION

- A. Contractor agrees that at the sole judgment of District, whenever it becomes apparent from the current Baseline Schedule that the contract completion date will not be met, it will take some or all of the following actions, as approved by District, at no additional cost to District:
 - 1. Increase construction manpower in such quantities and crafts as will substantially eliminate, in the judgment of District, the backlog of work. Also, increase material, equipment and other items as required.
 - 2. Increase the number of working hours per shift, shifts per working day, working days per week, or the amount of construction equipment, or any combination of the foregoing, sufficiently to substantially eliminate, in the judgment of District, the backlog of work. This paragraph shall not be construed to permit contractor to violate the work hour restrictions specified in the Contract Document.
 - 3. Reschedule activities to achieve maximum practical concurrence of accomplishment of activities. Nothing here in will limit any other District rights under the Contract Documents, including without limitation those under Section 00 71 00, paragraph 11.D.3.

1.8 ADJUSTMENT OF TIMES FOR COMPLETION

- A. In addition to provisions of the General Conditions, the time for completion of the Work will be adjusted in accordance with these procedures.
- B. Any request for an adjustment of the Contract Time for completion submitted by Contractor for changes or alleged delays shall be accompanied by a complete Time Impact Analysis, (TIA), which shall be submitted for review within five (5) days after the initial request for time by Contractor. Time extensions will not be granted unless substantiated by the CPM Schedule, and then not until the CPM project float becomes zero. If Contractor fails to submit a TIA within the aforementioned time period, then the Contractor shall be deemed to have agreed that there is no time impact and that Contractor has irrevocably waived its rights to any additional contract time.
- C. Each Time Impact Analysis shall provide information justifying the request and stating the extent of the adjustment requested for each specific change or alleged delay.
- D. The Time Impact Analysis shall be determined on the basis of the date or dates when the change or changes were issued, or the date or dates when the alleged delay or delays began. The status of the construction project and Time Impact Analysis shall include event time computations for all affected activities including but not limited to work around sequencing, or recovery options to maintain the original Contract completion date.
- E. Time Impact Analyses provided in order to demonstrate the time impact upon the overall project and the time for completion shall be accomplished at no additional cost to District.
- F. If District finds, after review of the Time Impact Analysis, that Contractor is entitled to any extension of time for completion, the time for completion will be adjusted by Change Order issued by District, and Contractor shall then revise the Baseline Schedule accordingly. If District determines that Contractor is not entitled to any extension of time for completion, and Contractor objects to District’s determination, Contractor’s sole remedy is to file a claim under Section 00 71 00 (General Conditions).

1.9 FINAL AS-BUILT SCHEDULE

- A. As a condition precedent to final acceptance of the Project, submit a final As-Built Construction Schedule and all final reports which accurately reflect the manner in which the Project was constructed and includes actual start and completion dates for all work activities on the Baseline Schedule.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION

SECTION 01 32 19

SUBMITTAL PROCEDURES**PART 1 GENERAL****1.1 SUMMARY**

- A. Section Includes:
1. Description of general requirements for Submittals for the Work:
 - a. Procedures
 - b. Schedule of Shop Drawing and Sample Submittals
 - c. Safety Program
 - d. Progress Schedules
 - e. Not Used
 - f. Not Used
 - g. Product Data
 - h. Vibration Control Drawings and Calculations
 - i. Shop Drawings
 - j. Samples
 - k. Installation, Operations and Maintenance Manuals
 - l. Quality Assurance Control Submittals
 - m. Environmental Impact Mitigation Plan Documents
 - n. Project Record Documents
 - o. Delay of Submittals

1.2 OPTIONAL REVIEW MEETING PROCEDURES

- A. Submit at Contractor's expense, the following items ("Submittals") required by the Contract Documents:
1. Schedule of Submittals
 2. Safety Program
 3. Progress Schedules
 4. Product Data
 5. Material Safety Data Sheets
 6. Vibration Control Drawings and Calculations
 7. Shop Drawings
 8. Samples
 9. Installation, Operation, and Maintenance Manuals
 10. Quality Assurance Control Data
 11. Environmental Impact Mitigation Documents
 12. Computer Programs
 13. Project Record Documents
 14. Storm Water Pollution Prevention Plan
 15. Seismic Submittal Review Forms, where specified in Divisions 2 through 60.
- B. Submit these Submittals to District for review and approval in accordance with accepted Schedule of Shop Drawings and Samples Submittals. If no such schedule is agreed upon prior to, then all Shop Drawing, Samples, and product data Submittals shall be submitted within **30 Days** after receipt of Notice to Proceed with Construction from District. In all instances, District may require Contractor to submit any or all Submittals directly to Architect/Engineer for review.
- C. Transmit each item with the appropriate Submittal transmittal form (attached to this Section 01 32 19 as Exhibits A and B). For project on which an electronic web-based Project Management System is used, per Section 01 31 23 Web Based Project Management System, Contractor shall use the system's similar electronic forms and formats for Submittal transmissions. Identify Project, Contractor, Subcontractor, major supplier, pertinent Drawing sheet and detail number, and Specification Section number as appropriate. Where manufacturer's standard drawings or data sheets are used, they shall be marked clearly to show those

portions of the data that are applicable to this Project. Inapplicable portions shall be marked out. Submittals shall be submitted based on each Specification Section. Submittals containing information about more than one Specification Section will be returned for re-submittal. Submittals shall include all information requested by each Specification Section. **(No partial Submittals.)** Incomplete Submittals will be returned and not reviewed by District.

- D. The data shown on the Submittals shall be complete with respect to quantities, dimensions, specified performance and design criteria, materials and similar data to show District the materials and equipment Contractor proposes to provide and to enable District to review the information for the limited purposes specified in this Section 01 32 19. Submittals shall be identified clearly as to material, supplier, pertinent data such as catalog numbers and the use for which it is intended and otherwise as District may require to enable District to review the Submittal. The quantity of each Submittal to be submitted will be as required by individual Specification Sections or this Section 01 32 19.
- E. At the time of each submission, give District specific written notice of all variations, if any, that the submitted Submittal may have from the requirements of the Contract Documents, and the reasons therefore. This written notice shall be in a written communication attached to the Submittal transmittal form. In addition, cause a specific notation to be made on each Submittal submitted to District for review and approval of each such variation. If District accepts deviation, District will note its acceptance on the returned Submittal transmittal form and, if necessary, issue appropriate Contract Modification.
- F. Submittal coordination and verification is responsibility of Contractor; this responsibility shall not be delegated in whole or in part to Subcontractors or suppliers. Before submitting each Submittal, review and coordinate each Submittal with other Submittals and with the requirements of the Work and the Contract Documents, and determine and verify:
 - 1. All field measurements, quantities, dimensions, specified performance criteria, installation requirements, materials, catalog numbers and similar information with respect thereto;
 - 2. All materials with respect to intended use, fabrication, shipping, handling, storage, assembly and installation pertaining to the performance of the Work; and
 - 3. All information relative to Contractor's sole responsibilities and of means, methods, techniques, sequences and procedures of construction and safety precautions and programs incident thereto.
- G. Contractor's submission to District of a Submittal shall constitute Contractor's representation that it has satisfied its obligations under the Contract Documents, and as set forth immediately above in this paragraph 1.2 of Section 01 32 19, with respect to Contractor's review and approval of that Submittal.
- H. Designation of work "by others," if shown in Submittals, shall mean that work will be responsibility of Contractor rather than Subcontractor or supplier who has prepared Submittals.
- I. After review by District or Architect/Engineer or other consultant designated by District, of each of Contractor's Submittals, one set of material will be returned to Contractor with actions defined as follows:
 - 1. NO COMMENT - Accepted subject to its compatibility with future Submittals and additional partial Submittals for portions of the Work not covered in this Submittal. Does not constitute approval or deletion of specified or required items not shown on the Submittal.
 - 2. SEE COMMENTS NOTED (NO RESUBMISSIONS REQUIRED) - Same as item 1 above, except that minor corrections as noted shall be made by Design-Build Entity.
 - 3. SEE COMMENTS, REVISE AS NOTED AND RESUBMIT - District identified major inconsistencies or errors that shall be resolved or corrected by Design-Build Entity prior to subsequent review by District.
 - 4. SUBMITTAL DOES NOT MEET CONTRACT REQUIREMENTS - RESUBMIT - Submitted material does not conform to Contract Documents in major respect, e.g.,: wrong size, model, capacity, or material.
- J. Make a complete and acceptable Submittal at least by second submission. District reserves the right to deduct monies from payments due Contractor to cover District and Architect/Engineer's additional costs of review beyond the second submission. Illegible Submittals will be rejected and returned to Contractor for resubmission. Contractor shall be in breach of the Contract if Contractor's first re-submittal, following a Submittal which District determines falls within categories 3 or 4 above, does not fall within categories 1 or 2 above. Deductions will be calculated in accordance with Section 1.2.T of this specification 01 32 19.
- K. Favorable review will not constitute acceptance by District of any responsibility for the accuracy, coordination and completeness of the Submittals. Accuracy, coordination, and completeness of Submittals shall be sole responsibility of Contractor, including responsibility to back-check comments, corrections, and modifications from District's review before fabrication. Contractor, Subcontractors, or suppliers may prepare Submittals, but Contractor shall ascertain that Submittals meet requirements of Contract Documents, while conforming to structural space and access conditions at point of installation. District's review will be only to assess if the items covered by the Submittals will, after installation or incorporation in the Work, conform to

the information given in the Contract Documents and be compatible with the design concept of the completed Project as indicated by the Contract Documents. Favorable review of Submittal, method of work, or information regarding materials and equipment Contractor proposes to furnish shall not relieve Contractor of responsibility for errors therein and shall not be regarded as assumption of risks or liability by District, or any officer or employee thereof, and Contractor shall have no claim under Contract Documents on account of failure or partial failure or inefficiency or insufficiency of any plan or method of work or material and equipment so accepted. Favorable review shall be considered to mean merely that District has no objection to Contractor using, upon Contractor's own full responsibility, plan or method of work proposed, or furnishing materials and equipment proposed.

- L. District's review will not extend the means, methods, techniques, sequences or procedures of construction or to safety precautions or programs incident thereto. The review and comment on a separate item as such will not indicate approval of the assembly in which the item functions.
- M. Submit complete initial Submittal for those items where required by individual Specification Sections. Complete Submittal shall contain sufficient data to demonstrate that items comply with Specifications, shall meet minimum requirements for submissions cited in Specification Sections, shall include motor data and seismic anchorage certifications, where required, and shall include necessary revisions required for equipment other than first named. If Contractor submits incomplete initial Submittal when complete Submittal is required, Submittal may be returned to Contractor without review.
- N. Copy, conform, and distribute reviewed Submittals in sufficient numbers for Contractor's files, Subcontractors, and vendors.
- O. After District's review of Submittal, revise as noted and resubmit as required. Identify changes made since previous Submittal.
 - 1. Begin no fabrication or work that requires Submittals until return of Submittals not requiring re-submittal. Do not extrapolate from Submittals covering similar work.
 - 2. Normally, Submittals will be processed and returned to Contractor within twenty-one (21) Days of receipt.
- P. Distribute copies of reviewed Submittals to concerned persons. Instruct recipients to promptly report any inability to comply with provisions.
- Q. All Submittals shall be **number-identified** by Contractor, prior to submission to District, in accordance with the following:
 - 1. Sequentially number each Submittal by Specification Section (i.e., "1-2", "2-2", "3-2", etc.) as the basis for number identification of Submittals.
 - 2. Affix the Submittal number under which each Submittal is made on every copy of each Shop Drawing, product data, sample, certification, etc.
 - 3. Number Installation, Operation, and Maintenance Manuals with original root number of the approved Submittal for the item.
 - 4. If the Submittal is a re-submittal (including without limitation after an initial Submittal is rejected, returned without review or marked 'Revise as Noted and Resubmit'), add the suffix designation "A" (i.e., a re-submittal of Submittal 1-2 would be numbered 1A-2). Subsequent re-submittals would be identified by the Submittal number and sequential letters (i.e., "B", "C", "D", etc.).
 - 5. All Submittals shall include all information requested by each Specification Section. No partial Submittals will be accepted unless previously authorized by District. In the event a partial Submittal is authorized, each subsequent different Submittal (as opposed to re-submittal) is given a new number.
- R. Submission Requirements:
 - 1. Deliver Submittals to District giving sufficient time for more than one review, but in no case less than thirty (30) Days before dates reviewed Submittals will be needed.
 - 2. Initial Submittal of Installation, Operation and Maintenance Manuals shall be forty-five (45) Days after the date Submittals that pertain to the applicable portion of the Installation, Operation and Maintenance Manual is satisfactorily reviewed.
 - 3. The following table lists the number of initial Submittals required from Contractor for each type of submission, to whom Contractor shall distribute the information, and District's distribution of reviewed submissions. If Contractor needs more copies of reviewed Submittals returned to it, then either submit additional copies or make copies from the returned transparency Submittal. Submittals requiring resubmission will require the same quantity and distribution as an initial Submittal.

Submittal	Contractor Initial Submittal		District Submittal Review Return	
	# of Electronic files	# of Hard Copies/ Prints/ Samples	# of Electronic files	# of Hard Copies/ Prints/ Samples
Schedule of Submittals	1	2	1	0
Safety Program	1	0	0	0
Progress Schedules	1	2	1	0
Product Data	1	2	1	0
Materials Safety Data Sheets	1	1	1	0
Vibration Control Drawings & Calculations	1	2	1	0
Shop Drawings	1	2	1	0
Samples	0	2	0	1
Installation, Operation, and Maintenance Manuals	1	2	1	0
Quality Assurance Control Submittals	1	0	1	0
Computer Programs	1	0	0	0
Environmental Impact Mitigation Documents	1	0	1	0
Project Record Documents	1	2	1	0
Other Documents	1	2	1	0

4. Accompany Submittals with Submittal transmittal form, containing:
 - a. Date, revision date, and Submittal log number.
 - b. **Project name and District’s Contract number.**
 - c. Contractor’s name, address, and job number.
 - d. Specification Section number clearly identified.
 - e. The quantity of Shop Drawings, Product Data, or Samples submitted.
 - f. Notification of deviations from Contract Documents.
 - g. Materials Safety Data Sheet (MSDS) for each item complying with OSHA’s Hazard Communication Standard 29 CFR 1910.1200.
 - h. Other pertinent data.
5. Submittal shall include:
 - a. Date and revision dates.
 - b. Revisions, if any, identified.
 - c. Project Name and Contract number.
 - d. The names of:
 - 1) Contractor, Subcontractor, Supplier, Manufacturer, and separate detailer, when pertinent.
 - e. Identification of product material by location within the Project.
 - f. Relation to adjacent structure or materials.
 - g. Field dimensions, clearly identified as such.
 - h. Specification Section number and applicable detail reference number on the Drawings.
 - i. Applicable reference standards, such as ASTM, ANSI, FS, NEMA, SMACNA or ACI.
 - j. A blank space, on each Drawing or data sheet, 5” x 4” for the District’s stamp.
 - k. Identification of deviations from Contract Documents.
 - l. Contractor’s stamp, initialed or signed, with language certifying the review of Submittals, verification of field measurements, construction criteria and technical standards in compliance with Contract Documents.
- S. Resubmission requirements:
 1. Shop Drawings:
 - a. Revise initial Shop Drawings as required and resubmit as specified for initial Submittals.
 - b. Indicate on Shop Drawings any changes that have been made other than those requested by District.
 2. Product Data and Samples:
 - a. Submit new Product Data and Samples as required for initial Submittals.
 3. Installation, Operation, and Maintenance Manuals:

- a. Revise initial Installation, Operation, and Maintenance Manual(s) as required and resubmit as specified for initial Submittals.
- T. Number of resubmissions:
1. One reexamination of Contractor's Submittals that have been returned for correction or replacement will be included in District's budget. **Any additional re-examination of Contractor's Submittals will be considered additional scope services to be paid by Contractor through District. Contractor shall pay District (or District may deduct from any progress or final payment), for design team personnel, on an hourly basis at 2.5 times direct payroll expenses, and for consultant personnel time at 1.25 times the amount billed District.**

1.3 SCHEDULE OF SHOP DRAWING AND SAMPLE SUBMITTALS

- A. Submit preliminary Schedule of Shop Drawing and Sample Submittals as required by Document 00 71 00 (General Conditions) and in quantities as required by paragraph 1.2.R.3 of this Section 01 32 19.
- B. Schedule of Submittals will be used by District to schedule its activities relating to review of Submittals. Schedule of Submittals shall indicate a spreading out of Submittals and early Submittals of long-lead-time items and of items that require extensive review.
- C. Unless otherwise specified, make Submittals in groups containing all associated items to assure that information is available for checking each item when it is received. Identify on the Submittal which Submittals should be reviewed together.
- D. Schedule of Submittals will be reviewed by District and shall be revised and resubmitted until accepted by District.

1.4 SAFETY PROGRAM

- A. Submit Safety Program in quantities as required by paragraph 1.2.R.3 of this Section 01 32 19, in Adobe pdf, to District within the time set forth in Section 01 56 00 (Site Security and Safety), paragraph 1.4. to District This submittal is for the District's information only.

1.5 PROGRESS SCHEDULE

- A. See Section 01 32 16 (Progress Schedules and Reports) for schedule and report requirements. Section 01 32 16 shall control in any conflict with Section 01 32 19.
- B. Submit in quantities as required by paragraph 1.2.R.3 of this Section 01 32 19, at each of the following times:
 1. Initial Progress Schedule as set forth in Section 01 32 16.
 2. Original Schedule as set forth in Section 01 32 16.
 3. Adjustments to the Schedule as required.
 4. Schedule updates monthly, as required.
- C. Submit one electronic copy, in Adobe .pdf, of the reports listed in Section 01 32 16 (Progress Schedules and Reports) with:
 1. Initial Schedule
 2. Original Schedule
 3. Each monthly Schedule update
- D. Progress Schedules and Reports shall be submitted on CD Roms or other electronic media, **using software described in paragraph 1.4.A of Section 01 32 16** (in addition to hard copies specified in this paragraph 1.2.R.3. Electronic files shall be complete copies, including all programs and electronic coding

1.6 NOT USED

1.7 NOT USED

1.8 PRODUCT DATA

- A. Submit Product Data in quantities and format as required by paragraph 1.2.R.3 of this Section 01 32 19.
- B. Ten Days prior to design phase system confirmation meeting(s), submit the complete list of major products proposed for use, with name of manufacturer, telephone number, trade name, and model number of each product. Tabulate product data by Specification Section.

- C. For products specified only by reference standards, give manufacturer, trade name, model or catalog designation, and reference standards.
- D. Product or Catalog Data:
 - 1. Manufacturer's standard drawings shall be modified to delete non-applicable data or include applicable data.
 - 2. Manufacturer's catalog sheets, brochures, diagrams, schedules, charts, illustrations and other standard descriptive data:
 - a. Mark each copy to identify pertinent materials, products, or models.
 - b. Show dimensions and clearances required, performance characteristics and capacities, wiring diagrams and controls.
 - c. Include applicable MSDS.
- E. Supplemental Data:
 - 1. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturer's standard data to provide information unique to Project.
- F. Provide final Project Record Data as described in Section 01 78 39 (Project Record Documents).

1.9 VIBRATION CONTROL DRAWINGS AND CALCULATIONS

- A. Submit Vibration Control Drawings and Calculations in quantities as required by paragraph 1.2.R.3 of this Section 01 32 19.
- B. Shop Drawings: Submit Shop Drawings showing isolator types and sizes, locations with static and dynamic load on each location, and installation details, including recording and alarm device wiring and control diagrams where required.
- C. Product Data: Submit manufacturer's product data and certificates of compliance for each type of vibration control product provided.
- D. Maintenance Data: Submit maintenance data for each type of vibration control product, and include in maintenance manual specified in 1.6 (Installation, Operations and Maintenance Manuals) of Section 01 78 39 (Project Record Documents).
- E. Seismic Calculations: Submit seismic calculations on all equipment, ductwork and piping restraints, anchors and supports. Calculations shall be prepared by Civil or Structural Engineer of Record.
- F. Measured Equipment Deflections: Upon completion of vibration control work, prepare a report showing measured device deflections for each major item of equipment indicated.

1.10 SHOP DRAWINGS

- A. Submit Schedule of Submittals in quantities as required by paragraph 1.2.R.3 of this Section 01 32 19.
- B. Minimum Sheet Size: 8½ inches by 11 inches. All others: Multiples of 8½ inches by 11 inches, 34 inches by 44 inches maximum.
- C. Mark each copy to identify applicable products, models, options, and other data; supplement manufacturers' standard data to provide information unique to Work.
- D. Include manufacturers' installation instructions when required by Specification Section.
- E. If Contractor submits Shop Drawings for items that Shop Drawings are not specified, District will not be obliged to review them.
- F. Contractor is responsible for procuring copies of Shop Drawings for its own use as it may require for the progress of the Work.
- G. Shop Drawings shall be drawn to scale and completely dimensioned, giving plan view together with such sectional views as are necessary to clearly show construction detail and methods.

1.11 SAMPLES

- A. Submit Schedule of Submittals in quantities as required by paragraph 1.2.R.3 of this Section 01 32 19.
- B. Submit full range of manufacturers' standard colors, textures, and patterns for District's selection.
- C. Submit samples to illustrate functional and aesthetic characteristics of product, with integral parts and attachment devices. Coordinate Submittal of different categories for interfacing work.
- D. Include identification on each sample, giving full information.
- E. Sizes: Unless otherwise specified, provide the following:
 - 1. Paint Chips: Manufacturers' standard
 - 2. Flat or Sheet Products: Minimum 6 inches square, maximum 12 inches square
 - 3. Linear Products: Minimum 6 inches, maximum 12 inches long

- 4. Bulk Products: Minimum 1 pint, maximum 1 gallon
- F. Full size samples may be used in Work upon approval by District.
- G. Field Samples and Mock-ups (if applicable):
 - 1. Erect field samples and mock-ups at Site in accordance with requirements of Specification Sections. If testing is conducted, record and certify results and full Contract compliance.
 - 2. Modify or make additional field samples and mock-ups as required to provide appearance and finishes approved by District.
 - 3. Approved field samples and mock-ups may be used in Work upon approval by District.
 - 4. Construct or prepare as many additional Samples as may be required, as directed by the District, until desired textures, finishes, and/or colors are obtained.
 - 5. Accepted Samples and mock-up shall serve as the standard of quality for the various units of work.
- H. No review of a Sample shall be taken in itself to change or modify the requirements in the Contract Documents.
- I. Finishes, materials, and workmanship in the completed Work shall match accepted Samples.

1.12 INSTALLATION, OPERATIONS AND MAINTENANCE MANUALS

- A. Submit Installation, Operations and Maintenance Manuals in quantities as required by paragraph 1.2.R.3 of this Section 01 32 19.
- B. Submit Project Record Documents as required in Section 01 78 39 Project Record Documents.
- C. Contractor shall submit initial copies of the complete IOM manuals for review by the architect/engineer and commissioning agent within 45 calendar days after review of applicable Submittal.
- D. Contractor shall submit final IOM manuals prior to substantial completion.
 - 1. Prior to final completion, the commissioning agent shall review the final IOM manuals (in addition to the initial IOM manuals), and documentation, with redline as-builts, for systems that were commissioned to verify compliance with the specifications. The commissioning agent will communicate, through District, deficiencies in the manuals to the contractor or Architect/Engineer, as requested.
 - 2. Upon successful review of the corrections, the commissioning agent will recommend approval and acceptance of the IOM manuals to District.
 - 3. The commissioning agent will also review each equipment warranty and verify that all requirements to keep the warranty valid are clearly stated. This work does not supersede the Architect/Engineer's review of the IOM manuals according to the Architect/Engineer's contract.

1.13 QUALITY ASSURANCE CONTROL SUBMITTALS

- A. Submit Schedule of Submittals in quantities as required by paragraph 1.2.R.3 of this Section 01 32 19.
- B. Test Reports:
 - 1. Indicate that material or product conforms to or exceeds specified requirements.
 - 2. Reports may be from recent or previous tests on material or product, but shall be acceptable to District. Comply with requirements of each individual Specification Section.
- C. Certificates:
 - 1. Indicate that material or product conforms to or exceeds specified requirements.
 - 2. Submit supporting reference data, affidavits, and certifications as appropriate.
 - 3. Certificates may be recent or from previous test results on material or product, but shall be acceptable to District.
- D. Manufacturers' Instructions:
 - 1. Include manufacturers' printed instructions for delivery, storage, assembly, installation, startup, adjusting, and finishing.
 - 2. Identify conflicts between manufacturers' instructions and Contract Documents.
- E. Material Safety Data Sheets:
 - 1. In addition to Material Safety Data Sheets (MSDS) otherwise required by the Contract Documents, submit MSDS for any paints, solvents, thinners, varnish, lacquer, glues and adhesives, mastics, or other materials needed for the Project as required by the individual Specification Sections or as otherwise specified in the Contract Documents.
 - 2. MSDS required for a Submittal shall be submitted with product data in order for the Submittal to be reviewed.

1.14 COMPUTER PROGRAMS

- A. Submit Computer Programs in quantities as required by paragraph 1.2.R.3 of this Section 01 32 19.
- B. Submit Computer Programs as listed in Section 01 78 39 Project Record Documents.

1.15 ENVIRONMENTAL IMPACT MITIGATION PLAN DOCUMENTS

- A. Submit Project Record Documents in quantities as required by paragraph 1.2.R.3 of this Section 01 32 19.
- B. Submit Noise Control Plan, Spill Prevention, Control and Countermeasure Program, Site Safety Plan, Hazardous Materials Program, Dust Control Plan, Erosion Control Plan, Cultural Resources Protection Plan, Traffic Control Plan, Tree Protection Plan, and Migratory Bird Protection Plan (if applicable) as listed in Section 01 35 00 Special Procedures.

1.16 PROJECT RECORD DOCUMENTS

- A. Submit Project Record Documents in quantities as required by paragraph 1.2.R.3 of this Section 01 32 19.
- B. Submit Project Record Documents listed in Section 01 78 39 Project Record Documents.

1.17 DELAY OF SUBMITTALS

- A. Delay of Submittals by Contractor is considered avoidable delay.

1.18 OPTIONAL REVIEW MEETING

- A. At the Contractor’s request, in order to facilitate the timeliness of the review process, the District may schedule a meeting to review the materials submitted. If this option is exercised, the following requirements apply:
 - 1. Request a meeting date with the District at least ten (10) Business Days in advance.
 - 2. Provide the complete package of Submittal information at least five (5) Business Days in advance of the meeting.
 - 3. The meeting shall take place at District’s office. District will provide the authorized staff to review and respond on the Submittal information during the meeting.
 - 4. Make available for this meeting the job superintendent and/or foreman, Contractor’s safety officer, and someone knowledgeable of all the items submitted and authorized to make substitutions or changes.

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION – NOT USED

END OF SECTION

TRANSMITTAL SHEETS AND MAINTENANCE SHEET FOLLOW THIS PAGE

Submittal Transmittal Form

EXHIBIT A
SUBMITTAL
TRANSMITTAL NO. _____

Project Name:		Date Received:		
San Mateo County Community College District 3401 CSM Drive San Mateo, CA 94402		Checked By:		
DBE:	To:	Log Page:		
Address:	Address:	Specification Section Number:		
Attention:	Attention:			
Date Transmitted:	Previous Transmittal Date:			
No. Copies	Description	Manufacturer	Dwg. or Data No.	Action Taken*

Remarks: _____

* The action designated above is in accordance with the following legend:

- | | |
|--|--|
| <p>A – No Exceptions Taken</p> <p>B – Make Corrections Noted (No Resubmission Required)</p> <p>C. – Make Corrections Noted and Resubmit</p> <p>D – Not Approved</p> <ol style="list-style-type: none"> 1. Not enough information for review 2. No reproducibles submitted 3. Copies illegible 4. Not enough copies submitted 5. Wrong sequence number 6. Wrong re-submittal number 7. Wrong Specification section number 8. Wrong form used 9. See comments | <p>E – District’s review not required</p> <ol style="list-style-type: none"> 1. Submittal not required 2. Supplemental information. Submittal retained for informational purposed only 3. Information reviewed and approved on prior Submittal 4. See comments |
|--|--|

Comments _____

Distribution: Contractor File IOR District CM Other

EXHIBIT B
INSTALLATION, OPERATION, AND MAINTENANCE MANUAL
TRANSMITTAL NO. _____

Project Name:		Date Received:		
San Mateo County Community College District 3401 CSM Drive San Mateo, CA 94402		Checked By:		
DBE:	To:	Log Page:		
Address:	Address:	Specification Section Number:		
Attention:	Attention:	1 st Submittal <input type="checkbox"/>	Resubmittal <input type="checkbox"/>	
Date Transmitted:	Previous Transmittal Date:			
No. Copies	Description	Manufacturer	Dwg. or Data No.	Action Taken*

Remarks:

* The action designated above is in accordance with the following legend:

- | | |
|---|---|
| <p>A – No exceptions taken</p> <p>B – Make Corrections Noted (No Resubmission Required)</p> <p>C. – Make Corrections Noted and Resubmit</p> <p>D – Not Approved– this manual Submittal is deficient in the following area:</p> <ol style="list-style-type: none"> 1. Equipment record sheets 2. Functional description 3. Assembly, disassembly, installation, alignment, adjustment, and checkout instructions 4. Operating instructions | <p>D – (continued)</p> <ol style="list-style-type: none"> 5. Lubrication and maintenance instructions 6. Troubleshooting guide 7. Parts list and ordering instructions 8. Organization (indexing and tabbing) 9. Wiring diagrams and schematics specific to installation 10. Outline, cross section, and assembly diagrams 11. Test data and performance curves 12. Tag or equipment identification numbers 13. See comments |
|---|---|

Comments

		By		Date
Distribution:	Contractor <input type="checkbox"/>	File <input type="checkbox"/>	IOR <input type="checkbox"/>	District <input type="checkbox"/>
			CM <input type="checkbox"/>	Other <input type="checkbox"/>

SECTION 01 35 00

SPECIAL PROCEDURES (COLLEGE OF SAN MATEO)**PART 1 GENERAL****1.1 Summary**

- A. In compliance with CEQA requirements, the District conducted an Initial Study to ascertain whether the project might have a significant effect on the environment. The Initial Study identified potentially significant impacts on the environment. However, all potential impacts of the proposed project can be avoided or reduced to a less-than-significant level with implementation of the following mitigation measures. Contractor shall conform with the following mitigation measures.
- B. Section Includes:
 - 1. Noise Control Plan
 - 2. Spill Prevention, Control and Countermeasure Program
 - 3. Site Safety Plan (Soil and Groundwater Management Plan)
 - 4. Hazardous Materials Program
 - 5. Dust Control Plan
 - 6. Erosion Control Plan
 - 7. Cultural Resources Protection Plan
 - 8. Traffic Control Plan
 - 9. Tree Protection Plan
 - 10. Migratory Bird Nesting Protection Plan

1.2 Definitions**1.3 Submittals**

- A. See Section 01 32 19 (Submittal Procedures).
- B. Name and address of the selected treatment, recycling, or disposal facilities for contaminated soil disposal.” if applicable)
- C. Hazardous waste manifests “if applicable.”
- D. Non-hazardous waste manifests “if applicable.”
- E. Facility weight tickets “if applicable.”
- F. Spill Prevention, Control, and Countermeasure Program.

1.4 Noise Control Plan

- A. Implement the following noise-control measures to reduce and control noise generated from construction, demolition, and renovation-related activities.
 - 1. Restrict noise-producing construction activities to between 7:00 a.m. and 7:00 p.m. on weekdays. If construction is scheduled for Saturdays or Sundays to avoid disrupting college operations, restrict noise-producing construction activities to 9:00 a.m. and 5:00 p.m. Construction on Sundays will be avoided if possible, and there will be no construction on public holidays. When activities must occur outside the hours specified above, conform with notification requirements of Section 01 10 00 (Summary of Work), Paragraph 1.7.C, and utilize local barriers around equipment and other noise attenuating devices if necessary to limit noise to acceptable levels.
 - 2. Construction equipment shall have appropriate mufflers, intake silencers, and noise-control features, and shall be properly maintained and equipped with exhaust mufflers that meet State standards.
 - 3. Vehicles and other gas- or diesel-powered equipment shall be prohibited from unnecessary warming up, idling, and engine revving.
 - 4. Post a sign at the construction site giving the name and telephone number or e-mail address of the District’s Representative whom the public should contact with any noise complaints. If necessary due to complaints, provide additional noise-attenuating measures such as additional mufflers or engine shrouding.

1.5 Spill Prevention, Control and Countermeasure Program

- A. Prepare and implement a Spill Prevention, Control, and Countermeasure Program (SPCCP) to minimize the potential for and effects from spills of hazardous, toxic, or petroleum substances during construction and demolition activities. Obtain approval of the SPCCP before any construction or demolition activities begin.
- B. Contractor shall routinely inspect the construction area to verify that the measures specified in the SPCCP are properly implemented and maintained. Inform the District immediately if there is a noncompliance issue and take immediate measures to restore compliance.
- C. The federal reportable spill quantity for petroleum products, as defined in 40 CFR 110, is any oil spill that includes any of the following.
 - 1. Violates applicable water quality standards.
 - 2. Causes a film or sheen on or discoloration of the water surface or adjoining shoreline.
 - 3. Causes a sludge or emulsion to be deposited beneath the surface of the water or adjoining shorelines.
- D. If a spill is reportable, notify the District's Representative and take action to contact appropriate safety and clean-up crews to ensure that the SPCCP is followed.
 - 1. A written description of reportable releases must be submitted to the District's Representative and to the San Francisco Bay RWQCB. This submittal must contain a description of the spill, including the type of material and an estimate of the amount spilled, the date of the release, an explanation of why the spill occurred, and a description of the steps taken to prevent and control future releases. Document the releases on a spill report form.
 - 2. If a reportable spill has occurred and results determine that project activities have adversely affected surface water or groundwater quality, the District will engage a registered environmental assessor for a detailed analysis to identify the likely cause of contamination. This analysis will conform to American Society for Testing and Materials (ASTM) standards, and will include recommendations for reducing or eliminating the source or mechanisms of contamination.
 - 3. Based on this analysis, the Contractor shall select and implement measures to control contamination, with a performance standard that groundwater quality must be returned to baseline conditions. These measures will be subject to approval by the District.

1.6 Site Safety Plan (Soil and Groundwater Management Plan) (Not used)

- A. ~~Prior to excavation, prepare and submit a Site Safety Plan (Soil and Groundwater Management Plan) to protect people from known or previously undiscovered soil and groundwater contamination during construction activities. Obtain approval of the SPCCP before any construction or demolition activities begin.~~
- B. ~~The Site Safety Plan (Soil and Groundwater Management Plan) shall, at a minimum, include the following:~~
 - 1. ~~All construction activities involving work in proximity to potentially contaminated soils and/or groundwater shall be undertaken in accordance with California Occupational Safety and Health Administration (Cal OSHA) standards, contained in Title 8 of the CCR.~~
 - 2. ~~Establish soil and groundwater mitigation and control specifications for construction activities, including health and safety provisions for monitoring exposure to construction workers, procedures to be undertaken in the event that previously unreported contamination is discovered, and emergency procedures and responsible personnel.~~
 - 3. ~~Procedures for managing soils and groundwater removed from the site to ensure that any excavated soils and/or dewatered groundwater with contaminants are stored, managed, and disposed in accordance with applicable regulations.~~

1.7 Hazardous Materials Program

- A. If hazardous materials are encountered, they shall be handled in accordance with applicable local, state, and federal regulations which may include: (1) CCR Title 8, Division 4, Chapter 4, Sections 5163 through 5167 and 5192 (Hazardous Waste Operations and Emergency Response); (2) CCR, Title 22, Division 4.5, Chapters 10 through 13 and 18 (Environmental Health Standards for Management of Hazardous Waste); and (3) CCR Title 23, Division 3, Chapter 15 (Discharges of Hazardous Waste to Land).
- B. Should the discovery of contaminants cause delay to Contractor's operations, extension of Contract Time will be granted by District in accordance with Section 00 71 00 (General Conditions), and Section 01 32 16 (Progress Schedules and Reports). Contractor may not be entitled to damages or additional payment due to such delay. District may, if it believes appropriate in its sole discretion, grant an extension of Contract Time. The Contractor shall take all measures to avoid and/or mitigate delays due to Hazardous Materials/Waste finds such as; avoiding the area of the find and proceeding with other work on the project;

developing “work around” plans; and documenting his best efforts to avoid and/or mitigate delays. See Section 01 32 16 (Progress Schedules and Reports) regarding requirement to demonstrate Time Impacts.

C. Subsurface Hazardous Materials

1. If Contractor encounters subsurface contamination, the following provisions and precautionary measures shall be implemented during construction:
 - a. Contractor's personnel shall be alert for and immediately report to District's Representative any detectable chemical odors, unusual debris, or discolored soil.
 - b. Disposal requirements: Soils containing hazardous materials shall be disposed by Contractor at permitted treatment, recycling, or disposal facilities in accordance with CCR Title 23, Division 3, Chapter 15 (Discharges of Waste to Land). Determine to which permitted treatment, recycling, or disposal facilities the soil will be delivered.
 - c. Dewatering: Construct, operate and maintain as required by applicable laws, codes and standards, and to complete the Work all necessary cofferdams, channels, pipes, flumes, drains, sumps, well points and protective works; and furnish, install, operate and maintain all necessary pumping and other equipment for dewatering the areas of Work suspected of containing hazardous materials; and control all surface flow and groundwater as may be encountered while performing the Work. Remove all water that may accumulate in the excavation while the Work progresses so that all Work can be performed in dry conditions. All contaminated water shall be removed from the excavation before it is backfilled. The excavation shall be kept free from water until backfilling has progressed to a height above the water source.
 - d. Water sampling and chemical analysis: Water samples shall be collected from the holding tanks and submitted to a State-Certified chemical analysis laboratory. Chemical analyses required for the samples shall at a minimum include: TPHg following EPA Test Methods 5030/8015 (modified); benzene, toluene, ethylbenzene, and total xylenes (BTEX) following EPA Test Method 8020; and chlorinated solvents following EPA Test Method 8010. Perform additional chemical analyses that may be required for disposal or recycling of the water. Laboratory chemical analysis reports associated with the water samples shall be provided to District's Representative.
 - e. Removal of dewatering equipment: After having served their purpose, all protective works, and dewatering pumps, shall be decontaminated and removed from the Site. Contractor is responsible for permanent disposal of all equipment that cannot be decontaminated or recycled in accordance with all applicable laws and regulations.
 - f. Fees: Pay for any fees associated with the treatment, recycling, or disposal of these soils. Any additional soil sampling and chemical analyses required for acceptance of the soil at facilities other than those described above may be deemed to be the responsibility of Contractor.
 - g. Transport: Transport the soils to the selected facilities under approved manifests and submit copies of these manifests and the facility weight tickets to District's Representative.

D. Hazardous Building Materials

1. To protect construction workers and members of the public from known or undiscovered hazardous building materials, including asbestos and lead, undertake all demolition activities in accordance with Cal-OSHA standards, contained in Title 8 of the California Code of Regulations (CCR).
2. During demolition activities, all building materials containing lead-based paint shall be removed in accordance with Cal-OSHA Lead in Construction Standard, Title 8, California Code of Regulations 1532.1.
3. All potentially friable asbestos-containing materials (ACMs) shall be removed in accordance with National Emissions Standards for Hazardous Air Pollutants (NESHAP) guidelines prior to building demolition or renovation that may disturb the materials. Applicable standards include the following.
 - a. The facility shall be inspected before any renovation occurs in which 160 square feet or more of building materials or 260 linear feet or more of pipe insulation will be disturbed at a regulated facility, or any demolition occurs at a regulated facility.
 - b. An asbestos notification form shall be submitted to the Bay Area Air Quality Management District (BAAQMD) for any regulated asbestos abatement project or regulated demolition 10 working days before the activity begins.
 - c. If ACMs are discovered during a renovation or demolition, they must be removed before the project may proceed. Also, the Cal-OSHA and California Environmental Protection Agency (Cal-EPA) hazardous waste regulations apply in most cases.

E. Naturally Occurring Asbestos

1. To protect construction workers and members of the public from exposure to known areas of naturally-occurring asbestos (NOA), all ground disturbing activities will be undertaken in accordance with all applicable Cal-OSHA standards, contained in Title 8 of the California Code of Regulations (CCR). In addition, any ground-disturbing activity in an area that meets one or more of the applicability criteria for the Asbestos Airborne Toxic Control Measure (ATCM) for Construction, Grading, Quarrying, and Surface Mining Operations, as adopted by the California Air Resources Board (CARB), is subject to the requirements therein. Per section 93105(b) of the ATCM, these criteria are as follows:
 - a. The area to be disturbed is located in a geographic ultramafic rock unit; or
 - b. The area to be disturbed has naturally-occurring asbestos, serpentine, or ultramafic rock as determined by the owner / operator, or the Air Pollution Control Officer (APCO); or
 - c. Naturally-occurring asbestos, serpentine, or ultramafic rock is discovered by the District, a registered geologist, or the APCO in the area to be disturbed after the start of any construction, grading, quarrying, or surface mining operation.
2. For construction projects that disturb areas of 1 acre or less, implement standard dust mitigation measures before construction begins, and maintain each measure throughout the duration of the construction project. The following additional measures will be implemented in accordance with Section 93105 (e)(1) of the ATCM and will be undertaken in concurrence with the dust control measures identified in Paragraph 1.8 Dust Control Measures and Paragraph 1.9 Erosion Control Measures.
 - a. Equipment used during excavation, grading, and construction activities will be washed down before moving from the property onto a paved public road.
 - b. Any visible track-out on the paved public road will be cleaned using wet sweeping or a high-efficiency particulate air (HEPA) filter equipped vacuum device within twenty-four hours.
3. For construction projects that disturb areas greater than 1 acre in size, submit an asbestos dust mitigation plan to the Bay Area Air Quality Management District (BAAQMD) for review and approval, in accordance with Section 93105(2)(A) of the ATCM, before the start of any construction or grading activity. The provisions of the dust mitigation plan will be implemented before construction begins, and will be maintained throughout the duration of the construction or grading activity. The asbestos dust mitigation plan will address the following:
 - a. Prevention of dust emissions offsite;
 - b. Control of dust for disturbed areas and storage piles;
 - c. Traffic control for on-site unpaved areas;
 - d. Control for earthmoving activities;
 - e. Track-out prevention;
 - f. Control for off-site transport;
 - g. Post-construction stabilization of disturbed areas;
 - h. Air monitoring for asbestos (if required by the APCO).

1.8 Dust Control Plan

- A. Implement dust control measures to protect air quality during construction. To control dust emissions generated during construction, implement the following Bay Area Air Quality Management District (BAAQMD) measures for construction emissions of particulate matter over 10 microns in size (PM10):
 1. Water all active construction areas at least twice daily.
 2. Cover all trucks hauling soil, sand, and other loose materials, or require all trucks to maintain at least 2 feet of freeboard.
 3. Pave, apply water three times daily, or apply (nontoxic) soil stabilizers on all unpaved access roads, parking areas, and staging areas at construction sites.
 4. Sweep streets daily (with water sweepers) if visible soil material has been carried onto adjacent public streets.
 5. Suspend excavation and grading activity when winds (instantaneous gusts) exceed 25 miles per hour.
 6. Limit speed of vehicles to 15 miles per hour or less at construction sites.

1.9 Erosion Control Plan

- A. Implement erosion control measures to protect water quality during construction.
 1. Cover or apply nontoxic soil stabilizers to inactive construction areas (previously graded areas inactive for ten days or more) that could contribute sediment to waterways.

2. Enclose and cover exposed stockpiles of dirt or other loose, granular construction materials that could contribute sediment to waterways.
3. Contain soil and filter runoff from disturbed areas by berms, vegetated filters, silt fencing, straw wattle, plastic sheeting, catch basins, or other means necessary to prevent the escape of sediment from the disturbed area.
4. Prohibit the placement of earth or organic material where it may be directly carried into a stream, marsh, slough, lagoon, or body of standing water.
5. Prohibit the following types of materials from being rinsed or washed into streets, shoulder areas, or gutters: concrete, solvents and adhesives, fuels, dirt, gasoline, asphalt, and concrete saw slurry.
6. Conduct dewatering activities according to the provisions of the Storm Water Pollution Prevention Plan (SWPPP). Prohibit placement of dewatered materials in local water bodies or in storm drains leading to such bodies without implementation of proper construction water quality control measures.

1.10 Cultural Resources Protection Plan

- A. If buried cultural resources, such as chipped or ground stone, historic debris, building foundations, or human bone or paleontological resources are discovered inadvertently during ground-disturbing activities, Contractor shall avoid any further disturbance of the materials and immediately discontinue earthwork within 100 feet of the find. Contractor shall notify District's Representative immediately upon encountering cultural resources. Contractor shall be prepared to move on to another location or phase of work, allowing sufficient time for District's Representative to evaluate the nature and significance of the find, and implement appropriate management procedures.
- B. In the event that prehistoric human remains are encountered, further excavation or disturbance of the site shall cease immediately, pursuant to Health and Safety Code 7050.5. Contractor shall notify District's Representative immediately upon encountering human remains. Contractor shall move on to another location or phase of Work to allow proper assessment of the situation.
- C. If human remains of Native American origin are discovered during project construction, it will be necessary to comply with State laws relating to the disposition of Native American burials, which fall under the jurisdiction of the NAHC (Public Resources Code [PRC] Section 5097). Consequently, if any human remains are discovered or recognized in any location other than a dedicated cemetery, there will be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains:
 1. until the San Mateo County Coroner has been informed and has determined that no investigation of the cause of death is required;
 2. if the remains are of Native American origin
 - a. the descendants of the deceased Native American(s) have made a recommendation to the landowner or the person responsible for the excavation work regarding means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in PRC Section 5097.98; or
 - b. the NAHC has been unable to identify a descendent or the descendent failed to make a recommendation within 24 hours after being notified by the NAHC.
- D. Contractor may be entitled to an increase in Contract Sum and Contract Time due to conditions described in this paragraph 1.4 of this Section 01 35 00. The Contractor shall take all measures to avoid and/or mitigate delays due to Cultural Resource finds such as; avoiding the area of the find and proceeding with other work on the project; developing "work around" plans; and documenting its best efforts to avoid and/or mitigate delays. See Section 01 32 16 (Progress Schedules and Reports) regarding requirement to demonstrate Time Impacts.

1.11 Traffic Control Plan – In addition refer Exhibit A1-4 Site Logistics Plan and spec. 01 58 00.

- A. Develop and implement a traffic control plan to minimize the effects of construction traffic on the surrounding residential areas, as appropriate. Submit the plan to the District for review and approval.
- B. The construction traffic control plan will include, at a minimum, the following requirements:
 1. Provide clearly marked pedestrian detours if any sidewalk or pedestrian walkway closures are necessary.
 2. Provide clearly marked bicycle detours if heavily used bicycle routes must be closed, or if bicyclist safety would be otherwise compromised.
 3. Provide crossing guards and/or flag persons as needed to avoid traffic conflicts and ensure pedestrian and bicyclist safety.

- 4. Use nonskid traffic plates over open trenches to minimize hazards.
- 5. Locate all stationary equipment as far away as possible from areas used heavily by vehicles, bicyclists, and pedestrians.
- 6. Notify and consult with emergency service providers and provide emergency access by whatever means necessary to expedite and facilitate the passage of emergency vehicles.
- 7. Avoid routing construction traffic through residential areas to the extent feasible. Prohibit mobilization and demobilization of heavy construction equipment during AM and PM peak traffic hours.
- 8. Provide access for driveways and private roads outside the immediate construction zone by using steel plates or temporary backfill, as necessary.
- 9. Prohibit construction worker parking in residential areas.

1.12 Tree Protection Plan

A. Definitions

- 1. Dripline: The area on the ground from the trunk of any tree to the point directly below the outermost tips of the foliage of that tree.
- 2. Root Protection Zone (“RPZ”): The areas enclosed with tree protection fencing as designated on the drawing(s).
- 3. Tree damage: Tree damage shall include, but not be limited to, the following: significant injury to the root system or other parts of a tree including burning, application of toxic substances, damaging through contact with equipment or machinery, changing the natural grade within the Dripline or RPZ, compacting the soil within the Dripline or RPZ, interfering with the normal water requirements of the tree, unauthorized trenching or excavating within the Dripline or RPZ, or unauthorized removal of more than 1/3 of the live wood, foliage, or roots.

B. Root protection: No storage of materials or equipment will be allowed within the Dripline. Whenever possible, excavation shall be on a radial line, diverging from the tree trunk.

C. Exposure to harmful substances: No storage or dumping of any substances that may be harmful to trees shall occur at any location on the Site.

D. Where construction is to be performed in the vicinity of trees and shrubbery, the Work shall be carried on in a manner that will cause minimum damage. District will designate trees that are to be removed. Under no circumstances are additional trees to be removed without written permission from District. Trees and shrubbery that are not to be removed shall be protected from injury or damage resulting from Contractor's operations.

E. Any tree that is removed without District's permission or is irreparably damaged, in the opinion of District, shall cost Contractor in damages [\$100.00] per square inch of cross section, measured at 4 ½ feet above ground, but not less than [\$250.00], such cost to be deducted from monies due or to become due under the Contract. If tree protection is not performed or is not performed adequately, and District determines that a tree has been irreparably damaged, Contractor shall pay the same amount of damages as for unauthorized removal of a tree. Contractor shall immediately report all tree damage to District, so that District may determine applicable damages.

1.13 Migratory Bird Nesting Protection Plan

- a. Conduct tree removal and building demolition outside of the migratory bird nesting season. The typical nesting season for migratory birds in this part of California is April 15 through July 31.
- b. If tree removal or building demolition must take place during the nesting season, these activities shall be preceded by a survey for nesting migratory birds. If bird nests are discovered in the trees or on the buildings, they shall not be removed while the nest(s) are active.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

END OF SECTION

SECTION 01 41 00

REGULATORY REQUIREMENTS**PART 1 GENERAL****1.1 SUMMARY**

- A. Section includes: regulatory requirements applicable to Contract Documents.
- B. Specific reference in the Specifications to codes and regulations or requirements of regulatory agencies shall mean the latest printed edition of each adopted by the regulatory agency in effect at the time of the opening of bids, except as may be otherwise specifically stated in the Contract Documents.
- C. Should any conditions develop not covered by the Contract Documents wherein the finished Work will not comply with current codes, a change order detailing and specifying the required Work shall be submitted to and approved by District before proceeding with the Work.

1.2 REFERENCES TO REGULATORY REQUIREMENTS

- A. Codes, laws, ordinances, rules and regulations referred to shall have full force and effect as though printed in full in these Specifications. Code, laws, ordinances, rules and regulations are not furnished to Contractor, because Contractor is assumed to be familiar with these requirements. The listing of applicable codes, laws, and regulations for hazardous waste abatement Work in the Contract Documents is supplied to Contractor as a courtesy and shall not limit Contractor's responsibility for complying with all applicable laws, regulations or ordinances having application to the Work. Where conflict among the requirements or with these Specifications occurs, the most stringent requirements shall be used.
- B. Conform to referenced codes, laws, ordinances, rules and regulations.
- C. Precedence:
 - 1. Where specified requirements differ from the requirements of applicable codes, ordinances and standards, the more stringent requirements shall take precedence.
 - 2. Where Drawings or Specifications require or describe products or execution of better quality, higher standard or greater size than required by applicable codes, ordinances and standards, Drawings and Specifications shall take precedence so long as such increase is legal.
 - 3. Where no requirements are identified on Drawings or in Specifications, comply with all requirements of applicable codes, ordinances and standards of governing authorities having jurisdiction.

1.3 CODES

- A. Codes that apply to Contract Documents include, but are not limited to, the following:
 - 1. CBC (Part 2, Title 24, CCR, including, without means of limitation, Sections 16A, 102A.23, 308, 420A, 504-506, 904.2.6, 1019 and 1604)
 - 2. CEC (Part 3, Title 24, CCR)
 - 3. CMC (Part 4, Title 24, CCR)
 - 4. CPC (Part 5, Title 24, CCR),
 - 5. State Elevator Safety Regulations (Part 7, Title 24, CCR)
 - 6. UBC
 - 7. UPC
 - 8. UMC
 - 9. NEC

1.4 LAWS, ORDINANCES, RULES, AND REGULATIONS

- A. During prosecution of Work to be done under Contract Documents, comply with applicable laws, ordinances, rules and regulations, including, but not limited to, the following:
 - 1. Federal
 - a. Americans with Disabilities Act of 1990
 - b. 29 CFR, Section 1910.1001, Asbestos

- c. 40 CFR, Subpart M, National Emission Standards for Asbestos
 - d. Executive Order 11246
 - e. Federal Endangered Species Act
 - f. Clean Water Act
2. State of California
 - a. California Code of Regulations, Titles 5, 8, 19, 21, 22, 24 and 25
 - b. California Public Contract Code
 - c. California Health and Safety Code
 - d. California Government Code
 - e. California Labor Code
 - f. California Civil Code
 - g. California Code of Civil Procedure
 - h. CPUC General Order 95, Rules for Overhead Electric Line Construction
 - i. CPUC General Order 128, Rules for Construction of Underground Electric Supply and Communications Systems
 - j. Cal/OSHA
 - k. OSHA: Hazard Communications Standards
 - l. California Endangered Species Act
 - m. Water Code
 - n. Fish and Game Code
 3. State of California Agencies
 - a. State and Consumer Services Agency
 - b. Office of the State Fire Marshall
 - c. Office of Statewide Health Planning and Development
 - d. Department of Fish and Game
 - e. Bay Area Air Quality Management District
 - f. San Francisco Bay Regional Water Quality Control Board
 - g. Division of the State Architects
 4. Local Agencies:
 - a. San Mateo Fire District (College of San Mateo); Woodside Fire District (Cañada College); San Bruno Fire District (Skyline College)
 - b. Regional Water Quality Control Board requirements for storm water runoff control
 5. Other Requirements:
 - a. National Fire Protection Association (NFPA): Pamphlet 101, Life Safety.
 - b. References on Drawings or in Specifications to “code” or “building code” not otherwise identified shall mean the codes specified in this Section 01 41 00, together with all additions, amendments, changes, and interpretations adopted by code authorities of the jurisdiction.
- B. Have access to all of the foregoing within 24 hours.
- C. Other Applicable Laws, Ordinances and Regulations:
1. Work shall be accomplished in conformance with all applicable laws, ordinances, rules and regulations of federal, state, and local governmental agencies and jurisdictions having authority over the Project.
 2. Work shall be accomplished in conformance with all rules and regulations of public utilities and utility districts.
 3. Where such laws, ordinances rules, and regulations require more care or greater time to accomplish Work, or require better quality, higher standards or greater size of products, Work shall be accomplished in conformance to such requirements with no change to the Contract Time and Contract Sum, except where changes in laws, ordinances, rules and regulations occur subsequent to the time of opening of the bids.
- D. Under California Government Code Section 930.2 et. seq. and Public Contract Code Section 7105(d)(2), neither the Contract Claims Procedure (Section 00 71 00, Article 12) nor the Change Order Procedure (Section 01 26 00 Modification Procedures) may be modified, waived, or otherwise not complied with, absent a written change order that explicitly and expressly makes such modifications.

1.5 CONFLICTS

- A. Between referenced regulatory requirements: Comply with the one establishing the more stringent requirement.
- B. Between referenced regulatory requirements and Contract Documents: Comply with the one establishing the more stringent requirement.

1.6 REQUIRED PROVISIONS ON CONTRACT CLAIM RESOLUTION

- A. The California Public Contract Code specifies required provisions on resolving contract claims less than \$375,000, which are set forth below, and constitute a part of this Contract.
1. For the purposes of this section, "Claim" means a separate demand by Contractor of \$375,000 or less for (1) a time extension, (2) payment or money or damages arising from Work done by or on behalf of Contractor arising under the Contract Documents and payment of which is not otherwise expressly provided for or the Claimant is not otherwise entitled to, or (3) an amount the payment of which is disputed by District. In order to qualify as a Claim, the written demand must state that it is a Claim submitted under paragraph 12 of Section 00 71 00 (General Conditions) and be submitted in compliance with all requirements of Section 00 71 00 (General Conditions), paragraph 12. Separate Claims which total more than \$375,000 do not qualify as a "separate demand of \$375,000 or less," as referenced above, and are not subject to this section.
 2. A voucher, invoice, payment application, or other routine or authorized form of request for payment is not a Claim for purposes of this section. If such request is disputed as to liability or amount, then the disputed portion of the submission may be converted to a Claim under this section by submitting a separate claim in claim in compliance with Contract Documents claim submission requirements.
 3. Caution. This section does not apply to tort claims and nothing in this section is intended nor shall be construed to change the time periods for filing tort claims or actions specified by Chapter 1 and Chapter 2 of Part 3 of Division 3.6 of Title 1 of the California Government Code.
- B. Procedure:
1. The Claim must be in writing, submitted in compliance with all requirements of Section 00 71 00 (General Conditions), paragraph 12, including, but not limited to, the time prescribed by and including the documents necessary to substantiate the Claim, pursuant to Section 00 71 00 (General Conditions), paragraph 12. Claims must be filed on or before the day of final payment. Nothing in this section is intended to extend the time limit or supersede notice requirements for the filing of claims as set forth in Section 00 71 00 (General Conditions), paragraph 12 or elsewhere in the Contract Documents.
 2. For Claims of fifty thousand dollars (\$50,000) or less
 - a. District shall respond in writing within forty-five (45) days of receipt of the Claim, or
 - b. District may request in writing within thirty (30) days of receipt of the Claim, any additional documentation supporting the Claim or relating to any defenses or claims District may have against Claimant.
 - 1) If additional information is thereafter required, it shall be requested and provided in accordance with this section upon mutual agreement of District and Claimant.
 - 2) District's written response to the Claim, as further documented, shall be submitted to Claimant within fifteen (15) days after receipt of further documentation or within a period of time no greater than taken by Claimant in producing the additional information, whichever is greater.
 3. For Claims over Fifty Thousand Dollars (\$50,000) and less than or equal to \$375,000:
 - a. District shall respond in writing within sixty (60) days of receipt of the Claim, or
 - b. District may request in writing within thirty (30) days of receipt of the Claim, any additional documentation supporting the Claim or relating to any defenses or claims District may have against Claimant.
 - 1) If additional information is thereafter required, it shall be requested and provided in accordance with this section, upon mutual agreement of District and Claimant;
 - 2) District's written response to the Claim, as further documented, shall be submitted to Claimant within thirty (30) days after receipt of further documentation or within a period of time no greater than taken by Claimant in producing the additional information, whichever is greater.
 4. Meet and Confer:
 - a. If Claimant disputes District's written response, or District fails to respond within the time prescribed above, Claimant shall notify District, in writing, either within fifteen (15) days of receipt of District's response or within fifteen (15) days of District's failure to timely respond, and demand an informal conference to meet and confer for settlement of the issues in dispute. Upon demand District will schedule a meet and confer conference within thirty (30) days for settlement of the dispute.
 - b. Following the meet and confer conference, if the Claim or any portion remains in dispute, Claimant may file a claim as provided in Chapter 1 (commencing with Section 900) and Chapter 2

(commencing with Section 910) of Part 3 of Division 3.6 of Title 1 of the California Government Code. For purposes of those provisions, the running of the period of time within which a claim must be filed shall be tolled from the time Claimant submits its written claim as set forth in paragraph 12 of Section 00 71 00 (General Conditions), until the time that Claim is denied as a result of the meet and confer process, including any period of time utilized by the meet and confer process.

1.7 COMPLIANCE WITH AMERICANS WITH DISABILITIES ACT

- A. Contractor acknowledges that, pursuant to the Americans with Disabilities Act (ADA), programs, services and other activities provided by a public entity to the public, whether directly or through a contractor, must be accessible to the disabled public. Contractor shall provide the services specified in the Contract Documents in a manner that complies with the ADA and any and all other applicable federal, state and local disability rights legislation. Contractor agrees not to discriminate against disabled persons in the provision of services, benefits or activities provided under this Agreement and further agrees that any violation of this prohibition on the part of Contractor, its employees, agents or assigns shall constitute a material breach of the Contract Documents.

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION – NOT USED

END OF SECTION

SECTION 01 42 00

REFERENCES AND DEFINITIONS**PART 1 GENERAL****1.1 SUMMARY**

- A. Section Includes: Reference standards, abbreviations, symbols, and definitions used in Contract Documents.
- B. Full titles are given in this Section for standards cited in other Sections of Specifications.
- C. Material and workmanship specified by reference to number, symbol, or title of specific standard such as state standard, commercial standard, federal specifications, technical society, or trade association standard, or other similar standard, shall comply with requirements of standards except when more rigid requirements are specified or required by applicable codes.
- D. Standards referred to, except as modified herein, shall have full force and effect as though printed in the Contract Documents. Standards are not furnished to Contractor because manufacturers and trades involved are assumed to be familiar with their requirements.

1.2 REFERENCE TO STANDARDS AND SPECIFICATIONS OF TECHNICAL SOCIETIES; REPORTING AND RESOLVING DISCREPANCIES

- A. Reference to standards, specifications, manuals, or codes of any technical society, organization, or association, or to the laws or regulations of any governmental authority, whether such reference be specific or by implication, shall mean the latest standard, specification, manual, code, or laws or regulations in effect at the time of opening of Bids, except as may be otherwise specifically stated in the Contract Documents.
- B. If during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents or between the Contract Documents and any provision of any such law or regulation applicable to the performance of the Work or of any such standard, specification, manual, or code or of any instruction of any supplier, Contractor shall report it in writing at once to Inspector, with copies to District's Representative and Architect/Engineer, and Contractor shall not proceed with the Work affected thereby until consent to do so is given by District.
- C. Except as otherwise specifically stated in the Contract Documents or as may be provided by Change Order, CCD, or Supplemental Instruction, the provisions of the Contract Documents shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between the provisions of the Contract Documents and:
 - 1. The provisions of any such standard, specification, manual, code, or instruction (whether or not specifically incorporated by reference in the Contract Documents); or
 - 2. The provisions of any such laws or regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such law or regulation).
- D. No provision of any such standard, specification, manual, code, or instruction shall be effective to change the duties and responsibilities of District, District's Representative, Architect/Engineer or Contractor, or any of their subcontractors, consultants, agents, or employees, from those set forth in the Contract Documents, nor shall it be effective to assign to District, Engineer, or any of their consultants, agents, representatives or employees any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.
- E. Comply with the applicable portions of standards and specifications published by the technical societies, institutions, associations, and governmental agencies referred to in Specifications.
 - 1. Comply with referenced standards and specifications; latest revision in effect at the time of opening of Bids, unless otherwise identified by date.
 - a. Exception: Comply with issues in effect as listed in governing legal requirements.
- F. Referenced Grades, Classes, and Types: Where an alternative or optional grade, class, or type of product or execution is included in a reference but is not identified in Drawings or in Specifications, provide the highest, best, and greatest of the alternatives or options for the intended use and prevailing conditions.
- G. Jobsite Copies:

1. Obtain and maintain at the Site copies of reference standards identified on Drawings and in Specifications in order to properly execute the Work.
 2. At a minimum, the following shall be readily available at the Site:
 - a. Safety Codes: State of California, Division of Industrial Safety regulations.
- H. Edition Date of References:
1. When an edition or effective date of a reference is not given, it shall be understood to be the current edition or latest revision published as of the date of opening Bids.
 2. All amendments, changes, errata and supplements as of the effective date shall be included.
- I. ASTM and ANSI References: Specifications and Standards of the American Society for Testing and Materials (ASTM) and the American National Standards Institute (ANSI) are identified in the Drawings and Specifications by abbreviation and number only and may not be further identified by title, date, revision, or amendment. It is presumed that Contractor is familiar with and has access to these nationally- and industry-recognized specifications and standards.

1.3 ABBREVIATIONS

- A. Listed hereinafter are the various organizations or references which may appear in the Contract Documents, along with their respective acronyms and/or abbreviations:

AA	Aluminum Association
AABC	Associated Air Balance Council
AAMA	Architectural Aluminum Manufacturers Association
AAP	Affirmative Action Program
AASHTO	American Association of State Highway and Transportation Officials
ABMA	American Boiler Manufacturers Association
ABPA	American Board Products Association
ACI	American Concrete Institute
AED	Association of Equipment Distributors
AGA	American Gas Association
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
AITC	American Institute of Timber Construction
AMCA	Air Moving and Conditioning Association, Inc.
ANSI	American National Standards Institute (formerly American Standards Association)
APA	American Plywood Association
ARI	Air-Conditioning and Refrigeration Institute
ASHRAE	American Society of Heating, Refrigeration, and Air-Conditioning Engineers
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
AWCI	Association of the Wall and Ceiling Industries
AWPA	American Wood- Preservers Association
AWPB	American Wood Preservers Bureau
AWS	American Welding Society
AWWA	American Water Works Association
BIL	Basic Insulation Level
Cal/OSHA	California Occupational Safety and Health Administration
Caltrans	State of California, Department of Transportation
CBC	California Building Code
CCD	Construction Change Directive
CCR	California Code of Regulations
CEC	California Electric Code
CFR	Code of Federal Regulations
CISPI	Cast Iron Soil Pipe Institute
CLMFI	Chain Link Fence Manufacturers Institute
CMC	California Mechanical Code
CO	Change Order
CPC	California Plumbing Code
CPM	Critical Path Method

CPUC	California Public Utilities Commission
CRA	California Redwood Association
CRSI	Concrete Reinforcing Steel Institute
CS	Commercial Standards, U.S. Department of Commerce
CSA	Canadian Standards Association
CTI	Ceramic Tile Institute
DHI	Door and Hardware Institute
DSA	Division of State Architect (formerly known as the Office of the State Architect)
EPA	Environmental Protection Agency
FGMA	Flat Glass Marketing Association
FM	Factory Mutual
FS	Federal Specifications
GA	Gypsum Association
HPMA	Hardwood Plywood Manufacturers Association
HVAC	Heating, Ventilating and Air Conditioning
I.D.	Identification
IACS	International Annealed Copper Standards
IAPMO	International Association of Plumbing and Mechanical Officials
ICBO	International Conference of Building Officials
ICEA	Insulated Cable Engineers Association
IEEE	Institute of Electrical and Electronic Engineers, Inc.
IES	Illuminating Engineering Society
ISA	Instrumentation Society of America
JATC	Joint Apprenticeship Training Committee
JV	Joint Venture
LBE	Local Business Enterprise
M.I.	Middle Initial
M/WBE	Minority and/or Woman-Owned Business Enterprise
MBE	Minority Business Enterprise
MIA	Masonry Institute of America
MIA	Marble Institute of America
MLSFA	Metal Lath/Steel Framing Association
MS	Military Specifications
MSDS	Material Safety Data Sheet
MSS	Manufacturers Standardization Society of the Valve & Fitting Industry
NAAMM	National Association of Architectural Metal Manufacturers
NACE	National Association of Corrosion Engineers
NBS	National Bureau of Standards
NEC	National Electric Code
NEMA	National Electric Manufacturers Association
NESC	National Electrical Safety Code
NFPA	National Fire Protection Association
NFPA	National Forest Products Association
NIOSH	National Institute for Occupational Safety and Health
NIST	National Institute of Science and Technology (formerly the National Bureau of Standards)
NOFMA	National Oak Flooring Manufacturers Association
NSF	National Sanitation Foundation
NTMA	National Terrazzo & Mosaic Association
NWWDA	National Wood Windows and Doors Association
OSHA	Occupational Safety and Health Administration
OSHPD	Office of Statewide Health Planning and Department
PCA	Portland Cement Association
PCI	Prestressed Concrete Institute
PDI	Plumbing and Drainage Institute
PG&E	Pacific Gas and Electric Company
PM	Preventive Maintenance
PR	Proposal Request

PS	Product Standard, U. S. Department of Commerce
RFI	Request for Information
RFP	Request for Proposals
RFS	Request for Substitution
RIS	Redwood Inspection Service
SDI	Steel Deck Institute
SFM	State of California, Office of State Fire Marshal
SIGMA	Sealed Insulating Glass Manufacturers Association
SJI	Steel Joint Institute
SMACNA	Sheet Metal and Air Conditioning Contractors National Association
SPIB	Southern Pine Inspection Bureau
SSPC	Steel Structures Painting Council
SWI	Steel Window Institute
TCA	Tile Council of America
TIE	Time Impact Evaluation
UBC	Uniform Building Code
UFC	Uniform Fire Code
UL	Underwriters' Laboratories, Inc.
UMC	Uniform Mechanical Code
UPC	Uniform Plumbing Code
USA	Underground Service Alert
USC	United States Code
WCLIB	West Coast Lumber Inspection Bureau
WHI	Warnock Hersey International a testing lab
WIC	Woodwork Institute of California
WWPA	Western Wood Products Association

B. Abbreviations in Specifications:

AWG	American Wire Gauge
accord	Accordance
Co.	Company
Corp.	Corporation
cm.	centimeter (centimeters)
cu.	Cubic
Div.	Division
dia.	diameter
ft.	foot (feet)
g./gr.	gram (grams)
gal.	gallon (gallons)
gpd	gallons per day
gpm	gallons per minute
hr.	hour
kg.	kilogram (kilograms)
in.	inch (inches)
Inc.	Incorporated
km.	kilometer (kilometers)
Kw	Kilowatt
l.	liter (liters)
lbs.	pounds
m	meter (meters)
Mfg.	manufacturing
Mg.	milligram (milligrams)
ml. /mls.	milliliter (milliliters)
mm.	millimeter (millimeters)
No.	number
o.c.	on centers

O.D.	outside diameter
psi	pounds per square inch
psf	pounds per square foot
sq.	square
T & G	tongue and groove
U.S.	United States
yd.	yard (yards)

C. Abbreviations on Drawings:

Additional abbreviations, used only on drawings, are indicated thereon.

1.4 SYMBOLS

A. Symbols in Specifications:

:	“shall be” or “shall” - where used within sentences or paragraphs
#1	Number
1#	Pound
&	And
%	Percent
C	Centigrade
F	Fahrenheit
°	Degree
/	per, except where used to combine words; example: power/fuel, and in that case it means and
“	inch (inches)
‘	foot (feet)
@	At

B. Symbols on Drawings:

Symbols, used only on Drawings, are indicated thereon.

1.5 DEFINITIONS

A. Wherever any of the words or phrases defined below, or a pronoun used in place thereof, is used in any part of the Contract Documents, it shall have the meaning here set forth. In the Contract Documents, the neuter gender includes the feminine and masculine, and the singular number includes the plural. While District has made an effort to identify all defined terms with initial caps, the following definitions shall apply regardless of case unless the context otherwise requires:

1. Addenda: Written or graphic instruments issued prior to the opening of Bids, which clarify, correct, or change the bidding requirements or the Contract Documents.
2. Agreement (Section 00 52 00): Agreement is the basic contract document that binds the parties to construction Work. Agreement defines relationships and obligations between District and Contractor and by reference incorporates Conditions of Contract, Drawings, and Specifications and contains Addenda and all Modifications subsequent to execution of Contract Documents.
3. Alternate: Work added to or deducted from the Base Bid, if accepted by District.
4. Application for Payment: Written application for monthly or periodic progress or final payment made by Contractor complying with the Contract Documents.
5. Approved Equal: Approved in writing by District as being of equivalent quality, utility and appearance.
6. Architect/Engineer: If used elsewhere in the Contract Documents, “Architect/Engineer” shall mean a person holding a valid California State Architect’s or Engineer’s license representing the District in the administration of the Contract Documents. Architect/Engineer may be an employee of or an independent consultant to District. When Architect/Engineer is referred to within the Contract Documents and no Architect/Engineer has in fact been designated, then the matter shall be referred to the District. The term Architect/Engineer shall be construed to include employees of Architect/Engineer and/or employees that

- Architect/Engineer supervises. When the designated Architect/Engineer is an employee of District, his or her authorized representatives on the Project will be included under the term Architect/Engineer. If Architect/Engineer is an employee of District, Architect/Engineer is the beneficiary of all Contractor obligations to District, including without limitation, all releases and indemnities. Refer to Section 341, Part 1, Title 24, California Code of Regulations.
7. Asbestos: Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by OSHA or Cal/OSHA.
 8. Bid: The offer or proposal of the Bidder submitted on the prescribed form(s) setting forth the prices for the Work to be performed.
 9. Bidder: One who submits a Bid.
 10. Bidding Documents: All documents comprising the Project Manual (including all documents and specification sections listed on Document 00 01 00 [Table of Contents]), including documents supplied for bidding purposes only and Contract Documents.
 11. Board: The Board of Trustees of the District.
 12. Business Day: Any Day other than Saturday, Sunday, and the following days that have been designated as holidays by District. If a holiday falls on a Saturday, the preceding Friday will be the holiday. If a holiday falls on a Sunday, the following Monday will be the holiday. Refer to the District's web site for a list of District observed holidays.
 13. By District: Work that will be performed by District or its agents at the District's expense.
 14. By Others: Work that is outside scope of Work to be performed by Contractor under this Contract, which will be performed by District, other contractors, or other means.
 15. Change Order: A written instrument prepared by District and signed by District and Contractor, stating their agreement upon all of the following:
 - a. a change in the Work;
 - b. the amount of the adjustment in the Contract Sum, if any; and
 - c. the amount of the adjustment in the Contract Time, if any.
 16. Code Inspector: A local or state agency responsible for the enforcement of applicable codes and regulations.
 17. Concealed: Work not exposed to view in the finished Work, including within or behind various construction elements.
 18. Construction Change Directive: A written order prepared and signed by District, directing a change in the Work and stating a proposed basis for adjustment, if any, in the Contract Sum or Contract Time, or both.
 19. Consultant: See Section 00 73 00 (Supplementary Conditions – Hazardous Materials) (if included)
 20. Construction Manager: See Section 00 52 00 (Agreement) (if this term is used).
 21. Contract Conditions: Consists of two parts: General Conditions and Supplemental Conditions.
 - a. General Conditions are general clauses that are common to the District Contracts, including Section 00 71 00.
 - b. Supplemental conditions modify or supplement General Conditions to meet specific requirements for this Contract, including Section 00 73 00 and Section 0073 05 (if included).
 22. Contract Documents and Contract: Contract Documents and Contract shall consist of the documents identified as the Contract Documents in Section 00 52 00 (Agreement), plus all changes, addenda, and modifications thereto.
 23. Contract Modification: Either:
 - a. a written amendment to Contract signed by Contractor and District; or
 - b. a Change Order; or
 - c. a Construction Change Directive (CCD); or
 24. Contract Sum: The sum stated in the Agreement and, including authorized adjustments, the total amount payable by District to Contractor for performance of the Work and the Contract Documents. The Contract Sum is also sometimes referred to as the Contract Price or the Contract Amount.

25. Contract Time: The number or numbers of Days or the dates stated in the Agreement
 - a. to achieve Substantial Completion of the Work or designated milestones; and/or
 - b. to complete the Work so that it is ready for final payment and is accepted.
26. Contractor: The person or entity identified as such in the Agreement and referred to throughout the Contract Documents as if singular in number and neutral in gender. The term "Contractor" means the Contractor or its authorized representative.
27. Contractor's Employees: Persons engaged in execution of Work under Contract as direct employees of Contractor, as Subcontractors, or as employees of Subcontractors.
28. Day: One calendar day of 24 hours measured from midnight to the next midnight, unless the word "day" is specifically modified to the contrary.
29. Defective: An adjective which, when modifying the word "Work," refers to Work that is unsatisfactory or unsuited for the use intended, faulty, or deficient, that does not conform to the Contract Documents, or does not meet the requirements of any inspection, reference standard, test or approval referred to in the Contract Documents (including but not limited to approval of samples and "or equal" items), or has been damaged prior to final payment (unless responsibility for the protection thereof has been assumed by District). District is the judge of whether Work is defective.
30. District: The San Mateo County Community College District.
31. District-Furnished, Contractor-Installed: Items furnished by District at its cost for installation by Contractor at its cost under Contract Documents.
32. District's Representative(s): See Section 00 52 00 (Agreement).
33. Drawings: The graphic and pictorial portions of Contract Documents, wherever located and whenever issued, showing the design, location and dimensions of the Work, generally including plans, elevations, sections, details, schedules and diagrams.
34. Equal: Equal in opinion of District. Burden of proof of equality is responsibility of Contractor.
35. Exposed: Work exposed to view in the finished Work, including behind louvers, grilles, registers and various other construction elements.
36. Final Acceptance or Final Completion: District's acceptance of the Work as satisfactorily completed in accordance with Contract Documents. Requirements for Final Acceptance/Final Completion include, but are not limited to:
 - a. All systems having been tested and accepted as having met requirements of Contract Documents.
 - b. All required instructions and training sessions having been given by Contractor.
 - c. All Project Record Documents having been submitted by Contractor, reviewed by District and accepted by District.
 - d. All punch list work, as directed by District, having been completed by Contractor.
 - e. Generally all Work, except Contractor maintenance after Final Acceptance, having been completed to satisfaction of District.
37. Force Account: Work directed to be performed without prior agreement as to lump sum or unit price cost thereof, and which is to be billed at cost for labor, materials, equipment, taxes, and other costs, plus a specified percentage for overhead and profit.
38. Furnish: Supply only, do not install.
39. Indicated: Shown or noted on the Drawings.
40. Inspector. The person engaged by District to inspect the workmanship, materials, or manner of construction of buildings or portions of buildings, to determine if such construction complies with the Contract Documents and applicable codes. The Inspector is subject to approval by the Architect/Engineer, District and, as appropriate, Division of the State Architect, and he will report to District. Refer to section 4-333 and section 4-342, Part 1, Title 24, California Code of Regulations.
41. Install: Install or apply only, do not furnish.
42. Latent: Not apparent by reasonable inspection, including but not limited to, the inspections and research required as a condition to bidding under the General Conditions.
43. Law: Unless otherwise limited, all applicable laws including without limitation all federal, state, and local laws, statutes, standards, rules, regulations, ordinances, and judicial and administrative decisions

44. **Material:** This word shall be construed to embrace machinery, manufactured articles, materials of construction (fabricated or otherwise), and any other classes of material to be furnished in connection with Contract, except where a more limited meaning is indicated by context.
45. **Milestone:** A principal event specified in Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all Work.
46. **Modification:** Same as Contract Modification.
47. **Not in Contract:** Work that is outside the Scope of Work to be performed by Contractor under Contract Documents.
48. **Notice of Completion:** Shall have the meaning provided in California Civil Code Section 3093, and any successor statute.
49. **Off Site:** Not on Property Owned by the District.
50. **Partial Utilization:** Use by District of a substantially completed part of the Work for the purpose for which it is intended (or a related purpose) prior to Substantial Completion of all of the Work.
51. **PCBs:** Polychlorinated byphenyls.
52. **Phase:** A specified portion of the Work (if any) specifically identified as a Phase in Section 00 52 00 (Agreement) or 01 10 00 (Summary).
53. **Product Data:** That information (including brochures, catalogue cuts, MSDS, etc.) supplied by the vendor describing the technical and commercial characteristics of the supplier equipment or materials, and accompanying commercial terms such as warranties, instructions and manuals.
54. **Progress Report:** A periodic report submitted by Contractor to District with progress payment invoices accompanying actual work accomplished to the Progress Schedule. See Section 01 32 16 (Progress Schedules and Reports) and Section 00 71 00 (General Conditions).
55. **Project:** Total construction of which Work performed under Contract Documents may be whole or part.
56. **Project Float:** As defined in Section 01 32 16 (Progress Schedules and Reports), paragraph 1.06.B.9.
57. **Project Manual:** Project Manual consists of Bidding Requirements, Agreement, Bonds, Certificates, Contract Conditions, and Specifications.
58. **Project Record Documents:** All Project deliverables required under various Sections, including without limitation, as-built drawings, operations and maintenance manuals, Installation, Operation, and Maintenance Manuals, and Machine Inventory Sheets.
59. **Provide:** Furnish and install.
60. **Request for Information (“RFI”):** A document prepared by Contractor requesting information regarding the Project or Contract Documents as provided in Section 01 26 00 (Modification Procedures). The RFI system is also a means for District to submit Contract Document clarifications or supplements to Contractor.
61. **Request for Proposals (“RFP”):** A document issued by District to Contractor whereby District may initiate changes in the Work or Contract Time as provided in Contract Documents. See Section 01 26 00 (Modification Procedures).
62. **Request for Substitution (“RFS”):** A document prepared by Contractor requesting substitution of materials as permitted and to the extent permitted in Contract Documents. See Section 01 60 00 (Product Requirements).
63. **RFI-Reply:** A document consisting of supplementary details, instructions, or information issued by District that clarifies or supplements Contract Documents, and with which Contractor shall comply. RFI-Replies do not constitute changes in Contract Sum or Contract Time except as otherwise agreed in writing by District. RFI-Replies will be issued through the RFI administrative system.
64. **Samples:** Physical examples of materials, equipment, or workmanship, including Mock Ups, that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.
65. **Shop Drawings:** All drawings, diagrams, illustrations, schedules and other data or information which are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work.
66. **Shown:** As indicated on Drawings.

67. Site: The particular geographical location of Work performed pursuant to Contract Documents.
 68. Spare Parts: Includes all spare parts, attic stock, required additional materials in excess of what is incorporated into the facility such as paint, carpet, tile, flooring, etc.
 69. Specifications: The written portion of the Contract Documents consisting of requirements for materials, equipment, construction systems, standards, and workmanship for the Work; performance of related services; and are contained in Divisions 1 through 16.
 70. Specified: As written in Specifications.
 71. Subcontractor: A person or entity that has a direct contract with Contractor to perform a portion of the Work at the Site. The term "Subcontractor" is referred to throughout the Contract Documents as if singular in number and neutral in gender and means a Subcontractor or an authorized representative of the Subcontractor. The term "Subcontractor" does not include a separate contractor or subcontractors of a separate contractor.
 72. Substantial Completion: The Work (or a specified part thereof) has progressed to the point where, in the opinion of District as evidenced by a Certificate of Substantial Completion, the Work is sufficiently complete, in accordance with Contract Documents, so that the Work (or specified part) can be utilized for the purposes for which it is intended; or if no such certificate is issued, when the Work (or specified part) is complete and ready for final payment as evidenced by written recommendation of District for final payment. The terms "Substantially Complete" and "Substantially Completed" as applied to all or part of the Work refer to Substantial Completion thereof.
 73. Supplemental Instruction: A written directive from District to Contractor ordering alterations or modifications that do not result in change in Contract Sum or Contract Time, and do not substantially change Drawings or Specifications. See Section 01 26 00 (Modification Procedures).
 74. Technical Specifications: Specification Divisions 2 through 48 of the Contract Documents.
 75. Title 24: Title 24, California Code of Regulations.
 76. Testing and Special Inspection Agency: An independent entity engaged by District to inspect and/or test the workmanship, materials, or manner of construction of buildings or portions of buildings, to determine if such construction complies with the Contract Documents and applicable codes.
 77. Underground Facilities: All pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels or other such facilities or attachments, and any encasements containing such facilities that have been installed underground to furnish any of the following services or materials: Electricity, gases, chemicals, steam, liquid petroleum products, telephone or other communications, cable television, sewage and drainage removal, traffic or other control systems or water.
 78. Unit Price Work: Shall be the portions of the Work for which a unit price is provided in Section 00 52 00 (Agreement) or Section 01 10 0 (Summary of Work).
 79. Verified Report: A periodic report submitted to District. Refer to Sections 4-336, 4-337 and 4-343, Part 1, Title 24, California Code of Regulations.
 80. Work: The entire completed construction, or the various separately identifiable parts thereof, required to be furnished under the Contract Documents within the Contract Time. Work includes and is the result of performing or furnishing labor and furnishing and incorporating materials and equipment into the construction, and performing or furnishing services and furnishing documents, all as required by the Contract Documents including everything shown in the Drawings and set forth in the Specifications. Wherever the word "work" is used, rather than the word "Work," it shall be understood to have its ordinary and customary meaning.
- B. Wherever words "as directed," "as required," "as permitted," or words of like effect are used, it shall be understood that direction, requirements, or permission of District is intended. Words "sufficient," "necessary," "proper," and the like shall mean sufficient, necessary, or proper in judgment of District. Words "approved," "acceptable," "satisfactory," "favorably reviewed," or words of like import, shall mean approved by, or acceptable to, or satisfactory to, or favorably reviewed by District.
- C. Wherever the word "may" or "ought" is used, the action to which it refers is discretionary. Wherever the word "shall" or "will" is used, the action to which it refers is mandatory.

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION – NOT USED

END OF SECTION

SECTION 01 45 23

TESTING AND INSPECTION**PART 1 GENERAL****1.1 SECTION INCLUDES**

- A. Contractor's Quality Control
- B. Quality of the Work
- ~~C. Inspections and Tests by Division of State Architect~~
- D. Inspections and Tests by Serving Utilities
- E. Inspections and Tests by Manufacturer's Representatives
- F. Inspections by Independent Testing and Inspection Agency
- G. Additional Testing and Inspection

1.2 CONTRACTOR'S QUALITY CONTROL

- A. Contractor's Quality Control: Ensure that products, services, workmanship and Site conditions comply with requirements of Drawings and Specifications by coordinating, supervising, testing, and inspecting the Work and by utilizing only suitably qualified and appropriately audited, licensed or trained, personnel.
- B. Quality Requirements: Work shall be accomplished in accordance with quality requirements of Drawings and Specifications, including, by reference, all codes, laws, rules, regulations, and standards. When no quality basis is prescribed, the quality and testing procedures shall be in accordance with the best-accepted practices of the construction industry for the locale of the Project, for projects of this type, or standards set by engineering or technical societies (e.g., ASTM or ASHRAE), whichever is more stringent.
- C. Quality Control Personnel: Employ and assign knowledgeable and skilled personnel as necessary to perform quality control functions to ensure that the Work is provided as required.

1.3 QUALITY OF THE WORK

- A. Quality of Products: Unless otherwise indicated or specified, all products shall be new, free of defects, and fit for the intended use.
- B. Quality of Installation: All Work shall be produced plumb, level, square and true, or true to indicated angle, and with proper alignment and relationship between the various elements, as shown on or required by Contract Documents.
- C. Protection of Completed Work: Take all measures necessary to preserve completed Work free from damage, deterioration, soiling, and staining, until acceptance by District.
- D. Standards and Code Compliance and Manufacturer's Instructions and Recommendations: Unless more stringent requirements are indicated or specified, comply with manufacturer's instructions and recommendations, reference standards and building code research report requirements in preparing, fabricating, erecting, installing, applying, connecting, and finishing Work.
- E. Deviations from Standards and Code Compliance and Manufacturer's Instructions and Recommendations: Secure District's advanced written consent. Document and explain all deviations from reference standards and building code research report requirements and manufacturer's product installation instructions and recommendations, including acknowledgement by the manufacturer that such deviations are acceptable and appropriate for the Project.
- F. Verification of Quality: Work shall be subject to verification of quality by District in accordance with provisions of the Contract Documents.
 - 1. Cooperate by making Work available for inspection by independent testing and inspection agencies.
 - 2. Such verification may include mill, plant, shop, or field inspection as required.
 - 3. Provide access to all parts of the Work, including plants where materials or equipment are manufactured or fabricated.
 - 4. Provide all information and assistance as required, including that by and from subcontractors, fabricators, materials suppliers and manufacturers, for verification of quality by District.

5. Applicable provisions of the Contract Documents shall govern Contract Modifications, if any, resulting from such verification activities.
- G. Observations by District's Consultants: Periodic and occasional observations of Work in progress will be made by District and District's consultants as deemed necessary to review progress of Work and general conformance with design intent.
- H. Limitations on Inspection, Testing and Observation: Neither employment of independent testing and inspection agency nor observations or tests by District and District's consultants shall in any manner relieve Contractor of obligation to perform Work in full conformance to all requirements of Contract Documents.
- I. District's Acceptance and Rejection of Work: District reserves the right to reject all Work not in conformance to the requirements of the Drawings and Specifications, or otherwise defective.
- J. Correction of Defective Work: Defective Work shall be modified, replaced, repaired or redone by the Contractor at no change in Contract Sum or Contract Time.
- K. Contract Adjustment for Defective Work: Should District determine that it is not feasible or in District's interest to require defective Work to be repaired or replaced, an equitable reduction in Contract Sum shall be made by agreement between District and Design-Build Entity, and documented in the form of a contract change order. If equitable amount cannot be agreed upon, a Construction Change Directive will be issued and the amount in dispute resolved in accordance with applicable provisions of Document 00 71 00 (General Conditions).
- L. Non-Responsibility for Defective Work: District and District's consultants disclaim any and all responsibility for Work produced not in conformance with the Drawings and Specifications.
- M. Responsibility for Defective Work: Contractor shall have full responsibility for all consequences resulting from defective work, including without limitation all delays, disruptions, extra inspection and correction costs by Contractor and District and re-Work, and extra time and costs of all types. Contractor waives excuses for defective work relating to District's prior review of Submittals and/or prior failure to notice defective work in place on inspection.

1.4 INSPECTIONS AND TESTS BY GOVERNING AUTHORITIES

- A. Regulatory Requirements for Testing and Inspection: Contractor shall comply with Part 1, Title 24, Section 4-335, California Code of Regulations and shall cooperate with Inspector in all testing required. Contractor shall comply with Part 2, Title 24, California Code of Regulations and shall cooperate with Inspector in all inspections, testing and approvals required. Contractor shall also comply with Uniform Building Code (UBC) requirements and all other requirements of governing authorities having jurisdiction.
- B. Inspections and Tests by Governing Authorities: Contractor shall cause all tests and inspections required by governing authorities having jurisdiction to be made for Work under this Contract.
 1. Such authorities may include, but are not limited to, the Architect/Designer, Fire Department, and similar agencies.
 2. Except as specifically noted, scheduling, conducting and paying for such inspections shall be solely the Contractor's responsibility.

1.5 INSPECTIONS AND TESTS BY SERVING UTILITIES

- A. Cause all tests and inspections required by serving utilities to be made for Work under this Contract. Scheduling, conducting and paying for such inspections shall be solely the Contractor's responsibility.

1.6 INSPECTIONS AND TESTS BY MANUFACTURER'S REPRESENTATIVES

- A. Cause all tests and inspections specified to be conducted by materials or systems manufacturers to be made. Additionally, all tests and inspections required by materials or systems manufacturers as conditions of warranty or certification of Work shall be made, the cost of which shall be included in the Contract Sum.

1.7 INSPECTIONS BY INDEPENDENT TESTING AND INSPECTION AGENCY

- A. District may select an independent testing and inspection agency or agencies approved by the Architect/Engineer to conduct tests and inspections in accordance with Part 1, Title 24, Section 4-335, California Code of Regulations and as indicated on Drawings, in Specifications and as required by governing authorities having jurisdiction.
- B. Responsibility for time and costs shall be as indicated in schedule below. All time and costs for Contractor's service related to such tests and inspections shall be included in Contract Time and Contract Sum.

- C. Notify District and Inspector in writing (and, if provided, on inspection request form provided by District) and, if directed by District, testing and inspection agency, when Work is ready for specified tests and inspections. Deliver this written notification at least 72 hours before the requested inspection date.
- D. Pay for all additional charges by testing and inspection agencies and governing authorities having jurisdiction due to the following:
 - 1. Contractor’s failure to properly schedule or notify testing and inspection agency or authorities having jurisdiction.
 - 2. Changes in sources, lots, or suppliers of products after original tests or inspections.
 - 3. Changes in means, methods, techniques, sequences, and procedures of construction that necessitate additional testing, inspection, and related services.
 - 4. Changes in mix designs for concrete and mortar after review and acceptance of submitted mix design.
 - 5. Contractor submitted requests to change materials or products, which are accepted, but require testing and/or reinspection beyond original design.
- E. Tests and special inspections to be paid by District may, where required, include the following:

<u>SECTION</u>	<u>MATERIAL TESTS</u>
03 21 13	Reinforcing steel for concrete and concrete masonry
03 31 00	Concrete slump and strength
04 22 00	Masonry block strength, shrinkage and moisture content
04 22 00	Masonry grout strength
04 22 00	High strength grout strength
04 22 00	Masonry mortar strength
05 12 00	Structural steel bolting and welding
31 63 00	Pile concrete and reinforcing
31 23 33	Trench backfill
31 23 00	Building pad sub-grade and imported fill
31 63 00	Load test pile dowels

<u>SECTION</u>	<u>SPECIAL INSPECTION</u>
03 21 00	Placement of reinforcing steel for concrete and concrete masonry
03 31 00	Placement of cast-in-place concrete
04 20 00	Placement of concrete block and grout
05 12 00	Structural steel fabrication, erection, bolting and welding
07 00 00	Installation of roof membrane
04 20 00	Installation of anchor bolts, dowels embedded in concrete and masonry
To be determined	Installation of adhesive (epoxy) connections
31 63 00	Placement of pile concrete and reinforcement
31 62 00	Pile driving
31 22 00	Site grading, road and parking phase
31 23 00	Trench backfill

<u>SECTION</u>	<u>ENVIRONMENTAL TESTS</u>
To be determined	Storm water runoff sampling
TBD	Construction Noise Monitoring
TBD	Air quality monitoring within occupied spaces

- F. Test and Inspection Reports: After each inspection and test, one copy of report shall be promptly submitted to District’s Representative, or any other consultant District designates, Architect/Engineer, Contractor and any agency having jurisdiction (if required by Code).
 - 1. Reports shall clearly identify the following:
 - a. Date issued.
 - b. Project name and number.
 - c. Identification of product and Specifications Section in which Work is specified.
 - d. Name of inspector.
 - e. Date and time of sampling or inspection.

- f. Location in Project where sampling or inspection was conducted.
 - g. Type of inspection or test.
 - h. Date of test.
 - i. Results of tests.
 - j. Comments concerning conformance with Contract Documents and other requirements.
2. Test reports shall indicate specified or required values and shall include statement whether test results indicate satisfactory performance of products.
 3. Samples taken but not tested shall be reported.
 4. Test reports shall confirm that methods used for sampling and testing conform to specified test procedures.
 5. When requested, testing and inspection agency shall provide interpretations of test results.
- G. Contractor Responsibilities in Inspections and Tests:
1. Unless specified otherwise, notify Inspector, District’s Representative, or any other consultant District designates, Architect/Engineer and independent testing and inspection agencies 72 hours in advance of expected time of each test and inspection, and for all other operations requiring inspection and testing services, by submitting Contractor’s inspection request in writing (or, if District provides a specific form, on that form).
 - a. When tests or inspections cannot be performed after such notice, reimburse District for testing and inspection agency personnel and travel expenses incurred due to Contractor’s negligence.
 2. Deliver to laboratory or designated location, adequate samples of materials proposed to be used that require advance testing, together with proposed mix designs.
 3. Cooperate with Inspector, District’s Representative, or any other consultant District designates, and District’s consultants. Provide access to Work areas and off-Site fabrication and assembly locations, including during weekends and after normal Work hours.
 4. Provide incidental labor and facilities to provide safe access to Work to be tested and inspected, to obtain and handle samples at the Site or at source of products to be tested, and to store and cure test samples.
 5. Provide, at least fifteen (15) Days in advance of first test or inspection of each type, a schedule of tests or inspections indicating types of tests or inspections and their scheduled dates.

1.8 ADDITIONAL TESTING AND INSPECTION

- A. If initial tests or inspections made by the Inspector or District’s Representative, or any other consultant District designates reveal that materials do not comply with Title 24, California Code of Regulations or with the Contract Documents, or if District has reasonable doubt that materials do not comply with Title 24, California Code of Regulations or with Contract Documents, additional tests and inspections shall be made as directed.
1. If additional tests and inspections establish that materials comply with Contract Documents, District shall pay all costs for such tests and inspections.
 2. If additional tests and inspections establish that materials do not comply with Contract Documents, all costs of such tests and inspections shall be deducted from Contract Sum.
 3. If Work requiring inspection is covered by follow-on or follow-up Work before it is inspected, uncover Work so proper inspections can be performed. All costs of such tests and inspections shall be deducted from Contract Sum.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION – NOT USED

END OF SECTION

SECTION 01 51 00**TEMPORARY FACILITIES AND CONTROLS****PART 1 GENERAL****1.1 SUMMARY**

- A. Section Includes:
1. Temporary Electricity
 2. Temporary Communications.
 3. Temporary Water
 4. Fences
 5. Protection of Public and Private Property
 6. Temporary Sanitary Facilities
 7. Temporary Barriers and Enclosures
 8. Water Control
 9. Pollution Control
 10. Construction Aids
 11. Erosion Control
 12. Noise Control
 13. Traffic Control
 14. Removal of Temporary Facilities and Controls

1.2 TEMPORARY ELECTRICITY

Contractor shall provide, maintain, and pay for electrical power at the Site for construction purposes and for Contractor's and Construction Manager's trailers. With the District's consent, power may be obtained from District at no cost to Contractor, but Contractor must provide all necessary wiring and appurtenances for connection to District's system. Contractor must coordinate point of connection with the District.

1.3 TEMPORARY COMMUNICATIONS

Provide, maintain, and pay for all applicable communications and data services for contractors' personnel. ~~(including without limitation telephone, facsimile, e-mail and internet) to field office commencing at time of Project mobilization, including all installation and connection charges. In addition, the Contractor shall provide, maintain and pay for a high speed internet service (minimum DSL) at the Site for both Contractor's field office and Construction Manager's trailer.~~

1.4 TEMPORARY WATER

- A. Provide, maintain, and pay for suitable quality water service required for construction operations.
- B. All water required for and in connection with the Work, including without limitation for dust control, shall be furnished by and at the expense of Contractor. Contractor may be allowed to utilize water from the District, with District's approval. However, District does not guarantee availability of this water. Contractor shall furnish necessary pipe, hose, nozzles, meter, and tools and perform all necessary labor to connect to the District's system. Unnecessary waste of water will not be permitted. Special hydrant wrenches shall be used for opening and closing fire hydrants; in no case shall pipe wrenches be used for this purpose.

1.5 FENCES

- A. All existing fences affected by the Work shall be maintained by Contractor until Final Completion. Fences which interfere with construction operations shall not be relocated or dismantled until District gives written permission to do so, and the period the fence may be left relocated or dismantled has been agreed upon. Where fences must be maintained across the construction easement, adequate gates shall be installed. Gates shall be kept closed and locked at all times when not in use.

- B. On completion of the Work across any tract of land, Contractor shall restore all fences to their original or to a better condition and to their original locations.

1.6 PROTECTION OF PUBLIC AND PRIVATE PROPERTY

- A. Contractor shall protect, shore, brace, support, and maintain all underground pipes, conduits, drains, and other underground construction uncovered or otherwise affected by its construction operations. All pavement, surfacing, driveways, curbs, walks, buildings, utility poles, guy wires, fences, and other surface structures affected by construction operations, together with all sod and shrubs in yards, parkways, and medians, shall be restored to their original condition, whether within or outside the easement. All replacements shall be made with new materials.
- B. Contractor shall be responsible for all damage to streets, roads, highways, shoulders, ditches, embankments, culverts, bridges, and other public or private property, regardless of location or character, which may be caused by transporting equipment, materials, or workers to or from the Work, Site or any part thereof, whether by Contractor or Subcontractors. Contractor shall make satisfactory and acceptable arrangements with the District, or the agency or authority having jurisdiction over the damaged property, concerning its repair or replacement or payment of costs incurred in connection with the damage.
- C. All fire hydrants and water control valves shall be kept free from obstruction and available for use at all times.

1.7 TEMPORARY SANITARY FACILITIES

- A. Provide and maintain required temporary buildings with sanitary toilets for use of all workers. At a minimum, sanitary facilities shall be located at trailer site, staging area, and adjacent to work area.
- B. Sanitary facilities shall be of reasonable capacity, properly maintained throughout the construction period, and obscured from public view to the greatest practical extent. If toilets of the chemically treated type are used, at least one toilet will be furnished for each 20 persons. Contractor shall enforce the use of such sanitary facilities by all personnel at the Site.
- C. Comply with all minimum requirements of the Health Department or other public agency having jurisdiction; maintain in a sanitary condition at all times.
- D. Provide temporary sanitary facilities for Campus and Staff during utility interruptions.

1.8 TEMPORARY BARRIERS AND ENCLOSURES

- A. Provide barriers to prevent unauthorized entry to construction areas to allow for District's use of Site, and to protect existing facilities and adjacent properties from damage from construction operations.
- B. Provide barricades required by governing authorities for public access to existing buildings.
- C. Protect vehicular traffic, stored materials, Site, and structures from damage.

~~1.9 WATER CONTROL~~

~~The following will be performed in accordance with the SWPPP specification, as specified in 1.9 of Section 01 35 00 (Special Procedures):~~

- ~~A. Grade Site to drain.~~
- ~~B. Maintain excavations free of water.~~
- ~~C. Protect Site from puddling or running water.~~
- ~~D. Provide water barriers as required to protect Site from soil erosion.~~
- ~~E. Provide for drainage of storm water and such water as may be applied or discharged on the Site in performance of the Work. Drainage facilities shall be adequate to prevent damage to the Work, the Site, and adjacent property.~~
- ~~F. Clean, enlarge and/or supplement existing drainage channels and conduit as necessary to carry all increased runoff attributable to Contractor's operations. Construct dikes as necessary to divert increased runoff from entering adjacent property (except in natural channels), to protect District's facilities and the Work, and to direct water to drainage channels or conduits. Provide ponding as necessary to prevent downstream flooding.~~

1.10 POLLUTION CONTROL

The following will be performed in accordance with the SWPPP Specification, as specified in 1.5 of Section 01 35 00 (Special Procedures) .

- A. Contractor shall prevent the pollution of drains and watercourses by sanitary wastes, sediment, debris, and other substances resulting from construction activities. No sanitary wastes shall be permitted to enter any drain or watercourse other than sanitary sewers. No sediment, debris, or other substance shall be permitted to enter sanitary sewers without authorization of the receiving sanitary sewer service, and all possible Best

Management Practices (BMPs) shall be taken to prevent such materials from entering any drain to watercourse.

- B. The Contractor shall implement BMPs during construction activities as specified in the California Storm Water Best Management Practices Handbook (Stormwater Quality Task Force, 1993) and/or the Manual of Standards for Erosion and Sediment Control Measures (ABAG, 1995). Erosion and sedimentation control practices shall include installation of silt fences, straw wattle, soil stabilization, revegetation, and runoff control to limit increases in sediment in stormwater runoff, including but not limited to, detention basins, straw bales, silt fences, check dams, geofabrics, drainage swales, and sand bag dikes.
- C. In the event that dewatering of excavations is required, Contractor shall obtain the necessary approval and permits for discharge of the dewatering effluent from the local jurisdiction. Contractor shall be responsible for assuring that water quality of such discharge meets the appropriate permit requirements prior to any discharge.

1.11 CONSTRUCTION AIDS

Contractor shall furnish, install, maintain, and operate all construction aids required by it and its Subcontractors in the performance of the Work, except as otherwise provided herein. Such construction aids shall include elevators and hoists, cranes, temporary enclosures, swing staging, scaffolding and temporary stairs. Construction aids shall be furnished without charge to the Subcontractors, and all necessary erection, maintenance, and operating personnel shall be included. In the event of conflict, the contractor furnishing the equipment shall determine priorities in the best interest of the Project.

~~1.12 EROSION CONTROL~~

~~A. GENERAL~~

~~Provide all materials, equipment and labor necessary to furnish and install straw wattles, silt fence barriers, hydroseed, or other Best Management Practices (BMP's) at locations shown on the Contractors Storm Water Pollution Prevention Plan.~~

- ~~1. Contractor shall prevent soil erosion on the Site and adjacent property resulting from its construction activities to the maximum extent practical, including implementation of Best Management practices. Effective measures shall be initiated prior to the commencement of clearing, grading, excavation, or other operations that will disturb the natural protection.~~
- ~~2. Work shall be scheduled to expose areas subject to erosion for the shortest possible time, and natural vegetation shall be preserved to the greatest extent practicable. Temporary storage and construction buildings shall be located, and construction traffic routed, to minimize erosion. Temporary fast growing vegetation or other suitable ground cover shall be provided as necessary to control runoff.~~

~~B. STORM WATER POLLUTION PREVENTION PLAN: Prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) tailored to the Contractor's operations, methods and equipment. Comply with State Water Resources Control Board requirements. The SWPPP shall be reviewed and approved by the authority having jurisdiction prior to the start of work. The SWPPP shall be tailored to the contractor's approach to the work in this contract. The Contractor shall as a minimum address:~~

- ~~1. Cut and fill operations~~
- ~~2. Temporary stockpiles~~
- ~~3. Vehicle and equipment storage, maintenance and fueling operations~~
- ~~4. Concrete, plaster, mortar and paint disposal~~
- ~~5. Dust control~~
- ~~6. Tracking of dirt and mud, on and off of site, and adjacent streets.~~
- ~~7. Pipe flushing and protection of drainage facilities both new and existing, on and off site as required by State Water Resources Control Board.~~

1.13 NOISE CONTROL

- A. When required by OSHA Standards, construction workers shall be provided with ear protection to operate equipment.
- B. Contractor shall take reasonable measures to avoid unnecessary noise. Such measures shall be appropriate for the normal ambient sound levels in the area during working hours. All construction machinery and vehicles shall be equipped with practical sound-muffling devices, and operated in a manner to cause the least noise consistent with efficient performance of the Work. During construction activities on or adjacent to occupied buildings, and when appropriate, Contractor shall erect screens or barriers effective in reducing noise in the

building and shall conduct its operations to avoid unnecessary noise which might interfere with the activities of building occupants.

- C. Ensure and provide certification to District that all construction equipment and vehicles used for the Work are:
 - 1. Maintained in good mechanical condition
 - 2. Equipped with properly installed engine mufflers
- D. The contractor will take care to minimize construction noise and coordinate construction operations in such a way that construction operations and noise shall not interfere or impact the operations of the College. The District has the authority to shut down contractors operations that are disrupting the College operations with no time or cost impacts for the failure of the contractor to coordinate operations with the District. The following is a partial listing of College events where particular care must be made on the part of the Contractor with regard to Noise Control (See Section 00 73 00 Supplementary Conditions for detailed list):
 - 1. Finals
 - 2. Commencement
 - 3. Large community events

1.14 TRAFFIC CONTROL

All traffic associated with the construction, including without limitation delivery and mail trucks, shall follow the District’s approved construction traffic route to and from the project site. Contractor shall provide signs directing construction and delivery traffic along this route. Construction truck traffic may be limited to specific, off-peak traffic hours, as directed by District’s Representative. - The Contractor shall provide adequate traffic control measures such as Barricades, Flagmen and Escorts for all construction traffic on College roads, pathways and adjacent areas to the construction site.

1.15 REMOVAL OF TEMPORARY FACILITIES AND CONTROLS

- A. Remove temporary utilities, equipment, facilities, and materials prior to final inspection.
- B. Remove underground installations.
- C. Clean and repair damage caused by installation or use of temporary work.
- D. Restore existing facilities used during construction to original condition. Restore permanent facilities used during construction to specified condition.

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION – NOT USED

END OF SECTION

SECTION 01 56 00

SITE SECURITY AND SAFETY**PART 1 GENERAL****1.1 SUMMARY**

- A. Overview
- B. Protection
- C. Control of Site
- D. Site Security
- E. Safety Program
- F. Safety Requirements
- G. Site Safety Officer
- H. Additional Safety Controls

1.2 OVERVIEW

- A. In order to continue support of our educational mission, the District's campuses and many of its facilities will remain occupied during completion of the Work making Site Security and Safety of paramount importance. Campuses are visited, on a daily basis, by an ever-changing and diverse population. Students, District staff, visitors, the public at large and contractor personnel will encounter real and potential safety hazards on a regular basis. Among this population, knowledge of safety and security hazards varies from considerable to none. This makes the risk of an injury of utmost concern to the District.

For this reason, failure to comply with the requirements of this Section will be considered grounds for the District, or its designated representative, to issue an order suspending work or terminate a contract for cause.

The District, or its designated representative, will also perform safety inspections and may issue a written notice ordering a contractor to correct an unsafe act or condition. If the Contractor fails to correct the unsafe act or condition within the requested time frame, the District or its representative may have the condition corrected and bill the non-compliant contractor for the costs associated with the correction.

- B. The General or Prime Contractor shall assume overall responsibility for project safety compliance.

1.3 PROTECTION

- A. Continuously maintain protection as necessary to protect the Work, as a whole and in part, and adjacent property and improvements from accidents, injuries or damage.
- B. Properly protect the Work:
 - 1. With lights, guard rails, temporary covers and barricades.
 - 2. Enclose excavations with proper barricades.
 - 3. Brace and secure all parts of the Work against storm and accident.
 - 4. Provide such additional forms of protection that may be necessary under existing circumstances.
- C. Provide and maintain in good condition all protective measures required to adequately protect all persons, including students, District staff, contractors and members of the public from hazards resulting from the Work and to exclude unauthorized persons from the Work. When regulated by Building Code, Cal OSHA, or other authority, such legal requirements for protection shall be considered as minimum requirements. Be responsible for the protection in excess of such minimum requirements as required.

1.4 CONTROL OF SITE

Ensure that no alcohol, firearms, weapons, or controlled substance enters or is used at the Site. Immediately and permanently remove from the Site any employee, contractor, subcontractor, vendor or consultant found in violation of this provision.

- A. Project Work Site parking will be limited to required work trucks, equipment pick-up/delivery vehicles and material delivery only. The Contractor's employees parking area is specified in Exhibit A – Site Logistics Plan.
- B. In addition to any other requirement in the Project Manual, or to enhance any existing requirement in these documents, the Contractor shall be aware of (and furnish and install or otherwise provide) the following:
 - a. Access to all existing classrooms must be maintained while isolating the Project Work Site by protective measures. Phasing of the work as (or if) required maintaining access to the buildings shall be a requirement of this Bid.
 - b. Isolation of the Project Work Site referenced immediately above shall be:
 - i. For exterior work (if any)- through the use of “pre-paneled” 6-foot high chain link fence. Fence panels shall include end clips/brackets with which the individual panels can be made into a “fence section” of indefinite length.
 - ii. For interior work (if any)- through the combined use of plywood and plastic sheeting walls constructed to prevent accidental entry to the work area and keep dust from entering occupied areas. Walls shall include end clips/brackets with which the individual panels can be made into a “wall section” of indefinite length.
- C. The fencing shall be maintained and relocated when and as necessary to assure staff/student/ visitor safety while maintaining a positive isolation barrier between the public and the Project Work Site.
- D. The contractor shall be responsible for posting, and maintaining, no less than the following construction site signage: CAUTION CONSTRUCTION; HARD HAT AREA; AND KEEP OUT. In the event that the Contractor's insurance carrier mandates that additional safety signs be posted, this contractor shall post and maintain those signs also.
- E. Construction Site signage shall be posted at the entries/exits from the buildings, at every chain link fence corner and in fence line “straight runs” as necessary to assure that the distance between signs does not exceed 500 linear feet.

1.5 SITE SECURITY

- A. As part of the Work included within the Contract Price, Contractor shall take and be fully responsible for all measures required to protect and maintain the security of persons, existing facilities and property at the Site, including without limitation preventing theft, loss, vandalism and improper concealment of personal property of the District and all persons lawfully present on the Site, and including times where workers are not present on the Site. Contractor's measures shall include, at a minimum, maintaining a log of all persons entering and leaving the Site and who they represent, what they are delivering and to whom.
- B. No claim shall be made against District by reason of any act of an employee or trespasser, and Contractor shall repair all damage to District's property resulting from Contractor's failure to provide adequate security measures.
- C. Contractor shall maintain a lock on the Construction access gate at all times. Contractor shall appoint one person to monitor the gate and maintain the sign-in/out list, with person's name, company, reason for entering, what they are delivering, time and date. Alternatively, Contractor shall provide a full-time guard at the gate at all times to control access and maintain the sign-in/out list. The sign in/out list shall be available to District at anytime upon request.
- D. Contractor shall supply additional security fencing, barricades, lighting, and other security measures as required to protect and control the Site.

1.6 SAFETY PROGRAM

- A. Within fifteen (15) days after Notice to Proceed, submit a Safety Program that has been reviewed and approved by an Industrial Hygienist certified by the American Board of Industrial Hygiene or a Certified Safety Professional. The Safety Program shall include the name, certification number, and certification seal of the Industrial Hygienist or Certified Safety Professional. Comply with the Safety Program and all applicable federal, state, and local regulation codes, rules, law and ordinances.
- B. Receipt and/or review of the Safety Program by District, Engineer or District's representative shall not relieve Contractor of any responsibility for complying with all applicable safety regulations.
- C. It is essential that Contractor and each Subcontractor implement an effective and vigorous Safety and Health Program to cover their respective portions of the Work. Subject to Contractor's overall responsibility for Project safety, it shall be understood that the full responsibility for providing a safe place to work with respect to their respective portions of the Work rests with Contractor and each individual Subcontractor.
- D. Safety Program components:

1. Injury and Illness Prevention Program (IIPP): Conforming to the General Industrial Safety Orders (CCR Title 8, Division 1, Chapter 4, Subchapter 7, Section 3203), and the California Labor Code (Section 6401.7).
 2. Site-Specific Safety and Health Plan (SSHP): Describing health and safety procedures that shall be implemented during the Work in order to ensure safety of the public and those performing the Work. Follow the guidelines for a SSHP listed in CCR Title 8, Division 1, Chapter 4, Subchapter 7, Section 5192, Item (b) (4) f.
 3. Confined Space Program: District will provide Contractor with any available information regarding permit space hazards, entry operations, and safety information relating to work in the permit spaces as set forth in the General Industrial Safety Orders (CCR Title 8, Division 1, Chapter 4, Subchapter 7, Section 5157). Permit space entry is allowed only through compliance with a permit space program meeting the requirements of Section 5157 of the General Industrial Safety Orders. During entry operations, or at the conclusion of entry operations, verbally notify Engineer of the permit space program followed and of any hazards confronted or created in permit spaces during entry operations.
 4. Emergency Response Plan (ERP): Describe procedures that shall be implemented in the event an incident or emergency occurs at the Project Site. The ERP should model multiple incident scenarios (e.g. minor injury, earthquake, fatality, fire, etc.). Special attention should be paid to Project Site access/egress and contractor personnel evacuation/staging areas. The District will provide contact information for designated internal staff.
- E. The wearing of hard hats shall be mandatory at all times for personnel on Site. Supply sufficient hard hats to equip properly all employees and visitors.
- F. Whenever an exposure exists, appropriate personal protective equipment (PPE) shall be used by all affected personnel. Supply PPE to all personnel under Contractor's direction.

1.7 SAFETY REQUIREMENTS

- A. Standards: Maintain the Project in accordance with state and local safety and insurance standards.
- B. Hazards Control:
1. Store volatile wastes in covered metal containers and remove from premises daily.
 2. Prevent accumulation of wastes that create hazardous conditions.
 3. Provide adequate ventilation during use of volatile or noxious substances.
- C. Conduct cleaning and disposal operations to comply with local ordinances and anti-pollution laws.
1. Do not burn or bury rubbish or waste material on the Site.
 2. Do not dispose of volatile wastes such as mineral spirits, oil, or paint thinner in storm or sanitary drains.
 3. Do not dispose of wastes into streams or waterways.
- D. Provide accident information on the forms provided by Contractor. This information shall be provided on the same day as the occurrence of said incident.
- E. The District, or its designated representative, must be notified of all contractor injuries in accordance with the timeline established by Cal-OSHA/OSHA. Injuries, no matter how minor, to students, District staff or the public at large must be reported to the District immediately. All incidents resulting in damage to District property or third-party must be reported to the District immediately. Damage to contractor property must be reported within 12 hours if Contractor expects to file a claim against the District or OCIP.
- F. Contractors must make their employees, agents, contractors, subcontractors, vendors and officers available for post-incident investigations.
- G. Contractors must make the involved employees, agents, contractors, subcontractors, vendors and officers available for post-incident/injury drug screening. Those employees failing the test will be removed permanently from the job site. The District will bear the cost of these tests.

1.8 SITE SAFETY OFFICER

- A. Designate one of Contractor's staff as "Site Safety Officer" whose duties shall include the responsibility for enforcing the environmental protection provisions of the Contract Documents including safety and health, the requirements of the Occupational Safety and Health Act, and other applicable federal, state and local standards. Submit for review by District Contractor's intended traffic flow plan, security plan, program for temporary structures, housecleaning plan, demolition program, and environmental safety and health plan. After review by District, the implementation and enforcement of these plans shall become the responsibility of the Site Safety Officer. Any changes in the plans shall be requested by Contractor through the Site Safety Officer for written concurrence by District.
- B. District's risk management representative(s) shall be allowed access to accident/injury and illness reports, inspection reports, scheduling and construction meetings, and safety meetings.

1.9 ADDITIONAL SAFETY CONTROLS

- A. According to industry practices, it is the responsibility of all contractors of every tier to exercise reasonable care to prevent work-related injuries, property and equipment damage at the Project site, as well as minimize risk to the third-party persons and property. All contractors shall undertake loss control prevention practices according to those requirements set by federal, state and local laws, statutes and specific project procedures developed for this Project.
- B. In the event of an accident it will be the responsibility of all contractors of every tier to see that injured workers or third-parties are given immediate medical treatment and that all medical and/or claim forms are filed with the appropriate authorities.
- C. Contractors and subcontractors participating in the project will be expected to comply with the following safety and loss control requirements:
 1. All subcontractors shall identify their contact person(s) to the General or Prime Contractor.
 2. All contractors and subcontractors shall follow District procedures regarding dealing with the media.
 3. All construction employees will be required to be attired in workpants, shirt and appropriate boots or closed toe shoes.
 4. Alcohol is prohibited on District property at all times.
 5. Smoking Policy: It is the policy of San Mateo County Community College District to provide a safe learning and working environment for both students and employees. It is recognized that smoke from cigarettes, pipes and/or cigars is hazardous to health; therefore, it is the intent of the District to provide a smoke-free environment to the greatest extent possible. To achieve this goal, the District limits smoking on District property to outdoor areas only, at a minimum of twenty (20) feet away from any doorway, entrance to an indoor facility, or fresh air intake vent. Smoking is prohibited in all indoor locations within the District. The sale or distribution of cigarettes or other smoking material is also prohibited.
 - a. Contractor shall develop and enforce a smoking policy within work site area(s) that is in alignment with District's smoking policy. Contractor shall prohibit smoking in existing buildings that are under renovation. Contractor shall prohibit smoking in new buildings under construction no later than when the roof and exterior walls have been installed.
 - b. Skyline College: Outside of the work site(s), smoking is prohibited except in designated smoking areas on the campus.
 6. Contractors will be required to respond to all District complaints about objectionable levels of dust or noise and will be required to provide the appropriate abatement as quickly as possible.
 7. Construction personnel cannot enter District grounds other than the construction site unless accompanied by District personnel, and are allowed only 'incidental' contact with students. Violations of these requirements by any construction employee will result in a mandatory background check of that employee – including fingerprinting – as required by state law.
 8. Fall protection is mandatory on all projects in accordance with CAL OSHA, OSHA and any other appropriate code.
 9. A site specific Injury and Illness Prevention Program shall be available on site with the General or Prime Contractor. All contractors shall abide by this program.
 10. Personal radios, headsets, walkmans, I-pods and CD players are not allowed on the job-site.
 11. All contractors and subcontractors must attend a pre-construction safety meeting.
 12. No sexual reference or preference shall be permitted on any piece of clothing or the hardhat. Any employee observed disregarding this policy shall be removed from the job site until further notice.
 13. All contractors' employees shall park in their designated parking area. Any sticker attached to the employees' vehicle that displays any form of sexual preference or reference shall be removed prior to parking at the site.

Each employee will provide their license plate number to the General or Prime Contractor. Any employee disregarding this policy shall be removed from the site until further notice.

14. All contractors shall control the break time activities of the employees to assure the cleanup of all soda cans, food wrappers, plastic bottles, or food containers from the break area. Such areas shall be cleaned immediately after the break and all waste placed in trash receptacles. No glass containers are permitted on the site.
15. Theft or willful damage to any property of the District, student, or other contractors will be prosecuted fully.
16. No guns, switchblades, or knives with blades greater than two inches shall be allowed on the job site. Any employee disregarding this policy shall be removed from the site until further notice.
17. All contractors will advise non-English speaking employees in their native language either in a written format or via an interpreter of these policies.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 01 58 00

PROJECT IDENTIFICATION AND SIGNS

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Project signs
 - 2. Maintenance
 - 3. Removal
- B. Related Sections
 - 1. Section 01 10 00: Summary of Work
 - 2. Section 01 32 19: Submittal Procedures

1.2 QUALITY ASSURANCE

- A. Design project identification signage and structure(s) to withstand 50 miles/hr wind.
- ~~B. Sign Manufacturer/Maker: Experienced as a professional signage company for a minimum of five years.~~
- C. Project identification signs shall be constructed of new materials.
- D. Finishes: Adequate to withstand weathering, fading, and chipping for duration of construction.

1.3 SUBMITTALS

- A. Submit shop drawings under provisions of Section 01 32 19 - Submittal Procedures.
- B. Show content, layout, lettering style, lettering size, and colors. Make sign and lettering to scale, clearly indicating condensed lettering, if used.
- C. Show proposed location(s) for signage.

PART 2 PRODUCTS

2.1 CONTRACTOR-PROVIDED SIGNAGE

- A. Refer Exhibit A1-4 Site Logistics Plan for locations of signage. All signage to be approved by District prior to fabrication.
- B. Project signage
 - 1. "S01"
 - a) (3) Three each signs, 4 ft by 4 ft , bottom of signage no less than 4 feet above ground.
 - ~~b) "BUILDING TODAY FOR EDUCATION TOMORROW" across the top of each sign.~~
 - ~~c) "Facilities Excellence" across the bottom of each sign.~~
 - d) A District Department name and number for more information or emergency response.
 - e) Name of Project.
 - f) Name of District and name of College, including logos.

~~g) Names and roles of Architect and any consultants specified by District.~~

~~h) Name of Prime Contractor.~~

~~i) New construction projects shall include Architect's artistic rendering of the building(s).~~

j) The information telephone number of the Construction Planning Department is centered near the bottom of the area with the blue background.

k) Graphic Design, Colors, Style of Lettering: to be determined in coordination with District's Representative.

2. "S02"

a) (2) Two each, 18" x 18"

b) Include language "EMERGENCY EXIT ONLY" on top line and "TEMPORARILY DURING CONSTRUCTION" on second line.

c) Graphic Design, Colors, Style of Lettering: to be determined in coordination with District's Representative.

3. "S03"

a) (12) Twelve each, 12" x 12"

b) Include language "CLOSED FOR CONSTRUCTION"

c) Graphic Design, Colors, Style of Lettering: to be determined in coordination with District's Representative

C. Sign Materials

1. Poster paper, laminated. Metal grommets at each corner, for mounting.

2. Mounting Hardware:

a) Use plastic tie wraps to secure the signage to the construction site perimeter chain link fence, at location(s) to be identified by Owner's construction manager.

b) Use clear tape to secure the signage to surfaces where tie wraps will not work.

PART 3 EXECUTION

3.1 INSTALLATION

A. Project Signage

a. Install project identification signage prior to mobilization on site.

i. Place signs at locations as directed in Exhibit A1-4. District reserves the right to modify precise sign location s in the field.

ii. Erect sign level and plumb.

3.2 MAINTENANCE AND REMOVAL OF PROJECT IDENTIFICATION SIGNAGE

A. Project identification signs shall be maintained to present a clean and neat look throughout the project duration. Maintain signs and supports, keep clean, repair deterioration and damage.

B. Remove signs, framing, supports and foundations at completion of Project and restore the area to a condition equal to or better than before construction.

END OF SECTION

SECTION 01 60 00

PRODUCT REQUIREMENTS**1.1 SECTION INCLUDES**

- A. Products
- B. Product Options and Substitutions
- C. Product Delivery Requirements
- D. Shipping Requirements
- E. Product Storage and Handling Requirements

1.2 PRODUCTS

- A. Products: New material, machinery, components, equipment, fixtures, and systems forming the Work. Does not include machinery and equipment used for preparation, fabrication, conveying and erection of the 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 the Contract Documents.
- C. For similar components, provide interchangeable components of the same manufacturer.

1.3 PRODUCT OPTIONS AND SUBSTITUTIONS

- A. Summary: This paragraph 1.3 describes procedures for selecting products and requesting substitutions of unlisted materials in lieu of materials named in the Specifications or approved for use in Addenda that were not already the subject of a Document 00 43 25 (Substitution Request) submittal as provided in Document 00 11 19 (Instructions to Bidders).
- B. Contractor's Options:
 - 1. For products specified only by reference standard: Select any product meeting that standard.
 - 2. For products specified by naming one or more products or manufacturers:
 - a. Select products of any named manufacturer meeting specifications.
 - b. If product becomes unavailable due to no fault of Contractor, submit Request for Substitution (RFS), including all information contained in this Section 01 60 00 and a fully executed Document 00 43 25 (Substitution Request), but using the term "Contractor" each place the term "Bidder" appears in that form.
- C. Substitutions:
 - 1. Except as provided in Document 00 11 19 (Instructions to Bidders) with respect to "or equal" items, District will consider Contractor's substitution requests only when product becomes unavailable due to no fault of Contractor. Requests for review of proposed substitute items will not be accepted from anyone other than Contractor. The RFS shall state the extent, if any, to which the evaluation and acceptance of the proposed substitute will prejudice Contractor's achievement of Substantial Completion on time, and whether or not acceptance of the substitute for use in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with District for work on the Project).
 - 2. Submit separate RFS (and four copies) for each product and support each request with:
 - a. Product identification.
 - b. Manufacturer's literature.
 - c. Samples, as applicable.
 - d. Name and address of similar projects on which product has been used, and dates of installation.
 - e. Name, address, and telephone number of manufacturer's representative or sales engineer.
 - f. For construction methods: Detailed description of proposed method; drawings illustrating methods.
 - 3. Where required, itemize a comparison of the proposed substitution with product specified and list significant variations including, but not limited to dimensions, weights, service requirements, and functional differences. If variation from product specified is not pointed out in submittal, variation will be rejected even though submittal was favorably reviewed. Identify all variations of the proposed substitute from that specified in the RFS and indicate available maintenance, repair, and replacement service.

4. State whether the substitute will require a change in any of the Contract Documents (or provisions of any other direct contract with District for work on the Project) to adapt the design of the proposed substitute, and whether or not incorporation or use of the substitute in connection with Work is subject to payment of any license fee or royalty. Submit data relating to changes in construction schedule.
 5. Include accurate cost data comparing proposed substitution with product and amount of net change in Contract Sum including, but not limited to, an itemized estimate of all costs or credits that will result directly or indirectly from acceptance of such substitute, including costs of redesign and claims of other contractors affected by the resulting change, all of which will be considered by District in evaluating the proposed substitute. District may require Contractor to furnish additional data about the proposed substitute.
 6. District will not consider substitutions which are for the Contractor's convenience, for acceptance (or, in District's sole discretion, District may make Contractor solely responsible for all resulting costs, expenses and other consequences) when a substitution:
 - a. Results in delay meeting construction Milestones or completion dates.
 - b. Is indicated or implied on submittals without formal request from Contractor.
 - c. Is requested directly by Subcontractor or supplier.
 - d. Acceptance will require substantial revision of Contract Documents.
 - e. Disrupts Contractor's job rhythm or ability to perform efficiently.
 7. Substitute products shall not be ordered without written acceptance of District.
 8. District will determine acceptability of proposed substitutions and reserve right to reject proposals due to insufficient information.
 9. Accepted substitutions will be evidenced by an approved Substitution Request Form. All Contract Documents requirements apply to Work involving substitutions.
- D. Contractor's Representation and Warranty:
1. Contractor's RFS constitute a representation and warranty that Contractor:
 - a. Has investigated proposed product and determined that it meets or exceeds, in all respects, specified product.
 - b. Will provide the same warranty for substitution as for specified product.
 - c. Will coordinate installation and make other changes that may be required for Work to be complete in all respects.
 - d. Waives claims for additional costs which may subsequently become apparent.
 2. Will compensate District for additional redesign costs associated with substitution. For substitutions made for the contractors convenience the contractor will be responsible for all costs pertaining to substitution request.
 - a. Pay all costs incurred by the District associated with acceptance of substitutions including, but not limited to design, review and management activities.
 - b. Will be responsible for Construction Schedule slippage due to substitution.
 - c. Will be responsible for Construction Schedule delay due to late ordering of available specified products caused by requests for substitution that are subsequently rejected by District.
 - d. Will compensate District for all costs; including extra costs of performing Work under Contract Documents, extra cost to other contractors, and any claims brought against District, caused by late requests for substitutions or late ordering of products.
- E. District's Duties:
1. Review Contractor's RFS with reasonable promptness.
 2. Notify Contractor in writing of decision to accept or reject requested substitution.
- F. Administrative Requirements:
1. Specified products, materials, or systems for Project may include engineering or on-file standards required by the regulatory agency. Contractor's substitution of products, materials or systems may require additional engineering, testing, reviews, approvals, assurances, or other information for compliance with regulatory agency requirements or both.
 2. Provide all agency approvals or other additional information required and Contractor shall pay additional costs for required redesign, inspection, etc. For substitutions made for the Contractors convenience the Contractor will be responsible for all costs pertaining to substitution request.

1.4 PRODUCT DELIVERY REQUIREMENTS

- A. Deliver 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.

1.5 SHIPPING REQUIREMENTS

- A. Preparation for Shipment. All equipment shall be suitably packaged to facilitate handling and to protect against damage during transit and storage. All equipment shall be boxed, crated, or otherwise completely enclosed and protected during shipment, handling, and storage. All equipment shall be protected from exposure to the elements and shall be kept dry at all times.
 - 1. Painted and coated surfaces shall be protected against impact, abrasion, discoloration, and other damage. Painted and coated surfaces which are damaged prior to acceptance of equipment shall be repainted to the satisfaction of District.
 - 2. Grease and lubricating oil shall be applied to all bearings and similar items.
- B. Shipping. Before shipping each item of equipment shall be tagged or marked as identified in the delivery schedule or on the Shop Drawings. Complete packing lists and bills of material shall be included with each shipment.

1.6 PRODUCT STORAGE AND HANDLING REQUIREMENTS

- A. Store products only in staging area per provisions of Section 01 10 00 (Summary of Work).
- B. Handle, 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.
- C. For exterior storage of fabricated products, place on appropriate supports, above ground.
- 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 a well-drained area.
- 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 assure products are undamaged and are maintained under specified conditions.
- H. Without limiting the foregoing:
 - 1. Contractor shall bear the responsibility for delivery of equipment, spare parts, special tools, and materials to the Site and shall comply with the requirements specified herein and provide required information concerning the shipment and delivery of the materials specified in Contract Documents. These requirements also apply to any subsuppliers making direct shipments to the Site. Acceptance of the equipment shall be made only after it is installed, tested, placed in operation and found to comply with all the specified requirements.
 - 2. All items shall be checked against packing lists immediately on delivery to the Site for damage and for shortages. Damage and shortages shall be remedied with the minimum of delay.
 - 3. No metalwork (miscellaneous steel shapes and reinforcing steel) shall be stored directly on the ground. Masonry products shall be handled and stored in a manner to hold breakage, chipping, cracking, and spalling to a minimum. Cement, lime, and similar products shall be stored off the ground on pallets and shall be covered and kept completely dry at all times. Pipe fittings and valves may be stored out of doors, but must be placed on wooden blocking. PVC pipe, geomembranes, plastic liner, and other plastic materials shall be stored off the ground on pallets and protected from direct sunlight.
 - 4. Electrical equipment and all equipment with antifiriction or sleeve bearings shall be stored in weathertight structures maintained at a temperature above 60°F. Electrical equipment controls, and insulation shall be protected against moisture and water damage. All space heaters furnished in equipment shall be connected and operated continuously.
 - 5. Equipment having moving parts such as gears, bearings, and seals, shall be stored fully lubricated with oil, grease, etc., unless otherwise instructed by the manufacturer. Manufacturer's storage instructions shall be carefully followed by Contractor.
 - 6. When required by the equipment manufacturer, moving parts shall be rotated a minimum of twice a month to ensure proper lubrication and to avoid metal to metal "welding". Upon installation of the equipment, Contractor shall, at the discretion of District, start the equipment at one-half load for an adequate period of time to ensure that the equipment does not deteriorate from lack of use.
 - 7. When required by the equipment manufacturer, lubricant shall be changed upon completion of installation and as frequently as required thereafter during the period between installation and acceptance. New lubricants shall be put into the equipment by Contractor at the time of acceptance.

8. Equipment and materials shall not show any pitting, rust, decay, or other deleterious effects of storage when installed in the Work.
9. In addition to the protection specified for prolonged storage, the packaging of spare units and spare parts shall be for export packing and shall be suitable for long-term storage in a damp location. Each spare item shall be packed separately and shall be completely identified on the outside of the container.
10. Handling. Stored items shall be laid out to facilitate their retrieval for use in the Work. Care shall be taken when removing the equipment for use to ensure the precise piece of equipment is removed and that it is handled in a manner that does not damage the equipment.
11. Contractor is to complete, and if necessary develop, maintenance forms for each piece of major equipment installed and/or stored until project close out. Maintenance forms are to document the recommended preventive maintenance as specified by the manufacturer of the equipment. Each completed form shall document no more than one piece of equipment. The make, model and serial number of each piece of equipment and the date it was purchased and delivered will be noted in the top right corner of each form. Maintenance forms will be completed at least monthly, according to the manufacturers' recommendations, beginning no later than thirty (30) days from purchase/delivery of the equipment. Copies of these maintenance forms are to be submitted with each pay application, matching the date range of the pay application. At project close a complete set of original maintenance forms are to be 3-hole punched, organized chronologically by equipment make, model and serial number, and will be submitted to the District's Representative no more than thirty (30) days after the date of Substantial Completion. See Section 01 10 00 (Summary of Work) for the list of equipment to which this applies.

PART 2 PRODUCTS - NOT USED.

PART 3 EXECUTION - NOT USED.

END OF SECTION

SECTION 01 74 00

CLEANING**PART 1 GENERAL****1.1 SECTION INCLUDES**

- A. Progress Cleaning
- B. Final Cleaning

1.2 PROGRESS CLEANING

- A. Contractor shall perform periodic cleaning to ensure that any streets and other District and public properties are maintained free from accumulation of waste materials, dust, mud, and debris.
- B. Where required, Contractor shall wet down surfaces to lay dust and prevent the blowing of dust to nearby residences or public properties.
- C. Contractor shall keep all streets clean and free of dust, mud, and debris resulting from Contractor's operations. Daily cleanup throughout the job will be necessary as Contractor progresses with its Work, but extra attention to cleanup shall be made prior to weekends and holidays. Without limiting the foregoing, Contractor shall remove trench spoil along traveled ways daily; grade and vacuum broom surfaces initially where applicable and later water flush with high-pressure sprays, being careful to avoid downstream contamination.
- D. All dust, mud, spoils, and construction debris shall be removed daily from all roadways, ditches, shoulders, and private property (fills or spoils placed on private property at private property owner's written request excepted).
- E. Disposal of Materials:
 - 1. As part of the scope of Work included within the Contract Sum, Contractor shall be fully responsible for disposing of all construction debris, dirt and spoils resulting from the Work.
 - 2. All waste materials, debris, dirt and rubbish shall be disposed of at sites to be chosen by Contractor in accordance with applicable local, state, and federal regulations.
 - 3. Contractor is cautioned that the County of San Mateo and cities within the county have regulations governing the disposal of rubble, broken pavement, and similar materials.
 - 4. Contractor shall become familiarized with the requirements of the agency having jurisdiction over any contemplated disposal site and shall comply with all such requirements.
 - 5. The contractor shall estimate, log and submit regular reports to the District, an estimate of quantities (e.g. tonnage) of waste materials disposed of for compliance with AB75. Documentation requirements including the nature of materials, destination, volume and tonnage, shall be submitted as follows:
 - a. Up-to-date copies of the Waste Reporting Log (Exhibit A of this Section 01 74 00) shall be submitted with each payment application per Section 01 29 00 (Measurement and Payment) paragraph 1.7.C.8.
 - b. The Contractor shall submit a cumulative report summarizing the nature of materials, destination, volume and tonnage of materials disposed for the preceding calendar year to the District's Representative by January 31st of each year or at the end of the project as part of the contract closeout.
- F. All excess soil from performance of Work shall be disposed at sites to be chosen by Contractor in accordance with applicable local, state, and federal regulations. If Contractor elects to dispose of soil on any private property, prior to any dumping, a letter allowing such dumping shall be obtained from the property owner and presented to District. Contractor is advised that the property owner is required to obtain a fill permit from the applicable government agency (ies). In addition, placement of fill in wetland areas is subject to permit procedures of the US Army Corps of Engineers. At the completion of Work, a letter from each affected property owner will be required releasing Contractor, San Mateo County, District and any District consultant from future liability.
- G. If Contractor does not properly clean the Site, in the opinion of District, then District shall have the option of using outside equipment to perform the cleanup and such cost will be withheld from the Contract Sum.
- H. Contractor will take care to mitigate dust during interior renovation activities through proper use of dust controls. Dust controls will include, but not be limited to: dust barricades, walk-off mats, negative air machines and daily custodial clean-up employed by the Contract and at not additional cost to the District

1.3 FINAL CLEANING

- A. Contractor shall execute final cleaning prior to final inspection, using only properly skilled workers.
- B. Remove grease, dust, dirt, stains, labels, fingerprints, and other foreign materials from exposed interior and exterior finished surfaces.
- C. Repair, patch, and touch up marred surfaces to match adjacent finishes.
- D. Clean interior and exterior surfaces exposed to view; remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces, vacuum carpeted and soft surfaces.
- E. Clean equipment and fixtures to a sanitary condition, clean or replace filters of mechanical equipment operated during construction, clean ducts, blowers and coils of units operated without filters during construction.
- F. Clean Site; mechanically sweep paved areas.
- G. Remove waste and surplus materials, rubbish, and construction facilities from Site.

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION – NOT USED

END OF SECTION

WASTE REPORTING LOG FOLLOWS ON NEXT PAGE

SECTION 01 77 00

CONTRACT CLOSEOUT**PART 1 GENERAL****1.1 SUMMARY**

- A. Section Includes:
 - 1. Description of contract closeout procedures including:
 - a. Removal of Temporary Construction Facilities
 - b. Substantial Completion
 - c. Final Completion
 - d. Final Cleaning
 - e. Project record documents
 - f. Contractor shall comply with all applicable requirements in Section 01 78 39 (Project Record Documents).
 - g. Project Guarantee
 - h. Warranties
 - i. Turn-In
 - j. Release of Claims
 - k. Fire Inspection Coordination
 - l. Building Inspection Coordination

1.2 REMOVAL OF TEMPORARY CONSTRUCTION FACILITIES

- A. Remove temporary materials, equipment, services, and construction prior to Substantial Completion inspection.
- B. Clean and repair damage caused by installation or use of temporary facilities.
- C. Restore permanent facilities used during construction to specified condition.
- D. Comply with paragraph 1.12 of Section 01 51 00 (Temporary Facilities and Controls).

1.3 SUBSTANTIAL COMPLETION

- A. When Contractor considers Work or designated portion of the Work as Substantially Complete, submit written notice to District's Representative, with list of items remaining to be completed or corrected.
- B. Within reasonable time, District's Representative will inspect to determine status of completion.
- C. Should District's Representative determine that Work is not Substantially Complete, District will promptly notify Contractor in writing, listing all defects and omissions.
- D. Remedy deficiencies and send a second written notice of Substantial Completion. District will reinspect the Work. If deficiencies previously noted are not corrected on reinspection, then Contractor shall pay District's cost of the reinspection.
- E. When District's Representative determines that Work is Substantially Complete, District will issue a Certificate of Substantial Completion, accompanied by Contractor's list of items to be completed or corrected as verified by District.
- F. Manufactured units, equipment and systems that require startup must have been started up and run for periods prescribed by District before a Certificate of Substantial Completion will be issued.
- G. A punch list examination will be performed upon Substantial Completion. One follow-up review of punch list items for each discipline will be provided. If further Site visits are required to review punch list items due to incompleteness of the Work by Contractor, Contractor will reimburse District for costs associated with these visits.
- H. District may enlist Consultants to assist with the above activities.

1.4 FINAL COMPLETION

- A. Final Completion occurs when Work meets requirements for District's Final Acceptance. When Contractor considers Work is Finally Complete, submit written certification that:

1. Contractor has inspected Work for compliance with Contract Documents, and all requirements for Final Acceptance have been met.
 2. Except for Contractor maintenance after Final Acceptance, Work has been completed in accordance with Contract Documents and deficiencies listed with Certificate of Substantial Completion have been corrected. Equipment and systems have been tested in the presence of District, and are operative.
 3. Work is complete and ready for final inspection.
- B. In addition to submittals required by Contract Documents, provide submittals required by governing authorities and submit final statement of accounting giving total adjusted Contract Sum, previous payments, and sum remaining due.
- C. When District's Representative find Work is acceptable and final closeout submittals are complete, District's Representative will issue final Change Order reflecting approved adjustments to Contract Sum not previously made by Change Order. Should District determine that Work is incomplete or defective:
1. District promptly will so notify Contractor, in writing, listing the incomplete or defective items.
 2. Promptly remedy the deficiencies and notify the District when it is ready for reinspection.
 3. When District determines that the Work is acceptable under the Contract Documents, District will request Contractor to make closeout submittals.
- D. Final adjustments of accounts:
1. Submit a final statement of accounting to District, showing all adjustments to the Contract Sum and complete and execute Document 00 65 73 (Agreement and Release of Any and All Claims).
 2. If so required, District shall prepare a final Change Order for submittal to Contractor, showing adjustments to the Contract Sum that were not previously made into a Contract Modification.
- E. District may enlist Consultants to assist with the above activities.

1.5 FINAL CLEANING

Contractor shall comply with all applicable requirements in Section 01 74 00 (Cleaning).

1.6 PROJECT RECORD DOCUMENTS

Contractor shall comply with all applicable requirements in Section 01 78 39 (Project Record Documents).

1.7 PROJECT GUARANTEE

- A. Requirements for Contractor's guarantee of completed Work are included in Article 9 of Document 00 71 00 (General Conditions). Guarantee Work done under Contract against failures, leaks, or breaks or other unsatisfactory conditions due to defective equipment, materials, or workmanship, and perform repair work or replacement required, at Contractor's sole expense, for period of one year from date of Final Acceptance.
- B. Neither recordation of Final Acceptance nor final certificate for neither payment nor provision of the Contract or partial or entire use or occupancy of premises by District shall constitute acceptance of Work not done in accordance with Contract Documents nor relieve Contractor of liability in respect to express warranties or responsibility for faulty materials or workmanship.
- C. District may make repairs to defective Work as set forth in Document 00 71 00 (General Conditions).
- D. If, after installation, operation, or use of materials or equipment to be provided under Contract proves to be unsatisfactory to District, District shall have right to operate and use materials or equipment until said materials and equipment can, without damage to District, be taken out of service for correction or replacement. Period of use of defective materials or equipment pending correction or replacement shall in no way decrease guarantee period required for acceptable corrected or replaced items of materials or equipment.
- E. Nothing in this Section shall be construed to limit, relieve, or release Contractor's, Subcontractors', and equipment suppliers' liability to District for damages sustained as result of latent defects in equipment caused by negligence of suppliers' agents, employees, or Subcontractors. Stated in another manner, warranty contained in the Contract Documents shall not amount to, nor shall it be deemed to be, waiver by District of any rights or remedies (or time limits in which to enforce such rights or remedies) it may have for defective workmanship or defective materials under laws of this State pertaining to acts of negligence.

1.8 WARRANTIES

- A. Execute Contractor's submittals and assemble warranty documents, and installation, operations and maintenance manuals described in Section 01 32 19 (Submittal Procedures), executed or supplied by Subcontractors, suppliers, and manufacturers.
 - 1. Provide table of contents and assemble in 8½ inches by 11 inches three-ring binder with durable plastic cover, appropriately separated and organized.
 - 2. Include contact names and phone numbers for District personnel to call during warranty period.
 - 3. Assemble in Specification Section order.
- B. Submit material prior to final application for payment.
 - 1. For equipment put into use with District's permission during construction, submit within 14 Days after first operation.
 - 2. For items of Work delayed materially beyond Date of Substantial Completion, provide updated submittal within 14 Days after acceptance, listing date of acceptance as start of warranty period.
- C. Warranties are intended to protect District against failure of Work and against deficient, defective and faulty materials and workmanship, regardless of sources.
- D. Limitations: Warranties are not intended to cover failures that result from the following:
 - 1. Unusual or abnormal phenomena of the elements
 - 2. Vandalism after Substantial Completion
 - 3. Insurrection or acts of aggression including war
- E. Related Damages and Losses: Remove and replace Work which is damaged as result of defective Work, or which must be removed and replaced to provide access for correction of warranted Work.
- F. Warranty Reinstatement: After correction of warranted Work, reinstate warranty for corrected Work to date of original warranty expiration or to a date not less than one year after corrected Work was done, whichever is later.
- G. Replacement Cost: Replace or restore failing warranted items without regard to anticipated useful service lives.
- H. Warranty Forms: Submit drafts to District for approval prior to execution. Forms shall not detract from or confuse requirements or interpretations of Contract Documents.
 - 1. Warranty shall be countersigned by manufacturers.
 - 2. Where specified, warranty shall be countersigned by Subcontractors and installers.
- I. Rejection of Warranties: District reserves right to reject unsolicited and coincidental product warranties that detract from or confuse requirements or interpretations of Contract Documents.
- J. Term of Warranties: For materials, equipment, systems, and workmanship, warranty period shall be one year minimum from date of Final Completion of entire Work except where:
 - 1. Detailed specifications for certain materials, equipment or systems require longer warranty periods.
 - 2. Materials, equipment or systems are put into beneficial use of District prior to Final Completion as agreed to in writing by District.
- K. Warranty of Title: No material, supplies, or equipment for Work under Contract shall be purchased subject to any chattel mortgage, security agreement, or under a conditional sale or other agreement by which an interest therein or any part thereof is retained by seller or supplier. Contractor warrants good title to all material, supplies, and equipment installed or incorporated in Work and agrees upon completion of all Work to deliver premises, together with improvements and appurtenances constructed or placed thereon by Contractor, to District free from any claim, liens, security interest, or charges, and further agrees that neither Contractor nor any person, firm, or corporation furnishing any materials or labor for any Work covered by Contract shall have right to lien upon premises or improvement or appurtenances thereon. Nothing contained in this paragraph, however, shall defeat or impair right of persons furnishing materials or labor under bond given by Contractor for their protection or any rights under law permitting persons to look to funds due Contractor in hands of District.

1.9 TURN-IN

Contract Documents will not be closed out and final payment will not be made until all personnel Identification Media, vehicle permits, keys issued to Contractor during prosecution of Work, and letters

from property owners pursuant to paragraph 1.2.F of Document 01 74 00 (Cleaning) are turned in to District.

1.10 RELEASE OF CLAIMS

Contract Documents will not be closed out and final payment will not be made until Document 00 65 73 (Agreement and Release of Any and All Claims) is completed and executed by Contractor and District.

1.11 FIRE INSPECTION COORDINATION

Coordinate fire inspection and secure sufficient notice to District to permit convenient scheduling (if applicable).

1.12 BUILDING INSPECTION COORDINATION

Coordinate with District a final inspection for the purpose of obtaining an occupancy certificate (if applicable).

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION – NOT USED

END OF SECTION

SECTION 01 78 39

PROJECT RECORD DOCUMENTS**PART 1 GENERAL****1.1 SUMMARY**

- A. Section Includes: Administrative and procedural requirements for Project Record Documents.
- B. Project Record Documents required include:
 - 1. Marked-up copies of Drawings
 - 2. Marked-up copies of Shop Drawings
 - 3. Newly prepared Drawings
 - 4. Marked-up Product Data submittals
 - 5. Field records, such as photographs, for variable and concealed conditions
 - 6. Record information on Work that is recorded only schematically
 - 7. Maintenance forms for major equipment
- C. Specific Project Record Documents requirements that expand requirements of this Section are included in the individual Sections of Divisions 2 through 60.
- D. General Project closeout requirements are included in Section 01 77 00 (Contract Closeout).
- E. Maintenance of Documents and Samples:
 - 1. Store Project Record Documents and Samples in the field office apart from Contract Documents used for construction.
 - 2. Do not permit Project Record Documents to be used for construction purposes.
 - 3. Maintain Project Record Documents in good order and in a clean, dry, legible condition.
 - 4. Make Documents and Samples available at all times for inspection by District.
- F. Dedicate one full size set of the Drawings and one Project Manual for use for recording as-built conditions.

1.2 PROJECT RECORD DRAWINGS

- A. Mark-up Procedure: During the construction period, maintain a set of blue-line or black-line prints of Contract Drawings and Shop Drawings for Project Record Documents purposes. Label each document (on first sheet or format page) "PROJECT RECORD" in 2-inch high printed letters. Keep record documents current. Note: A reference by number to a Change Order, CCD, RFI, RFQ, RFP, Field Order or other such document is not acceptable as sufficient record information on any record document. Do not permanently conceal any Work until required information has been recorded.
 - 1. Mark these Drawings to indicate the actual installation where the installation varies appreciably from the installation shown originally. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later. Items required to be marked include but are not limited to:
 - a. Dimensional changes to the Drawings
 - b. Revisions to details shown on the Drawings
 - c. Depths of various elements of foundation in relation to main floor level or survey datum
 - d. Horizontal and vertical location of underground utilities and appurtenances referenced to permanent surface improvements
 - e. Location of internal utilities and appurtenances concealed in construction referenced to visible and accessible features of structure
 - f. Locations of underground work, points of connection with existing utilities, changes in direction, valves, manholes, catch basins, capped stub outs, invert elevations, and similar items
 - g. Actual numbering of each electrical circuit
 - h. Field changes of dimension and detail
 - i. Revisions to routing of piping and conduits
 - j. Revisions to electrical circuitry
 - k. Actual equipment locations
 - l. Duct size and routing
 - m. Changes made by Change Order or CCD

- n. Details not on original Contract Drawings
- 2. Mark completely and accurately Project Record Drawing prints of Contract Drawings or Shop Drawings, whichever is the most capable of showing actual physical conditions. Where Shop Drawings are marked, show cross-reference on Contract Drawings location.
- 3. Mark Project Record Drawing sets with red, erasable colored pencil; use other colors to distinguish between changes for different categories of the Work at the same location.
- 4. Mark important additional information that was either shown schematically or omitted from original Drawings.
- 5. Note CCD numbers; alternate numbers, Change Order numbers, and similar identification.
- 6. Responsibility for Mark-up: Where feasible, the individual or entity who obtained Project Record Drawing data, whether the individual or entity is the installer, Subcontractor, or similar entity, is required to prepare the mark-up on Project Record Drawings.
 - a. Accurately record information in an understandable and legible drawing technique.
 - b. Record data as soon as possible after it has been obtained. In the case of concealed installations, record and check the mark-up prior to concealment.
- B. Preparation of Record Drawings: Immediately prior to inspection for Certification of Substantial Completion, review completed marked-up Project Record Drawings with District, Inspector of Record and Architect of Record to consolidate and ensure accuracy of information. Once accuracy of information is confirmed, prepare and submit a full electronic set, in AutoCAD format, of as-built Contract Drawings and Shop Drawings.
 - 1. Incorporate changes and additional information previously marked on print sets. Delete, redraw, and add details and notations where applicable. Identify and date each Drawing; include the printed designation "PROJECT RECORD DRAWING" and the date prepared in a prominent location on each Drawing.
 - 2. Distribution: Whether or not changes and additional information were recorded, organize and bind original marked-up set of prints that were maintained during the construction period into manageable sets. Bind the set with durable paper cover sheets, with appropriate identification, including titles, dates, and other information on cover sheets, and submit to District.
- C. In addition to requirements of this Section, comply with supplemental requirements of other Divisions 2 through 60.
 - 1. Divisions 22, 23, 25 and 26 of the Specifications require the preparation of large scale, detailed layout drawings of the Work of those Divisions. These layout drawings are not Shop Drawings as defined by Section 00 71 00 (General Conditions), but together with Shop Drawings or layout drawings of all other affected Sections are used to check, coordinate, and integrate the work of the various Sections.
 - 2. Include these layout drawings as part of the Project Record Documents.

1.3 PROJECT RECORD SPECIFICATIONS

- A. During the construction period, maintain one copy of the Project Specifications, including addenda and modifications issued, for Project Record Documents purposes.
- B. Mark the Project Record Specifications to indicate the actual installation where the installation varies substantially from that indicated in Specifications and Modifications issued. Note related Project Record Drawing information, where applicable. Give particular attention to substitutions, selection of product options, Change Order and Construction Change Directive work, and information on concealed installation that would be difficult to identify or measure and record later.
 - 1. In each Specification Section where products, materials or units of equipment are specified or scheduled, mark the copy with the proprietary name and model number of the product furnished.
 - 2. Record the name of the manufacturer, catalog number, supplier and installer, and other information necessary to provide a record of selections made and to document coordination with Project Record Product Data submittals and maintenance manuals.
 - 3. Note related Project Record Product Data, where applicable, for each principal product specified, indicate whether Project Record Product Data has been submitted in maintenance manual instead of submitted as Project Record Product Data.
 - 4. Upon completion of mark-up, submit Project Record Specifications to District for District's records.

1.4 ADDITIONAL REQUIREMENTS FOR FINAL PROJECT RECORD DOCUMENTS

- A. Using a distinct AutoCAD layer, clearly indicate at each affected detail and other drawings a full description of changes made during construction, and the actual location of items as previously specified.

- B. "Cloud" all affected areas using a distinct AutoCAD layer.
- C. Submit duplicate electronic files of all drawings in Tag Image File Format (.tif).
- D. In the event that Contractor utilizes Building Information Modeling (BIM) software or an alternate computerized application to AutoCAD to design and record its design and construction services, Contractor shall submit as Project Record Documents the equivalent files, computer software, and any other relevant items, and train District personnel in its use, to allow District to receive and fully utilize the alternate method to meet the intent of the requirements of this Section 01 78 39 Project Record Documents.

1.5 PROJECT RECORD PRODUCT DATA

- A. During the construction period, maintain one copy of each Project Record Product Data submittal for Project Record Document purposes.
 - 1. Mark Project Record Product Data to indicate the actual product installation where the installation varies substantially from that indicated in Project Record Product Data submitted. Include significant changes in the product delivered to the Site, and changes in manufacturer's instructions and recommendations for installation.
 - 2. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 - 3. Note related Change Orders and mark-up of Project Record Drawings, where applicable.
 - 4. Upon completion of mark-up, submit a complete set of Project Record Product Data to District for District's records.
 - 5. Where Project Record Product Data is required as part of maintenance manuals, submit marked-up Project Record Product Data as an insert in the manual, instead of submittal as Project Record Product Data.
 - 6. Contractor is responsible for mark-up and submittal of Project Record Product Data for its own Work.
- B. Material, Equipment, and Finish Data:
 - 1. Provide data for primary materials, equipment and finishes as required under each Specification Section. Submit three (3) hard copy sets and one (1) digital copy, on compact disc (CD) prior to final inspection, bound in 8-1/2 inches by 11 inches three-ring binders with durable plastic covers; provide typewritten table of contents for each volume. Provide project identification information on binder covers and spines.
- C. Arrange by Specification Section number and give names, addresses, and telephone numbers of Subcontractors and suppliers. List:
 - a. Trade names.
 - b. Model or type numbers.
 - c. Assembly diagrams.
 - d. Operating instructions.
 - e. Cleaning instructions.
 - f. Maintenance instructions.
 - g. Recommended spare parts.
 - h. Product data.

1.6 MISCELLANEOUS PROJECT RECORD SUBMITTALS

- A. Refer to other Specification Sections for miscellaneous record keeping requirements and submittals in connection with various construction activities. Immediately prior to Substantial Completion, complete miscellaneous records and place in good order, properly identified, ready for use and reference. Submit to the District for District's electronic records, in Adobe pdf format. Categories of requirements resulting in miscellaneous records include, but are not limited to, the following:
 - 1. Field records on excavations and foundations
 - 2. Field records on underground construction and similar work
 - 3. Survey showing locations and elevations of underground lines
 - 4. Invert elevations of drainage piping
 - 5. Surveys establishing building lines and levels
 - 6. Authorized measurements utilizing unit prices or allowances
 - 7. Records of plant treatment
 - 8. Ambient and substrate condition tests
 - 9. Certifications received in lieu of labels on bulk products
 - 10. Batch mixing and bulk delivery records

11. Testing and qualification of tradespersons
12. Documented qualification of installation firms
13. Load and performance testing
14. Inspections and certifications by governing authorities
15. Leakage and water-penetration tests
16. Fire resistance and flame spread test results
17. Final inspection and correction procedures
18. Final As-Built Construction Schedule

1.7 MAINTENANCE FORMS FOR MAJOR EQUIPMENT

- A. See Section 01 60 00 Product Requirements

1.8 INSTALLATION, OPERATIONS AND MAINTENANCE MANUALS

- A. The contractor shall compile O&M manuals for every piece of equipment and building operating or electrical system, commissioned or not, with the following formats:
1. Quantity: as specified in Section 01 32 19 Submittal Procedures, Paragraph 1.2.R.3 (unless more are required by the technical specifications).
 2. Hard Media Format:
 - (a) Size: 8½ x 11 inch, 3 ring loose-leaf binders. Use as many binders as required for each element as listed below. Do not overload binders.
 - (b) Binding: Bind in stiff, metal-hinged, three-ring binder(s) with standard three-hole punching. Binders shall be 3-inch maximum. Use white or black colored binders with integrated clear plastic covers to enable insertion of binder titles.
 - (c) Sheet lifters: Provide plastic sheet lifters prior to first page and following last page.
 - (d) Binder titles: Include the following title on front and spine of binder:

NAME OF PROJECT (YEAR)
INSTALLATION, OPERATION AND MAINTENANCE MANUAL
 - (e) Sheet Size: 8½ x 11 inch
 - (f) Drawing Size: Reduce drawings or diagrams to an 8½ x 11 inch or 11 x 17 inch size. However, where reduction is not practical to ensure readability, fold larger drawings separately and place in vinyl envelopes bound into the binder. Identify vinyl envelopes with drawing numbers.
 - (g) Dividers: Use dividers with permanently marked tabs of card stock to separate each section and sub section. Tab labels shall not be handwritten. Use a main tab for each specification section. Behind the section number tab there shall be the equipment ID tag sub-tab for each piece of major equipment (or group, if small or numerous). These sub-tabs shall be similar to the specification number tabs but of a different color.
 - (h) Contents
 - (1) Title page, which shall be a duplicate of front binder title
 - (2) Table of Contents
 - (3) Equipment Sections and Sub sections
 - (i) Contractor. The first page behind the equipment tab shall be the Contractor's name, address and telephone number of the manufacturer and installing contractor and the 24-hour number for emergency service for all equipment in this section, identified by equipment.
 - (ii) Submittal and Product Data. This section shall include all approved submittal data, cut sheets, data base sheets and appropriate shop drawings. If submittal was not required for approval, descriptive product data shall be included.
 - (iii) Operation and Maintenance Instructions. These shall be the written manufacturer's data with the model and features of this installation clearly marked and edited to omit reference to products or data not applicable to this installation. This section shall include data on the following:

1. Model number, serial number and nameplate data for each piece of equipment and any subcomponent.
2. Installation, startup and break-in instructions.
3. All starting, normal shutdown, emergency shutdown, manual operation and normal and emergency operating procedures and data, including any special limitations.
 - i. Step-by-step procedure for system startup, including a pre-start checklist. Refer to controls and indicators by nomenclature consistent with that used on panels and in control diagrams.
 - ii. Sequence of operation, with detailed instruction in proper sequence, for each mode of operation (i.e., day-night; staging of equipment).
 - iii. Emergency operation: If some functions of the equipment can be operated while other functions are disabled, give instructions for operations under these conditions. Include here only those alternate methods of operations (from normal) which the operator can follow when there is a partial failure or malfunctioning of components, or other unusual condition.
 - iv. Shutdown procedure: Include instructions for stopping and securing the equipment after operation. If a particular sequence is required, give step-by-step instructions in that order.
4. O&M and installation instructions that were shipped with the unit.
5. Preventative and corrective maintenance, with service procedures and schedules:
 - i. Provide a schedule for preventive maintenance in a printed format and an electronic format compatible with owner's system. State, preferably in tabular form, the recommended frequency of performance for each preventive maintenance task, cleaning, inspection and scheduled overhauls.
 - ii. Cleaning: Provide instructions and schedules for all routine cleaning and inspection with recommended lubricants.
 - iii. Inspection: If periodic inspection of equipment is required for operation, cleaning or other reasons, indicate the items to be inspected and give the inspection criteria for: motors; controls; filters and any other maintenance items.
 - iv. Provide instructions for minor repairs or adjustments required for preventive maintenance routines. Identify test points and give values for each. Include sensor calibration requirements and methods by sensor type.
 - v. Corrective maintenance instructions shall be predicated upon a logical effect-to-cause troubleshooting philosophy and a rapid replacement procedure to minimize equipment downtime.
 - vi. Troubleshooting: Troubleshooting tables, charts, or diagrams shall be used to present specified procedures. A guide to this type shall be a three-column chart. The columns shall be titled: malfunction, probable cause and recommended action.
 - vii. Repair and Replacement: Indicate repair and replacement procedures most likely to be required in the maintenance of the equipment.
 - viii. A list of recommended spare parts with a price list and a list of spare parts provided under this Contract.
 - ix. Outline, cross-section, and assembly drawings; engineering data; and electrical diagrams, including elementary diagrams, labeled wiring diagrams, connection diagrams, word description of wiring diagrams and interconnection diagram

6. Safety Precautions: This subsection shall comprise a listing of safety precautions and instructions to be followed before, during and after making repairs, adjustments or routine maintenance.
 7. Manufacturers' brochures (including controls): Manufacturers' descriptive literature covering devices and equipment used in the system, together with illustrations, exploded views and renewal parts lists. Manufacturers' standard brochures and parts list shall be corrected so that information applying to the actual installed equipment is clearly defined.
 8. Supply any special tools required to service or maintain the equipment.
 9. Performance data, ratings and curves.
 10. Warranty and guarantee, which clearly lists conditions to be maintained to keep warranty in effect and conditions that would affect the validity of the warranty.
 11. Any service contracts issued.
- (4) Supplemental Data. Prepare written text and/or special drawings to provide necessary information, where manufacturer's standard printed data is not available and information is necessary for a proper understanding and operation and maintenance of equipment or systems, or where it is necessary to provide additional information to supplement data included in the manual or project documents.
 - (5) Control Diagrams/Drawings. Include the as-built control diagrams/drawings for the piece of equipment and its components, including full points list, full print out of all schedules and set points after testing and acceptance of the system, and copies of all checkout tests and calibrations performed by the contractor (not commissioning tests).
 - (6) Specifications. This section is comprised of the component or system specification section copied and inserted complete with all addenda.
 - (7) System Description. This section shall include the individual equipment portion of the overall system Design Basis Narrative.
3. Electronic Media Format: Electronic media format shall be Adobe pdf, with chapter markers and/or bookmarks inserted in place of the equivalent hard copy section tabs. Electronic copy shall include all tables, charts, drawings, codes and all other matters reflected in hard copies. Electronic media files shall be delivered on a unique CD-ROM.
 4. A separate manual or chapter shall be provided for each applicable system as follows:
 - (a) Chillers
 - (b) Cooling Towers
 - (c) Boilers
 - (d) Pumps
 - (e) Air Handling Units (include sequence of operation, one line diagram and area served in a plastic pouch for mounting on equipment or in equipment room)
 - (f) Exhaust Fans
 - (g) Supply Air Fans (excluding Air Handling Units)
 - (h) Plumbing and Drainage Systems/Equipment
 - (i) Emergency Generator Systems
 - (j) UPS
 - (k) Fire Protection Systems
 - (l) Fire Alarm System
 - (m) Valves and Pipe Specialties (include valve identification chart)
 - (n) Variable Frequency Drives (VFD)
 - (o) Smoke Control Systems
 - (p) Water Treatment System
 - (q) Elevator Systems
 - (r) Lighting Systems and Controls (interior, exterior and airfield)
 - (s) Switchgear, Transformers, Panel boards, Motor Control Centers and Motor Starters
 - (t) Lightning Protection and Surge Suppression Systems

- (u) Public Address, Closed Circuit TV, Communication and Telephone Systems
- (v) Security System
- (w) Building Management/Temperature Control System (BMS)
- (x) Fuel System
- (y) Doors and Hardware.
- (z) Power monitoring systems
- (aa) HVAC, Testing Adjusting, and Balancing

1.9 COMPUTER PROGRAMS

- A. When any equipment requires operation by computer programs, submit copy of program on appropriate CD, plus a hard-copy and an electronic copy (Adobe .PDF format) of all user manuals and guides for operating the programs and making changes in the programs for upgrading and expanding the databases. Program shall be Windows XP compatible. Provide required licenses to District at no additional cost.

1.10 DISTRICT’S RECOURSE

- A. If Contractor is not able to provide project record documents in specified formats, District and Contractor shall negotiate a credit back to the District for this work.

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION

3.1 RECORDING

Post changes and modifications to the Contract Documents as they occur. Do not wait until the end of the Project. District may periodically review Project Record Documents to assure compliance with this requirement.

3.2 SUBMITTAL

- A. At completion of Project, deliver Project Record Documents to District, per Section 01 32 19 Submittal Procedures.
- B. Accompany submittal with transmittal letter containing:
 - 1. Date
 - 2. Project title and number
 - 3. Contractor’s name and address
 - 4. Number and title of each Project Record Document
 - 5. Certification that each document as submitted is complete and accurate, and signature of Contractor or Contractor’s authorized representative.

END OF SECTION

HAZARDOUS MATERIALS SPECIFICATION

**Building 12 & Colonnades Roof Replacement
College of San Mateo
1700 West Hillside Blvd.
San Mateo, California 94402**

Date: February 21, 2013

Prepared for:

**San Mateo County Community College District
3401 CSM Drive
San Mateo, California 94402**

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SURVEYS & REPORTS

- 1.0 HAZARDOUS MATERIALS REMOVAL & ABATEMENT SCOPE OF WORK**
- 1.0 SCOPE OF WORK**

The Scope of Work (SOW) includes the removal and/or abatement of asbestos containing materials from the roofs of Building 12 and colonnades identified in architectural plans and drawing prepared by Alan Buick Berb dated December 21, 2011. The area include roof surfaces and associate equipment areas on Building 12, Colonnade 16-18 North Colonnade 16-18 South, Fountain Colonnade, and Building 2-4 Colonnade on the College of San Mateo campus.

The specific areas in the Scope of Work include the following:

All Colonnades (Colonnade 16-18 North, Colonnade 16-18 South, Fountain Colonnade (North & South), & Building 2-4 Colonnade)

The Contractor is to assume that all surface materials on the concrete roof areas of all colonnades contain degraded asbestos containing materials (ACM) and caulking materials at the separation between the colonnades and adjacent building. The objective is to remove the ACMs and caulking from the underlying bare concrete surface. The ACM removal activity is to leave the concrete surfaces in a condition suitable for subsequent renovation by others to District requirements. The Contractor is required to propose the use of a containment that will prevent the release of ACMs, ACM debris, and dust from the regulated area.

The approximate size of the colonnades areas to be address are Colonnade 16-18 North 8,976 square feet, Colonnade 16-18 South 6,732 square feet, Fountain Colonnade (North & South) each 1,428 square feet, & Building 2-4 Colonnade 3,267 square feet.

Building 12 Roof Areas

The Contractor is to address to remove ACMs gray caulking along the perimeter edge of the building roof. Building B12 measures approximately 90' x 204' using the scale on the drawings. The Contractor is responsible for independently measuring the work area.

The Contractor is to remove the ACMs associated with the B12 roof mechanical equipment area and all roof pipe and vent penetrations. A metal screen surrounds the mechanical equipment. ACMS were detected in the caulking/sealant at the base of the metal screen supports. ACMs are potentially present in the base areas of the mechanical equipment area. The mechanical equipment will be removed by other and close visual inspection of the base area will be conducted to assess the presence/absence of potential ACMs which may require removal by the Contractor.

The Contractor is additionally referred to the separate District documents and drawings which provide additional details on the Scope of Work.

2.0 ASBESTOS ABATEMENT SPECIFICATIONS

2.1 GENERAL REQUIREMENTS

A. Minimum Qualification of Abatement Contractors

1. The hazardous materials abatement contractor must meet the following minimum qualifications:
 - a. Minimum of 5 years of hazardous materials abatement experience on similar public building projects.
 - b. Contractor must hold a 021 Demolition Contractor license and ASB license with the California State Contractor's Licensing Board (CSLB).
 - c. Contractor must have Department of Health Services (DHS) certified supervisors and workers for lead work.
 - d. Contractor must be able to fully staff projects through all phases with properly trained, certified and experienced personnel.

2.2 Related Documents

- A. The general conditions of the Contract apply to this Section and the Contractor is responsible for understanding the District project. Contractor is responsible for reviewing the following documents which include hazardous materials survey and abatement information for District Buildings.
 - District Bid Package No. 86658 February 14, 2013
 - Allen Buick Berb Architects Project design plans, drawings and other materials specific to the District project.
 - Ninyo & Moore report -"Asbestos Abatement Specifications, Abatement Drawings and Tables and Associated Graphics Related to CSM Buildings 10, 11, 12, 14, and 19" dated, October 31, 2006.
 - Asbestos containing materials (ACM) sample laboratory reports results Building 12 and colonnades, dated October 28, 2008, April 29, 2011, May 7, 2011 and February 21, 2013.

2.3 Compliance & Intent

- A. The Contractor is responsible for repair, to the satisfaction of the District, of surfaces not scheduled for demolition that become damaged as a result of the work. All unscheduled repair work shall be conducted at no increase to contract price.
- B. This project involves the removal of ACM and hazardous materials in District buildings identified in the Scope of Work. It is necessary for the Contractor to coordinate all hazardous materials abatement work with the specifications. During all work, provide monitoring and worker protective equipment in

accordance with the California Occupational Safety and Health Administration (CalOSHA) and as required by this specification. Where there is conflict, the most stringent requirement shall apply.

- C. The work covered by this specification includes the handling, removal, and proper disposal of hazardous materials including, but not limited to, asbestos-containing materials (ACMs) and asbestos-containing construction materials (ACCMs). All hazardous materials shall be removed and disposed of according to all federal, state and local regulations.
- D. All asbestos abatement workers and personnel shall have received EPA-accredited training and be currently certified for asbestos abatement work.
- E. Furnish all labor, materials, facilities, equipment, services, employee training, medical monitoring, permits and agreements necessary to perform the work required for hazardous materials abatement in accordance with this specification.
- F. Comply with all federal, state, and local regulations pertaining to hazardous materials removal, storage, transportation and disposal, employee health and safety, Contractor certifications, hazardous materials certifications, and all licenses, permits, notifications, and training.
- G. Work on the premises shall be confined to areas designated in the Contract Documents. Materials and equipment shall be stored within areas designated by the District. Should additional space be required, the Contractor shall request permission for additional space and shall adequately safeguard occupants from associated health and safety hazards.
- H. Perform all work specified herein with competent persons trained, knowledgeable and qualified in techniques relating to hazardous materials abatement, handling, and the subsequent cleaning of contaminated areas.
- I. During removal activities, the Contractor shall protect against contamination of soil, water, plant life, and adjacent offices, classrooms, hallways, laboratories, utility rooms, and all other building areas, and shall ensure that there is no airborne release of hazardous materials and dusts outside of the containment. The District's Consultant may collect air and wipe samples in the Work Areas and in adjacent areas to evaluate the Contractor's performance. Evidence of settled dust or airborne levels of contaminants above background will require the implementation of additional controls and cleanup at no increase to contract price.
- J. It is the Contractor's responsibility to determine the quantities of hazardous materials impacted by the planned demolition work. The Contractor shall participate in a mandatory site visit to determine exact locations of materials impacted by the building renovation work. This section provides appropriate protocols for handling and disposal of hazardous materials. All hazardous materials shall be removed according to the procedures outlined in this specification. If additional suspect hazardous materials are discovered during

the course of the abatement work, immediately notify the District and/or the District's Consultant.

- K. The work of this section shall be performed by a commercial business entity that holds a current, valid asbestos handling license issued by the California State Contractor's Licensing Board (CSLB) and a current valid Certificate of Registration for Asbestos-Related Work issued by the California Department of Industrial Relations-Division of Occupational Safety and Health (Cal-OSHA), unless other specified. Display copies of CSLB license and CalOSHA Certificates in a visible place at the job-site.
- L. Hazardous materials removed during the abatement activities shall be disposed of in an approved manner complying with all applicable federal, state, and local regulations. Appropriate waste manifests or letters of salvage shall be furnished to the District thereby limiting the District's liability for improperly salvaged items. Materials are conveyed to the Contractor "as is," without any warranty, expressed or implied, including but not limited to, any warranty to marketability or fitness for a particular purpose, or any purpose. The District or the District's Consultant shall approve the non-ACM hazardous waste disposal site(s) prior to disposal for materials that may be disposed of in that manner.
- M. All exterior asbestos abatement work shall be conducted using a containment structure or enclosure approved by the District which prevents the movement, migration, release, spillage or transfer of asbestos containing materials, dust, and demolition debris outside of the containment. The contractor will submit a containment plan to the District for approval at least fifteen (15) days before the initiating of any asbestos abatement or removal activity.
- N. Asbestos Containing Materials
1. The Contractor must dispose of all asbestos containing materials (ACMs) in accordance with applicable Federal, State, and local regulations governing hazardous waste disposal.

Asbestos Containing Construction Materials

1. The Contractor must dispose of all asbestos containing construction materials (ACCMs) in accordance with applicable Federal, State, and local regulations governing hazardous waste disposal.
2. The Contractor is responsible for conformance with all applicable regulations, including, but not limited to, CAL/OSHA Worker Protection, CAL/EPA Environmental Protection requirements, and the Department of Health Services (DHS).

2.4 Definitions

The following definitions are to be used for the Project Specification and Scope of Work:

Abatement - Asbestos: Process of controlling fiber release from asbestos-containing materials, including encapsulation, enclosure, controlled renovation procedures, removal, clean up and disposal.

Abatement - Lead: Process of removal, clean up and disposal of lead from building surfaces as required for demolition or renovation work.

ACM: Asbestos-containing material

Aggressive Sampling: Refers to air sampling either during or following the agitation of the air.

AHERA: Asbestos Hazard Emergency Response Act (40 CFR Part 763).

Airlock: A system for permitting ingress and egress with minimum air movement between a contaminated area and uncontaminated areas. Typically consists of two curtained or gasketed doorways separated by a distance of at least six feet such that one passes through one doorway into the airlock, allowing the doorway to close off the opening. This airlock must be maintained in uncontaminated condition at all times.

Ambient Air Quality: The quality of air (in terms of airborne fiber content) that is present in a given space.

Area Monitoring: Sampling of airborne asbestos fiber concentrations and/or airborne lead concentrations within the work area and outside the work area. Sampling shall represent airborne concentrations that may reach the breathing zone.

Asbestos Fibers: Refers to asbestos fibers having an aspect ratio of 3:1, and those fibers longer than five (5) micrometers.

Asbestos Permissible Exposure Limit (PEL): A level of airborne fibers specified by OSHA as an occupational exposure standard for asbestos. This level represents the 8-hour time-weighted average of 0.1 fibers per cubic centimeter as measured by Phase Contrast Microscopy (PCM) analytical method.

Asbestos-Containing Material (ACM): Those manufactured products and construction materials including structural and mechanical building materials, as well as packings and gaskets that contain more than one percent (1.0 %) asbestos by weight.

Asbestos: Asbestos includes asbestiform varieties of serpentinite (chrysotile), riebeckite (crocidolite) cummingtonite-gunerite (amosite), anthophyllite, tremolite, and actinolite. For the purposes of determining worker respiratory protection, both the asbestiform and non-asbestiform of the above minerals, and any chemically treated or altered materials shall be considered as asbestos.

Authorized Visitor: Designated employees or consultants for the District and representatives of any federal, state and local regulatory or other agency having jurisdiction over the project.

B Reader: A radiologist skilled in evaluating X-rays of people exposed to asbestos.

Baseline: Refers to the background levels of asbestos and lead monitored before abatement.

Breathing Zone: A hemisphere forward of the shoulders and head with a radius of approximately six to nine inches.

Breach: A rift or gap in the critical or secondary barriers that allow egress of air from the containment to outside, or vice versa.

Bridging Encapsulant: An encapsulant that forms a discrete layer on the surface of an in-situ asbestos matrix.

CAL/OSHA: State of California, Division of Occupational Safety & Health enforcement arm of the California Department of Labor related to worker protection laws.

Chain-of-Custody: A legal concept involving documentation of the physical possession of a sample/samples from the moment it is collected, transported, analyzed, and ultimately stored in an archive.

Change Rooms: Refers to the two chambers in the decontamination area used to change into and out of protective clothing.

Certified Industrial Hygienist (CIH): A person certified by the American Board of Industrial Hygiene Association.

Clean Room: An uncontaminated area or room that is part of the worker decontamination enclosure system, with provisions for storage of workers' street clothes and protective equipment.

Clearance Level - Asbestos: Clearance level for samples analyzed by Phase Contrast Microscopy (PCM) will be less than 0.01 fibers per cubic centimeter of air and for Transmission Electron Microscopy (TEM) will be less than 70 structures per square millimeter ($< 70 \text{ s/mm}^2$). Samples may be collected by non-aggressive sampling methods and the minimum air volume shall be 1,200 liters.

Competent Person: One who is capable of identifying existing and predictable lead and asbestos hazards and who has the authority to take prompt corrective measures to eliminate them.

Critical Barrier: A unit of temporary construction that provides the only separation between asbestos work area and an adjacent potential occupied space. This includes

the decontamination unit, perimeter walls, ceilings, penetrations and any temporary critical barriers between the work area and the uncontaminated environment.

CSLB: Contractors State Licensing Board

Decontamination Area: Area which is constructed to provide the means for workers to store clothing, equipment and other articles, and to properly remove asbestos and lead contamination upon concluding work activities that result in exposure to these hazardous materials.

DHS: California Department of Health Services

DOP: Dioctylphthalate, the challenge aerosol used to perform on-site leak testing of HEPA filtration equipment.

DOT: Federal Department of Transportation

DOSH: Division of Occupational Safety & Health (Also see Cal-OSHA)

Decontamination Unit: Refers to system of airlocks used to decontaminate personnel, waste bags, equipment, etc. when exiting the work area. A decontamination unit shall be set up for each containment area.

Demolition: The wrecking or taking out of any load-supporting structural member of a facility together with any related handling operations or the intentional burning of any facility.

Disposal Bag: Minimum six (6) mil thick leak-tight plastic bags used for transporting asbestos waste from a work area to disposal or shipping container. Each disposal bag must have required labels according to 8 CCR 1529 (Cal-OSHA asbestos rule), 5194 (HAZCOM). RACM waste must be additionally labeled according to 49 CFR 171-179 (USDOT), and 40 CFR 61 Subpart M (NESHAP). Hazardous waste disposal bags must be labeled with generator's name, address, and site location and generator number.

DANGER
CONTAINS ASBESTOS FIBERS
AVOID CREATING DUST
CANCER & LUNG DISEASE HAZARD
AVOID BREATHING AIRBORNE ASBESTOS
RQ WASTE ASBESTOS, 9 NA 2212 PG III

(Class 9 placard)
HAZARDOUS WASTE
STATE AND FEDERAL LAW
PROHIBITS IMPROPER DISPOSAL
IF FOUND, CONTACT THE NEAREST
POLICE OR PUBLIC SAFETY
AUTHORITY OR THE CALIFORNIA
DEPARTMENT OF TOXIC SUBSTANCES AND CONTROL

Encapsulant: A liquid material that can be applied to asbestos-containing material that controls the possible release of asbestos fibers from the material either by creating a membrane over the surface (bridging) or by penetrating into the material and binding its components together (penetrating encapsulant).

Encapsulation: A specified procedure necessary to coat asbestos-containing material or asbestos contaminated surfaces with an encapsulant to control the possible release of asbestos fibers into the ambient air.

Enclosure: The construction of an airtight, impermeable, permanent barrier surrounding the asbestos-containing material to prevent the release of asbestos fibers into the air.

Environmental Consultant: Industrial Hygienist (IH), Certified Asbestos Consultant (CAC), and/or Certified Site Surveillance technician retained by the District.

Equipment Decontamination Enclosure System: A decontamination enclosure system for materials and equipment, typically in a designated area of the work area, and including a washroom, a holding area, and an uncontaminated area.

Equipment Room: A contaminated area or room that is part of the worker decontamination enclosure system, with provisions for storage of contaminated clothing and equipment. The equipment room shall be kept dean from asbestos-containing debris at all times.

Excursion Limit: A California Code of Regulations (8 CCR 1529) requirement that ensures no employee is exposed to airborne concentration of asbestos in excess of 1.0 fiber per cubic centimeter of air (1 f/cc) as averaged over a sampling period of thirty (30) minutes.

Filter: A media component used in respirators to remove solid or liquid particles from the inspired air.

Fixed Object: A unit of equipment or furniture in the work area that cannot be removed from the work area.

EPA: United States Environmental Protection Agency.

HEPA: High Efficiency Particulate Air filter capable of filtering out airborne particulate 0.3 microns or greater in diameter at 99.97 percent efficiency.

Friable Asbestos-Containing Material: Material that contains more than 1.0% asbestos by weight and that can be crumbled, pulverized or reduced to powder by hand pressure when dry.

Foreman: An individual who typically fulfills the duties of “competent person” as defined in Title 8 OCR 1529. This individual must supply documentation of a passing grade in

an EPA accredited course in Practices and Procedures in Asbestos Control. The foreman must be on-site during all abatement work.

Glove bag: A polyethylene bag with two inward projecting long sleeve gloves, designed to enclose an object from which an asbestos-containing material is to be removed. Bags shall be seamless at the bottom, have a minimum thickness of 6 mil, and shall be labeled appropriately.

Glove bag Technique: A method for removing ACM from heating, ventilating, and air conditioning (HVAC) ducts, piping runs, valves, joints, elbows, and other non-planar surfaces. The glove bag is constructed and installed in such a manner that it surrounds the object or material to be removed and contains all asbestos fibers released during the process. Secondary containment shall be provided for all glove-bag work unless noted otherwise.

Gross or Full Abatement Area: Designated rooms, spaces, or areas of the project that have been totally sealed, contained in polyethylene, equipped with decontamination enclosure systems, and placed under negative pressure.

HEPA Filter Equipment: High efficiency particulate air filtered vacuuming equipment with a filter system capable of collecting and retaining asbestos fibers. Filters shall be 99.97 percent efficient at retaining fibers of 0.3 microns or larger.

HEPA Filter Vacuum Collection Equipment: High efficiency particulate air filtered vacuum collection equipment with a filter system capable of collecting and retaining asbestos fibers. Filters should be of 99.97% efficiency for retaining fibers of 0.3 microns or larger.

Movable Object: A unit of equipment or furniture in the work area that can be removed from the work area, (e.g., smoke detectors, lights).

Negative Pressure Respirator: A respirator in which the air pressure inside the respiratory-inlet covering is positive during exhalation in relation to the air pressure of the outside atmosphere, and negative during inhalation in relation to the air pressure of the outside atmosphere.

Negative Pressure: Air pressure lower than surrounding areas, generally caused by exhausting air from a sealed space (work area).

NESHAP: National Emission Standard for Hazardous Air Pollutants - EPA Regulation 40 CFR Subpart M, Part 61.

NIOSH: National Institute for Occupational Safety and Health: (Research Institute within Federal OSHA). Sets testing standards, analytical methods, and certifies performance of various respirator designs.

NIST: National Institute of Standards and Technology: Administers the NVLAP Program.

NVLAP: National Voluntary Laboratory Accreditation Program: Evaluates and certifies laboratories doing PLM and TEM analysis.

District: San Mateo County Community College District and campuses.

District's Consultant: The hazardous materials consultant company identified by the District for the specific District project.

Passive Sampling: Refers to air sampling with no air agitation.

Penetrating Encapsulant: An encapsulant absorbed by the in-situ asbestos matrix without leaving a discrete surface layer.

Permissible Exposure Limits (PELs) - Asbestos: A level of airborne fibers specified by OSHA as an occupational exposure standard for asbestos. Represents the 8-hour time weighted average of 0.1 total fibers per cubic centimeter and 30 minute excursion limit of 1.0 fiber per cubic, as measured by phase contrast microscopy (PCM).

Personal Monitoring: Sampling for asbestos and lead concentrations within the breathing zone of an employee.

Phase Contrast Microscopy (PCM): Phase contrast microscopy (PCM) is a technique using a light microscope equipped to provide enhanced contrast between the fibers and the background. Filters are cleared with a chemical solution and viewed through the microscope at a magnification of approximately 400X. This method does not distinguish between fiber types and only counts those fibers longer than 5 micrometers and wider than approximately 0.25 micrometers. Because of these limitations, fiber counts by PCM typically provide only an index of the total concentration of airborne asbestos in the environment monitored.

Polarized Light Microscopy (PLM): An optical microscopic technique used to identify asbestos content and distinguish between different types of asbestos fibers by their shape and unique optical properties.

Powered Air Purifying Respirator (PAPR): A full facepiece respirator that has the breathing air powered to the wearer after it has been purified through a filter.

Protection Factor: The ratio of the ambient concentration of an airborne substance to the concentration of the substance inside the respirator at the breathing zone of the wearer. The protection factor is a measure of the degree of protection provided by a respirator to the wearer.

Remodel: Replacement or improvement of an existing building or portion thereof where exposure to airborne asbestos may result. Remodel includes, but is not limited to, installation of materials, demolition, cutting, patching, and removal of building materials.

Removal encapsulant: A penetrating encapsulant specifically designed for removal of asbestos containing materials than for in-situ encapsulation.

Respirator: A device designed to protect the wearer from the inhalation of harmful atmospheres.

Shower Room: A room between the clean room and the equipment room in the worker decontamination enclosure system. This room contains hot and cold or warm running water and soap suitably arranged for complete showering during decontamination. The shower room comprises an air lock between contaminated and clean areas.

Soluble Threshold Limit Concentration (STLC): A material is considered a California hazardous waste if laboratory test results indicate Soluble Threshold Limit Concentration of measured lead are greater than or equal to 5 milligrams per liter (mg/l).

Surfactant: A chemical wetting agent added to water to improve penetration, thus reducing the quantity of water required for a given operation or area.

TEM: Transmission Electron Microscopy: Asbestos structure analysis for a specified volume of air. TEM is a technique that focuses an electron beam onto a thin sample. As the beam transmits through certain areas of the sample, an image resulting from varying densities of the sample is projected onto a fluorescent screen. Transmission electron microscopy is the state-of-the-art analytical method for identifying asbestos fibers collected in air samples in non-industrial settings. Transmission electron microscopes equipped with selected area electron diffraction (SAED) capabilities also can provide information on the crystal structure of an individual particle.

Visible Emissions: Any emission containing particulate material that is visually detectable without the aid of instruments. This does not include condensed uncombined water vapor.

Visual Inspection: A visual inspection by the District Consultant of the work area under adequate lighting to ensure that the work area is free of visible asbestos material, debris, and dust.

Washroom: A room between the work area and the holding area in the equipment decontamination enclosure system equipped with water for the decontamination of equipment and sealed waste containers. The washroom or shower room comprises one air lock.

Water Filtration: Refers to water filtration to as small a particulate size as technically feasible, but not more than 5 microns.

Wet Cleaning: The process of eliminating asbestos contamination from building surfaces and objects by using cloths, mops, or other cleaning utensils dampened with amended water or diluted removal encapsulant and afterward thoroughly decontaminated or disposed of as asbestos contaminated waste.

Work Area: The area where asbestos, lead or hazardous material work or removal is performed and that is defined or isolated to prevent the spread of lead or asbestos dust,

fibers or debris, and entry by unauthorized personnel. Work area is a Regulated Area as defined by Title 8 CCR 1529.

Zinc Protoporphyrin (ZPP) Test: Biological test for lead-exposure that measures the amount of zinc protoporphyrin in blood.

2.5 References

The publications listed below form a part of this specification by reference. The publications are referred to in the text by basic designation only. If there is a conflict between any of the listed regulations or standards, then the most stringent or restrictive shall apply.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ANSI Z9.2	1979 (R 1991) Fundamentals Governing the Design and Operation of Local Exhaust Systems
ANSI Z88.2 1992	Respiratory Protection
ASTM C 732	1982 (R 1987) Aging Effects of Artificial Weathering on Latex Sealants
ASTM D 522	1993 (Rev. A) Mandrel Bend Test of Attached Organic Coatings
ASTM D 1331	Solutions of Surface-Active Agents
ASTM D 2794	1993 Resistance of Coatings to the Effects of Rapid Deformation (Impact)
ASTM E 84	1991 (Rev. A) Surface Burning Characteristics of Building Materials
ASTME96	1994 Water Vapor Transmission of Materials
ASTM E 119	1988 Fire Tests of Building Construction and Materials
ASTM E 736	1992 Cohesion/Adhesion of Sprayed Fire-Resistive Materials Applied to Structural Members
ASTM E 1368-00	2000 Visual Inspection of Asbestos Abatement Projects

CALIFORNIA CODE OF REGULATIONS (CCR)

Title 8 CCR 5208	General Industry - Asbestos
Title 17 Div. 1, Chpt. 8	Accreditation, Certification, and Work Practices in Lead-Related Construction
CCR CAR	Carcinogen and Asbestos Registration Sections 340-344.53, 341.6 Amended, and 341.9 Amended Through 341.14

CCR CSO	Construction Safety Orders, Chapter 4, Subchapter 4
CCR ESO	Electrical Safety Orders, Chapter 4, Subchapter 5
CCR 1529	Asbestos Construction Standard
CCR 1532.1	Lead in Construction
CCR 3203	Accident Prevention Program
CCR 3204	Access to Employee Exposure and Medical Records
CCR 3220	Emergency Action Plan
CCR 3221	Fire Prevention Plan
CCR 5144	Respiratory Protection Equipment Standard
CCR 5194	Hazard Communication Standard
CCR 5209	Carcinogen Regulation
CCR 6003	Accident Prevention Signs

CALIFORNIA CODE OF REGULATIONS TITLES 22 AND 23

CHS 66508	Section 66508
CHS 66510	Section 66510
CHS DIV 4	Division 4, Commencing with Section 66000, "Disposal"

CALIFORNIA HEALTH AND SAFETY CODE (CHSC)

CHSC 20	Division 20, Commencing with Section 24200
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CALIFORNIA LABOR CODE (CLC)

CLC DIVISION 5	Part 1, commencing with 6300
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CALIFORNIA PROPOSITIONS (CP)

CP 65	Proposition 65
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CALIFORNIA STATE BOARD OF EQUALIZATION (CSBE)

CSBE ETU	Excise Tax Unit
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CALIFORNIA STATE LICENSE BOARD (CSLB)

CSLB CBPC California Business and Professional Code Sections
7058.5 and 7068.7, "Certification"

CODE OF FEDERAL REGULATIONS (CFR)

29 CFR 1910.134	Respiratory Protection
29 CFR 191 0.141	Sanitation
29 CFR 1910.145	Accident Prevention Signs and Tags
29 CFR 1926.21	Safety Training and Education
29 CFR 1926.55	Gases, Vapors, Fumes, Dusts, and Mists
29 CFR 1926.62	Lead Exposure in Construction
29 CFR 1926.65	Hazardous Waste Operations and Emergency Response
29 CFR 1926.103	Respiratory Protection
29 CFR 1926.59	Hazard Communication
29CFR 191 0.1000	Air Contaminants
29 CFR 1926.1101	Asbestos
40 CFR 61-Subpart A	General Provisions
40 CFR 61-Subpart M	National Emission Standards for Asbestos
49 CFR 172	Hazardous Materials Tables and Hazardous Materials Communications Regulations
40 CFR 260	Hazardous Waste Management Systems: General
40 CFR 261	Identification and Listing of Hazardous Waste
40 CFR 262	Generators of Hazardous Waste
40 CFR 263	Transporters of Hazardous Waste
40 CFR 264	Districts and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities

40 CFR 265	Interim Status Standards for Districts and Operators of
40 CFR 268	Hazardous Waste Treatment, Storage, and Disposal Facilities
40 CFR 745	Land Disposal Restrictions
40 CFR 763	Lead; Requirements for Lead-Based Paint Activities
40 CFR 763	Asbestos Containing Material in Schools
40 CFR 178	Shipping Container Specifications

STATE AND LOCAL REGULATIONS

Regulation 11, Rule 2 Bay Area Air Quality Management District

UNDERWRITERS LABORATORIES INC. (UL)

Standard 586 - High-Efficiency Particulate Air

2.6 Submittals

The following items shall be submitted to, and approved by, the District or the District's Consultant before commencing work involving the hazardous materials outlined in these specifications.

A. Detailed work plan that includes: detailed plans for containment structure, dust control, water and electrical power supply at the site, waste water discharge from showers and inside the work area; construction, location and number of containments and decontamination units; etc. Schedule showing milestone dates for activities such as mobilization, work area preparation, ACM removal, ACM waste load-out, final clearance evaluations, completion dates, etc. Also, submit variances received from regulatory agencies as applicable. Additionally, submit copies of notifications to regulatory agencies as applicable.

B. Provide a Site Safety Plan at least fifteen (15 days) prior to project initiation. The Site Safety Plan shall address at a minimum: the following areas:

1. Personal protective equipment;
2. Site safety and health hazards;
3. Roof perimeter safety and fall protection
4. Scaffolding, if employed
5. Prevention of fiber release incidents; and cleanup procedures

6. Control of water leakage or discharge within and/or from the work area;
7. Medical emergency;
8. Asbestos abatement and removal procedures;
9. Contractor's internal administrative and inspection procedures;
10. Earthquakes and/or fire emergency procedures;
11. Protocol for responding to complaints or questions from interested parties;
12. 24-Hour emergency telephone numbers for Contractor personnel with authority to respond to emergencies.

C. Competent Person (as defined by Title 8 CCR 1529): Demonstrate education and specialized training with successful completion of examination of an EPA approved asbestos and DHS accredited lead training courses.

D. Workers: Demonstrate education and specialized training with successful completion of EPA approved and DHS accredited lead training courses.

E. Proof of Respirator Fit Testing: Provide proof of respirator fit testing. Fit testing records must be less than eleven (11) months old and document testing on the type of respiratory protective equipment used for this project. Fit testing records must be signed by the Competent Person.

F. Foreman Training: Submit evidence that the foreman to be used on the job fulfills the qualifications detailed in this specification and has experience in similar jobs.

G. Medical Examinations: Submit evidence signed by a physician that each employee used on the job has received an appropriate medical examination as detailed in Title 8 CCR 1529 and 1532.1. The submitted document must be less than eleven months old.

H. Certificates of Compliance: Submit manufacturer's certification that vacuums, ventilation equipment, and other equipment required to contain airborne asbestos fibers conform to ANSI Z9.2.

I. Hazardous Waste: Hazardous waste must be tested (TTLC/STLC/TCLP) and categorized for purposes of disposal. The Contractor shall submit written evidence of approved testing (including sample chain-of-custody forms) and disposal of hazardous wastes within five (5) days following the completion of each phase of the project.

J. Submit written evidence that the landfill(s) for disposal are approved for asbestos disposal by the USEPA and state or local regulatory agency(s). Submit uniform hazardous waste manifests prepared, signed and dated by an agent of the landfill. The manifest must certify the amount of hazardous materials delivered to the landfill. The manifest must be provided to the District's Consultant within ten working days after delivery.

K. Satisfactory proof that written notification has been provided to the Bay Area Air Quality Management District, in accordance with Title 40 CFR Part 61 Subparts A & M, National Emission Standards for hazardous Air Pollutant, U.S. EPA.

L. Licenses: Submit copies of state and local licenses, evidence of Cal-OSHA registration and permits necessary to carry out the work of this contract.

M. Notification of Other Contractors: If other contractors are working at the job site, before beginning any work the Contractor must inform all other contractors in writing. The Contractor must provide copies to the Districts Consultant about the location, nature, and requirements of the work areas.

N. Material Safety Data Sheets/Specification Sheets: The Contractor shall submit Material Safety Data and Specification Sheets for all chemicals, encapsulants, etc. to be used for this project.

O. Rental Equipment: When rental equipment is to be used in the abatement areas or to transport hazardous waste, the Contractor shall provide written notification regarding intended use of the rental equipment to the rental agency before use, with copies to the Districts Consultant and the District's representative.

P. Submittals at the Completion of the Project - Upon completion of on-site work, Contractor shall provide a detailed project summary that will include each of the Items listed below. The project Summary shall be submitted and approved by the District's representative prior to acceptance of final pay request and shall include the following:

1. Contractor to submit copies of the Security and Safety Logs showing names of persons entering the workspace. The logs shall include date and time of entry and exit, supervisor's record of any accident (detailed description of accident);
2. Emergency evacuations and any other safety or health incident,
3. Waste manifests,
4. Personal air sample results,
5. Pressure differential strip chart readings for each differential recording device on the site,
6. Project Summary:
7. Abatement contractor's name and address, certification number (CSLB), registration number (DOSH), and Tax ID;
8. Hazardous waste hauler (DTSC, DOT);
9. Name, address, and registration number of hazardous waste hauler;

10. Certified laboratory performing analysis (NISTINVLAP);
11. Contract number and name of project;
12. Specific inventory (including exact locations) of the hazardous materials which were removed or handled. Using a tabular format, provide for each type of hazardous material, and approximate quantity; Number of employees working on the project; Date of commencement of on-site work;
13. Date of completion of all on-site work;
14. Work method applied; i.e., glove bag, mini-enclosure, full containment with negative air, decon, etc.
15. Name, location, telephone number, and EPA registration of waste disposal site used;

2.7 District's Consultant

The District's Consultant will act as the District's liaison in technical matters involving the hazardous materials removal and disposal work.

The District's Consultant will only review submittals for general conformance with the abatement concept and general compliance with the information provided in the Bid Documents. Any action indicated during submittal review is subject to the requirements of the Specifications. The Contractor shall be responsible for dimensions and quantities that shall be confirmed at the job site.

The designated site representative of the District's Consultant is authorized by the District to have free access to all hazardous, materials work areas, to assist in interpretation of procedures, and to advise on all provisions of the Contract Documents pertaining to the management and control of hazardous materials.

The District's Consultant will advise the District to stop the Contractor's work if, in the course of performing monitoring duties, the Consultant observes an instance of substantial non-conformance with the Contract Documents and/or situations presenting health hazards to workers. Work shall not resume until the corrective measures have been enforced. Instances of substantial non-conformance shall include, but not be limited to, the following:

1. Loss of negative pressurization;
2. Activities or misconduct imperiling worker's safety; and
3. Breaches in containment resulting in potential release of asbestos containing materials and/or other hazardous materials.
- 4.

All hazardous materials abatement work shall be conducted using good work practices to prevent the release of fibers or dust outside the work area. If poor work practices are observed, the District's Consultant shall direct the Contractor to make the necessary corrections. Generally, airborne fiber concentrations measured by PCM inside the containment area exceeding 0.2 fibers/cc will be viewed as an indication of poor work practices unless the concentration is a direct result of design or external circumstances anticipated in the project specification.

If appropriate conditions are not made after two (2) warnings, or if an immediate threat exists that asbestos fibers or lead dust could be released outside the work area, all abatement work will be stopped. The decision to stop work shall be made jointly by the District's Consultant and the District.

The District's Consultant may perform baseline air sampling in selected work areas of the buildings before the start of abatement work to establish the background total asbestos fiber and lead dust concentrations.

The background total fiber concentration (or a total fiber concentration greater than 0.01 f/cc) shall not be exceeded outside the work area during abatement work. If the total fiber concentration exceeds either the background or 0.01 f/cc whichever is greater, the District's Consultant is authorized to act in accordance with the above provisions to stop work. The Contractor shall perform any and all necessary corrective actions to reduce the fiber concentrations.

The District's Consultant may perform air sampling inside and outside the hazardous materials work area during all phases of the work. The Contractor shall cooperate fully with the Consultant and ensure the cooperation of his workers during collection of air samples and work area inspections.

When visual inspections or air monitoring are specified, the Contractor shall notify the District and the District's Consultant in writing 24 hours in advance of the day and time when the Contractor will be ready for such inspections or monitoring. Such requests shall be initiated by the Contractor's Competent Person or Foreman indicating that the zone has been previously inspected and is ready for inspection/testing.

The District's Consultant's role in advising the District regarding environmental, health and safety matters does not relieve the Contractor's obligation to comply with all applicable health and safety regulations promulgated by the federal, state, or local governments. Air monitoring results generated by the District's Consultant shall not be used by the Contractor to represent compliance with regulatory agency requirements for monitoring of workers exposure to airborne asbestos, nor shall any other activity on the part of the District's Consultant represent the Contractor's compliance with applicable health and safety regulations.

3.0 Materials & Equipment

3.1 Signs and Labels

Provide labeling in accordance with U.S. EPA requirements. Provide the required signs, labels, warnings, or posted instructions for containers used to transport hazardous material to the landfill.

Location of Caution Signs and Labels: Provide bilingual caution signs at all approaches to work areas in languages used by the Contractor's employees. Locate signs at such a distance that personnel may read the sign and take the necessary protective steps required before entering the area. Provide labels and affix to all asbestos and/or lead containing materials, scrap, waste, debris, and other products contaminated with hazardous materials.

Warning Sign Format: Vertical format conforming to Title 8 CCR 1529:

DANGER
ASBESTOS
CANCER AND LUNG DISEASE HAZARD
AUTHORIZED PERSONNEL ONLY
RESPIRATORS AND PROTECTIVE CLOTHING ARE REQUIRED IN THIS AREA

Warning Label Format Provide labels that comply with Title 8 CCR 1529 of sufficient size to be clearly legible, displaying the following legend:

DANGER
CONTAINS ASBESTOS FIBERS
AVOID CREATING DUST
CANCER AND LUNG DISEASE HAZARD

Postings shall be in English and Spanish, and in any language used by any of the Contractor's employees as the primary language of communication.

3.2 Encapsulants

Encapsulants shall be U.L. Listed, in full-scale E-1 19 fire test.

Average depth of penetration shall meet manufacturer's recommendations.

Dry mil thickness of bridging encapsulating systems (if used) shall be as indicated in the specific treatment instructions included in this specification, and as recommended by the manufacturer.

Material shall be tinted sufficiently to provide a readable contrast to background color to which it is applied.

3.3 Plastic Sheeting

Use fire-retardant (FR) polyethylene (poly) film with following characteristics:

1. Thickness - 6-mil, minimum, NO EXCEPTIONS.
2. Flame Resistance/Flame Spread Rate <25.
3. Conforms to NFPA #701 and Tested in accordance with ASTM E-84.

Spray adhesive for sealing polyethylene to polyethylene shall contain no methylene chloride or methyl chloroform (1, 1, 1-trichloroethane) compounds.

3.4 Tape

Tape, 2" or wider, shall be capable of sealing joints of adjacent sheet of polyethylene and shall attach polyethylene sheet to finished or unfinished surfaces or similar materials. Tape shall be capable of adhering under dry and wet conditions, including use of amended water. Taping to critical or sensitive surfaces shall be completed using preservation sealing tape, such as 3M Scotch Brand No. 4811 Preservation Tape; or 3M Scotch Branch No. 472 Plastic Film Tape or approved equal.

3.5 Strip Chart Recorder(s)

Where interior work areas are required, each shall have a minimum differential pressure of 0.03 inches water gage at all times. Fluctuations below 0.02 inches of water column are unacceptable and may require temporary cessation of work until conditions are corrected.

Multiple continuous circular chart recorder(s) shall be used to document the level of pressure difference between the containment space and all other spaces as deemed necessary by the Environmental Consultant. Defective or non-operating instrumentation may require temporary cessation of work until instrumentation is repaired or replaced.

Differential air pressure systems shall be in accordance with Appendix J of EPA's "Guidance for Controlling Asbestos-Containing Materials in Buildings," EPA 560/5-85-024.

Air, which is exhausted to maintain negative pressure, shall be exhausted from the building at locations, approved by the District's Consultant. Exhausted air shall not be near or adjacent to other building intake vents or louvers or at entrances to buildings. The Contractor shall provide on-site independent DOP testing to document the effectiveness of the air filtration units. The test results shall be signed by the individual performing the testing. Repeat testing if the unit or the air filtration units have been repaired or replaced.

3.6 Vacuum Equipment

All vacuum equipment used in the work area shall use HEPA filtration systems and be of the wet-dry type. The Contractor shall provide on-site independent DOP testing to document the effectiveness of the vacuum units. The test results shall be signed by the individual performing the testing.

3.7 Local Exhaust System

If containments are required, sufficient High Efficiency Particulate Absolute (HEPA) ventilation units shall be used to maintain the negative pressure in each interior work area at 0.02 inches of water column. These exhaust systems shall be in accordance with ANSI and the HEPA unit shall bear a UL 586 label. The ventilation system shall remain in operation 24 hours a day, until clearance of the containment is achieved. HEPA-filtered air necessary to maintain pressure differential shall be vented to non-contaminated areas outside the buildings. Other HEPA units shall operate within the enclosure to circulate air and control fiber counts. All HEPA units shall be fitted as follows:

1. A two stage pre-filter as follows: 100 micron low efficiency filter and a second stage medium prefilter for particle sizes down to 5 microns;
2. HEPA systems must provide sufficient exhaust air to maintain a negative pressure of 0.02 inches of water.

3.8 Hours of Operation for HEPA Filtration Units

The ventilation system shall remain in operation 24 hours a day until the work area has passed the specified clearance criteria. HEPA filtered air necessary to maintain pressure differential shall be vented to non-contaminated areas outside the buildings. Other HEPA units shall operate within the enclosure to circulate air and control fiber counts.

3.9 Reserve Equipment

Contractor to have the following equipment on site: two reserve, functioning and DOP-tested HEPA Filter Vacuum Cleaning Units, two reserve and DOP-tested HEPA area filtration units, and sufficient polyethylene (poly), respirators, protective equipment, tape, tools, decontamination units, etc.

Provide authorized visitors, District, Consultants or other contractors requiring access to the work area with suitable protective clothing, headgear, eye protection, as described in this specification, whenever the visitor must enter the work area. The Contractor shall have available and maintain at all times a minimum of three (3) suits and other suitable protective equipment for this purpose. All protective equipment shall be new and for the exclusive use of visitors.

The Contractor shall document that each visitor has been trained and fit-tested prior to entering an abatement area.

3.10 Scaffolding

Scaffolding, as required to do the specified work, shall meet all applicable safety regulations and DOSH standards. A non-skid surface shall be furnished on all scaffold surfaces subject to foot traffic.

3.11 Transportation Equipment

Transportation equipment, as required, shall be lockable and suitable for loading, temporary storage, transit and unloading of contaminated waste without exposure to persons or property. Any vehicle used to transport asbestos waste shall be properly registered with all applicable controlling agencies.

3.12 Connections to Water Supply

Contractor shall assure that all connections to the site's water system shall include backflow protection. Valves shall be temperature and pressure rated for operation of the temperatures and pressures encountered. After use, connections and fittings shall be removed without damage or alteration to existing water piping and equipment. Leaking or dripping valves shall be piped to the nearest drain or located over an existing sink or grade where water shall not damage existing finishes or equipment.

Employ heavy-duty abrasion-resistant hoses with a pressure rating greater than the maximum pressure of the water distribution system in each work area. Provide fittings as required to allow for connection to existing wall hydrants or spouts.

3.13 Water Heater

The hot water supply must be adequate to allow for 15 minutes of continuous usage while maintaining a water temperature of 85° F. At minimum provide UL rated 40-gallon electric water heater to supply hot water for the decontamination unit shower. Start from a 30-amp circuit breaker located within the decontamination unit subpanel. Provide relief valve compatible with water heater operation; pipe relief valve down to drip pan on floor with type L copper. Drip pans shall consist of a 24 inch X 24 inch X 6 inch deep pan, made of 19 gauge galvanized steel with handles. Drip pan shall be securely fastened to the water heater with bailing wire or similar material. Wiring of the water heater shall comply with NEMA, NEC and UL standards.

3.14 Other Tools and Equipment

The Contractor shall provide other suitable tools for the stripping, removal and disposal activities. Tools shall include: hand-held scrapers, plastic brushes, sponges, rounded edge shovels, brooms, polyethylene, carts, etc. All tools shall be inspected for contamination by the District's Consultant prior to use. Equipment not inspected by the District's Consultant or contaminated equipment shall be removed from the site immediately. The Contractor shall bear the cost of any clean-up, laboratory costs and

District's Consultant's time associated with any clearance work resulting from the use of contaminated tools and equipment.

All other materials not specifically described, but required shall be provided by the Contractor subject to the approval of the District's Consultant.

Prohibited Equipment: The following equipment is prohibited from use on this project unless accepted in writing by the District's Consultant:

1. High or low pressure water blasting equipment for hosing of work areas.
2. Vacuum-powered removal or collection equipment located outside the asbestos work area, such as a "Vacu-Loader."
3. Gasoline, propane, diesel or other fuel powered equipment inside the building, unless previously approved in writing by the District and the District's Consultant.
4. Equipment that creates excessive noise or vibration that would affect the safety of the building or generate complaints from neighboring building occupants. No equipment shall exceed an A-weighted sound level of 85 dB as measured at 3 ft. from the radiating source without written permission of the District's Consultant and/or District.
5. Metal wire-brushes.
6. Flammable solvents with a flash point below 140 degrees F or materials containing methylene chloride, methyl chloroform (1, 1, 1 -trichloroethane).
7. Non-fire retardant polyethylene sheeting.
8. Polyurethane spray foam for application in fire-rated assemblies, including but not limited to penetrations into stairwells, mechanical rooms, electrical closets, rated floor-to-floor assemblies, etc.

4.0 Abatement Practices

4.1 Initial Area Isolation (Asbestos)

Shut down and disconnect all electrical power, gas, sewage, water, phone lines, fire life safety lines and sprinkler systems to the work area so that there is no possibility of reactivation and electrical shock.

Provide all connections for temporary utilities in the work area needed throughout abatement. Temporary electrical power shall be according to OSHA and the National Electrical Code for Wet Environments.

As required, establish designated limits for the hazardous materials work area with continuous barriers. Use barrier tape (3-inch) with a pre-printed asbestos warning throughout asbestos abatement activities. Provide signs around the perimeter of the work area according to EPA, OSHA, and Cal/OSHA.

Contractor shall conform to the District's lockout requirements, and secure the work area at all times. Area entrances and exits shall be secured by the Contractor throughout the abatement phase. Unauthorized visitors are strictly prohibited. Only the Contractor, Environmental Consultant, and District's representatives are permitted at the job site. Contractor shall ensure that all doors, gates, windows, and potential entrances to the work areas and the designated waste location areas are secured and locked at the end of each workday.

Contractor shall store all materials, equipment, and supplies for the project inside the buildings or in areas designated by the District.

Contractor shall provide temporary sanitary services of adequate capacity to handle the maximum estimated crew size. Contractor shall maintain the temporary facilities throughout the duration of the project.

The District's Consultant will inspect and approve all containment setups before any abatement is undertaken. If a containment area is breached (failure of polyethylene seals, visible dust emission, fiber counts above background level, etc.), the Contractor shall take immediate action to control the breach and clean the area to the satisfaction of the District's Consultant. Clearance for any contaminated areas will be determined by the District's Consultant and may include air sampling. The Contractor shall be responsible for all costs associated with the clean-up and testing (including costs associated with the District's Consultant) resulting from containment breaches.

The Contractor shall be responsible for identifying all HVAC components (if applicable) that lead into or out of the work areas. All components shall be disconnected and sealed airtight for the duration of the abatement work. All openings shall be sealed with two (2) layers of 6 mil polyethylene secured with duct tape, as applicable.

4.2 Containment Set-up Procedures-Asbestos

For exterior work, Contractor shall seal operable windows and air intakes within 50 feet of the work area with two layers of 6-mil polyethylene sealed with tape.

Contractor shall construct an airtight negative pressure containment for the removal of all Interior materials. Contractor must segregate the friable asbestos-containing materials from the non-friable asbestos-containing materials and must package and label them accordingly. If, at any time, the friable and non-friable materials are combined into one waste stream, then all the waste material will become hazardous asbestos waste and shall be disposed of under uniform waste manifest.

To permit the inspector to view the majority of the work area, the Contractor shall provide easily accessible viewing ports from the clean space into each abatement area. Viewing ports must be a minimum of 2' x 2', clear-see-through plastic with no scratches, tape or glue marks.

Pressure differential recorders with strip charts are required to monitor the pressure differential in the work area. The recorders must be calibrated prior to arriving on site and shall be periodically recalibrated throughout the project. Recalibration shall be performed by qualified technicians following the procedures outlined by the manufacturers.

The work area(s) shall be placed under negative pressure as outlined in this specification throughout the abatement work period.

Approved fire extinguishers (Class ABC, multi-purpose, dry chemical type, rated: 4A; 60BC) shall be readily available to workers (maximum travel distance of 50 feet) inside and adjacent to work area(s). Personnel and emergency exits shall be clearly indicated on the inside of the containment area. The emergency exit plan shall be approved by the District's Consultant prior to the set up of any work areas.

A three-chambered decontamination unit shall be required during the abatement work conducted in full containment. The unit shall be located inside the building and shall be relocated as necessary to access materials that may be under or behind it. Chambers shall be arranged as follows: (1) a clean/change room shall be the first chamber entered from outside the work area, (2) a shower shall be located between the clean/change room and the dirty/change room, and (3) a dirty/change room shall be the last chamber before entering the work area.

The clean/change room of the worker decontamination unit shall be of sufficient size to accommodate the work crew and their belongings. It shall include a respirator storage area and be fully equipped with reserve equipment and materials such as clean suits, towels, soap, tape, and respirator filters.

Worker decontamination unit walls shall be a minimum of two layers of 6-mu fire retardant poly and floors shall be constructed with a minimum of three layers of fire retardant poly. All entry and exit doorways shall consist of at least two sheets of

overlapping, fire resistant poly. At no time shall the flapped doors be taped open in order to expedite material or personnel load-out.

The worker shower(s) shall be equipped with a UL rated, electric water heater capable of providing 15 minutes of continuous usage while maintaining an 85 degrees F water temperature during worker showers. The load-out decontamination area shall be equipped with running water and a drip pan with dimensions of at least 24 inch X 24 inch X 6 inch. Provide relief valve compatible with water heater operation; pipe relief valve down to drip pan on floor with type L copper. Drip pans shall consist of a 24 inch X 24 inch X 6 inch deep pan, made of 19 gauge galvanized steel with handles. Drip pan shall be securely fastened to the water heater with bailing wire or similar material. Wiring of the water heater shall comply with NEMA, NEC and UL standards.

All water from the shower and bag wash area shall be filtered to the technically feasible limit but not more than five (5) microns before disposal. In addition, the Contractor shall comply with all current local, state and federal codes relating to waste water release.

4.3 Personnel Protection

Informed Workers:

1. All workers shall be informed of the hazards of asbestos and lead. Workers shall also be instructed in the use and fitting of respirators, protective clothing, decontamination procedures, and all other aspects associated with abatement work.

Personal Hygiene Practices:

1. The Contractor shall enforce and follow good personal hygiene practices during the abatement of hazardous materials. These practices will include but not be limited to the following:

No eating, drinking, smoking, or applying cosmetics in the work area. The Contractor shall provide a clean space, separated from the work area, for these activities.

If air monitoring data gathered by the District's Consultant in areas adjacent to the work areas shows exposure to airborne asbestos, lead or other hazardous materials exceeding Cal-OSHA criteria, that area will become regulated and workers must wear protective clothing and approved respirators and must have a shower facility provided to them.

Respirators:

1. Establish a respirator program as outlined by ANSI and required by Cal-OSHA. Select respirators from those approved by the National Institute for Occupational Safety and Health (NIOSH). Respirators selected must be approved by the Competent Person. Submit program for review a

minimum of five (5) working days prior to the commencement of abatement activities.

2. Respirators and Protective Equipment for Handling Asbestos and Lead:

At minimum, provide each employee with the following respiratory protection and protective clothing for each work phase:

- (1) Pre-cleaning, containment set-up, and containment removal work: NIOSH-approved, half-face respirators with HEPA cartridges.
- (2) Interior asbestos abatement of thermal system insulation: Powered-Air Purifying respirators (PAPRs) with HEPA cartridges.
- (3) Interior asbestos abatement of vinyl floor tile and associated mastics and transite panels: half-face respirators with HEPA cartridges and organic vapor cartridges (as necessary).
- (4) All interior and exterior lead paint and ceramic tile removal work: NIOSH-approved, half-face respirators with HEPA cartridges.

3. If Measured Exposure Exceeds PAPR:

Type C continuous flow or pressure-demand, supplied-air respirators if the average airborne concentration of asbestos exceeds 100 times the permissible exposure limits; i.e., 8-hour time-weighted average (TWA) and ceiling limit. Use the respirators presented in Title 8 CCR 1529 that afford adequate protection at such upper concentrations of airborne asbestos.

4. When Type C Respirators are Required:

The air supply system shall provide Grade D breathing air that conforms to OSHA and ANSI Commodity Specification for Air.

Compressed Air System for Type C Respirators shall be high pressure, with a compressor capable of satisfying the respirator manufacturer's recommendations. The receiver shall have sufficient capacity to allow a 15-minute escape time for the respirator wearers if the compressor fails or malfunctions. The compressed air system shall have compressor failure alarm, high temperature alarm, and a carbon monoxide alarm. It also shall have suitable in-line air purifying absorbent beds and filters to assure Grade D breathing air.

Use of Belt: Type C respirators shall be worn with belt to minimize possibility of dislodging face mask when hose is snagged in the work area.

Protective Clothing:

1. Provide personnel exposed to asbestos fibers and/or lead dust with fire retardant disposable protective whole body clothing, head coverings, gloves, and foot coverings. Provide appropriate gloves to protect workers hands from exposure to hazardous materials. Make sleeves secure at the wrists and make foot coverings secure at the ankles with tape. Ensure that all personnel entering and leaving the work space follow this procedure. Suits shall be of adequate size to accommodate the largest employee. Foot covers may be part of the coveralls. Non-disposable footwear shall be left in the work area until it is decontaminated or disposed of at the completion of the job.
2. Protective clothing will be worn inside the work area after the area passes pre-abatement inspection and shall remain in use until the area passes final clearance inspection.

Eye Protection: Provide safety glasses or goggles to personnel engaged in asbestos and lead operations when half-face respirators are in use.

Shower Requirements: Contractor shall assure that all certified employees and visitors use protective equipment and the shower or wash down facility following each entry into the containment area after the start of the hazardous materials abatement.

4.4 Containment and Decontamination Areas/Systems

Prior to each work shift and continuously throughout the project, each containment and decontamination enclosure shall be inspected and repaired as needed.

Ambient asbestos fiber levels outside each work area shall not exceed 0.01 f/cc (PCM) or 70 s/mm² (TEM) or background air sample results, whichever is greater. If the asbestos fiber concentrations outside each work area should exceed the level shown above, then abatement must stop and operations be reviewed and modified until the fiber count can be reduced to within the acceptable limits.

4.5 Asbestos Removal

The Contractor shall abate all asbestos containing materials identified in the buildings and listed in this specification.

The Contractor shall continuously apply wetting agent throughout the removal process. The wetting agent shall be applied with a low-pressure fine spray to minimize fiber releases. The materials shall be thoroughly saturated so that there is no detectable fiber release. All ACM shall be immediately packaged in leak-tight containers following removal.

Minimize removal activities of ACMs that generate airborne particulate. To the extent feasible, use manual methods to remove ACMs in sections or substantially intact, wetting along the scoring line continually, and misting the air with an airless sprayer to knock down suspended particulate.

Weather conditions should be dry and wind conditions less than 15 mph for exterior abatement activities. Establish a waste storage area where sealed bags of exterior materials are stored during removal. Line the storage area with a layer of 6-mil polyethylene sheeting. Transport bags without risk to their integrity to the dumpster. HEPA vacuum and/or wet wipe the entire adjacent surfaces following abatement. The area may be sprayed with a light coat of encapsulant to lockdown all remaining asbestos fibers.

The Contractor shall transport asbestos-containing waste bags to the waste debris box at designated hours approved by the District. RACM shall be packaged in a minimum of two (2) 6-mil polyethylene bags. Bags shall have site specific generator labels for proper RACM disposal.

Asbestos-containing debris and contaminated water shall be cleaned from the work area at the end of each work shift. The Contractor shall clean the work area using wet methods and HEPA vacuum equipment.

4.6 Air Monitoring – Asbestos and Lead

The purpose of the air monitoring conducted by the District will be to detect possible release of fibers or dusts emanating from the work areas. The District, at his discretion, may provide area monitoring as described in this specification. In addition to air monitoring within the work and adjacent areas, the District may conduct wipe samples to determine lead concentrations in settled dusts. If sample results indicate that conditions have exceeded the baseline, as determined by the District, all work shall cease. Work shall not recommence until the condition(s) causing the increase have been corrected.

All PCM air sample analysis shall comply with NIOSH Method 7400. All TEM analysis shall be consistent with AHERA protocols.

The District's representative shall perform all final clearance inspection and sampling.

The method of analysis for pre-abatement and clearance air samples shall be via Phase Contrast Microscopy (PCM). The method of analysis for in-progress asbestos air samples shall be PCM and TEM at the option of the District.

The Contractor shall be responsible for all personal air sampling. During the performance of any work in the contaminated work area, sufficient personnel breathing zone samples shall be taken to constitute representative sampling. These samples shall be taken each shift and for each distinct crew operation, and shall be used to verify adequacy of fiber control and respiratory protection. Personal breathing zone air sampling shall be in accordance with Cal-OSHA asbestos and lead standards. Personal air sampling results shall be provided to the District's Consultant on a weekly basis.

4.7 Decontamination – Asbestos

A. Asbestos Decontamination:

1. Following the abatement work, all reusable, contaminated equipment, such as masks, hard hats, boots, etc. shall be thoroughly decontaminated through wet cleaning methods before removal from the work area.
2. No accumulation of debris or standing water will be permitted following the initial decontamination.

4.8 Clearance Inspections – Asbestos

Initial Visual Inspection: Contractor shall notify the District's representative when the decontamination process in each containment area is complete. Evidence of asbestos or lead dusts will require additional clean up by the Contractor. Contractor shall be responsible for recleaning all areas found to be deficient.

Once the initial visual is passed, the Contractor shall remove all but the containment critical barriers.

If the District determines that the work area is sufficiently clean, the Contractor may proceed. If the District determines that certain areas require additional cleaning, the Contractor shall re-clean the work area and request a second inspection of the re-cleaned area. All costs incurred by the District for inspections required after the second inspection will be charged to the Contractor.

Following the visual inspection for asbestos, the Contractor shall provide a coating of non-diluted encapsulant in the work area. The Contractor shall allow the encapsulant to dry for the period specified by the manufacturer.

Asbestos Clearance Testing: Following encapsulation and drying time, the Contractor may request that the District's Consultant conduct air clearance sampling. Clearance air sampling shall not take place until all encapsulant is dry.

4.9 Clearance Criteria - Asbestos

The District's Consultant will conduct a final visual inspection of each work area. Any material found shall be cleaned by the Contractor and any repairs to existing conditions shall be made at no additional cost to the District's Consultant. When the area is clean, the District's Consultant shall provide the Contractor with a written notice of acceptance.

If clearance air testing is conducted by the District's Consultant within a containment, the clearance level for each containment shall be less than 0.01 fibers per cubic centimeter via phase contrast microscopy (PCM) or less than 70 structures per square millimeter via transmission electron microscopy (TEM). At the discretion of the District or the District's Consultant, aggressive sampling may be used for clearance purposes and multiple samples shall be collected in large containment areas.

Multiple samples will be collected depending on the size and configuration of the work areas. Typically a minimum of two (2) samples will be collected per area. The sample results shall be averaged for TEM and the results must be less than 70 structures per

square millimeter and for PCM all samples must be less than 0.01 fibers per cubic centimeter.

If air samples do not pass the required clearance criteria, the area shall be re-cleaned and new samples shall be collected by the District's Consultant. The Contractor shall be responsible for all costs associated with re-sampling and re-analyses. This amount will be deducted by the District from the Contractor's final payment.

The District's Consultant shall notify the Contractor in writing of acceptable asbestos fiber concentrations. The Contractor shall then remove all the remaining barriers in the work area.

4.10 Hazardous Materials Disposal

Load-Out Procedures:

1. Ensure that polyethylene bags are sealed air-tight. All bags shall be wet cleaned prior to removing them from the equipment decontamination unit.
2. Ensure all disposal containers are properly labeled according to 8 CCR 1529, 5194 (HAZCOM), 49 CFR 171-179 (USDOT), 40 CFR 61 Subpart M (NESHAP), and any local regulations and state regulations as required by this specification.

Asbestos Disposal Procedures:

1. It is the responsibility of the Contractor to determine current waste handling, labeling, transportation and disposal regulations for the work site and for each waste disposal landfill. The Contractor must comply fully with these regulations, local, state, and federal regulations and provide documentation of the same.
2. Filter all wastewater to the technically feasible limit, but not more than five (5) microns before disposal. Comply with all current local, state and federal codes relating to waste water release.
3. Asbestos-containing waste that is properly labeled and double-bagged may be temporarily stored in areas approved by the District. Areas must be made secure before storing the waste. Waste is not to remain in temporary storage area for longer than ten (10) days before final load-out of materials.
4. All asbestos waste shall be double-wrapped prior to transport from the site.
5. All vehicles used to transport hazardous waste must be registered with the Department of Toxic Substance Control and display the proper registration and expiration stickers.
6. Trucks must have an enclosed cargo area with a storage compartment that is fully lined with a minimum of one (1) layer of 6-mu polyethylene on the walls and two (2) layers on the floor.
7. Contractor shall not throw bags into the truck in a way that may cause the bags to burst open.
8. Contractor shall provide at minimum one (1) day advance notification to the District when signatures are required on manifest(s). The Contractor shall ensure that the Hazardous Waste Manifest is correctly filled out. The Contractor shall give the appropriate copies to the District and shall also

instruct the District in writing that they must send the appropriate copy to the Department of Toxic Substance Control.

9. If a debris box is used, the Contractor shall make all necessary arrangement with the District including obtaining all appropriate permits.
10. Contractor is responsible for all coordination with the waste disposal site and with the waste hauling company.
11. Debris box for hazardous waste shall be fully lined with a double layer of polyethylene sheeting and must be locked at all times when unattended.
12. Debris box shall be constructed with minimum 20-gauge steel with no windows or openings other than the door. The door of the container shall have a secure cover on the locking device with access to the lock only at the key-hole. Once the debris box is filled and the manifest is signed, Contractor must transport the debris box off the job site.
13. Disposal shall be in a landfill that meets EPA requirements. Do not throw bags into landfills in a way that may cause the bags to burst open. If bags cannot be taken out of the drums undamaged, then include the disposal of the drums with the bags. Ensure that bags remain intact during this process.

END OF SECTION

SURVEYS & LABORATORY REPORTS

SECTION 02 41 22

SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Demolition and removal of selected portions of a building or structure.
- B. Demolition and removal of selected site elements.
- C. Repair procedures for selective demolition operations.

1.2 DEFINITIONS

- A. Remove: Detach items from existing construction and legally dispose of them off-site, unless otherwise indicated.
- B. Remove and Salvage: Detach items from existing construction and deliver them to the Owner, suitable for re-use where indicated.
- C. Remove and Reinstall: Detach items from existing construction, prepare them for reuse in the Work, and reinstall them where indicated.
- D. Existing to Remain: Existing items of construction that are not to be removed and that are not otherwise indicated to be removed, removed and salvaged, or removed and reinstalled.

1.3 MATERIALS OWNERSHIP

- A. Except for items or materials indicated to be reused, salvaged, reinstalled, or otherwise indicated to remain Owner's property, demolished materials shall become Contractor's property and shall be removed from Project site.

1.4 SUBMITTALS

- A. Qualification Data: For firms and persons specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of Architects and owners, and other information specified.
- B. Proposed dust-control and noise-control Measures: Submit statement or drawing that indicates the measures proposed for use, proposed locations, and proposed time frame for their operation.
 - 1. Identify options if proposed measures are later determined to be inadequate.
- C. Schedule of Selective Demolition Activities: Indicate the following:
 - 1. Detailed sequence of selective demolition and removal work, with starting and ending dates for each activity.

2. Interruption of utility services.
3. Coordination for shutoff, capping, and continuation of utility services.
4. Construction and use of temporary elevators.
5. Locations of temporary partitions, if required, and means of egress.
6. Coordination of Owner's continuing occupancy of portions of existing building and of Owner's occupancy of completed Work.

D. Predemolition Photographs or Videotape: Show existing conditions of adjoining construction and site improvements, including finish surfaces that might be misconstrued as damage caused by selective demolition operations. Submit before Work begins.

E. Landfill Records: Indicate receipt and acceptance of hazardous wastes by a landfill facility licensed to accept hazardous wastes.

1.5 QUALITY ASSURANCE

A. Demolition Firm Qualifications: An experienced firm that has specialized in demolition work similar in material and extent to that indicated for this Project.

B. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.

C. Standards: Comply with ANSI A10.6 and NFPA 241.

D. Predemolition Conference: Review methods and procedures related to selective demolition including, but not limited to, the following:

1. Inspect and discuss condition of construction to be selectively demolished.
2. Review structural load limitations of existing structure.
3. Review and finalize selective demolition schedule and verify availability of materials, demolition personnel, equipment, and facilities needed to make progress and avoid delays.
4. Review requirements of work performed by other trades that rely on substrates exposed by selective demolition operations.

1.6 REGULATORY REQUIREMENTS

A. Comply with authorities having jurisdiction over selective demolition operations, including:

1. California Occupational Safety and Health Administration (CalOSHA)
2. Department of Transportation (DOT)
3. Department of Health Services (DOHS)
4. Environmental Protection Agency (EPA)
5. California Contractors State License Board

1.7 PROJECT CONDITIONS

A. Owner will occupy portions of building immediately adjacent to selective demolition area.

1. Conduct selective demolition so Owner's operations will not be disrupted.
2. Provide not less than 72 hours' notice to Owner of activities that will affect Owner's operations.
3. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities.

- B. Owner assumes no responsibility for condition of areas to be selectively demolished.
- C. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.
- D. Storage or sale of removed items or materials on-site will not be permitted.
- E. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.
 - 1. Maintain fire-protection facilities in service during selective demolition operations.

1.8 SEQUENCING

- A. Coordinate the sequencing of roofing demolition work with roofing system applicator to ensure that the roofing replacement will promptly follow demolition work.
- B. Provide and install temporary protection during the period between demolition and replacement work.
- C. Take steps necessary to ensure that the building is watertight at the end of each days work and when inclement weather is forecast.
 - 1. Failure to adequately protect the building and its contents from weather will result in the Owner installing temporary protection at the Contractor's expense.

PART 2 - PRODUCTS

2.1 REPAIR MATERIALS

- A. Use repair materials identical to existing materials.
 - 1. If identical materials are unavailable or cannot be used for exposed surfaces, use materials that visually match existing adjacent surfaces to the fullest extent possible.
 - 2. Use a material whose installed performance equals or surpasses that of existing materials.
- B. Comply with material and installation requirements specified in individual Specification Sections.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Visit the project to survey existing conditions and correlate with Contract Document requirements indicated to determine extent of selective demolition required.
 - 1. Perform visual survey accompanied by the Owner or the Owner's Representative.
 - 2. Mark interface surfaces as required to enable workmen to identify items scheduled for demolition and those scheduled to remain.
- B. Inventory and record the condition of items to be removed and reinstalled and items to be removed and salvaged.

- C. When unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure the nature and extent of conflict. Promptly submit a written report to Architect.
- D. Engage a professional engineer to survey the condition of the building to determine whether removing any element might result in structural deficiency or unplanned collapse of any portion of structure or adjacent structures during selective demolition operations.
- E. Perform surveys as the Work progresses to detect hazards resulting from selective demolition activities.

3.2 UTILITY SERVICES

- A. Existing Utilities: Maintain services and protect them against damage during selective demolition operations.
- B. Do not interrupt existing utilities serving occupied or operating facilities unless authorized in writing by Owner and authorities having jurisdiction.
- C. Provide temporary services during interruptions to existing utilities, as acceptable to Owner and to authorities having jurisdiction.
 - 1. Provide at least 72 hours' notice to Owner if shutdown of service is required during changeover.
- D. Utility Requirements: Do not start selective demolition work until utility disconnecting and sealing have been completed and verified in writing.

3.3 PREPARATION

- A. Dangerous Materials: Drain, purge, or otherwise remove, collect, and dispose of chemicals, gases, explosives, acids, flammables, or other dangerous materials before proceeding with selective demolition operations.
- B. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
 - 1. Do not close or obstruct streets, walks, walkways, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction.
 - 2. Provide alternate routes around closed or obstructed traffic ways if required by governing regulations.
 - 3. Erect temporary protection, such as walks, fences, railings, canopies, and covered passageways, where required by authorities having jurisdiction.
 - 4. Protect existing site improvements, appurtenances, and landscaping to remain.
- C. Temporary Facilities: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
 - 1. Provide protection to ensure safe passage of people around selective demolition area and to and from occupied portions of building.
 - 2. Provide temporary weather protection, during interval between selective demolition of existing construction on exterior surfaces and new construction, to prevent water leakage and damage to structure and interior areas.

3. Protect walls, ceilings, floors, and other existing finish work that are to remain or that are exposed during selective demolition operations.
 4. Cover and protect furniture, furnishings, and equipment below selective demolition where applicable.
- D. Temporary Enclosures: Provide temporary enclosures for protection of existing building and construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities.
1. Provide temporary weathertight enclosure for building exterior.
 2. Where heating or cooling is needed and permanent enclosure is not complete, provide insulated temporary enclosures. Coordinate enclosure with ventilating and material drying or curing requirements to avoid dangerous conditions and effects.
- E. Temporary Partitions: Erect and maintain dustproof partitions and temporary enclosures to limit dust and dirt migration and to separate areas from fumes and noise where indicated.
- F. Temporary Shoring: Provide and maintain shoring, bracing, or structural support to preserve stability and prevent movement, settlement, or collapse of construction to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.
1. Strengthen or add new supports when required during progress of selective demolition.

3.4 POLLUTION CONTROLS

- A. Dust Control: Comply with the Owner's and applicable governing environmental protection regulations.
- B. Disposal: Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
1. Remove debris from elevated portions of building by enclosed chute, hoist, or other pre-approved device that will convey debris to grade level in a controlled descent.

3.5 SELECTIVE DEMOLITION

- A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated.
- B. Use methods required to complete the Work within limitations of governing regulations.
- C. Proceed with selective demolition systematically, from higher to lower level.
- D. Neatly cut openings and holes plumb, square, and true to dimensions required.
- E. Use cutting methods least likely to damage construction to remain or adjoining construction.
1. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping, to minimize disturbance of adjacent surfaces.
 2. Temporarily cover openings to remain.
 3. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.

- F. Do not use cutting torches until work area is cleared of flammable materials.
 - 1. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations.
 - 2. Maintain fire watch and portable fire-suppression devices during flame-cutting operations.
 - 3. Maintain adequate ventilation when using cutting torches.
- G. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
- H. Remove structural framing members and lower to ground by method suitable to avoid free fall and to prevent ground impact or dust generation.
- I. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
- J. Dispose of demolished items and materials promptly.
- K. Return elements of construction and surfaces that are to remain to condition existing before selective demolition operations began.
- L. Existing Facilities: Comply with building manager's requirements for using and protecting elevators, stairs, walkways, loading docks, building entries, and other building facilities during selective demolition operations.
- M. Removed and Salvaged Items: Comply with the following:
 - 1. Clean salvaged items.
 - 2. Pack or crate items after cleaning, identifying contents of containers.
 - 3. Store items in a secure area until delivery to Owner.
 - 4. Transport items to Owner's storage area where so indicated.
 - 5. Protect items from damage during transport and storage.
- N. Removed and Reinstalled Items: Comply with the following:
 - 1. Clean and repair items to functional condition adequate for intended reuse.
 - 2. Paint equipment where indicated.
 - 3. Reinstall items in locations indicated.
 - 4. Comply with installation requirements for new materials and equipment.
 - 5. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.
- O. Existing Items to Remain: Protect construction to remain against damage and soiling during selective demolition.
 - 1. When permitted by Architect, items may be removed to a suitable, protected storage location during selective demolition and reinstalled in their original locations after selective demolition operations are complete.
- P. Roofing: Remove no more existing roofing than can be covered in one day by new roofing.

3.6 PATCHING AND REPAIRS

- A. General: Promptly repair damage to adjacent construction caused by selective demolition operations.
- B. Promptly replace items demolished that were not so scheduled to the satisfaction of the Owner.
- C. Repairs: Where repairs to existing surfaces are required, patch to produce surfaces suitable for new materials.
 - 1. Completely fill holes and depressions in existing masonry walls that are to remain with an approved masonry patching material applied according to manufacturer's written recommendations.
- D. Finishes: Restore exposed finishes of patched areas and extend restoration into adjoining construction in a manner that eliminates evidence of patching and refinishing.
 - 1. Patch with durable seams that are as invisible as possible. Provide materials and comply with installation requirements specified in other Sections of these Specifications.
 - 2. Where patching occurs in a painted surface, apply primer and intermediate paint coats over patch and apply final paint coat over entire unbroken surface containing patch. Provide additional coats until patch blends with adjacent surfaces.
- E. Ceilings: Patch, repair, or rehang existing ceilings as necessary to provide an even-plane surface of uniform appearance.

3.7 DISPOSAL OF DEMOLISHED MATERIALS

- A. General: Promptly dispose of demolished materials. Do not allow demolished materials to accumulate on-site.
- B. Burning: Do not burn demolished materials.
- C. Disposal: Transport demolished materials and dispose of at designated spoil areas on Owner's property.
- D. Disposal: Transport demolished materials off Owner's property and legally dispose of them.

3.8 CLEANING

- A. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations.
- B. Return adjacent areas to condition existing before selective demolition operations began.

3.9 SELECTIVE DEMOLITION SCHEDULE

- A. Existing Construction to Be Removed: Remove existing construction where indicated. Remove existing construction as required to install the Work.
 - 1. Existing built-up roofing down to existing deck at Building 12.
 - 2. Existing abandoned wood sleepers.
 - 3. Existing strainers, clamping rings and associated components.
 - 4. Alternate: Existing drains, strainers, clamping rings and associated components.

5. Core drill existing concrete and provide overflow drains, overflow piping, and hardware. Scan existing concrete to locate existing steel reinforcing prior to drilling through concrete. Drilling through existing reinforcing is not permitted. Cores taken through concrete that expose existing reinforcing shall be patched at no cost to the Owner.
 6. Existing roof hatch where indicated.
 7. Existing roofing systems to substrate at Colonnades.
 8. Existing flashings, carpentry, sealants and other construction components to accommodate the Work.
 9. Existing construction as indicated and as needed to complete the Work.
 10. Other construction where shown or noted on the Drawings and where specified in the Project Manual.
- B. Existing Items to Be Removed and Reinstalled: Items and/or construction requiring temporary removal and/or disconnection, modification, etc. to remain a part of the Work.
1. Existing wall-mounted access ladder to roof hatch.
 2. Existing mechanical equipment as indicated and as required to complete the Work.
 3. Existing construction as indicated and as needed to complete the Work.
 4. Other construction where shown or noted on the Drawings and where specified in the Project Manual

END OF SECTION

SECTION 06 10 00
ROUGH CARPENTRY

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
1. Wood blocking and nailers.
 2. Wood framing.
 3. Plywood.
 4. Fire-retardant-treated materials.
 5. Fasteners.
 6. Other rough carpentry indicated in the Contract Documents.

1.2 SUBMITTALS

- A. Product Data: For each type of process and factory-fabricated product.
1. Include data for wood-preservative treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements.
 2. Include data for fire-retardant treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements.
- B. Evaluation Reports: For the following, from ICC-ES:
1. Wood-preservative-treated wood.
 2. Fire-retardant-treated wood.
 3. Power-driven fasteners.

PART 2 - PRODUCTS

2.1 WOOD PRODUCTS, GENERAL

- A. Lumber: DOC PS 20 and applicable rules of grading agencies indicated. If no grading agency is indicated, provide lumber that complies with the applicable rules of any rules-writing agency certified by the ALSC Board of Review. Provide lumber graded by an agency certified by the ALSC Board of Review to inspect and grade lumber under the rules indicated.
1. Factory mark each piece of lumber with grade stamp of grading agency.
 2. Provide dressed lumber, S4S, unless otherwise indicated.
- B. Maximum Moisture Content of Lumber: 19 percent unless otherwise indicated.

2.2 WOOD-PRESERVATIVE-TREATED LUMBER

- A. Preservative Treatment by Pressure Process: AWPA U1; Use Category UC3b.
1. Preservative Chemicals: Acceptable to authorities having jurisdiction and containing no arsenic or chromium.

- B. Kiln-dry lumber after treatment to a maximum moisture content of 15 percent. Do not use material that is warped or that does not comply with requirements for untreated material.
- C. Mark lumber with treatment quality mark of an inspection agency approved by the ALSC Board of Review.
- D. Application: Treat items where indicated.

2.3 FIRE-RETARDANT-TREATED MATERIALS

- A. General: Where fire-retardant-treated materials are indicated, use materials complying with requirements in this article, that are acceptable to authorities having jurisdiction, and with fire-test-response characteristics specified as determined by testing identical products per test method indicated by a qualified testing agency.
- B. Fire-Retardant-Treated Lumber and Plywood by Pressure Process: Products with a flame spread index of 25 or less when tested according to ASTM E 84, and with no evidence of significant progressive combustion when the test is extended an additional 20 minutes, and with the flame front not extending more than 10.5 feet (3.2 m) beyond the centerline of the burners at any time during the test.
 - 1. Exterior Type: Treated materials shall comply with requirements specified above for fire-retardant-treated lumber and plywood by pressure process after being subjected to accelerated weathering according to ASTM D 2898. Use for exterior locations and where indicated.
- C. Kiln-dry lumber after treatment to a maximum moisture content of 19 percent. Kiln-dry plywood after treatment to a maximum moisture content of 15 percent.
- D. Identify fire-retardant-treated wood with appropriate classification marking of qualified testing agency.
- E. Application: Treat items indicated on Drawings.

2.4 WOOD BLOCKING, NAILERS AND WOOD FRAMING

- A. General: Provide miscellaneous lumber indicated and lumber for support or attachment of other construction, including blocking, nailers, and wood framing.
- B. For items of dimension lumber size, provide Construction or No. 2 grade lumber, douglas fir, pressure treated where indicated.
- C. Minimum dimension for any individual piece shall be 24 inches, unless otherwise indicated.

2.5 PLYWOOD

- A. Plywood: APA Exterior C-D to match existing thicknesses unless otherwise noted. Use pressure treated where in contact with concrete.
- B. Fire Treated Plywood: DOC PS 1, APA Exterior C-D, fire-retardant treated, in thickness indicated or, if not indicated, not less than 1/2-inch (13-mm) nominal thickness.

2.6 FASTENERS

- A. General: Provide fasteners of size and type indicated that comply with requirements specified in this article for material and manufacture.
 - 1. Where rough carpentry is exposed to weather, pressure-preservative treated, or in area of high relative humidity, provide fasteners of Type 304 stainless steel. Otherwise, provide hot-dip galvanized fasteners.
 - 2. Penetrate wood substrates 1-1/4 inch or 3/4 inch through, unless otherwise noted or required.
 - 3. Nails shall have annular (ring) shanks.
 - 4. Screws: Approved hardened steel and wood penetrating screws shall be Number 10 self-drilling and self-tapping screws made of stainless steel or carbon steel with corrosion resistant fluorocarbon coating, unless otherwise noted.
 - 5. Select fasteners of size that will not fully penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections.
- B. Power-Driven Fasteners: ICC-ES ESR-1539.
- C. Fastener for Installing Fire- or Preservative-Treated Plywood to Concrete: Subject to compliance with requirements, provide X-CR (ICC ESR-1663) by Hilti or approved equal.
 - 1. Material: SAE 316 stainless steel.
 - 2. Washers: SAE 316 stainless steel, premounted.
 - 3. Diameter: 0.145 inch diameter.
- D. Framing Anchors: Subject to compliance with requirements provide framing anchors by Simpson Strong Tie or approved equal.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Set rough carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit rough carpentry to other construction; scribe and cope as needed for accurate fit. Locate framing, nailers, blocking and similar supports to comply with requirements for attaching other construction.
- B. Framing Standard: Comply with AF&PA's WCD 1, "Details for Conventional Wood Frame Construction," unless otherwise indicated.
- C. Metal Framing Anchors: Install metal framing anchors to comply with manufacturer's written instructions. Install fasteners through each fastener hole.
- D. Do not splice structural members between supports unless otherwise indicated.
- E. Comply with AWWA M4 for applying field treatment to cut surfaces of preservative-treated lumber.
- F. Fastening:
 - 1. Nail without splitting wood.
 - 2. Pre-bore as required or indicated on the Contract Documents.
 - 3. Remove split members and replace with members complying with the specified requirements.
 - 4. Wood Screws: Pre-drill as needed to prevent splitting wood.

- G. Securely attach rough carpentry work to substrate by anchoring and fastening as indicated, complying with the following:
1. Table 2304.9.1, "Fastening Schedule," in ICC's International Building Code.
 2. ICC-ES ESR-1539 for power-driven fasteners.

END OF SECTION

SECTION 07 22 00

ROOF AND DECK INSULATION

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Tapered insulation.
 - 2. Substrate board.
 - 3. Glass-fiber blanket (batt) insulation
 - 4. Expanding polyurethane foam insulation.
 - 5. High temperature pipe insulation.
 - 6. Accessories.

1.2 RELATED REQUIREMENTS

- A. Section 07 54 00 "Thermoplastic Membrane Roofing;" for roofing system, administrative and warranty requirements.

1.3 ALTERNATES

- A. Furnishing and installation of tapered insulation in lieu of wood cants/crickets at Building 12 is an Alternate. Refer to the Bid Form for Alternates.

1.4 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Shop Drawings: Submit manufacturer's shop drawings indicating tapered insulation layout, cross section of assembly, and minimum board dimensions on 24"x36" drawings sheets.
 - 1. Submit drawings indicating slope, ridges and valleys to achieve positive drainage at slopes indicated.
 - 2. Comply with recommendations of National Roofing Contractors Association (NRCA) Roofing Manual, latest edition.
- C. Samples for Verification: For the following products:
 - 1. Substrate board.
- D. Product test reports.
- E. FM – 1-90 insulation attachment pattern diagram, include roof edge perimeter and roof corner attachment.

1.5 DELIVERY, STORAGE AND HANDLING

- A. All products delivered to the job site shall be in the original unopened containers or wrappings bearing all seals and approvals.
- B. Handle all materials to prevent damage. Place all materials on pallets and fully protect from moisture.
- C. Do not overload roof. Load goods so as not to cause structural damage or failure, or create a safety hazard.
- D. All materials which are determined by the Owner, Owner's Representative or the manufacturer to be damaged are to be removed from the job site and replaced at no cost to the Owner.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Tapered Insulation (Alternate): Polyisocyanurate insulation with inorganic coated-glass facers, including tapered edge strips; ASTM C 1289, with a core density of 2.0 pcf, per ASTM D 1622.
 - 1. Subject to compliance with requirements, provide products by one of the following:
 - a. Atlas Roofing Corporation
 - b. Sarnafil Inc.
 - c. Approved Equal
 - 2. ASTM C 1289, Type II
 - 3. ASTM E 108 or UL 790, Class A System
 - 4. ASTM E 84 or UL 237, Class 1 Rating
 - 5. ASTM D 1621, Compressive Strength 20 PSI
 - 6. Thickness: Varies.
 - 7. Panel Size: Insulation panel shall be 4'-0" x 4'-0" maximum.
 - 8. Primary slope shall be 1/4" per foot minimum. Secondary slope, including crickets, shall be 1/2" per foot.
 - 9. Tapered edge strip at drains shall slope vertically from 0 to 1-1/2 inch in 12 inches horizontal.
 - 10. Fully adhered for deck attachment, in accordance with manufacturer's recommendations.
 - 11. Approved by roofing membrane manufacturer for specified warranty.
- B. Substrate Board: Glass mat gypsum panel with pre-primed surfaces on front and back; ASTM C 1177, with maximum flame-spread and smoke-developed indexes of 0, per ASTM E 84.
 - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Georgia Pacific; DensDeck Prime
 - b. Approved Equal
 - 2. Thickness: 1/2" horizontal applications; 1/4" vertical applications.
 - 3. Width: 4'-0"
 - 4. Length: 4'-0"
 - 5. Surfacing: Fiberglass mat with non-asphaltic coating
 - 6. Flexural strength: 80 lbs. min., ASTM C 473
 - 7. Permeance: 35 perms, ASTM E 96
 - 8. R Value: 0.56, ASTM C 518
 - 9. Water Absorption: 10% maximum, ASTM C 1177
 - 10. Compression Strength: 500-900 PSI
 - 11. FM Class 1, FM 4450

12. UL Class A, UL 790
13. Fully adhered for horizontal attachment and mechanically attached to vertical substrates, in accordance with manufacturer's recommendations.

C. Tapered Edge Strip: ASTM C 728, perlite insulation board from Johns-Manville or approved equal.

2.2 GLASS-FIBER BLANKET INSULATION

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
1. CertainTeed Corporation.
 2. Guardian Building Products, Inc.
 3. Owens Corning.
- B. Unfaced, Glass-Fiber Blanket Insulation: ASTM C 665, Type I; with maximum flame-spread and smoke-developed indexes of 25 and 50, respectively, per ASTM E 84; passing ASTM E 136 for combustion characteristics.
1. Thickness: As required to fill cricket framing cavities.

2.3 ACCESSORIES

- A. Foam Adhesive: Manufacturer's standard foam adhesive for bonding substrate board to the roof deck.
1. Subject to compliance with requirements, provide products by one of the following:
 - a. FTR 601; FiberTite
 - b. WeatherTite One Step Foamable Adhesive; Millenium Adhesive Products Incorporated
 - c. OlyBond500; OMG Roofing Products
 2. Provide foam adhesive accepted by roofing manufacturer for specified warranty.
- B. Expanding Polyurethane Foam Insulation: Two-component, quick-cure polyurethane foam.
1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Dow Chemical Company; Froth-Pak
 - b. Approved Equal
- C. Pipe Insulation: High temperature pipe insulation
- D. Fasteners: Fasteners to secure substrate boards shall be FM approved substrate board fasteners as recommended and approved by the substrate board manufacturer. Fasteners shall be corrosion resistance coated with 3-inch, 26 gauge galvalume coated plates. Length of fasteners shall be sized to provide no less than 1-1/2 inch embedment.

PART 3 - EXECUTION

3.1 CONDITION OF SURFACES

- A. Inspection of Surfaces: Substrate on which insulation and substrate board is to be installed shall be clean, smooth and dry. Condition of substrate shall be inspected and approved by the Contractor, Architect, and the Owner's Representative immediately before start of installation.
- B. Preparation of Surfaces: Check roof deck surfaces for defects before work is started; correct defects and inaccuracies in roof deck surface to eliminate poor drainage, hollow and low spots.

- C. Correct defects in existing decks where required by the Architect.

3.2 PROTECTION OF MATERIALS

- A. Keep roof materials dry before, during, and after installation. Apply two layers of tarp over insulation and substrate board on a daily and nightly basis.

3.3 INSTALLATION, GENERAL

- A. Comply with manufacturer's written instructions applicable to products and applications indicated.
- B. Install insulation and substrate board that is undamaged, dry, and unsoiled and that has not been left exposed to ice, rain, or snow at any time.
- C. Extend substrate board to envelop entire area to be roofed. Cut and fit tightly around obstructions and fill voids with substrate board. Remove projections that interfere with placement.
- D. Provide sizes to fit applications indicated and selected from manufacturer's standard thicknesses, widths, and lengths. Apply single layer of board to produce thickness indicated unless multiple layers are otherwise shown or required to make up total thickness.
- E. Install accessories in accordance with manufacturers' instructions.
- F. Install only as much substrate and insulation board as can be covered with roofing by the end of the workday and prior to inclement weather.

3.4 INSTALLATION OF INSULATION AND SUBSTRATE BOARD

- A. Layout of Insulation/Substrate Board: Install insulation and substrate board over the properly prepared decking.
 - 1. Multiple-Layer Installation: Board thickness greater than 2 inches shall be installed in multiple layers and shall be 2 inches maximum per layer.
 - 2. Boards to be loosely laid with all joints staggered twelve inches minimum from adjacent rows and from joints of board layer below.
 - 3. Closely cut each board to tightly fit around all roof penetrations.
 - 4. No boards shall be cut to less than one square foot in size.
 - 5. Fit each board snugly against adjacent boards so that no gap larger than 1/8 inch exists.
 - 6. Carefully inspect the installation to ensure that each board fits flush with adjacent boards.
 - 7. Boards with broken corners or that display cupping or warping shall not be used.
- B. Fully adhere insulation to properly prepared deck.
- C. Fully adhere substrate board to tapered insulation and properly prepared deck. Mechanically attach substrate board at vertical applications.
- D. Crickets: Install crickets at the high side of all curbs or other obstacles twenty four inches or wider blocking positive drainage to roof drains or scuppers, and at locations indicated.
 - 1. Carefully layout each cricket to ensure positive roof drainage and no possibility of roof ponding.
 - 2. Crickets shall smoothly transition between changes in slope. Provide tapered edge strips to avoid voids at toe of crickets.

- E. Foam Adhesive Attachment of Insulation and Substrate Board at Horizontal Applications: Using a ribbon pattern space 1/2 inch wide beads of foam at 8 inches on center. As adhesive is applied, immediately place substrate board into wet adhesive. Do not allow adhesive to skin over. Eliminate uneven surfaces to ensure positive contact between the board and substrate. Foam cannot be applied to a wet substrate.
- F. Mechanical Attachment of Substrate Board at vertical applications: Fasten through substrate board with screw and plate type fasteners, minimum spacing to be one fastener per every four square feet. If fastening pattern set by manufacturer or necessary to meet FM Global I-90 wind uplift requirements exceeds those of this Section, the more stringent fastening requirements are to be followed. Fastening pattern to be increased in corners and perimeters per the requirements of FM Global Loss Prevention Data Sheet I-28.
 - 1. Ensure that fasteners do not penetrate conduit or miscellaneous piping below the existing decking.

3.5 INSTALLATION OF GLASS-FIBER BLANKET (BATT) INSULATION

- A. Glass-Fiber Blanket Insulation: Install in cavities formed by framing members according to the following requirements:
 - 1. Use insulation widths and lengths that fill the cavities formed by framing members. If more than one length is required to fill the cavities, provide lengths that will produce a snug fit between ends.
 - 2. Place insulation in cavities formed by framing members to produce a friction fit between edges of insulation and adjoining framing members.
 - 3. For wood-framed construction, install blankets according to ASTM C 1320.

3.6 INSTALLATION OF EXPANDING FOAM POLYURETHANE INSULATION

- A. Install expanding foam polyurethane insulation in accordance with manufacturer's recommendations and written instructions.

3.7 PROTECTION OF APPLIED SUBSTRATE BOARD

- A. Completely cover applied substrate board with finished roofing system. Protect open spaces between substrate board and walls and spaces at curbs, until permanent roofing and flashing is applied. Insulation and substrate and board may not be left uncovered overnight.
- B. In finished areas, storing walking, wheeling or trucking will not be permitted. Provide smooth, clean board or plank walkways, runways, and platforms near supports, as necessary to distribute weight to conform to indicated live load limits or roof construction.

END OF SECTION

SECTION 07 54 00

THERMOPLASTIC MEMBRANE ROOFING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Adhered felt backed thermoplastic membrane roofing system.
 - 2. Accessories.

1.2 RELATED REQUIREMENTS

- A. Section 07 22 00 "Roof and Deck Insulation;" for insulation and substrate board.
- B. Section 07 62 00 "Sheet Metal Flashing and Trim;" for pre-manufactured 2-piece fascia.

1.3 ADMINISTRATIVE REQUIREMENTS

- A. Preinstallation Roofing Conference: Conduct conference at Project site.
 - 1. Provide all Submittals per Action Submittal and Informational Submittal Articles for approval a minimum of (7) days prior to Preinstallation roofing conference.
 - 2. Ensure a clear understanding of the Drawings and Specifications.
 - 3. Provide on-site inspection and acceptance of the roofing substrate and pertinent structural details relating to the roof system.
 - 4. Coordinate the work of the various trades involved in providing the roofing system and other components secured to the roofing.
 - 5. The Contractor shall attend the conference with personnel directly responsible for the installation of roofing, substrate board, insulation, flashing and sheet metal work, plumbing, and the roofing materials manufacturer. Conflicts shall be resolved and confirmed in writing.
- B. Progress Meetings: While work is in progress, Contractor shall attend a mandatory progress meeting, at a time and day as determined by the Owner. Progress meetings will be held a minimum of once per week. Owner may decide to hold bi-weekly meetings. Coordinate and schedule Work. Contractor's Representative needs to be able to make ongoing decisions regarding schedule, change orders and quality of workmanship. Job Foreman to be present at progress meetings.

1.4 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Shop Drawings: For roofing system. Include plans, elevations, sections, details, and attachments to other work. Include flashings, tie-ins, edges, terminations, expansion joints, penetrations and joints.
- C. Shop Drawings: Provide shop drawings for assemblies indicated below.
 - 1. Layout and quantity of walkway pads.

2. All membrane-clad sheet metal configurations.
 3. Layout of crickets including, but not limited to, slope, heights from drain, connections/securement to existing structural deck.
- D. Samples for Verification: For the following products:
1. Membrane roofing, of color specified.
 2. Flashing materials.
 3. Sealant, 11 oz. tube.
 4. Fasteners, each type used.
- E. Certificates: Signed by roofing manufacturer certifying that roofing system complies with requirements specified in "Performance Requirements" Article.
1. Submit evidence of compliance with performance requirements.
- F. Certificates: By manufacturers of roofing and accessory materials that all materials supplied comply with all requirements of the identified ASTM and industry standards or practices.
- G. Certificates: From the Applicator that the system specified meets all identified code and insurance requirements as required by the Specification.
- H. Field quality-control reports.
- 1.5 CLOSEOUT SUBMITTALS
- A. Operation and Maintenance Data.
 - B. Warranty Documentation.
- 1.6 QUALITY ASSURANCE
- A. Installer Qualifications: A qualified firm that is authorized by the membrane manufacturer prior to bid with minimum five years documented experience as a certified applicator to install manufacturer's products.
 - B. Applicator personnel trained and authorized by the manufacturer shall complete all work pertaining to the installation of membrane and flashings.
 - C. There shall be no deviation made from the Drawings, Specifications or the approved Shop Drawings without prior written approval by the Architect.
 - D. Source Limitations: Obtain components for membrane roofing system from same manufacturer as membrane roofing or approved by membrane roofing manufacturer.
 - E. Standard Test Methods for Fire Tests of Roof Coverings: Class A; UL 790
 - F. Suitability of Construction Documents: Verify that the specifications and drawings are workable and not in conflict with the roofing manufacturer's recommendations and instructions prior to the start of work.
 1. Start of work constitutes acceptance of project conditions and requirements.
 - G. Inspection by Manufacturer: Provide site visits, with inspections and written reports, performed by a technical representative of the roofing membrane manufacturer at the following intervals:
 1. Pre-installation review

2. Final inspection for issuance of warranty by a technical representative employed by roofing system manufacturer specifically to inspect installation for warranty purposes.
 - a. Conduct at first spring at the end of rainy season.
3. Submit copies of reports to the Architect within 7 days of the site visit.

1.7 TESTING AGENCIES

- A. Conform to California Building Code for roof assembly and fire hazard requirements.
- B. Conform to applicable City, County, State, and Federal requirements.
- C. The applicator shall submit evidence that the proposed roof system meets the requirements of the local building code and has been tested and approved or listed by the following test organizations. These requirements are minimum standards and no roofing work shall commence without written documentation of the system's compliance.
 1. Factory Mutual Research Corporation (FM) - Norwood, MA: Class 1-60.
 2. Underwriters Laboratories, Inc. - Northbrook, IL: Class A assembly
- D. Conform to the requirements of the following regulatory agencies:
 1. OSHA
 2. EPA
 3. Local City and County Authorities

1.8 DELIVERY, STORAGE AND HANDLING

- A. All products delivered to the job site shall be in the original unopened containers or wrappings bearing all seals and approvals.
- B. Handle all materials to prevent damage. Place all materials on pallets and fully protect from moisture.
- C. Membrane rolls shall be stored lying down on pallets and fully protected from the weather with clean canvas tarpaulins. Un-vented polyethylene tarpaulins are not accepted due to the accumulation of moisture beneath the tarpaulin in certain weather conditions that may affect the ease of membrane weldability.
- D. Do not overload roof. Load goods so as not to cause structural damage or failure, or create a safety hazard.
- E. All adhesives shall be stored at temperatures between 40° F (5° C) and 80° F (27° C) unless manufacturer requires more stringent temperature limits.
- F. All flammable materials shall be stored in a cool, dry area away from sparks and open flames. Follow precautions outlined on containers or supplied by material manufacturer/supplier.
- G. All materials which are determined to be damaged by the Architect, Owner or the manufacturer are to be removed from the job site and replaced at no cost to the Owner.

1.9 FIELD CONDITIONS

- A. Only as much of the roofing as can be made weathertight each day, including all flashing and detail work, shall be installed. All seams shall be cleaned and heat-welded before leaving the job site that day.

- B. All work shall be scheduled and executed without exposing the interior building areas to the effects of inclement weather. The existing building and its contents shall be protected against all risks.
- C. All surfaces to receive new materials shall be dry. Should surface moisture occur, the Applicator shall provide the necessary equipment to dry the surface prior to application. Do not apply roofing to damp or wet substrate.
- D. All new and temporary construction, including equipment and accessories, shall be secured in such a manner as to preclude wind blow-off and subsequent roof or equipment damage.
- E. Uninterrupted waterstops shall be installed at the end of each day's work and shall be completely removed before proceeding with the next day's work. Waterstops shall not emit dangerous or unsafe fumes and shall not remain in contact with the finished roof as the installation progresses. Contaminated membrane shall be replaced at no cost to the Owner.
- F. Arrange work sequence to avoid use of newly constructed roofing as a walking surface or for equipment movement and storage. Where such access is absolutely required, the Applicator shall provide all necessary protection and barriers to segregate the work area and to prevent damage to adjacent areas. A substantial protection layer consisting of plywood over membrane or plywood over insulation board shall be provided for all new and existing roof areas which receive rooftop traffic during construction.
- G. Apply roofing within the range of ambient and substrate temperatures recommended by the roofing manufacturer.

1.10 WARRANTY

- A. **Manufacturer Warranty:** Manufacturer's standard or customized form, without monetary limitation, in which manufacturer agrees to repair or replace components of membrane roofing system including components that fail in materials or workmanship within specified warranty period.
 - 1. **Warranty Period:** 20 years from date of Substantial Completion.
- B. **Installer's Warranty:** Installer's warranty in which installer agrees to repair or replace components of membrane roofing system that fail in materials or workmanship within the specified warranty period. Repair or replacement shall also include insulation, substrate board, and accessory products.
 - 1. **Warranty Period:** 5 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. In other Part 2 Articles, the following requirements apply to product selection:
 - 1. **Products:** Subject to compliance with requirements, provide one of the products specified or approved equal.

2.2 THERMOPLASTIC MEMBRANE

- A. **KEE Sheet:** ASTM D 6754, Type II, Grade I, fabric reinforced, felt backed.
 - 1. **Basis-of-Design Product:** Subject to compliance with requirements, provide FiberTite-SM-FB fleece backed; Fibertite or approved equal.
 - 2. **Thickness** 50 mils nominal.
 - 3. **Exposed Face Color:** White.

- B. Other Acceptable Thermoplastic Membrane Roofing Systems: ASTM D 4434, Type II, Grade I, glass fiber reinforced, felt backed.
 - 1. PVC Sheet: Sarnafil G410 Feltback EnergySmart; Sarnafil Inc.
 - a. Thickness: 60 mils nominal.
 - b. Exposed Face Color: White.
 - 2. Approved Equal.
- C. Membrane Performance Criteria: Criteria for thermoplastic roofing membrane includes, but is not limited to the following:
 - 1. Solar Reflective Index: 95 minimum; ASTM E1980
 - 2. Solar Reflectance: 0.80 minimum; ASTM A1918
 - 3. Solar Emittance: 0.87 minimum; ASTM E408
 - 4. No private-labeled roofing membrane. Manufacturer shall produce their own membrane.
 - 5. Felt backing and thermoplastic membrane shall be one component.
- D. Roofing System Performance Criteria
 - 1. Energy Performance: Provide roofing system that is listed on the DOE's ENERGY STAR "Roof Products Qualified Product List" for low-slope roof products.
 - 2. Wind Uplift Performance: Provide assembly meeting FM I-90 requirements.
 - 3. Fire Resistance of Roof Covering Materials: Provide assembly meeting Class A requirements in accordance with UL 790.

2.3 AUXILIARY MEMBRANE ROOFING MATERIALS

- A. General: Auxiliary membrane roofing materials recommended by roofing system manufacturer for intended use, and compatible with membrane roofing.
 - 1. Liquid-type auxiliary materials shall comply with VOC limits of authorities having jurisdiction.
- B. Thermoplastic Membrane Flashing: Manufacturer's standard sheet flashing of same material, type, reinforcement, thickness, and color as thermoplastic sheet membrane.
- C. Membrane Clad Metal: Manufacturer's G90 hot dip galvanized steel with manufacturer's thermoplastic membrane laminated on one side.
 - 1. Metal Gauge: 24 gauge.
 - 2. Laminated Membrane Mil Thickness: 17 mils, minimum.
 - 3. Color: To be selected by Owner from manufacturer's full range of colors.
- D. Oil Resistant Sheet Flashing: Manufacturer's standard oil resistant sheet flashing of same material, type, reinforcement, thickness, and color as PVC sheet membrane.
- E. Bonding Adhesive: Manufacturer's standard.
- F. Sealant: Manufacturer's standard, one-part urethane sealant.
- G. Slip Sheet: Manufacturer's standard, of thickness required for application.
- H. Termination Bars: Manufacturer's standard, predrilled stainless steel termination bars, approximately 1 by 1/8 inch (25 by 3 mm) thick; with anchors.
- I. Wormgear Clamp: 100 percent type 316 stainless steel wormgear clamp.
- J. Fasteners: Factory-coated corrosion resistant steel fasteners and metal or plastic plates complying with corrosion-resistance provisions in FM Approvals 4470, designed for fastening membrane and components to substrate, and acceptable to membrane roofing system manufacturer.

- K. Membrane Walkway Pads: Manufactured or recommended by membrane manufacturer.
 - 1. Cross Grip; Seaman Corp.
 - 2. Cross Grip; Sika-Sarnafil.
- L. Miscellaneous Accessories: Provide pourable sealers, flashing adhesive, preformed cone and vent sheet flashings, preformed inside and outside corner sheet flashings, T-joint covers, lap sealants, termination reglets, aluminum tape and other accessories.

PART 3 - EXECUTION

3.1 SUBSTRATE CONDITION

- A. Applicator shall be responsible for acceptance or provision of proper substrate to receive roofing materials.
- B. The substrate shall be clean, smooth, dry, free of flaws, sharp edges, loose and foreign material, oil and grease and be structurally sound. Sharp ridges, other projections and accumulations of bitumen above the surface shall be removed to ensure a smooth surface before roofing. Roofing shall not start until all defects have been corrected.
- C. The substrate must be clean and dry.

3.2 ADHERED MEMBRANE ROOFING INSTALLATION

- A. Compare Manufacturer's written instructions to those within this Section and to those of Contract Drawings. Notify Architect immediately with any contradictions. Contractor to proceed with Work only after approval by Architect.
- B. The surface of the insulation or substrate shall be inspected prior to installation of the roof membrane. The substrate shall be clean, dry, free from debris, and smooth with no surface roughness or contamination. Broken, delaminated, wet or damaged insulation or substrate boards shall be removed and replaced.
- C. Adhere membrane roofing over area to receive roofing and install according to membrane roofing system manufacturer's written instructions.
 - 1. Install sheet according to ASTM D 5036.
- D. Accurately align membrane roofing and maintain uniform side and end laps of minimum dimensions required by manufacturer. Stagger end laps.
- E. Bonding Adhesive: Apply to surfaces and at rate required by manufacturer before installing membrane roofing. Do not apply to splice area of membrane roofing.
- F. In addition to adhering, mechanically fasten membrane roofing securely at base of wall, penetrations, drains, curbs, perimeter of roofing and where indicated. Predrill holes where fastening into concrete.
- G. Apply membrane roofing with side laps shingled with slope of roof deck where possible.
- H. Clean seam areas, overlap membrane roofing, and hot-air weld side and end laps of membrane roofing and sheet flashings according to manufacturer's written instructions to ensure a watertight seam installation.

3.3 HOT-AIR WELDING

- A. Hand-welded seams shall be completed in two stages. Hot-air welding equipment shall be allowed to warm up for at least one minute prior to welding.
 - 1. The back edge of the seam shall be welded with a narrow but continuous weld to prevent loss of hot air during the final welding.
 - 2. The nozzle shall be inserted into the seam at a 45 degree angle to the edge of the membrane. Once the proper welding temperature has been reached and the membrane begins to “flow,” the hand roller is positioned perpendicular to the nozzle and pressed lightly. For straight seams, the 1-1/2 inch wide nozzle recommended for use. For corners and compound connections, the 1 inch wide nozzle shall be used.
- B. Machine welded seams are achieved by the use of Manufacturer’s automatic welding equipment. When using this equipment, Manufacturer’s instructions shall be followed.
- C. Correct welds display failure from shearing of the membrane prior to separation of the weld.
 - 1. Minimum passing weld, machine weld: 1-1/2 inch.
 - 2. Minimum passing weld, hand weld: 1-1/2 inch.

3.4 QUALITY CONTROL OF WELDED SEAMS

- A. The Applicator shall check all welded seams for continuity using a rounded screwdriver.
- B. Visible evidence that welding is proceeding correctly is smoke during the welding operation, shiny membrane surfaces, and an uninterrupted flow of dark gray material from the underside of the top membrane.
- C. On-site evaluation of welded seams shall be made daily by the Applicator to locations as directed by the Architect, Owner or manufacturer’s representative.
- D. A minimum of one inch wide cross-section samples of welded seams shall be taken at least three times a day.
- E. Correct welds display failure from shearing of the membrane prior to separation of the weld.
- F. The Architect may take seam cut test samples randomly during application. The contractor shall fully cooperate and repair test samples and identified deficiencies promptly.
- G. Each test cut shall be patched by the Applicator at no extra cost to the Owner.

3.5 BASE FLASHING INSTALLATION

- A. All flashings shall be installed concurrently with the roof membrane as the job progresses.
- B. No temporary flashings shall be allowed without the prior written approval of the Architect and Manufacturer. Approval shall only be for specific locations on specific dates. If any water is allowed to enter under the newly completed roofing, the affected area shall be removed and replaced at the Applicator's expense. Flashing shall be adhered to compatible, dry, smooth, and solvent-resistant surfaces. Use caution to ensure adhesive fumes are not drawn into the building.
- C. Install sheet flashings and preformed flashing accessories and adhere to substrates according to membrane roofing system manufacturer's written instructions.

- D. Apply bonding adhesive per manufacturer's instructions. Adhesive shall be applied in smooth, even coats with no gaps, globs or similar inconsistencies. Only an area which can be completely covered in the same day's operations shall be flashed. Do not apply to seam area of flashing.
- E. Flash penetrations and field-formed inside and outside corners with cured or uncured sheet flashing. All interior and exterior corners and miters shall be cut and hot-air welded into place. No bitumen shall be in contact with the membrane.
- F. Clean seam areas, overlap, and firmly roll sheet flashings into the adhesive. Hot-air weld side and end laps to ensure a watertight seam installation.
- G. Terminate and seal top of sheet flashings and mechanically anchor to substrate through termination bars.
 - 1. Coordinate flashing with counterflashing installation.
- H. Terminate and seal top of sheet flashings at penetrations passing through the membrane; anchor at top with a wormgear clamp.
 - 1. Coordinate flashing with umbrella installation.
- I. All flashings shall extend a minimum of 8 inches above roofing level. All flashings that exceed 30 inches in height shall receive additional securement. See Contract Drawings for additional securement.

3.6 MEMBRANE CLAD EDGE METAL FLASHING

- A. Install flashings concurrently with the roof membrane as the job progresses. No temporary flashings shall be allowed with the prior approval of the Design Professional or the Manufacturer. Acceptance shall only be for specific areas on specific dates. Should water intrusion occur at newly completed roof membrane due to incomplete flashings, the affected area shall be removed and replaced at the Applicator's expense.
- B. Space adjacent sheets of membrane clad metal flashing 1/4 inch apart. Cover joint with 2 inch wide aluminum tape centered over joint. Hot-air weld a minimum 4 inch wide strip of flashing membrane over the taped joint.
- C. Attach edge metal to 20 gauge galvanized sheet metal continuous cleat. Fasten cleat 8 inches on center.
- D. Extend face of edge metal 4 inches minimum below roof deck and 4 inches minimum onto horizontal roofing surface.
- E. Fasten edge metal 3 inches on center staggered with ring-shank nails.
- F. Hem edges in contact with membrane.

3.7 MISCELLANEOUS MATERIALS

- A. Protection Layer: Install protection layer over completed membrane in accordance with membrane manufacturer's recommendations in all areas where wood sleepers or pipe supports are to be installed on the roof membrane.
- B. Walkway Pads: Install walkway pads in accordance with manufacturer's written instructions and recommendations. Install where indicated on the Contract Drawings.

3.8 TEMPORARY CUT-OFF

- A. All temporary waterstops shall be constructed to provide a 100 percent watertight seal.
- B. The waterstop shall be sealed to the deck and/or substrate so that water will not be allowed to travel under the new or existing roofing.
- C. The edge of the membrane shall be sealed in a continuous heavy application of manufacturer approved sealant.
- D. When work resumes, the contaminated membrane shall be cut out. All sealant, contaminated membrane, separation board fillers, etc. shall be removed from the work area and properly disposed of off-site. None of these materials shall be used in the new work.
- E. If inclement weather occurs while a temporary waterstop is in place, the Applicator shall provide the labor necessary to monitor the situation to maintain a watertight condition.
- F. If any water is allowed to enter under the newly-completed roofing, the affected area shall be removed and replaced at the Applicator's expense.

3.9 PERMANENT CUT-OFF

- A. Tie into existing roofing per NRCA and manufacturer's recommendations to ensure a watertight system.

3.10 CLEANING

- A. Remove and dispose of roofing debris on a daily basis. Protect all newly installed roof surfaces.
- B. Clean all contaminants generated by roofing work from building and surrounding areas, including, but not limited to, adhesives, sealants and coatings.
- C. Repair or replace building components and finished surfaces damaged or defaced due to the work of this Section; comply with recommendations of manufacturers of components and surfaces.
- D. Prior to final inspection, contractor shall power wash the roof membrane to permit inspection of all seams.
- E. Contractor is responsible for the cleaning and removal of all debris or residue that is tracked from existing roof areas to the installed thermoplastic membrane.

3.11 PROTECTION

- A. Where construction traffic must continue over finished roof membrane, provide durable protection and replace or repair damaged roofing to original condition.

3.12 FIELD QUALITY CONTROL

- A. Testing Agency: Owner shall engage a qualified third party testing agency to perform tests and inspections.

- B. Final Roof Inspection: Arrange for roofing system manufacturer's technical personnel to inspect roofing installation on completion.
- C. Repair or remove and replace components of membrane roofing system where inspections indicate that they do not comply with specified requirements.

END OF SECTION

SECTION 07 56 00

FLUID-APPLIED ROOFING

PART 1 - GENERAL

1.1 SYSTEM DESCRIPTION

- A. The following specification outlines the requirements for a fully reinforced cold fluid-applied polyurethane liquid resin roofing membrane and flashing system, and all other ancillary waterproofing work as specified.

1.2 SECTION INCLUDES

- A. Adhered fully reinforced, cold fluid-applied, polyurethane liquid resin roofing membrane system including membrane, penetration flashings, base flashings, and expansion joints.
- B. Substrate preparation, cleaning, leveling and patching.
- C. Priming.
- D. Roofing membrane installation.
- E. Flashing installation and expansion joint installation.
- F. Protective surfacing.

1.3 REFERENCES

- A. National Roofing Contractors Association (NRCA) Roofing and Waterproofing Manual
- B. ACI-308 - Recommended Practice for Curing Concrete
- C. ASTM - D638 - Test Methods for Tensile Properties of Plastics
- D. ASTM - D4258 - Standard Practice for Surface Cleaning Concrete for Coatings
- E. ASTM - D4259 - Standard Practice for Abrading Concrete
- F. ASTM - D4541 - Method for Pull-Off Strength of Coatings using Portable Adhesion Tester
- G. ASTM - E96(A) - Test Methods of Moisture Transmission of Material
- H. ASTM E-108, ANSI/UL 790 for fire resistance
- I. International Concrete Repair Institute Guideline 03732 Concrete Surface Preparation

1.4 SUBMITTALS FOR REVIEW

- A. Membrane System Product Data: Provide current standard printed product literature indicating characteristics of membrane materials, flashing materials, components, and accessories product specification and installation.
- B. Product Samples: Submit product samples of membrane and flashing materials showing color, texture, thickness and surfacing representative of the proposed system for review and approval by the Owners Representative.
- C. Submit sample copies of both the Manufacturer and Applicator warranties for the periods stipulated. Each specimen must be a preprinted representative sample of the issuing company's standard warranty for the system specified.
- D. Submit copies of current Material Safety Data Sheets (MSDS) for all components of the work.

1.5 QUALITY ASSURANCE

- A. Membrane Manufacturer: Company specializing in manufacturing fully reinforced cold fluid applied liquid resin waterproofing membrane systems with a minimum of ten (10) years of documented applications in the United States. Membrane Manufacturer shall submit the following certifications for review:
 - 1. Substrates and conditions are acceptable for purpose of providing specified warranty.
 - 2. Materials supplied shall meet the specified requirements.
- B. Applicator: Company specializing in performing the work of this section with (3) years documented experience and approved by system manufacturer for warranted membrane installation. Applicator shall submit the following certification for review:
 - 1. Applicator shall submit documentation from the membrane manufacturer to verify Contractor's status as an approved applicator for warranted installations.
- C. Evaluate moisture content of substrate materials. Contractor shall determine substrate moisture content throughout the work and record with Daily Inspection Reports or other form of reporting acceptable to the Owner or designated Representative, and Membrane Manufacturer.
- D. Random tests to determine tensile bond strength of membrane to substrate shall be conducted by the Contractor at the job site using an Elcometer Adhesion Tester Model 106 or similar device, or by the performance of a manual pull test. Contractor shall perform tests at the beginning of the Work, and at intervals as required to assure specified adhesion with a minimum of three (3) tests per 5000 square feet. Smaller areas shall receive a minimum of three (3) tests. Test results shall be submitted to the Owner or his designated Representative and the Membrane Manufacturer. Contractor shall immediately notify the Owner or his designated Representative and Membrane Manufacturer in the event bond test results are below specified values.
 - 1. Adequate surface preparation will be indicated by tensile bond strength of membrane to substrate greater than or equal to 220 psi (1.5 N/mm²), as determined by use of an adhesion tester.
 - 2. Adequate surface preparation will be indicated by 135° peel bond strength of membrane to substrate such that cohesive failure of substrate or membrane occurs before adhesive failure of membrane/substrate interface.
 - 3. In the event the bond strengths are less than the minimum specified, additional substrate preparation is required. Repeat testing to verify suitability of substrate preparation.
- E. Monitor quantities of installed materials. Monitor application of resin mixture, reinforcing fleece and flashing. Perform Work in accordance with the Contract Documents and manufacturer's instructions, more stringent to apply.

1.6 REGULATORY REQUIREMENTS

- A. Conform to applicable building and jurisdictional codes for roofing/waterproofing assembly and fire resistance requirements.
- B. Comply with requirements of OSHA, NIOSH or local governing authority for work place safety.
- C. Comply with authority or agency "Confined Space Policy" during and throughout all work to be performed, as necessary for site conditions.

1.7 PRE-INSTALLATION MEETING

- A. Convene a pre-installation meeting at the job site (1) week before starting work of this section. Require attendance of parties directly affecting work of this section, including but not limited to, Roofing/Waterproofing Specifier, Owner's Representative, Roofing/Waterproofing Contractor, and Membrane Manufacturer's Representative. Review roofing/waterproofing preparation and installation procedures, coordination and scheduling required with related work, and condition and structural loading limitations of deck/substrate.

1.8 FIELD INSPECTION SERVICES

- A. Manufacturer's technical representative shall provide the following inspections of the membrane application:
 - 1. Jobstart inspection at the beginning of each phase of the project, to review special detailing conditions and substrate preparation.
 - 2. Periodic in-progress inspections throughout duration of the project to evaluate membrane and flashing application.
 - 3. Final punch-list inspection at the completion of each phase of the project prior to installation of any surfacing or overburden materials.
 - 4. Warranty inspection to confirm completion of all punch list items, surfacing, and overburden application.
 - 5. All necessary costs for inspection services shall be bore by the Contractor and included in the base bid.

1.9 DELIVERY, STORAGE, AND PROTECTION

- A. The Contractor together with the Owner or his designated Representative shall define a storage area for all components. The area shall be cool, dry, out of direct sunlight, and in accordance with manufacturer's recommendations and relevant regulatory agencies. Materials shall not be stored in quantities that will exceed design loads, damage substrate materials, hinder installation or drainage.
- B. Store solvent-bearing solutions, resins, additives, inhibitors or adhesives in accordance with the MSDS and/or local fire authority. After partial use of materials replace lids promptly and tightly to prevent contamination.
- C. Roll goods shall be stored horizontally on platforms sufficiently elevated to prevent contact with water and other contaminants. DO NOT use rolls that are wet, dirty or have damaged ends.
- D. Roofing/waterproofing materials must be kept dry at all times. If stored outside, raise materials above ground or roof level on pallets and cover with a canvas tarpaulin or other waterproof material. Plastic wrapping installed at the factory shall not be used as outside storage covers.

- E. Follow manufacturer's directions for protection of materials prior to and during installation. Do not use materials that have been damaged to the point that they will not perform as specified. Fleece reinforcing materials must be clean, dry and free of all contaminants.
- F. Copies of all current MSDS for all components shall be kept on site. Provide any and all crew members with appropriate safety data information and training as it relates to the specific chemical compound he or she may be expected to deal with. Each crew member shall be fully aware of first-aid measures to be undertaken in case of incidents. Comply with requirements of OSHA, NIOSH or local governing authority for work place safety.

1.10 ENVIRONMENTAL REQUIREMENTS

- A. Do not apply roofing/waterproofing membrane during or with the threat of inclement weather.
- B. Application of cold fluid-applied reinforced polyurethane roofing/waterproofing membrane may proceed while air temperature is between 40°F (5°C) and 85°F (30°C) providing the substrate is a minimum of 5°F above the dew point.
- C. When ambient temperatures are at or expected to fall below 50°F (10°C), or reach 85°F (30°C) or higher, follow Membrane System Manufacturer's recommendations for weather related additives and application procedures.
- D. Ensure that substrate materials are dry and free of contaminants. DO NOT commence with the application unless substrate conditions are suitable. Contractor shall demonstrate that substrate conditions are suitable for the application of the materials.
- E. Odor control and elimination measures are not typically necessary, but if required by the Owner or his designated Representative, Contractor shall implement odor control and elimination measures prior to and during the application of the roofing/waterproofing materials.
- F. When disposing of all refuse or unused materials, observe all EPA, OSHA or local disposal requirements.

1.11 COORDINATION & PROTECTION

- A. Coordinate the work with the installation of associated metal flashings, wood nailers, accessories, appurtenances, etc. as the work of this section proceeds.
- B. Building components shall be protected adequately (with tarp or other suitable material) from soil, stains, or spills at all hoisting points and areas of application. Contractor shall be responsible for preventing damage from any operation under its Contract. Any such damage shall be repaired at Contractor's expense to Owner's satisfaction or be restored to original condition.
- C. Provide barricades, retaining ropes, safety elements (active/passive) and any appropriate signage required by OSHA, NIOSH, and NSC and/or the Owner or designated Representative.
- D. Protect finished roofing/waterproofing membrane from damage by other trades by the use of a cushioning layer such as 1" thick expanded polystyrene insulation and an impact layer such as 1/2 inch thick exterior-grade plywood. Include this provision on preinstallation meeting agenda for discussion.
- E. Do not allow waste products containing petroleum, grease, acid, solvents, vegetable or mineral oil, animal oil, animal fat, etc. or direct steam venting to come into direct contact with the membrane unless approved by manufacturer's chemical resistance chart.

- F. Erection of a full containment/barrier will be required during demolition. Requirements will be discussed at pre-bid walk.

1.12 WARRANTY

- A. Manufacturer's Premier Warranty: Provide 20 year manufacturer's premier warranty under provisions of this section. This warranty provides for cost of labor and materials for loss of watertightness, limited to amounts necessary to effect repairs necessitated by either defective material or defects in related installation workmanship, with no dollar limitation ("NDL").
- B. Waterproofing Contractor's Warranty: Provide 2 year "Applicator Maintenance Warranty" covering workmanship for all work of this section including installation of membrane, flashings, metal work, and roofing/waterproofing accessories.
- C. Submit (2) executed copies of both the manufacturer and applicator warranties for the periods stipulated, starting from the date of substantial completion. Each warranty must be signed by an authorized representative of the issuing company.

1.13 MATERIAL SUBSTITUTIONS

- A. Materials proposed for use in the performance of the work that are not specified herein must be submitted to the Owner/Owner's Representative for evaluation no later than ten days prior to bid.

PART 2 - PRODUCTS

2.1 GENERAL

- A. The products herein specified are pre-engineered products of the listed manufacturer and establish criteria for the approval of substitutions. Products must be part of a virtually odorless, pre-engineered, low VOC fully reinforced cold liquid applied polymeric resin waterproofing membrane system, equivalent in function, quality, composition and method of application to be considered for approval as an "Approved Substitute". Substitute materials must meet or exceed the physical performance characteristics of the specified materials. Single component primers or resin systems will not be accepted. A minimum 165 g/m² fleece reinforcement is required in all locations.
- B. Accessory products shall be those indicated or an approved equal. Substitute accessory product shall be approved by the manufacturer for inclusion in the warranty and by the Architect.

2.2 MEMBRANE

- A. Membrane: Two-component, cold fluid-applied reinforced polyurethane waterproofing membrane with a 360 degree needle punched non-woven 165 g/m² polyester reinforcing fleece, for a finished dry film membrane thickness of .070 inch nominal per ply. Provide products manufactured and supplied by the following:
 - 1. Kemper System America's Kemperol 2K-PUR resin for use in an adhered waterproofing system.

B. Physical Properties:

Property	Value	Test Method
Color	Gray-Green	-
Physical state	Cures to solid	-
Nominal thickness (165 fleece)	70 mils	-
Tensile strength @ break	120 lb/in	ASTM D-751
Elongation	50%	ASTM D-751
Tearing strength	5.0 lbs	ASTM D-751
Puncture resistance	140 lbf	FTMS 101-2031
Dimensional stability	0.1%	ASTM D-1204
Water absorption	2.2%	ASTM D-471
Surface hardness	Shore A 85	ASTM D-2240
Water vapor transmission	0.04 perms	ASTM E-96
Usage time*	30 minutes	-
Rainproof after*	2 hours	-
Solid to walk on after*	24 hours	-
Solid to drive on with air rubber tires after*	48 hours	-
Surfacing to be applied between*	16-48 hours	
Overburden may be applied after	2 days	-
Completely hardened after	3 days	-
Crack spanning	2mm/0.08 inch	-
Resistance to temperatures up to (short term)	250°C/482°F	-
*all times are approximate and depend upon air flow, humidity and temperature.		

2.3 FLASHINGS

- A. Membrane Flashings: A composite of the same resin material as field membrane with 165 g/m² fleece reinforcement.

2.4 SUBSTRATE PRIMERS AND RESIN ADDITIVES

- A. Polyurethane Primer: Two-component, solvent-free polyurethane resin for use in improving adhesion of membrane to wood, metal and bituminous substrate surfaces, as provided by the following manufacturer:
1. Kemper System America, Inc.'s Kempertec D primer.
- B. Epoxy Primer: Two-component, solvent-free epoxy resin for use in improving adhesion of membrane to wood and cementitious/masonry substrate surfaces, as provided by the following manufacturer:
1. Kemper System America, Inc.'s Kempertec EP primer.
- C. Cold Weather Additive: Additive specifically designed to accelerate the resin reaction time at ambient temperatures below 50°F (10°C). Accelerator to be used with cream resin Component A prior to mixing of multi-component resin, as provided by the following manufacturer:
1. Kemper System America Inc.'s Kemperol A 2K-PUR Accelerator.

2.5 SURFACINGS AND COATINGS

- A. Color Coating: Single-component, water-borne acrylic-based coating suitable for use as a colored coating, as provided by the following Manufacturer:
1. Kemper System America, Inc.'s Kemperdur BSF-R Finish (Title 24 White)

2.6 WALKING PATHS

- A. Aggregate Finish Bonding Resin: Two-component polyurethane-based coating suitable for bonding aggregate, as provided by the following Manufacturer:
1. Kemper System America, Inc.'s Kemperol 2K-PUR Resin (without fleece)
- B. Color Coating: Single-component, water-borne acrylic-based coating suitable for use as a colored coating, as provided by the following Manufacturer:
1. Kemper System America, Inc.'s Kemperdur BSF-R Finish

2.7 ACCESSORIES

- A. Application Tools, Accessories, and Cleaners: Supplied and/or approved by membrane manufacturer for product installation.
- B. Solvent-Based Cleaner for Tools and Membrane Tie-Ins: Methyl Ethyl Ketone (MEK) or acetone.
- C. Water-Based Cleaner for Membrane: Simple Green HD.
- D. Topcoat Surfacing Aggregate: Silica sand, ceramic-coated quartz, or specialty aggregate shall be washed, kiln-dried, and dust-free with the following size specification:
1. Aesthetic/Pedestrian Traffic: 0.4 - 1.0 mm
- E. Leveling and Patching Aggregate: Silica sand shall be washed, kiln-dried, and dust-free, suitable for troweling or pourable self-leveling, round grain or angular with the following size specification:
1. For voids less than 1" in depth: #00 (0.3 - 0.6 mm)
 2. For voids 1" to 2" in depth: #0 (0.5 - 1.2 mm)
 3. Mixing Proportions shall be a ratio of resin to sand at 1:2 by volume for leveling, 1:4 by volume for patching, or as approved by membrane manufacturer.
- F. Backer Rod: Expanded, closed-cell polyethylene foam designed for use with cold-applied joint sealant.
- G. Sealant: Single component, non-sag elastomeric polyurethane sealant meeting ASTM C920, Type S, Grade NS, Class 50 for use in sealing cracks and joints, and making watertight seals where required.
1. BASF The Chemical Company; Sonolastic 150.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that surfaces and site conditions are ready to receive work.
- B. Verify deck/substrate openings, curbs, and protrusions through deck/substrate are in place and solidly set.

- C. Verify deck/substrate is structurally supported, secure and sound.

3.2 PREPARATION OF SUBSTRATE

- A. General: Surfaces to be prepared as a substrate for the new waterproofing system as follows:
 - 1. The Contractor shall determine the condition of the existing structural deck/substrate. All defects in the deck or substrate shall be corrected before new waterproofing work commences. Areas of deteriorated deck/substrate, porous or other affected materials must be removed and replaced with new to match existing.
 - 2. Prepare flashing substrates as required for application of new waterproofing membrane flashings.
 - 3. Inspect substrates, and correct defects before application of new waterproofing. Fill all surface voids greater than 1/8 inch wide with an acceptable fill material.
 - 4. Remove all ponded water, frost and/or ice from the work substrate prior to installing new waterproofing materials.
 - 5. The final substrate for waterproofing shall be clean, dry, free of loose, spalled or weak material including coatings, mineral aggregate, and flood coat/gravel surfacing, oil, grease, contaminants, abrupt changes in level, waterproofing agents, curing compounds, and free of projections which could damage membrane materials.
 - 6. Install wood nailers at perimeters of Colonnades.
- B. Existing Roofing and Waterproofing Materials:
 - 1. Existing roofing systems and flashings shall be removed down to the structural substrate/penetration at all areas.
- C. Structural Concrete:
 - 1. New or existing concrete shall be free of oil, grease, curing compounds, loose particles, moss, algae growth, laitance, friable matter, dirt, bituminous products and previous waterproofing materials.
 - 2. New or existing concrete shall be dry with a maximum moisture content of five (5) percent. Determinations of moisture content shall be performed by the Contractor. Contractor shall be responsible to perform periodic evaluations of moisture content during the work. Moisture evaluation results shall be submitted in writing to the Owner or his designated Representative and Waterproofing manufacturer for acceptance.
 - 3. Where required, concrete shall be abrasively cleaned in accordance with ASTM D4259 to provide a sound substrate free from laitance. Achieve an open concrete surface in accordance with ICRI surface profiles CSP 3-5. When using mechanical methods to remove existing waterproofing products or surface deterioration, the surface profile is not to exceed 1/4 inch (peak to valley).
 - 4. The substrate shall be sound and all spalls, voids and blow holes on vertical or horizontal surfaces must be repaired prior to placement of the primer coat. Spalls and other deterioration shall be repaired in accordance with the requirements of the Owner or his designated Representative and Membrane manufacturer.
 - 5. Areas of minor surface deterioration of 0.25" (6 mm) or greater in depth shall be repaired to prevent possible pooling of the liquid applied materials, leading to excessive usage of primer and resin.
 - 6. Hollow-core panels, T-panels, and Twin-T panels shall have grouted joints between panels and shall be provided with mechanical securement from panel to panel.
 - 7. For concrete materials with a compressive strength of less than 3,000 psi contact Waterproofing Manufacturer's Technical Department for substrate preparation requirements.
- D. Steel/Metal:
 - 1. Clean and prepare metal surfaces to near white metal in accordance with SSPC - SP3 (power tool clean) or as required by membrane manufacturer. Extend preparation a minimum of one (1) inch beyond the termination of the membrane flashing materials.
 - 2. In addition to cleaning, all metal surfaces shall be abraded to provide a rough open surface. A wire brush finish is not acceptable.

- E. Other Flashing Surfaces:
1. Remove all contaminants as required by membrane manufacturer. Surface preparation shall be performed by means approved by Owner or his designated Representative.
- F. Finish Leveling, Patching and Crack Preparation:
1. General: Epoxy primer/sand mix is the preferred material for all concrete and masonry substrate finish leveling, crack and wall/deck preparation and patching. Epoxy primer/sand patching mix provides a set time of approximately twelve (12) hours and does not require surface grinding. Kemperol primer/sand mix is typically applied in conjunction with general surface priming.
 2. Concrete and Masonry Substrate Leveling & Patching: Substrate conditions are to be evaluated by the Contractor, the Owner, or his designated Representative, and Membrane manufacturer. Perform leveling and patching operations as follows:
 - a. Level uneven surfaces with a leveling mixture of primer and approved kiln-dried silica sand in a 1:2 primer to sand ratio by volume. Spread and plane this compound with a squeegee and trowel to achieve a flat surface.
 - b. Fill cavities with a patching mixture of primer and approved kiln-dried sand in a 1:4 primer to sand ratio by volume.
 - c. Silica sand must be kept absolutely dry during storage and handling.
 - d. Any surface to be leveled or filled must first be primed with an appropriate primer.
 3. Joint and Crack Preparation: Joints, cracks and fractures in the structural deck/substrate shall be prepared as defined below prior to installation of the waterproofing membrane. Note: Joints, cracks, and fractures may telegraph through the waterproofing membrane.
 - a. Non-Moving Cracks, Joints, and Voids: Determine that crack/joint is non-moving. Clean out crack/joint by brushing and oil-free compressed air. Fill crack/joint with polyurethane sealant. Voids require the installation of backer rod or other backing material prior to application of the polyurethane sealant. Allow for a minimum of twelve (12) hours cure or as required by sealant Manufacturer.
 - b. Moving Cracks: Determine that crack is moving. Clean out crack by brushing and oil-free compressed air. Fill crack with polyurethane sealant. Allow for a minimum of twelve (12) hours cure or as required by sealant Manufacturer. Following full curing of primer, apply waterproofing resin and 4 inch (10 cm) wide strip of membrane (resin and fleece) in strict accordance with Membrane manufacturer's written instructions.

3.3 PRIMER APPLICATION

- A. General:
1. Mix and apply two-component primer in strict accordance with written instructions of Membrane Manufacturer. Use only proprietary materials, as supplied by the membrane manufacturer.
 2. The substrate surface must be dry, with any remaining dust or loose particles removed using clean, dry, oil-free compressed air, industrial vacuum, cloth wipe or a combination of methods.
 3. Do not install primer on any substrate containing newly applied and/or active asphalt, coal-tar pitch, creosote or penta-based materials unless approved in writing by Membrane Manufacturer. Some substrates may require additional preparation before applying primer.
- B. Mixing of Kempertec EP and Kempertec D Primers:
1. Premix primer Component A thoroughly with a spiral agitator or stir stick. Pour primer Component B into Component A and mix the components for approximately 2 minutes with a clean spiral agitator on slow speed or stir stick without creating any bubbles or streaks. DO NOT AERATE. The Primer solution should be a uniform color, with no light or dark streaks present.
 2. Do not thin primer. Determine required primer coverage for each substrate material/condition and apply in strict accordance with written instructions of Membrane Manufacturer.
 3. Mix only that amount of primer components A & B that can be used in 30 minutes.

C. Application of Primer:

1. Roll or brush the primer evenly onto the surface to fully saturate the substrate in one application. Do not allow primer to pond or collect in low areas. Follow manufacturer's recommended application rates to ensure that a thin layer of cured primer remains on the substrate surface.
2. Apply primer only up to the edge of the membrane flashing terminations. Primer application past the membrane terminations requires surfacing with an approved material.
3. For EP primer applications over cementitious substrates where protection from substrate wetness is required, apply primer coat at a heavier application rate until pore saturation is achieved.
4. For all EP primer applications, apply kiln-dried sand into the final coat of EP primer while still wet at the rate of 50 lbs. per 100 square feet.
5. Allow standard primers to cure for a minimum of twelve (12) hours before membrane application. Membrane must be applied to primer only when completely dry and without tack.
6. Exposure of the primer in excess of eight (8) days or premature exposure to moisture may require removal and application of new primer. DO NOT apply new primer over exposed primer older than eight (8) days, primer prematurely exposed to moisture, or primer used as temporary waterproofing, unless approved in writing by the Membrane Manufacturer.

D. Disposal of Primer:

1. Cured primer may be disposed of in standard landfills. This is accomplished by thoroughly mixing all components.
2. Uncured primer is considered a hazardous material and must be handled as such, in accordance with local, state and federal regulation. Do not through uncured resin away.

3.4 MEMBRANE APPLICATION

A. General:

1. It is recommended to apply the waterproofing membrane immediately following full curing of the primer in order to obtain the best bond between primer and membrane.
2. Mix and apply cold fluid-applied reinforced polyurethane waterproofing membrane in strict accordance with written instructions of Membrane Manufacturer. Use only proprietary membrane resins and materials, as supplied by the membrane manufacturer.
3. The primed substrate surface shall be dry, with any remaining dust or loose particles removed using clean, dry, oil-free compressed air, industrial vacuum, cloth-wipe or a combination.
4. Protect all areas where membrane has been installed. Do not work off installed membrane during application of remaining work before forty-eight (48) hours of curing. Movement of materials and equipment across installed membrane is not acceptable. If movement is necessary, provide complete protection of affected areas.
5. Closely follow the Membrane Manufacturer's recommendation for hot and cold weather application. Monitor surface and ambient temperatures, including the effects of wind chill.

B. Mixing of Kemperol 2K-PUR Resin:

1. Mix resin Component A (cream formulation) with a spiral agitator until the liquid is a uniform cream color. If the ambient temperature is below 50°F (10°C), then a weather related additive should be combined and mixed into the Component A.
 - a. Accelerator should be added to resin Component A when the ambient temperature is 50°F (10°C) and below. The accelerator should be mixed with the spiral agitator for 2 minutes or until both liquids are thoroughly blended.
2. Pour resin Component B into Component A at a 4:1 ratio (by weight) and thoroughly mix the components with a clean spiral agitator. The Resin solution should be a uniform color, with no light or dark streaks present.
3. Mix only that amount of resin components A & B that can be used in 30 minutes.

C. Application of Resin/Fleece:

1. Apply mixed resin to the prepared surface at the manufacturer's recommended application rate. The resin should be rolled or brushed liberally and evenly onto the surface using a broad, even stroke. Cover one working area at a time, between 15 – 20 ft.² (1.4 – 1.9 m²).
2. Roll out dry polyester fleece onto the liquid resin mix, making sure the SMOOTH SIDE IS FACING UP (natural unrolling procedure), avoiding any folds and wrinkles. The fleece will begin to rapidly saturate with the liquid resin mix. Use a medium nap roller or brush to work the resin into the fleece, saturating from the bottom up, and eliminating air bubbles, wrinkles, etc. The appearance of the saturated fleece should be light opaque amber with no white spots. White spots are indications of unsaturated fleece or lack of adhesion. It is important to correct these faults before the resin cures.
3. Apply additional liquid resin mix on top of fleece at the manufacturer's recommended application rate to finish the saturation of the fleece. Roll this final coating into the fleece, which will result in a glossy appearance. The fleece can only hold so much resin and all excess should be rolled forward to the unsaturated fleece, eliminating ponding or excessive build-up of the resin. The correct amount of resin will leave no whiteness in fleece and there will be a slightly fibrous surface texture. The final resin coating should be smooth and uniform.
4. Approximately 2/3 of the total resin should be applied to the substrate below the fleece reinforcement, and 1/3 of the total resin should be applied over the fleece reinforcement.
5. Prevent contact between mixed/unmixed resin and new/existing membrane. If any unmixed resin contacts membrane surface remove immediately and clean thoroughly with a cloth rag.
6. At all fleece seams, allow a 2" (5 cm) overlap for all side joints and a 4" (10 cm) overlap for all end joints.
7. At membrane tie-offs, clean in-place membrane with MEK (methyl ethyl ketone) solvent or acetone once resin has cured. Allow solvents to fully evaporate before application of new resin.

D. Disposal of Resin:

1. Cured resin may be disposed of in standard landfills. This is accomplished by thoroughly mixing all components.
2. Uncured resin is considered a hazardous material and must be handled as such, in accordance with local, state and federal regulation. Do not throw uncured resin away.

3.5 FLASHING APPLICATION

A. General:

1. Install flashing system in accordance with the requirements/recommendations of the Membrane manufacturer and as depicted on standard drawings and details. Provide system with base flashing, edge flashing, penetration flashing, and all other flashings required for a complete watertight system.
2. Wherever possible, install the flashings before installing the field membrane to minimize foot traffic over newly installed field membrane.
3. All membrane flashings shall be installed concurrently with the waterproofing membrane as the job progresses. Temporary flashings are not allowed without prior written approval from the Membrane manufacturer. Should any water penetrate the new waterproofing membrane because of incomplete flashings, the affected area shall be removed and replaced at the Contractor's expense.
4. Provide a minimum vertical height of 8 inches for all flashing terminations. Flashing height shall be at least as high as the potential water level that could be reached as a result of a deluging rain and/or poor slope.
5. All flashings shall be terminated as required by the Membrane Manufacturer.

B. Metal Flashing – General:

1. Metal flashings shall be fabricated in accordance with the current recommendations of SMACNA and in accordance with Contract Documents; the more stringent shall apply.

2. Metal flashing flanges to which membrane is to be bonded shall be a minimum of four (4) inches in width, and secured to the wood nailers three (3) inches on center staggered with fasteners appropriate to the substrate type. The flanges shall be provided with a roughened surface that has been cleaned of all oil and other residue.
 3. Metal edges that will be overlaid with membrane shall be provided with a 1/4" min. hemmed edge.
 4. Apply primer, resin and fleece to metal flange, extending membrane to outside face of metal edging, and to vertical face of metal base/curb flashing.
- C. Membrane Flashing – General:
1. Membrane flashings shall be fabricated with primer appropriate for the substrate surface, resin of the same base chemical type as the field membrane, and fleece of the same weight as the field membrane unless specified otherwise.
 2. Primer, resin, and fleece mixing and application methods as specified for field membranes are also suitable for membrane flashing.
 3. Fleece shall overlap 2" (5 cm) minimum for all joints. Fleece shall be cut neatly to fit all flashing conditions without a buildup of multiple fleece layers. Work wet membrane with a brush or roller to eliminate blisters, openings, or lifting at corners, junctions, and transitions.
- D. Pipes, Conduits, and Unusually Shaped Penetrations:
1. Flashing shall be constructed as a two part assembly consisting of a vertical wrap and a horizontal target patch. There must be a minimum of a two (2) inch (5 cm) overlap between vertical and horizontal flashing components.
 2. A generous cove of sealant is to be applied at junction between the substrate and penetration.
- E. Drains:
1. Acceptable drain materials are cast iron, cast aluminum, and copper.
 2. Alternatively, replace all broken or damaged parts of existing drains.
 3. Flashing material shall extend four (4) inches minimum onto drain flange and into drain body.
 4. Install clamping ring if provided as part of the drain design. Install a strainer basket to prevent debris from clogging the drainage line.
 5. All serviceable drain parts are to be salvaged and presented to the Owner for future use.
- F. Walls, Curbs and Base Flashings:
1. Wall, curb and base flashings shall be installed to solid substrate surfaces only. Adhering to gypsum-based panels, cementitious stucco, synthetic stucco, wood or metal siding, and other similar materials is not acceptable.
 2. Reinforce all transition locations and other potential wear areas with a four (4) inch wide membrane strip, using membrane flashing, evenly positioned over the transition prior to installing the exposed flashing layer.
 3. Reinforce all inside and outside corners with a four (4) inch diameter conical piece of membrane prior to installing the exposed flashing layer.
 4. All pins, dowels and other fixation elements shall be flashed separately with a vertical flashing component prior to installing the exposed flashing layer.
 5. Extend flashing a minimum of four (4) inches onto the field substrate surface.
- G. Drip Edges and Gravel Stops:
1. Metal drip edges shall be installed to wood nailers only. Securement to gypsum-based panels, cementitious stucco, synthetic stucco, wood or metal siding or coping, and other similar materials is not acceptable.

2. Flash all drip edges by extending the field membrane all the way to the edge and down the exposed face prior to installing the metal edging. Strip in the metal flange with a separate eight (8) inch wide strip of membrane adhered to both the securement flange and to the field membrane.
3. For conditions where water infiltration behind the exposed drip edge or gravel stop face is possible, install a separate membrane layer positioned behind the face area and extending a minimum of four (4) inches past the securement flange onto the field substrate prior to installing the drip edge or gravel stop.

H. Field Fabricated Control or Expansion Joint Flashing:

1. Control or expansion joints in excess of two (2) inches in width require the use of a separate engineered joint system.
2. Grind or otherwise bevel the inside edges of the joint opening to provide a smooth transition edge for the fleece.
3. Flashing shall consist of a fully saturated membrane bottom layer looped into the joint as a cradle, a compressible foam backer rod insert at 25% compression fitted into the joint, and a membrane top layer applied over the joint. Extend both fleece layers four (4) inches minimum onto the field substrate on both sides of the joint.
4. Apply the field membrane over the entire joint area.

I. Electrical Conduit, Gas Lines and Lightning Protection

1. Supports for electrical conduit and gas lines one (1) inch or less in diameter, and bases for lightning protection rods and cable, shall be set over specified support block assemblies.

3.6 MEMBRANE PREPARATION FOR SURFACINGS AND COATINGS

- A. Membrane must be clean and dry, and free of all contaminants that may interfere with the adhesion of the surfacing and coating to the membrane surface.
- B. Membrane exposed less than 48 hours prior to application of surfacing and coating materials does not require special surface preparation. It is highly recommended that all surfacing and coating materials be applied to the membrane surface within 48 hours.
- C. Membrane exposed longer than 48 hours will require sanding/scuffing of the surface to remove the hard gloss finish, followed by an MEK or acetone solvent wipe.

3.7 SURFACING AND FINISHES

A. Aggregate Finish Surfacing

1. Provide approved kiln-dried silica sand, or other approved mineral surfacing to achieve an aesthetic and/or non-skid surface.
2. Pre-mix single-component and two-component coatings prior to application to achieve an even consistency.
3. Broadcast specified and approved sand or aggregate in excess into a bonding coat application of Kemperol 2K-Pur Resin applied over clean, cured membrane at the manufacturer's recommended application rate. Aggregate shall be applied to excess to obtain uniform and full coverage.
4. Following minimum 24 hour cure time remove loose/un-embedded mineral aggregate by blowing with oil-free compressed air or with a vacuum. Re-broadcast clean mineral aggregate as required to provide full embedment and coverage of membrane.
5. Seal aggregate surface with a sealing coat application of Kemperdur BSF-R Finish, applied at the manufacturer's recommended application rate. After completion of surfacing, avoid any traffic for a minimum of three (3) days to allow for surfacing to cure.

3.8 TEMPORARY CLOSURES & WATERSTOPS

- A. Contractor shall be responsible to ensure that moisture does not damage any completed section of the new waterproofing system. Completion of flashings, terminations, and temporary closures shall be completed as required to provide a watertight condition. All temporary closures shall be made as recommended or required by the membrane manufacturer.

3.9 PROTECTION

- A. Upon completion of waterproofing and flashings (including all associated work), institute appropriate procedures for surveillance and protection of roofing during remainder of construction period. Protect all areas where membrane has been installed.

3.10 FLOOD TEST

- A. A flood test of the completed membrane and flashing system shall be conducted prior to the installation of any overburden/surfacing. The flood test shall be of a 48 hr. minimum duration, and shall apply a water head of 2 inches over the entire application area. Any incidents of water entry shall be evaluated and all necessary repairs conducted, followed by an additional flood test.

3.11 CLOSEOUT

- A. Correction of Work:
 - 1. Work that does not conform to specified requirements including tolerances, slopes, and finishes shall be corrected and/or replaced at Contractor's sole expense. Any deficiencies of membrane application, termination and/or protection as noted during the Membrane Manufacturer's inspections shall be corrected and/or replaced at Contractor's sole expense.
- B. Clean-Up:
 - 1. Site clean-up, including both interior and exterior building areas that have been affected by construction, shall be restored to preconstruction condition.

END OF SECTION

SECTION 07 62 00

SHEET METAL FLASHING AND TRIM

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Formed low-slope roofing sheet metal fabrications.
 - 2. High temperature self-adhering flashing.
 - 3. Other sheet metal as indicated.

1.2 RELATED REQUIREMENTS

- A. Section 07 92 00 "Joint Sealants;" for procedural and administrative, product and execution requirements for joint sealants referred to in this Section.

1.3 ADMINISTRATIVE REQUIREMENTS

- A. Preinstallation Meeting: Conduct conference at Project site.

1.4 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Shop Drawings: Show fabrication and installation layouts of sheet metal flashing, including plans, elevations, expansion-joint locations, and keyed details. Distinguish between shop- and field-assembled work.
 - 1. Identification of material, thickness, weight, and finish for each item and location in Project.
 - 2. Details for forming sheet metal flashing and trim, including profiles, shapes, seams, and dimensions.
 - 3. Details for joining, supporting, and securing sheet metal flashing and trim, including layout of fasteners, cleats, clips, and other attachments. Include pattern of seams.
 - 4. Details of termination points and assemblies, including fixed points.
 - 5. Details of expansion joints and expansion-joint covers, including showing direction of expansion and contraction.
 - 6. Details of perimeter conditions.
 - 7. Details of specialized conditions including saddles, transitions and terminations in sheet metal flashing.
 - 8. Details of connections to adjoining work.
 - 9. Detail formed flashing and trim at a scale of not less than 3 inches per 12 inches.
- C. Samples: for Initial Selection: For each type of sheet metal flashing and accessory indicated with factory-applied color finishes involving color selection.

- D. Samples for Verification: For each type of exposed finish required, prepared on Samples of size indicated below:
 - 1. Sheet Metal Flashing: 12 inches long by actual width of unit, including finished seam and in required profile. Include fasteners, cleats, clips, closures, and other attachments.
 - 2. Expansion Joints, Joint Intersections, and Miscellaneous Fabrications: 12 inches long and in required profile. Include fasteners and other exposed accessories.
 - 3. Accessories and Miscellaneous Materials: Full-size Sample.
- E. Qualification Statements: For qualified fabricator.
- F. Warranty: Sample of special warranty.

1.5 QUALITY ASSURANCE

- A. Fabricator Qualifications: Shop that employs skilled workers who custom fabricate sheet metal flashing similar to that required for this Project and whose products have a record of successful in-service performance.
- B. Installer Qualifications: Engage an experience Installer who has completed sheet metal flashing and trim work similar in material, design, and extent to that indicated for this Project and with a record of successful in-service performance.
- C. Sheet Metal Flashing and Trim Standard: Comply with SMACNA's "Architectural Sheet Metal Manual" unless more stringent requirements are specified or shown on Drawings.
- D. Copper Sheet Metal Standard: Comply with CDA's "Copper in Architecture Handbook." Conform to dimensions and profiles shown unless more stringent requirements are indicated.
- E. Mockups: Build mockups to verify selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for fabrication and installation.
 - 1. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
 - 2. Build mockup of each fabrication, including saddles, approximately 10 feet (3.0 m) long, including inside corners, outside corners, supporting construction cleats, seams, attachments, underlayment, and accessories.
 - 3. Locate mockups on-site in the location and of the size indicated or, if not indicated, as directed by Consultant.
 - 4. Notify the Owner and the Consultant one week in advance of the dates and times when mockups will be constructed.
 - 5. Demonstrate the proposed range of aesthetic effects and workmanship.
 - 6. Obtain Consultant's approval of mockups before start of final unit of Work.
 - 7. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.
- F. Coordinate Work of this Section with interfacing and adjoining Work for proper sequencing of each installation.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Do not store sheet metal flashing materials in contact with other materials that might cause staining, denting, or other surface damage. Store sheet metal flashing materials away from uncured concrete and masonry.

- B. Protect strippable protective covering on sheet metal flashing from exposure to sunlight and high humidity, except to the extent necessary for the period of sheet metal flashing installation.

1.7 WARRANTY

- A. Special Warranty on Finishes: Manufacturer's standard form in which manufacturer agrees to repair finish or replace sheet metal flashing that shows evidence of deterioration of factory-applied finishes within specified warranty period.
 - 1. Exposed Panel Finish: Deterioration includes, but is not limited to, the following:
 - a. Color fading more than 5 Hunter units when tested according to ASTM D 2244.
 - b. Chalking in excess of a No. 8 rating when tested according to ASTM D 4214.
 - c. Cracking, checking, peeling, or failure of paint to adhere to bare metal.
 - 2. Finish Warranty Period: 20 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE CRITERIA

- A. General: Sheet metal flashing assemblies as indicated shall withstand wind loads, structural movement, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction.
 - 1. Completed sheet metal flashing shall not rattle, leak, or loosen, and shall remain watertight.
- B. Install systems to allow movement of components without causing buckling, failure of joint seals, undue stress on fasteners or other detrimental effects, when subjected to 100-year seasonal temperature ranges.
- C. Thermal Movements: Provide sheet metal flashing that allows for thermal movements from ambient and surface temperature changes.
 - 1. Temperature Change (Range): 120 degrees F, ambient; 180 degrees F, material surfaces.
- D. Install specialized, custom fabricated, sheet metal saddles for waterproof performance at terminations and transitions of sheet metal flashing and trim such as multi-plane intersects, and:
 - 1. Where indicated.
 - 2. Where constructed conditions will not provide watertight performance without saddles.
- E. Install specialized, custom fabricated, sheet metal saddles for waterproof performance at terminations and transitions of construction components such as multi-plane intersects, and:
 - 1. Where indicated.
 - 2. Where constructed conditions will not provide watertight performance without saddles.
- F. Contractor shall inspect transitions and terminations to make Project watertight. Contract Documents indicate design intent and may not indicate all instances where saddles apply. Field verify locations where saddles are required.

2.2 SHEET METALS

- A. General: Protect mechanical and other finishes on exposed surfaces from damage by applying a strippable, temporary protective film before shipping.
 - 1.

- B. Metallic-Coated Steel Sheet: Restricted flatness steel sheet, metallic coated by the hot-dip process.
 - 1. Zinc-Coated (Galvanized) Steel Sheet: ASTM A 653/A 653M, G90 coating designation; structural quality.
 - 2. Finish: Smooth, flat and bonderized for painting.
 - a. Prime all surfaces of bonderized metal.
 - b. Paint exposed surfaces in accordance with Section 09 91 13 "Exterior Painting."
 - 3. Locations: For use with all sheet metal, unless otherwise indicated.

2.3 HIGH TEMPERATURE SELF-ADHERING FLASHING

- A. High temperature self-adhering flashing, polyethylene faced: ASTM D 1970, min. of 30 mils thick; slip-resisting, polyethylene-film-reinforced top surface laminated to butyl rubber adhesive, with release-paper backing; cold applied.
 - 1. Products: Grace Ultra; W.R. Grace Construction Products or approved equal.
- B. Primer: Manufacturer's recommended primer for improved adhesion to substrates.

2.4 MISCELLANEOUS MATERIALS

- A. General: Provide materials and types of fasteners, solder, welding rods, protective coatings, separators, sealants, and other miscellaneous items as required for complete sheet metal flashing and trim installation and recommended by manufacturer of primary sheet metal or manufactured item unless otherwise indicated.
- B. Solder for Zinc-Coated (Galvanized) Steel: ASTM B 32, Grade Sn50, 50 percent tin and 50 percent lead or Grade Sn60, 60 percent tin and 40 percent lead.
- C. Exposed Sealants: Refer to Section 07 92 00 "Joint Sealants."
- D. Butyl Sealant: ASTM C 1311, single-component, non-curing, solvent-release butyl rubber sealant; polyisobutylene plasticized; heavy bodied for hooked-type expansion joints with limited movement.
 - 1. Provide butyl sealant between sheet metal laps, at concealed locations, and where indicated.
 - a. Subject to compliance with requirements, provide ADCO GT-106; ADCO or approved equal.
- E. Butyl Sealant Tape: Pressure-sensitive, 100 percent solids, gray polyisobutylene compound sealant tape with release-paper backing. Provide permanently elastic, nonsag, nontoxic, nonstaining tape 1/2 inch (13 mm) wide and 1/8 inch (3 mm) thick.
 - 1. Provide pre-shimmed butyl glazing tape between sheet metal laps and where indicated.
 - a. Subject to compliance with requirements, provide ADCO BP-300; ADCO or approved equal.
- F. Bituminous Coating: Cold-applied asphalt emulsion complying with ASTM D 1187.
- G. Sealing Washers: Stainless steel backed EPDM washers.

2.5 FASTENERS

- A. Annular threaded nails, self-tapping screws, self-locking rivets and bolts, and other suitable fasteners designed to withstand design loads and recommended by manufacturer of primary sheet metal or manufactured item.

- B. General: Blind fasteners or self-drilling screws, gasketed, with hex-washer head.
 - 1. Exposed Fasteners: Stainless steel or hot-dipped galvanized. Heads matching color of sheet metal using plastic caps or factory-applied coating
 - 2. Blind Fasteners: High-strength stainless-steel rivets suitable for metal being fastened.
- C. Fasteners for Zinc-Coated (Galvanized) Steel Sheet: Hot-dip galvanized steel according to ASTM A 153/A 153M or ASTM F 2329 or Type 304 stainless steel.
 - 1. Provide Type 304 stainless steel fasteners where fastening through pressure treated wood.
- D. Drive Pin Anchors: Subject to compliance with requirements provide Nylon Nailin; Powers Fasteners or approved equal.
 - 1. Body: Nylon, mushroom.
 - 2. Pin: Type 304 stainless steel.

2.6 FABRICATION, GENERAL

- A. General: Custom fabricate sheet metal flashing and trim to comply with recommendations in SMACNA's "Architectural Sheet Metal Manual" that apply to design, dimensions, geometry, metal thickness, and other characteristics of item indicated. Fabricate items at the shop to greatest extent possible.
 - 1. Sheet metal components requiring fabrication must have shop drawings submitted and approved prior to fabrication and delivery to the project site. Materials delivered to the project site without the required Architect's approval shall be immediately removed from the site and not incorporated into the completed Work.
 - 2. Fabricate sheet metal flashing and trim in thickness or weight needed to comply with performance requirements, but not less than that specified for each application and metal.
 - 3. Obtain field measurements for accurate fit before shop fabrication.
 - 4. Form sheet metal flashing and trim without excessive oil canning, buckling, and tool marks and true to line and levels indicated, with exposed edges folded back to form hems.
 - 5. Conceal fasteners and expansion provisions where possible. Exposed fasteners are not allowed on faces exposed to view.
 - 6. Field verify dimensions prior to fabrication.
 - 7. Solder sheet metal prior to application of finish.
 - 8. Flashings shall have minimum 4 inch vertical back leg and 2 inch overlap at exposed side.
- B. Materials delivered to the project site without the required Consultant's approval shall be immediately removed from the site and shall not be incorporated into the completed roof system.
- C. Fabrication Tolerances: Fabricate sheet metal flashing and trim that is capable of installation to specified tolerance.
- D. Sealed Joints: Form nonexpansion but movable joints in metal to accommodate elastomeric sealant.
- E. Expansion Provisions: Where lapped expansion provisions cannot be used, form expansion joints of intermeshing hooked flanges, not less than 1 inch (25 mm) deep, filled with butyl sealant concealed within joints.
- F. Fabricate cleats and attachment devices from same material as accessory being anchored or from compatible, noncorrosive metal.
- G. Seams: Fabricate nonmoving seams with flat-lock seams. Pop rivet pieces together at 1 inch on center prior to soldering. Tin edges to be seamed, form seams, and solder. Sweat solder the lap. Solder rivet holes watertight.

- H. Coil-Coated Seams: Fabricate nonmoving seams with flat-lock seams. Lap seams 4 inches and seal in a full bed of butyl sealant. Apply butyl sealant so it does not ooze out of seam. Rivet joints at 1 inch on center. Apply polyurethane sealant over rivets.
- I. Form pieces to a minimum length of 8 feet with the exception of pieces with a total length of less than 8 feet.
- J. Form pieces to maximum length of 10 feet.
- K. Corners: Sheet metal corner flashing shall be fully soldered to form one watertight piece.
- L. Hem exposed edges on underside 1/2 inch.

2.7 LOW-SLOPE ROOFING SHEET METAL FABRICATIONS

- A. Fabricate low-slope roofing sheet metal fabrications as indicated in this Article unless more stringent requirements are indicated elsewhere in the Contract Documents.
- B. Edge Metal: Fabricate from the following materials:
 - 1. Galvanized Steel: 24 gauge.
- C. Base Flashing: Fabricate from the following materials:
 - 1. Galvanized Steel: 24 gauge.
- D. Architectural Vent Hood:
 - 1. Manufacturer: Greenheck or approved equal.
 - 2. Fabricate from the following materials: Aluminum.
- E. Multi-Hood Penetration: Fabricate from the following materials:
 - 1. Galvanized Steel: 24 gauge.
- F. Cleats: Fabricate from the following materials:
 - 1. Galvanized Steel: 20 gauge.
- G. Saddles: Fabricate from the following materials:
 - 1. Galvanized Steel: 24 gauge.

2.8 MISCELLANEOUS SHEET METAL FABRICATIONS

- A. Saddles, Transitions, and Terminations in Sheet Metal Flashing and Trim: Fabricate from the following materials:
 - 1. Wall/Siding Related Flashing: Galvanized steel 24 gage, unless otherwise noted.
- B. Provide specialized, custom fabricated, sheet metal saddles for waterproof performance at terminations and transitions of sheet metal flashing and trim and construction components such as multi-plane intersects, and:
 - 1. Where indicated.
 - 2. Where constructed conditions will not provide watertight performance without saddles.
 - 3. Contractor shall inspect transitions and terminations to make Project watertight. Contract Documents indicate design intent and may not indicate all instances where saddles apply. Field verify locations where saddles are required.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, to verify actual locations, dimensions and other conditions affecting performance of the Work.
 - 1. Verify compliance with requirements for installation tolerances of substrates.
 - 2. Verify that substrate is sound, dry, smooth, clean, sloped for drainage, and securely anchored.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 HIGH TEMPERATURE SELF-ADHERING FLASHING INSTALLATION

- A. High Temperature Self-Adhering Flashing: Install self-adhering sheet flashing, wrinkle free.
 - 1. Apply primer where required by manufacturer and as necessary to achieve proper adhesion between self-adhering flashing and substrate.
 - 2. Comply with temperature restrictions of manufacturer for installation; use primer rather than nails for installing self-adhering flashing at low temperatures.
 - 3. Apply in shingle fashion to shed water, with end laps of not less than 6 inches staggered 24 inches between courses. Overlap side edges not less than 3-1/2 inches. Roll laps with roller. Cover self-adhering flashing within 14 days.

3.3 INSTALLATION, GENERAL

- A. General: Anchor sheet metal flashing and trim and other components of the Work securely in place, with provisions for thermal and structural movement so that completed sheet metal flashing and trim shall not rattle, leak, or loosen, and shall remain watertight. Use fasteners, solder, welding rods, protective coatings, separators, sealants, and other miscellaneous items as required to complete sheet metal flashing and trim system.
 - 1. Install sheet metal flashing and trim true to line and levels indicated. Provide uniform, neat seams with minimum exposure of solder, welds, and sealant.
 - 2. Install sheet metal flashing and trim to fit substrates and to result in watertight performance. Verify shapes and dimensions of surfaces to be covered before fabricating sheet metal.
 - 3. Space cleats not more than 12 inches (300 mm) apart. Anchor each cleat with two fasteners. Bend tabs over fasteners.
 - 4. Install exposed sheet metal flashing and trim without excessive oil canning, buckling, and tool marks.
 - 5. Install sealant tape where indicated.
 - 6. Torch cutting of sheet metal flashing and trim is not permitted.
- B. Install all metal flashing and sheet metal in accordance with the recommendations of:
 - 1. SMACNA Architectural Sheet Metal Manual.
 - 2. NRCA Roofing and Waterproofing Manual.
- C. The requirements of this Section supersede the above noted references except where the requirements of the reference specification are more stringent.
- D. Saddles: Secure with fasteners and sealing washers and continuous cleat.
- E. Do not fabricate or install any sheet metal item without the Consultant's written approval.
- F. Lap joints in direction of water flow.

- G. Exercise care when cutting materials on site, to ensure cuttings do not remain on finished surfaces.
- H. Use concealed fasteners except where specifically approved by the Consultant.
- I. Metal Protection: Where dissimilar metals will contact each other or corrosive substrates, protect against galvanic action by painting contact surfaces with bituminous coating or by other permanent separation as recommended by SMACNA.
 - 1. Where installing metal flashing directly on cementitious or wood substrates, install a course of high temperature self-adhering flashing.
- J. Expansion Provisions: Provide for thermal expansion of exposed flashing and trim. Space movement joints at a maximum of 10 feet (3 m) with no joints allowed within 24 inches (600 mm) of corner or intersection. Where lapped expansion provisions cannot be used or would not be sufficiently watertight, form expansion joints of intermeshing hooked flanges, not less than 1 inch (25 mm) deep, filled with sealant concealed within joints.
- K. Fastener Sizes: Use fasteners of sizes that will penetrate wood substrate not less than 1-1/4 inches for nails and not less than 3/4 inch for wood screws.
- L. Seal joints as shown and as required for watertight construction.
 - 1. Where sealant-filled joints are used, embed hooked flanges of joint members not less than 1 inch into sealant.
 - 2. Form joints to completely conceal sealant.
 - 3. When ambient temperature at time of installation is moderate, between 40 and 70 degrees F, set joint members for 50 percent movement each way.
 - 4. Adjust setting proportionately for installation at higher ambient temperatures. Do not install sealant-type joints at temperatures below 40 degrees F.
 - 5. Rivet sealed joints at 1 inch on center.
 - 6. Apply sealant over rivets.
 - 7. Prepare joints and apply sealants to comply with requirements in Division 07 Section "Joint Sealants."
- M. Soldered Joints: Clean surfaces to be soldered, removing oils and foreign matter. Pre-tin edges of sheets to be soldered to a width of 1-1/2 inches (38 mm), except reduce pre-tinning where pre-tinned surface would show in completed Work.
 - 1. Do not solder coil-coated or membrane-clad sheet metal.
 - 2. Do not use torches for soldering. Heat surfaces to receive solder and flow solder into joint. Fill joint completely. Completely remove flux and spatter from exposed surfaces.
- N. Rivets: Rivet joints where indicated and where necessary for strength at 1 inch on center, unless otherwise indicated. Apply sealant over rivets.

3.4 WALL SHEET METAL INSTALLATION

- A. General: Install sheet metal flashing and trim to comply with performance requirements, sheet metal manufacturer's written installation instructions, and SMACNA's "Architectural Sheet Metal Manual." Provide concealed fasteners where possible, set units true to line, and level as indicated. Install work with laps, joints, and seams that will be permanently watertight and weather resistant.
- B. Counterflashing: Coordinate installation of counterflashing with installation of base flashing. Insert counterflashing in reglets or receivers and fit tightly to base flashing. Extend counterflashing 4 inches (100 mm) over base flashing. Lap counterflashing joints a minimum of 4 inches (100 mm) and bed with sealant.

3.5 MISCELLANEOUS FLASHING INSTALLATION

- A. Saddles, Transitions, and Terminations: Coordinate installation of saddles, transitions, and terminations with installation of siding, self-adhering sheet waterproofing, weather resistive barrier, and other components of the construction.
 - 1. Miscellaneous flashing not installed in accordance with the drawings and specifications will require the removal and reinstallation of construction to properly install the required flashing at no additional cost to the Owner.

3.6 ERECTION TOLERANCES

- A. Installation Tolerances: Shim and align sheet metal flashing and trim within installed tolerance of 1/4 inch in 20 feet on slope and location lines as indicated and within 1/8-inch offset of adjoining faces and of alignment of matching profiles.

3.7 CLEANING AND PROTECTION

- A. Clean exposed metal surfaces of substances that interfere with uniform oxidation and weathering.
- B. Clean and neutralize flux materials. Clean off excess solder.
- C. Clean off excess sealants.
- D. Remove temporary protective coverings and strippable films as sheet metal flashing and trim are installed unless otherwise indicated in manufacturer's written installation instructions. On completion of installation, remove unused materials and clean finished surfaces. Maintain in a clean condition during construction.
- E. Replace sheet metal flashing and trim that have been damaged or that have deteriorated beyond successful repair by finish touchup or similar minor repair procedures.

END OF SECTION

SECTION 07 72 00

ROOF ACCESSORIES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes roof hatches.
- B. Relocate existing access ladder from the existing north elevation wall in the custodial closet to the adjacent west elevation wall. Provide brackets that will accomplish a 19 inch standoff the wall. Provide brackets at the bottom, top and intermediate span of the ladder. Integrate the ladder extension to the relocated ladder. Contractor to provide shop drawings, including brackets, fasteners, dimensions, and clearances, for approval prior to installation.

1.2 ACTION SUBMITTALS

- A. Product Data: For each type of roof accessory indicated.
- B. Shop Drawings: For roof accessories.
- C. Shop Drawings: For access ladder relocation, extension, brackets, fasteners, dimensions, and clearances.

1.3 INFORMATIONAL SUBMITTALS

- A. Coordination Drawings: Roof plans, drawn to scale, and coordinating penetrations and roof-mounted items.
- B. Warranty: Sample of special warranty.

1.4 CLOSEOUT SUBMITTALS

- A. Operation and maintenance data.

PART 2 - PRODUCTS

2.1 ROOF HATCH

- A. Roof Hatches: Metal ladder access roof-hatch units with lids and insulated single-walled curbs, welded corner joints, continuous lid-to-curb counterflashing and weathertight perimeter gasketing, and integrally formed deck-mounting flange at perimeter bottom.
 - 1. Basis-of-Design Product: Subject to compliance with requirements, provide roof hatch by The Bilco Company or approved equal.
- B. Size: Match existing.

- C. Hatch Material: Stainless-steel sheet, 14 gauge, type 304.
- D. Finish: Sandblast finish.
- E. Construction:
 - 1. Hatch Lid: Breakformed, hollow-metal design with 1 inch concealed fiberglass insulation, 3 inches beaded, overlapping flange, fully welded at corners, and internally reinforced for 40 psf live load
 - 2. Curb Liner: Manufacturer's standard, of same material and finish as metal curb.
 - 3. Curb: 12 inch in height with integral cap flashing, 1 inch fiberboard insulation, fully welded at corners, and 3-1/2 inch mounting flange with 7/16 inch holes provided for securing frame to the roof deck.
 - 4. Gasket: Extruded EPDM rubber gasket permanently adhered to cover.
- F. Hardware: Type 316 stainless steel.
 - 1. Hinges: Heavy-duty pintle hinges with 3/8" Type 316 stainless steel hinge pins.
 - 2. Latch: Slam latch with interior and exterior turn handles and padlock hasps.
 - 3. Lift Assistance: Compression spring operators enclosed in telescopic tubes. Automatic hold-open arm with grip handle release.
- G. Safety Railing System: Roof-hatch manufacturer's standard system including rails, clamps, fasteners, safety barrier at railing opening, and accessories required for a complete installation; attached to roof hatch and complying with 29 CFR 1910.23 requirements and authorities having jurisdiction.
- H. Ladder-Assist Post: Roof-hatch manufacturer's standard device for attachment to roof-access ladder. Post locks in place on full extension; release mechanism returns post to closed position.

2.2 PERFORMANCE CRITERIA

- A. Roof hatch shall comply with UL 790 Class A (burning brand test).

2.3 METAL MATERIALS

- A. Stainless-Steel Sheet and Shapes: ASTM A 240/A 240M or ASTM A 666, Type 304.

2.4 MISCELLANEOUS MATERIALS

- A. General: Provide materials and types of fasteners, protective coatings, and other miscellaneous items required by manufacturer for a complete installation.
- B. Fasteners: Roof accessory manufacturer's recommended fasteners suitable for application and metals being fastened. Match finish of exposed fasteners with finish of material being fastened. Provide nonremovable fastener heads to exterior exposed fasteners.
 - 1. Fasten through stainless steel backed EPDM washers where exposed to the exterior.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. General: Verify dimensions of roof openings for roof accessories. Install roof accessories according to manufacturer's written instructions.
 - 1. Install roof accessories level, plumb, true to line and elevation, and without warping, jogs in alignment, excessive oil canning, buckling, or tool marks.
 - 2. Anchor roof accessories securely in place so they are capable of resisting indicated loads.
 - 3. Use fasteners, separators, and other miscellaneous items as required to complete installation of roof accessories and fit them to substrates.
 - 4. Install roof accessories to resist exposure to weather without failing, rattling, leaking, or loosening of fasteners and seals.

- B. Metal Protection: Protect metals against galvanic action by separating dissimilar metals from contact with each other or with corrosive substrates by painting contact surfaces with bituminous coating or by other permanent separation as recommended by manufacturer.
 - 1. Coat concealed side of stainless-steel roof accessories with bituminous coating where in contact with wood, ferrous metal, or cementitious construction.
 - 2. Underlayment: Where installing roof accessories directly on cementitious or wood substrates, install a course of felt underlayment and cover with a slip sheet, or install a course of polyethylene sheet.

3.2 REPAIR AND CLEANING

- A. Replace roof accessories that have been damaged or that cannot be successfully repaired by minor repair procedures.

- B. Clean and protect roof accessories after completion of the Work of this Section.

END OF SECTION

SECTION 07 92 00

JOINT SEALANTS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Polyurethane joint sealants.
2. Accessories.

1.2 RELATED REQUIREMENTS

- A. Section 07 60 00 – Flashing and Sheet Metal; for butyl sealant and butyl sealant tape.

1.3 PRECONSTRUCTION TESTING

- A. Preconstruction Compatibility and Adhesion Testing: Submit to joint-sealant manufacturers, for testing indicated below, samples of materials that will contact or affect joint sealants.

1. Use ASTM C 1087 to determine whether priming and other specific joint preparation techniques are required to obtain rapid, optimum adhesion of joint sealants to joint substrates.
2. Submit not fewer than eight pieces of each kind of material, including joint substrates, shims, joint-sealant backings, secondary seals, and miscellaneous materials.
3. Schedule sufficient time for testing and analyzing results to prevent delaying the Work.
4. For materials failing tests, obtain joint-sealant manufacturer's written instructions for corrective measures including use of specially formulated primers.
5. Testing will not be required if joint-sealant manufacturers submit joint preparation data that are based on previous testing, not older than 24 months, of sealant products for adhesion to, and compatibility with, joint substrates and other materials matching those submitted.

- B. Preconstruction Field-Adhesion Testing: Before installing sealants, field test their adhesion to Project joint substrates as follows:

1. Locate test joints where indicated on Project or, if not indicated, as directed by Architect.
2. Conduct field tests for each application indicated below:
 - a. Each kind of sealant and joint substrate indicated.
3. Notify Architect seven days in advance of dates and times when test joints will be erected.
4. Arrange for tests to take place with joint-sealant manufacturer's technical representative present.
 - a. Test Method: Test joint sealants according to Method A, Field-Applied Sealant Joint Hand Pull Tab, in Appendix X1 in ASTM C 1193 or Method A, Tail Procedure, in ASTM C 1521.
 - 1) For joints with dissimilar substrates, verify adhesion to each substrate separately; extend cut along one side, verifying adhesion to opposite side. Repeat procedure for opposite side.
5. Report whether sealant failed to adhere to joint substrates or tore cohesively. Include data on pull distance used to test each kind of product and joint substrate. For sealants that fail adhesively, retest until satisfactory adhesion is obtained.
6. Evaluation of Preconstruction Field-Adhesion-Test Results: Sealants not evidencing adhesive failure from testing, in absence of other indications of noncompliance with requirements, will be considered satisfactory. Do not use sealants that fail to adhere to joint substrates during testing.

1.4 ACTION SUBMITTALS

- A. Product Data: For each joint-sealant product indicated.
- B. Samples for Initial Selection: Manufacturer's color charts consisting of strips of cured sealants showing the full range of colors available for each product exposed to view.
- C. Samples for Verification: For each kind and color of joint sealant required, provide Samples with joint sealants in 1/2-inch- wide joints formed between two 6-inch- long strips of material matching the appearance of exposed surfaces adjacent to joint sealants.
- D. Joint-Sealant Schedule: Include the following information:
 - 1. Joint-sealant application, joint location, and designation.
 - 2. Joint-sealant manufacturer and product name.
 - 3. Joint-sealant formulation.
 - 4. Joint-sealant color.
- E. Qualification Data: For qualified Installer.
- F. Product Certificates: For each kind of joint sealant and accessory, from manufacturer.
- G. Sealant, Waterproofing, and Restoration Institute (SWRI) Validation Certificate: For each sealant specified to be validated by SWRI's Sealant Validation Program.
- H. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, indicating that sealants comply with requirements.
- I. Preconstruction Compatibility and Adhesion Test Reports: From sealant manufacturer, indicating the following:
 - 1. Materials forming joint substrates and joint-sealant backings have been tested for compatibility and adhesion with joint sealants.
 - 2. Interpretation of test results and written recommendations for primers and substrate preparation needed for adhesion.
- J. Preconstruction Field-Adhesion Test Reports: Indicate which sealants and joint preparation methods resulted in optimum adhesion to joint substrates based on testing specified in "Preconstruction Testing" Article.
- K. Field-Adhesion Test Reports: For each sealant application tested.
- L. Warranties: Sample of special warranties.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: Manufacturer's authorized representative who is trained and approved for installation of units required for this Project.
- B. Source Limitations: Obtain each kind of joint sealant from single source from single manufacturer.

- C. Product Testing: Test joint sealants using a qualified testing agency.
 - 1. Testing Agency Qualifications: An independent testing agency qualified according to ASTM C 1021 to conduct the testing indicated.
 - 2. Test according to SWRI's Sealant Validation Program for compliance with requirements specified by reference to ASTM C 920 for adhesion and cohesion under cyclic movement, adhesion-in-peel, and indentation hardness.
- D. Mockups: Install sealant in mockups of assemblies specified in other Sections that are indicated to receive joint sealants specified in this Section. Use materials and installation methods specified in this Section.
- E. Preinstallation Conference: Conduct conference at Project site.

1.6 WARRANTY

- A. Special Installer's Warranty: Manufacturer's standard form in which Installer agrees to repair or replace joint sealants that do not comply with performance and other requirements specified in this Section within specified warranty period.
 - 1. Warranty Period: Two years from date of Substantial Completion.
- B. Special Manufacturer's Warranty: Manufacturer's standard form in which joint-sealant manufacturer agrees to furnish joint sealants to repair or replace those that do not comply with performance and other requirements specified in this Section within specified warranty period.
 - 1. Warranty Period: Ten years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MATERIALS, GENERAL

- A. Compatibility: Provide joint sealants, backings, and other related materials that are compatible with one another, with adjacent materials and with joint substrates under conditions of service and application, as demonstrated by joint-sealant manufacturer, based on testing and field experience.
- B. VOC Content of Interior Sealants: Sealants and sealant primers used inside the weatherproofing system shall comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24):
 - 1. Architectural Sealants: 250 g/L.
 - 2. Sealant Primers for Nonporous Substrates: 250 g/L.
 - 3. Sealant Primers for Porous Substrates: 775 g/L.
- C. Liquid-Applied Joint Sealants: Comply with ASTM C 920 and other requirements indicated for each liquid-applied joint sealant specified, including those referencing ASTM C 920 classifications for type, grade, class, and uses related to exposure and joint substrates.
 - 1. Suitability for Immersion in Liquids. Where sealants are indicated for Use I for joints that will be continuously immersed in liquids, provide products that have undergone testing according to ASTM C 1247. Liquid used for testing sealants is deionized water, unless otherwise indicated.

- D. Stain-Test-Response Characteristics: Where sealants are specified to be nonstaining to porous substrates, provide products that have undergone testing according to ASTM C 1248 and have not stained porous joint substrates indicated for Project.

2.2 POLYURETHANE JOINT SEALANTS

- A. Urethane Joint Sealant: ASTM C 920.
 - 1. Basis-of-Design Product: Subject to compliance with requirements, provide Sikaflex-1a; Sika Corporation.
 - a. Preapproved Equal: Sonolastic NP 1; BASF.
 - 2. Type: Single component (S).
 - 3. Grade: nonsag (NS).
 - 4. Class: 35.
 - 5. Uses Related to Exposure: Nontraffic (NT).

2.3 JOINT SEALANT BACKING

- A. General: Provide sealant backings of material that are nonstaining; are compatible with joint substrates, sealants, primers, and other joint fillers; and are approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.
- B. Cylindrical Sealant Backings: ASTM C 1330, Type C (closed-cell material with a surface skin) or Type B (bicellular material with a surface skin), as approved in writing by joint-sealant manufacturer for joint application indicated, and of size and density to control sealant depth and otherwise contribute to producing optimum sealant performance.
- C. Bond-Breaker Tape: Polyethylene tape or other plastic tape recommended by sealant manufacturer.

2.4 MISCELLANEOUS MATERIALS

- A. Primer: Material recommended by joint-sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint-sealant-substrate tests and field tests.
- B. Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials.
- C. Masking Tape: Nonstaining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine joints indicated to receive joint sealants, with Installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting joint-sealant performance.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint-sealant manufacturer's written instructions.
1. Remove all foreign material from joint substrates that could interfere with adhesion of joint sealant, including dust, paints (except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer), old joint sealants, oil, grease, waterproofing, water repellents, water, surface dirt, and frost.
 2. Clean porous joint substrate surfaces by brushing, grinding, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealants. Remove loose particles remaining after cleaning operations above by vacuuming or blowing out joints with oil-free compressed air. Porous joint substrates include the following:
 - a. Unglazed surfaces of ceramic tile.
 3. Remove laitance and form-release agents from concrete.
 4. Clean nonporous joint substrate surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants. Nonporous joint substrates include the following:
 - a. Metal.
 - b. Glass.
 - c. Porcelain enamel.
 - d. Glazed surfaces of ceramic tile.
- B. Joint Priming: Prime joint substrates where recommended by joint-sealant manufacturer or as indicated by preconstruction joint-sealant-substrate tests or prior experience. Apply primer to comply with joint-sealant manufacturer's written instructions. Confine primers to areas of joint-sealant bond; do not allow spillage or migration onto adjoining surfaces.
- C. Masking Tape: Use masking tape where required to prevent contact of sealant or primer with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

3.3 INSTALLATION

- A. General: Comply with joint-sealant manufacturer's written installation instructions for products and applications indicated, unless more stringent requirements apply.
- B. Sealant Installation Standard: Comply with recommendations in ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.
- C. Install sealant backings of kind indicated to support sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.
1. Do not leave gaps between ends of sealant backings.
 2. Do not stretch, twist, puncture, or tear sealant backings.
 3. Remove absorbent sealant backings that have become wet before sealant application and replace them with dry materials.
- D. Install bond-breaker tape behind sealants where sealant backings are not used between sealants and backs of joints.

- E. Install sealants using proven techniques that comply with the following and at the same time backings are installed:
1. Place sealants so they directly contact and fully wet joint substrates.
 2. Completely fill recesses in each joint configuration.
 3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.
- F. Tooling of Nonsag Sealants: Immediately after sealant application and before skinning or curing begins, tool sealants according to requirements specified in subparagraphs below to form smooth, uniform beads of configuration indicated; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint.
1. Remove excess sealant from surfaces adjacent to joints.
 2. Use tooling agents that are approved in writing by sealant manufacturer and that do not discolor sealants or adjacent surfaces.
 3. Provide concave joint profile per Figure 8A in ASTM C 1193, unless otherwise indicated.
- G. Clean off excess sealant or sealant smears adjacent to joints as the Work progresses by methods and with cleaning materials approved in writing by manufacturers of joint sealants and of products in which joints occur.

3.4 FIELD QUALITY CONTROL

- A. Field-Adhesion Testing: Field test joint-sealant adhesion to joint substrates as follows:
1. Extent of Testing: Test completed and cured sealant joints as follows:
 - a. Perform 10 tests for the first 1000 feet of joint length for each kind of sealant and joint substrate.
 - b. Perform 1 test for each 1000 feet of joint length thereafter or 1 test per each floor per elevation.
 2. Test Method: Test joint sealants according to Method A, Field-Applied Sealant Joint Hand Pull Tab, in Appendix X1 in ASTM C 1193 or Method A, Tail Procedure, in ASTM C 1521.
 - a. For joints with dissimilar substrates, verify adhesion to each substrate separately; extend cut along one side, verifying adhesion to opposite side. Repeat procedure for opposite side.
 3. Inspect tested joints and report on the following:
 - a. Whether sealants filled joint cavities and are free of voids.
 - b. Whether sealant dimensions and configurations comply with specified requirements.
 - c. Whether sealants in joints connected to pulled-out portion failed to adhere to joint substrates or tore cohesively. Include data on pull distance used to test each kind of product and joint substrate. Compare these results to determine if adhesion passes sealant manufacturer's field-adhesion hand-pull test criteria.
 4. Record test results in a field-adhesion-test log. Include dates when sealants were installed, names of persons who installed sealants, test dates, test locations, whether joints were primed, adhesion results and percent elongations, sealant fill, sealant configuration, and sealant dimensions.
 5. Repair sealants pulled from test area by applying new sealants following same procedures used originally to seal joints. Ensure that original sealant surfaces are clean and that new sealant contacts original sealant.
- B. Evaluation of Field-Adhesion Test Results: Sealants not evidencing adhesive failure from testing or noncompliance with other indicated requirements will be considered satisfactory. Remove sealants that fail to adhere to joint substrates during testing or to comply with other requirements. Retest failed applications until test results prove sealants comply with indicated requirements.

3.5 CLEANING

- A. Clean off excess sealant or sealant smears adjacent to joints as the Work progresses by methods and with cleaning materials approved in writing by manufacturers of joint sealants and of products in which joints occur.

3.6 PROTECTION

- A. Protect joint sealants during and after curing period from contact with contaminating substances and from damage resulting from construction operations or other causes so sealants are without deterioration or damage at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated joint sealants immediately so installations with repaired areas are indistinguishable from original work.

3.7 JOINT-SEALANT SCHEDULE

- A. Joint-Sealant Application: Exterior joints in vertical surfaces and horizontal non-traffic surfaces.
 - 1. Joint Locations:
 - a. Over rivets where indicated.
 - b. Beneath expansion joint at Colonnades.
 - c. Exposed joints associated with the Work.
 - d. Other joints as indicated.
 - 2. Joint Sealant: Polyurethane.
 - 3. Joint-Sealant Color: As selected by Architect from manufacturer's full range of colors.

END OF SECTION

SECTION 09 91 13

EXTERIOR PAINTING

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes surface preparation, sealing, and field painting of the following:
1. All exposed exterior galvanized metal in the Project.
 2. Concrete under edge metal where indicated.
 3. Where indicated.
- B. Comply with San Mateo County Community College District Design Standard Exterior Paint Guideline attached at the end of this Section.
- C. Paint exposed surfaces, except where the paint schedules indicate that a surface or material is not to be painted or is to remain natural. If the paint schedules do not specifically mention an item or a surface, paint the item or surface the same as similar adjacent materials or surfaces whether or not schedules indicate colors. If the schedules do not indicate color or finish, the Architect will select from standard colors and finishes available.
- D. Do not paint prefinished items, concealed surfaces, finished metal surfaces, operating parts, and labels.
1. Prefinished items including factory-finished components.
 2. Concealed surfaces include walls or ceilings in inaccessible spaces.
 3. Finished metal surfaces.
 4. Operating parts include moving parts of operating equipment.
 5. Labels: Do not paint over Underwriters Laboratories (UL), Factory Mutual (FM), or other code-required labels or equipment name, identification, performance rating, or nomenclature plates.

1.2 DEFINITIONS

- A. Paint: Paint systems materials, including primers, emulsions, enamels, stains, sealers and fillers, and other applied materials whether used as prime, intermediate or finish coats, and of various degrees of opacity or sheen.
- B. Minimum Dry Film Thickness (MDFT or DFT): The depth or thickness of a coating in the dry state, usually expressed in mils per coat by manufacturer.
- C. Sheen: The following terms used by the Architect to denote specific sheen for coatings in the Contract Documents, Color Schedule or other correspondence relating to the Project, will apply:
1. Flat: Less Than 3 based on 60 degree meter
 2. Low Sheen: 5 to 10 based on 60 degree meter
 3. Eggshell: 10 to 15 based on 60 degree meter
 4. Satin Gloss: 25 to 35 based on 60 degree meter
 5. Semi-Gloss: 50 to 55 based on 60 degree meter
 6. Gloss: Above 70 based on 60 degree meter

1.3 ADMINISTRATIVE REQUIREMENTS

- A. Pre-installation Conference: Contractor, installer, manufacturer's representative, and representatives of other affected trades shall meet at Site to review painting procedure, acceptance of substrate surfaces, and coordination with other trades.

1.4 SUBMITTALS

- A. Materials and Products List: Organize in the same order indicated in the Paint Schedules specified at the end of this Section. Indicate material to be painted, manufacturer, product name, catalog number and color, surface preparation for each application or special condition, number of coats and DFT.
 - 1. Include one product data sheet for each product identified on the Materials and Products List. Organize product sheets in same order as Materials and Product List.
- B. Color Samples: Submit two (at least 3 by 5 inch) paper-backed samples of each color and sheen combination indicated. Samples will be reviewed for sheen as well as for color.
- C. Samples for Verification: Of each color and material to be applied, with texture to simulate actual conditions, on representative Samples of the actual substrate.
 - 1. Provide stepped Samples, defining each separate coat, including block fillers and primers. Use representative colors when preparing Samples for review. Resubmit until required sheen, color, and texture are achieved.
 - a. Provide samples of multiple sheens for Owner selection.
 - 2. Provide a list of materials and applications for each coat of each sample. Label each sample for location and application.
 - 3. Submit Samples on the following substrates for the Architect's review of color and texture only:
 - a. Galvanized Metal: Provide two 4-inch square samples of flat metal for each color and finish.
- D. Certificates: Submit written approval by manufacturer of each substrate test location as well as additional instructions if necessary to correct deficiencies identified in the test sample installations.

1.5 EXTRA STOCK MATERIALS

- A. Deliver to Owner one gallon of finish paint in each color required for Project.
 - 1. Mark each container with color and areas where paint was used, without obscuring manufacturer's label.

1.6 QUALITY ASSURANCE

- A. Applicator Qualifications: Engage an experienced applicator who has completed painting system applications similar in material and extent to that indicated for this Project with a record of successful in-service performance.
- B. Paints and coatings shall be mixed and applied strictly in accordance with the manufacturer's written recommendations.
- C. Source Limitations: Obtain primers, and undercoat materials for each coating system from the same manufacturer as the finish coats, unless otherwise indicated.

- D. Mockups: Provide a full-coat benchmark finish sample of each type of coating and substrate required on the Project. Comply with "Benchmark Sample" procedures specified in PDCA P5. Duplicate finish of approved prepared samples.
1. The Architect will select one surface to represent surfaces and conditions for each type of coating and substrate to be painted.
 - a. Wall Surfaces: Provide samples on at least 100 sq. ft. (9 sq. m) of wall surface.
 - b. Small Areas and Items: The Owner's Representative will designate an item or area as required.
 - c. After finishes are accepted, the Owner's Representative will use the surface to evaluate coating systems of a similar nature.
 2. Final approval of colors will be from Mockups.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Delivery: Deliver products in original unopened packaging with legible manufacturer's product identification.
1. Product name or title of material.
 2. Product description (generic classification or binder type).
 3. Manufacturer's stock number and date of manufacture.
 4. Contents by volume, for pigment and vehicle constituents.
 5. Thinning instructions.
 6. Application instructions.
 7. Color name and number.
 8. VOC content.
- B. Storage: Comply with manufacturer's recommendations.
1. Remove oily rags, waste, and similar every night and take every precaution to prevent fire.
 2. Store in a cool, dry place out of direct sunlight.
 3. Protect from the elements and from damage.
 4. Store at a temperature of not less than 40 degrees F.

1.8 FIELD CONDITIONS

- A. Environmental Requirements: Comply with manufacturer's recommendations for conditions under which paint systems can be applied, and the following:
1. Maintain ambient temperature above 40 degrees F during and (24 hours) after installation.
 2. Apply water-borne paints when the temperature of surfaces to be painted and surrounding air temperature is between 50 degrees F and 90 degrees F.
 3. Apply solvent-thinned paints only when the temperature of surfaces to be painted and the surrounding air temperature is between 45 degrees F and 95 degrees F.
 4. Do not apply paint in precipitation, fog or mist, when relative humidity exceeds 85 percent, or at temperatures less than 5 degrees F above dew point, or to damp or wet surfaces.
- B. Do not apply paint in areas where dust is being generated.
- C. Do not apply paint until moisture content of surface is within limitations recommended by paint manufacturer. Test with a moisture meter.
1. Concrete: 12 percent.

1.9 WARRANTIES

- A. Provide a warranty on paint products used and all labor to correct problems that occur from product failure, improper application or insufficient coverage of the products used.
 - 1. Paint Manufacturer: Ten (10) years on materials.
 - 2. Installer: Five (5) years on labor and materials.

PART 2 - PRODUCTS

2.1 MANUFACTURER

- A. Subject to compliance with requirements, provide paint by Kelly-Moore Paint Company, Inc.
 - 1. Refer to San Mateo County Community College District Design Standard Exterior Paint Guideline attached at the end of this Section for basis-of-design product information and location.

2.2 MATERIALS

- A. Material Compatibility: Provide fillers, primers, undercoats, and finish-coat materials that are compatible with one another and the substrates indicated under conditions of service and application, as demonstrated by manufacturer based on testing and field experience.
- B. Material Quality: Provide manufacturer's best-quality paint material of the various coating types specified. Paint-material containers not displaying manufacturer's product identification will not be acceptable.
- C. Colors: Color to be selected by Architect from manufacturer's full range, including custom colors.
- D. Primers: Prime all surfaces, including pre-primed surfaces with manufacturer's recommended primer for each type of material.

2.3 EQUIPMENT

- A. Painting and Decorating Equipment: Appropriate for product type and application.

2.4 MIXING AND TINTING

- A. Unless otherwise specified herein or pre-approved, paint shall be ready-mixed and pre-tinted. Re-mix paint in containers prior to and during application to ensure break-up of lumps, complete dispersion of settled pigment, and color and gloss uniformity.
- B. Paste, powder or catalyzed paint mixes shall be mixed in strict accordance with manufacturer's written instructions.
- C. Where thinner is used, addition shall not exceed paint manufacturer's recommendations. Do not use kerosene or any such organic solvents to thin water-based paints.

2.5 FINISH AND COLORS

- A. Colors not already indicated shall be selected by the Architect from the manufacturer's full range of colors.

2.6 ACCESSORIES

- A. Accessory Materials: Provide material not specified, such as linseed oil, shellac, thinners, and solvents of top commercial quality, designed for intended use and compatible with specified paints.
- B. Patching and fillers: Provide top quality material appropriate for patching and adjoining the surface on which it is being used.
- C. Sealants: Sealants for substrates shall be compatible with each substrate and paint coating.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with the Applicator present, under which painting will be performed for compliance with paint application requirements.
 - 1. Do not begin to apply paint until unsatisfactory conditions have been corrected and surfaces receiving paint are thoroughly dry.
 - 2. Start of painting will be construed as the Applicator's acceptance of surfaces and conditions within a particular area.
- B. Coordination of Work: Review other Sections in which primers are provided to ensure compatibility of the total system for various substrates. On request, furnish information on characteristics of finish materials to ensure use of compatible primers.
 - 1. Notify the Owner's Representative about anticipated problems using the materials specified over substrates primed by others.
- C. Test Panels: Contractor shall provide test samples at one representative building location.
 - 1. The Owner will select the location.
 - 2. Location shall be 3-feet square.
 - 3. The surface shall be prepared as specified.
 - 4. Test location shall be installed as specified.
 - 5. Test locations must be reviewed by the Owner and manufacturer's technical representative.

3.2 PREPARATION

- A. General: Remove hardware and hardware accessories, plates, machined surfaces, lighting fixtures, and similar items already installed that are not to be painted. If removal is impractical or impossible because of the size or weight of the item, provide surface-applied protection before surface preparation and painting.
1. Lightly coat rubber door seals with petroleum jelly to prevent newly painted door edges from sticking to the seals.
 2. After completing painting operations in each space or area, reinstall items removed using workers skilled in the trades involved.
- B. Protection: Protect surfaces not being painted concurrently, or not to be painted, and the finished Work of other trades.
1. Mask UL labels and hardware items that cannot be removed, before painting the surface on which they occur.
 2. Remove masking when painting of surfaces or items is completed.

3.3 PREPARATION OF SURFACES

- A. Prepare substrate in strict accordance with manufacturer's written instructions. If there is conflict between the manufacturer's instructions and the Contract Documents, the more stringent shall apply.
- B. Cleaning: Before applying paint or other surface treatments, clean the substrates of substances that could impair the bond of the various coatings. Remove oil and grease before cleaning.
1. Schedule cleaning and painting so dust and other contaminants from the cleaning process will not fall on wet, newly painted surfaces.
 2. Power wash areas of exterior surfaces to be painted using a mild detergent solution, thoroughly rinsing with clear clean water until all residues have been removed. Allow all surfaces to thoroughly dry prior to proceeding with preparation or painting.
 3. Prepare the surface of areas to be re-painted, removing all dirt, chalk, and surface contaminants that will interfere with the adhesion of subsequent coats without damaging the substrates or adjacent areas.
 4. Treat areas that show signs of mildew with a commercial grade mildicide.
 5. Carefully examine all areas after preparation and prior to painting for cracking, blistering, peeling or flaking of existing paint. Remove loose, unsound, or non-adhering paint.
 6. Report existing damage to buildings or other structures, including, but not limited to, broken windows, existing paint splatters, broken wood trim, dry rot and termite infestation. Report conditions out of the ordinary found to exist to the Owner's Representative prior to starting any work.
 7. Remove soil along bottom edge of buildings and surface areas to permit proper application of paint below ground level where applicable.
 8. Remove efflorescence, white residue salt deposits, which may appear on cementitious or plaster surfaces by wire brushing and acid etching with phosphoric acid.
- C. Galvanized Steel: Clean galvanized surfaces with non-petroleum-based solvents so surface is free of oil and surface contaminants. Remove pretreatment from galvanized sheet metal fabricated from coil stock by mechanical methods. Clean previously painted surfaces according to manufacturer's written instructions.

- D. Tinting: Tint each undercoat a lighter shade to simplify identification of each coat when multiple coats of the same material are applied. Tint undercoats to match the color of the finish coat, but provide sufficient differences in shade of undercoats to distinguish each separate coat.
- E. Primer: Spot prime bare or patched areas or prime entire surface, as needed to provide surface for painting. Prime lightly-chalked painted surfaces with a suitable surface conditioner. Omit primer on metal surfaces that have been shop primed and touchup painted.
 - 1. Re-coat primed and sealed surfaces where evidence of suction spots or unsealed areas in first coat appears, to ensure a finish coat with no burn through or other defects due to insufficient sealing.
- F. Provide barrier coats over incompatible materials or remove and re-prime.
- G. Fill all cracks, gaps, holes, and other defects with appropriate filler.

3.4 APPLICATION

- A. General: Apply paint according to manufacturer's written instructions. Use applicators and techniques best suited for substrate and type of material being applied. If there are discrepancies between the manufacturer's instructions and the Contract Documents, the more stringent shall govern.
 - 1. Do not paint over dirt, rust, scale, grease, moisture, scuffed surfaces, or conditions detrimental to formation of a durable paint film.
 - 2. Provide finish coats that are compatible with primers used.
 - 3. Paint surfaces behind movable equipment the same as similar exposed surfaces.
 - 4. Finish exterior doors on tops, bottoms, and side edges the same as exterior faces.
- B. Wind Conditions:
 - 1. Apply paint materials using a spray gun only when no wind conditions exist above 10 miles per hour.
 - 2. When wind conditions exceed 10 miles per hour, apply paint materials using rollers and brushes.
 - 3. Carefully monitor and avoid paint overspray in any kind of wind condition.
- C. Scheduling Painting: Apply first coat to surfaces that have been cleaned, pretreated, or otherwise prepared for painting as soon as practicable after preparation and before subsequent surface deterioration.
- D. The number of coats and the film thickness required are the same regardless of application method. Do not apply succeeding coats until the previous coat has cured as recommended by the manufacturer. If sanding is required to produce a smooth, even surface according to manufacturer's written instructions, sand between applications.
- E. Apply at rates recommended on manufacturer's label. Do not exceed application rate recommended for the surface involved. Use materials without adulteration and only with thinning agents recommended by the manufacturer in the printed instructions.
- F. Apply materials with suitable brushes, rollers, or spraying equipment. Keep brushes, rollers and spraying equipment, clean, free from contaminants and suitable for the finish required.
- G. Vary slightly the color of successive coats under the finish coat.

- H. Allow sufficient time between successive coats to permit proper drying. Do not re-coat surfaces until paint has dried to where it feels firm, does not deform or feel sticky under moderate thumb pressure, and where application of another coat of paint does not cause the undercoat to lift or lose adhesion.
 - 1. Comply with the recommendation of the manufacturer for drying time between succeeding coats.
- I. Sand and dust between each coat to remove defects visible from a distance of 5 feet.
- J. Apply paints smooth, free of brush marks, streaks, laps, pile-up of paint, runs, sags, holidays, air bubbles, and excessive roller stipple. Apply additional finish coats to entire surface if undercoats show through and to correct any defect.
- K. If undercoats, stains, or other conditions show through final coat of paint, apply additional coats until paint film is of uniform finish, color, and appearance. Give special attention to ensure edges, corners, crevices, welds, and exposed fasteners receive a dry film thickness equivalent to that of flat surfaces.
- L. Pigmented (Opaque) Finishes: Completely cover surfaces as necessary to provide a smooth, opaque surface of uniform finish, color, appearance, and coverage. Cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness, or other surface imperfections will not be acceptable.
- M. Make edges of paint adjoining other materials or colors clean and sharp with no overlapping.
- N. Maintain a wet edge to avoid lap marks.
- O. Application Procedures: Apply paints and coatings by brush, roller, spray, or other applicators according to manufacturer's written instructions.
 - 1. Brushes: Use brushes best suited for the type of material applied. Use brush of appropriate size for the surface or item being painted. Back-brush bottom edge of siding to ensure full coverage of all areas.
 - 2. Rollers: Use rollers of carpet, velvet back, or high-pile sheep's wool as recommended by the manufacturer for the material and texture required.
 - 3. Spray Equipment: Use airless spray equipment with orifice size as recommended by the manufacturer for the material and texture required.
- P. Minimum Coating Thickness: Apply paint materials no thinner than manufacturers recommended spreading rate or 5 mils DFT, whichever is greater. (Prime and two finish coats.)
- Q. Completed Work: Match approved mockups for color, texture, and coverage. Remove, refinish, or repaint work not complying with requirements

3.5 FIELD QUALITY CONTROL

- A. The Owner reserves the right to invoke the following test procedure at any time and as often as the Owner deems necessary during the period when paint is being applied:
 - 1. The Owner may engage the services of an independent agency to sample the paint material being used. Samples of material delivered to the Project will be taken, identified, sealed, and certified in the presence of the Contractor.

2. The testing agency or Owner's Architect will perform appropriate tests for the characteristics as required by the Owner including but not limited to Dry Film Thickness and adhesion.
3. The Owner may direct the Contractor to stop painting if test results show material being used does not comply with specified requirements. The Contractor shall remove non-complying paint from the site, pay for testing, and repaint surfaces previously coated with the rejected paint. If necessary, the Contractor may be required to remove rejected paint from previously painted surfaces if, on repainting with specified paint, the two coatings are incompatible.

3.6 CLEANING

- A. Cleanup: At the end of each workday, remove empty cans, rags, rubbish, and other discarded paint materials from the site.
 1. After completing painting, clean glass and paint-spattered surfaces. Remove spattered paint by washing and scraping. Be careful not to scratch or damage adjacent finished surfaces.

3.7 PROTECTION

- A. Protect the Work, whether being painted or not, against damage. Correct damage by cleaning, repairing or replacing, and repainting, as approved by Architect. Remove masking tape and other protection media and its residue after painting.
- B. Provide "Wet Paint" signs to protect newly painted finishes. Remove temporary protective wrappings provided by others to protect their work after completing painting operations.
 1. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces. Comply with procedures specified in PDCA P1.

3.8 ATTACHMENTS:

- A. List of Attachments: San Mateo County Community College District Design Standard Exterior Paint Guideline.

END OF SECTION



Design Standard

Exterior Paint Guideline

Purpose:

Paint covers a large amount of surface in a building, and therefore has a significant impact on environmental quality. This design standard has the purpose of creating a consistent application of painting requirements throughout the San Mateo County Community College District. The intent is to create a standard of quality for maintenance and reliability throughout all renovation and new building projects.

Design Standard:

1. SMCCCD has standardized on latex (water based) paints for the outdoor environment. Why latex paints?
 - Water-based paints are the safest option for the people who handle them and the environment.
 - Latex paints have a less objectionable odor, which makes them good for repaints and painting in occupied areas, where solvent odor is an issue.
 - They clean up with soap and water; there's no need to work with hazardous and/or flammable solvents, and no used solvent to dispose of afterwards.
 - Latex paints dry faster, and can be recoated sooner; this makes them a good choice for painting in occupied areas, where someone might touch or brush up against the freshly painted surface.
 - Latex paint binders hold up better in sun-exposed areas, because they're more resistant to UV (ultraviolet) radiation.
 - Latex paint films are less prone to yellowing over time, especially with white, light off-white and pastel colors.
 - Latex paint films are more breathable; they allow small amounts of water vapor to pass through the film, so the chance of blistering is reduced. This is especially important when the surface being painted is slightly damp.
 - Latex paint films have better gloss and color retention, so they'll keep a 'like-new' appearance longer.

2. SMCCCD has standardized on elastomeric wall coatings for its masonry buildings. What are elastomeric paints?
 - The buildings within SMCCCD are almost exclusively masonry buildings. Masonry buildings expand and contract in response to changing temperatures. SMCCCD uses elastomeric wall coatings on its masonry buildings. Elastomeric wall coatings are applied in very thick films that seal out moisture. They also bridge existing cracks and prevent additional cracks from developing. Elastomeric wall coatings made with 100 percent acrylic binders, and are applied at a dry film thickness four to five times that of a latex exterior paint (usually 12-15 mils). When temperatures drop, these flexible coatings "stretch" to span cracks in our masonry. Then, when temperatures return to normal and these cracks diminish in size, the



coatings contract, returning to their original shape without warping or wrinkling. The water-resistant qualities of these "elastic" coatings help prevent moisture from penetrating cracked or porous masonry. But, at the same time, they are able to breathe, allowing moisture from within the building or from within the masonry itself to escape to the outdoors as vapor.

3. SMCCCD has standardized on Kelly-Moore Paints. Why Kelly-Moore Paints?

- There are numerous Kelly-Moore Paint store located within reasonable driving distance to each of our college campuses, and their paints are all readily available. The close proximity of their distribution outlets reduces driving time for the maintenance staff who purchase touch-up paint.
- Kelly-Moore Paints provides quality products at fair prices.
- The ubiquitous nature of Kelly-Moore Paints brings a price competition to SMCCCD's painting projects, ensuring best use of public funds.
- The only additional approved manufacturer is Rustoleum for their "Bronzetone", used only for door trim and selectively approved exterior metal surfaces.

4. College exterior paint color palettes:

- Each of our colleges has standardized on an exterior building paint scheme to complement the exterior architectural elements of the individual campuses. For example, the colors selected highlight the exposed vertical columns at College of San Mateo, reflect daylight into the building interiors at the often foggy Skyline College environment, and highlight the entries at Cañada College. These color schemes were selected by an Architectural & Furniture Finishes Task Force, comprised of representatives from each college as well as industry experts, to add interest to the building exterior and serve the colleges for many years to come. Each college's exterior paint color palette list can be found in the Appendices to this Exterior Paint Design Standard.
- The various color schemes are centered on basic, timelessly elegant off-white and creamy colors as the field colors. Complementary shades of beiges, taupes and creams are used to accent various exterior architectural details of the buildings.
 - In addition to the "tone on tone" colors, CSM's color palette includes darker colors that provide "weight" when used below a certain architectural datum line toward the bottom of the building.
 - Skyline College's color palette includes a lighter white for the architectural window surrounds, to reflect daylight into the buildings. Skyline's palette also includes a darker beige for the roof parapets, which hides the dirt and moss growth that occurs at that location due to the moist microclimate.
 - Cañada College has incorporated dramatic accent colors that "pop" and direct the eye toward entries or other important architectural elements that want to be enhanced.
- Accent paint colors should be used sparingly and effectively.
- The exterior paint color schemes for any given project are relatively prescribed, given the overall coordinated look of building exteriors at each campus. However, entries may be emphasized with the use of accent paints, as desired by the building's/project's steering committee and if approved by the College's Cabinet.



- Athletic facility buildings at all the colleges conform to a unified color palette, different from the colleges' main campus building color palettes. The dark green (Essex Green) color of playing-level buildings (buildings that are adjacent to and at the same elevation as athletic fields and courts) provides excellent contrast to fast-flying objects (balls, etc.), which is a safety requirement. Metro Gray provides a mid-tone contrast color option to Essex Green, for doors.
- Digressions from this Exterior Paint Design Standard shall not be considered, unless the design professional receives prior written authorization from the Executive Director of Construction Planning or the Vice Chancellor of Facilities.

5. Paint Application Guidelines:

- For ease of initial and touch-up painting, mid-plane color changes are not allowed. Wall paint shall be applied across one wall plane, corner-to-corner, or at an architectural "breakpoint" such as a change in material or architectural trim.
- Door jambs shall be one color only, for ease of initial and touch-up painting and for the cleanest overall aesthetic.
- The majority of SMCCCD's buildings require masonry paint, because the exterior skins are concrete or plaster.
 - For Skyline College, the standard masonry paint to be used is 1118 ElastaKote 100% Acrylic Elastomeric Coating. This is a 100% acrylic, smooth elastomeric coating that features good film strength, elasticity, 200% elongation, bridging of hairline cracks, prevention of moisture penetration and cleans up with water. This paint is designed for above grade concrete, concrete block, stucco, and masonry. This paint conforms to Green Seal Paints GS-11 Criteria.
 - For College of San Mateo and Cañada College, the standard masonry paint to be used is 1128 Kel-Seal 100% Acrylic Elastomeric Coating. This is a 100% acrylic, smooth elastomeric coating that features excellent weather resistance, waterproofing, durability, excellent film strength, elasticity, 300% elongation, bridging of hairline cracks for prevention of moisture penetration, chalk resistant properties and cleans up with water. This paint is designed for concrete, concrete block, stucco and masonry surfaces and is self-priming on cured concrete and stucco. This paint conforms to Green Seal Paints GS-11 Criteria.
 - These elastomeric coatings are suitable for incidental use on adjacent metal and wood surfaces that should be painted the same color as the building field.
 - Specify the application of the same color semi-gloss paint on top of the final layer of elastomeric paint on lower exterior walls in circulation areas, as a cleanable, sacrificial wear layer.
 - Door trim can be painted in the adjacent building wall color or in the bronzetone color listed in the matrix below.

Approved Manufacturers

- Kelly-Moore
- Rustoleum
- Tnemec



Substitutes Allowed?

No substitutes allowed.

Pursuant to Section 3400 of the Public Contract: Kelly-Moore Paints, Rustoleum Paints and Tnemec Paints are now in use on the particular public improvement described as San Mateo County Community College District. At each instance in these specifications that a designated material, product, thing or service is designated by the brand names “Kelly-Moore” or “Rustoleum” or “Tnemec”, “Kelly-Moore”, “Rustoleum” or “Tnemec” are designated to support the existing painting systems that are in place at College of San Mateo, Cañada College, Skyline College, and the District Administration Building. The Contractor will furnish and apply only “Kelly-Moore” and/or “Rustoleum” and/or “Tnemec” paints and coatings as required, and no substitutions shall be deemed to be “or equal” or allowed.

Associated Design Standards and Construction Specifications

- 099123 Interior Paint Design Standard

End of Document
(Appendices follow)



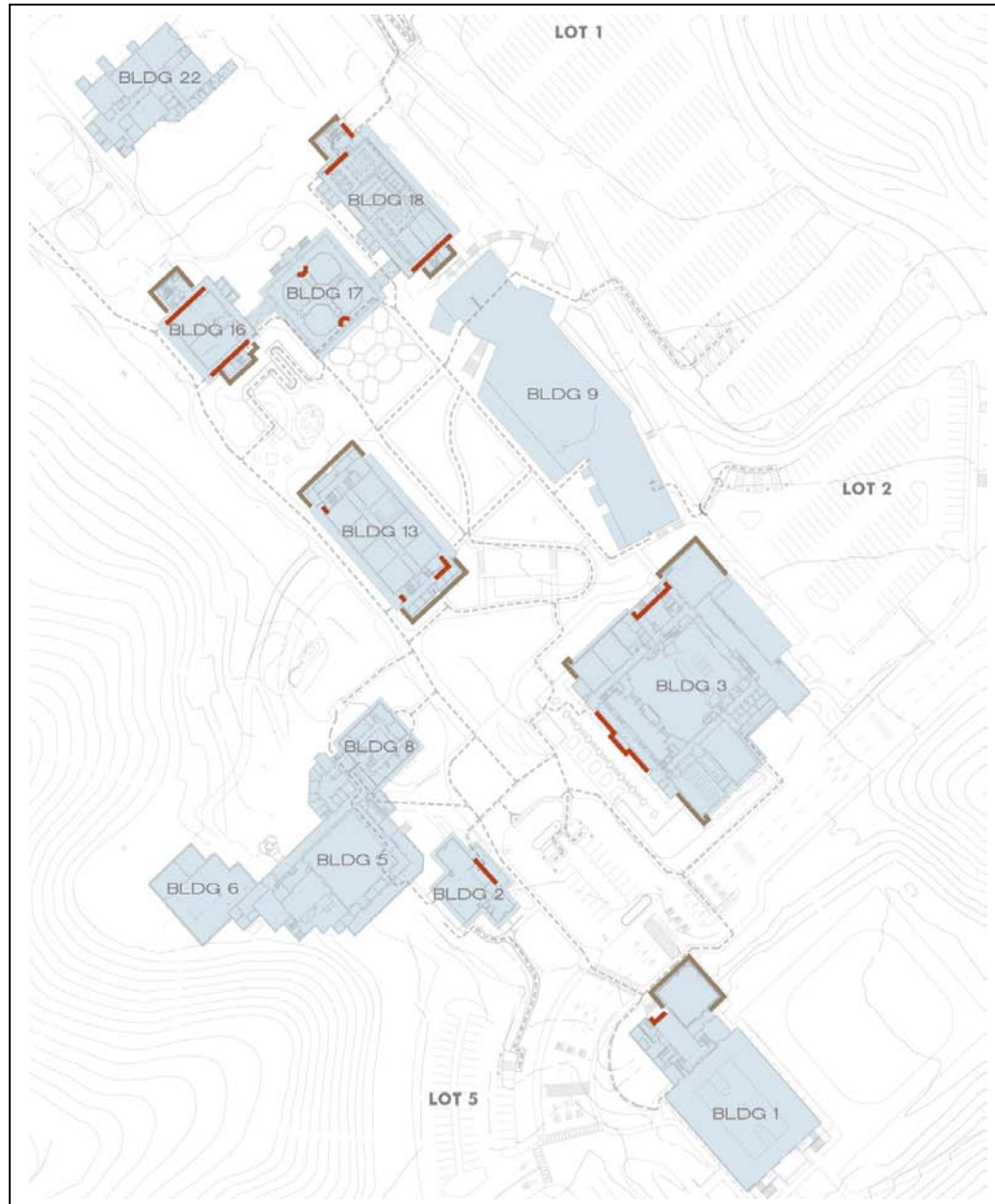
**Appendix A to Exterior Paint Design Standard
Cañada College Exterior Paints Color Palette**

Exterior Paint for All Buildings except Athletic Facilities @ Field Level						
Color description	color name	Kelly-Moore Control #	Product	sheen	notes	Formula
white	Roof White	05-1197-1112	1250-121 Acry-Shield	semi-gloss	for mansard roof parapets	(D ½)(C9)(L28)
parchment	Column White	00-988-1113	1128-100 Kel-Seal Terpolymer	flat elastomeric	for building columns and eaves (masonry surfaces)	(A1)(G2½)(C6)(L10)(Kx10)
beige	Wall Color	05-1198-1112	1128-100 Kel-Seal Terpolymer	flat elastomeric	for building walls (masonry surfaces)	(C21)(I 1)(LY18)
beige	Wall Color	05-1198-1112	1685-222 Dura-Poxy+	semi-gloss	Applied on top of elastomeric paint on lower exterior walls in circulation areas, for cleanable wear layer. Also for metal/wood surfaces adjacent to building wall & colonnade ceilings.	(M.25)(L32.5)(C14½)
medium orange	Terra Cotta	05-2086-1112	1128-330 Kel-Seal Terpolymer	flat elastomeric	accent color at building entries (masonry surfaces)	(B2½)(C2Y2)(I 12½) (F12½)(T12)
medium brown	Hickory Wind	09-1005-1102	1128-220 Kel-Seal Terpolymer	flat elastomeric	accent color at building bookends (masonry surfaces); this color matches Superior Stucco #746 Ambrose, which is the color of the B3 planters and, matches Solomon "Mojave" which is the colored concrete used on the Cañada College entablature	(C37)(L3)(Y42)
dark green	Green Thumb	KM# 149	1250-149 Acry-Shield	semi-gloss	accent color	Standard KM color
mossy green	Avocado	05-2089-1112	1685-555 Durapoxy	semi-gloss	accent color	(D28)(BY6)(C30) (L3Y44)(Kx2Y)
gray green	Khaki Green	05-2090-1112	1128-220 Kel-Seal Terpolymer	flat elastomeric	accent color (masonry surfaces)	(BY44)(CY23)(I6½)(L16)
grape	Eggplant	05-2093-1112	1685-555 Durapoxy	semi-gloss	accent color	(B46)(E5)(M46)(Kx25)
dark brown	Bronzestone	Rustoleum	5275402	semi-gloss	interior/exterior door trim, other metal surfaces as approved	Standard Rustoleum color
Exterior Paint for Athletic Facilities @ Field Level						
dark green	Essex Green	07-2318-1102	1250-149 Acry-Shield	semi-gloss	building color	(B3Y)(DY)(F4)(T8)
dark green	Essex Green	05-1888-1112	1245-149 Acry-Shield	low-sheen	building color	(B3Y)(DY)(F4)(T8)
medium gray	Metro Gray	KM# 75	1700-333 Kel-Guard	semi-gloss	door color	Standard KM color



Cañada College Accent Paint Legend

- “Bookends” accent color indicated in brown
- “Entry Accents” denoted in red



End of Appendix A of Exterior Paint Design Standard



**Appendix B to Exterior Paint Design Standard
College of San Mateo Exterior Paints Color Palette**

Exterior Paint for All Buildings except Athletic Facilities @ Field Level						
color description	color name	Kelly-Moore Control #	Product	sheen	notes	Formula
beige	Malibu Beige	KM# 216	1128-100 Kel-Seal Terpolymer	flat elastomeric	for building wall & colonnade ceilings (masonry surfaces)	Standard KM color
beige	Malibu Beige	KM# 216	1250-121 Acry-Shield	semi-gloss	Applied on top of elastomeric paint on lower exterior walls in circulation areas, for cleanable wear layer. Also for metal/wood surfaces adjacent to building wall & colonnade ceilings.	Standard KM color
white	Acoustic White	05-1200-1112	1240-121 Acry-Shield	flat	for roof overhangs	(C25)(L2)(Y34)
creamy white	Swiss Coffee	05-1201-1112	1128-100 Kel-Seal Terpolymer	flat elastomeric	for building columns & roof fascia (masonry surfaces); matches Parex stucco color "Marble White"	(C ¹ / ₄)(L ³ / ₄)
creamy white	Swiss Coffee	KM# 23	1250-23 Acry-Shield	semi-gloss	for metal/wood adjacent to bldg columns & roof fascia	Standard KM color
light brownish beige	Glen Abbey	05-922-1112	1128-100 Kel-Seal Terpolymer	flat elastomeric	for lowest floor of building walls below a certain datum line (i.e., the pedestal of the building) (masonry surfaces)	(B25)(I 15)(C22)
light brownish beige	Glen Abbey	KM# 3957-2	1250-222 Acry-Shield	semi-gloss	to match Glen Abbey paint color on metal/wood surfaces	Standard KM color
dark brownish beige	Earthstone	KM# 3972-2	1128-220 Kel-Seal Terpolymer	flat elastomeric	Matches Parex stucco color "Brushwood" (the medium stucco color on B10)	Standard KM color
dark brownish beige	Earthstone	KM# 3972-2	1685-220 Dura-Poxy+	semi-gloss	Matches Parex stucco color "Brushwood" (the medium stucco color on B10)	Standard KM color
wet concrete	Fair Fieldstone	KM# 3959-3	1128-330 Kel-Seal Terpolymer	flat elastomeric	Matches Parex stucco color "Fair Field Stone" (the darkest stucco color on the lowest part of B10 and B5)	Standard KM color
wet concrete	Fair Fieldstone	KM# 3959-3	1685-330 Dura-Poxy+	semi-gloss	Applied on top of elastomeric paint on lower exterior walls in circulation areas, for cleanable wear layer. Also used on exterior guardrails on stairs, decks, etc.	Standard KM color
wet concrete	Fair Fieldstone	KM# 3959-3	5725 DTM Acrylic Primer Finish 5885 DTM High Performance Acrylic Semi-Gloss Enamel	semi-gloss	For exterior galvanized metal railings on stairs, decks, etc., use one coat of # 5725 DTM Acrylic Primer Finish and 2nd and 3rd coats of #5885 DTM High Performance Acrylic Semi-Gloss Enamel	Standard KM color
gray green	Khaki Green	05-2090-1112	1128-220 Kel-Seal Terpolymer	flat elastomeric	accent color (masonry surfaces)	(BY44)(CY23)(I6½)(L16)



medium orange	Terra Cotta	05-2086-1112	1128-330 Kel-Seal Terpolymer	flat elastomeric	accent color (masonry surfaces)	(B2½)(C2Y2)(I 12½) (F12½)(T12)
golden yellow	Full Sun	KM# 168	1128-220 Kel-Seal Terpolymer	flat elastomeric	accent color (masonry surfaces)	Standard KM color
dark brown	Bronzestone	Rustoleum	5275402	semi-gloss	interior/exterior door trim, other metal surfaces as approved	Standard Rustoleum color
medium grey	46GR Sinker	Tnemec Company Inc.	StrataShield	satin	Applied on structural steel posts for rooftop screen at Building 5. V69F high build epoxoline topcoat also applied, in satin finish.	Standard Tenemec color
Exterior Paint for Athletic Facilities @ Field Level						
dark green	Essex Green	07-2318-1102	1250-149 Acry-Shield	semi-gloss	building color	(B3Y)(DY)(F4)(T8)
dark green	Essex Green	05-1888-1112	1245-149 Acry-Shield	low-sheen	building color	(B3Y)(DY)(F4)(T8)
medium gray	Metro Gray	KM# 75	1700-333 Kel-Guard	semi-gloss	door color	Standard KM color
gold	ME 660 Pharaoh's Gold	Modern Masters Metallic Paint Collection™	n/a	Semi opaque	Gold lettering on Bulldog Softball, Bulldog Baseball, and Bulldog Aquatics signage on black iron gates	n/a

End of Appendix B of Exterior Paint Design Standard



**Appendix C to Exterior Paint Design Standard
Skyline College Exterior Paints Color Palette**

Exterior Paint for All Buildings except Athletic Facilities @ Field Level						
color description	color name	Kelly-Moore Control #	product	sheen	notes	Formula
light beige	Malibu Beige	05-1202-1112	1118-100 ElastaKote	flat elastomeric	for building walls, overall color	(C4 ^{1/4})(LY13)(R2 ^{1/4})
light beige	Malibu Beige	KM# 216	1250-121 Acry-Shield	semi-gloss	for metal/wood adjacent to building walls	(B25)(C35)(F4 ^{1/2})
light beige	Cascade Beige	05-1203-1112	1118-100 ElastaKote	flat elastomeric	for columns and parapets	(B30 ^{1/2})(C27)(F5 ^{1/2})
light beige	Cascade Beige	KM# 218	1250-121 Acry-Shield	semi-gloss	Applied on top of elastomeric paint on lower exterior walls in circulation areas, for cleanable wear layer. Also for metal/wood adjacent to columns and parapets	Standard KM color
white	Weathered Branch	05-1204-1112	1118-100 ElastaKote	flat elastomeric	for window surrounds	(C1 ^{1/2})(L25)
white	Weathered Branch	KM# 573-L	1250-121 Acry-Shield	semi-gloss	for metal/wood adjacent to window surrounds	Standard KM color
dark brown	Bronzestone	Rustoleum	5275402	semi-gloss	interior/exterior door trim, other metal surfaces as approved	Standard Rustoleum color
shadow grey	African Plain	KM# 3975-3	1245-333 Acry-Shield	low sheen	For painting the inside of cast-in-place inscriptions in order to allow the wording to pop out against the wall color, e.g. the Gandhi inscription on Building 6 Student Center	Standard KM color
medium orange	Terra Cotta	05-2086-1112	1118-330 ElastaKote	flat elastomeric	accent color at building entries (masonry surfaces)	(B2 ^{1/2})(C2Y2)(I 12 ^{1/2})(F12 ^{1/2})(T12)
Exterior Paint for Athletic Facilities @ Field Level						
dark green	Essex Green	07-2318-1102	1250-149 Acry-Shield	semi-gloss	building color	(B3Y)(DY)(F4)(T8)
dark green	Essex Green	05-1888-1112	1245-149 Acry-Shield	low-sheen	building color	(B3Y)(DY)(F4)(T8)
medium gray	Metro Gray	KM# 75	1700-333 Kel-Guard	semi-gloss	door color	Standard KM color

End of Appendix C of Exterior Paint Design Standard

SECTION 22 14 00

FACILITY STORM DRAINAGE

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Prior to demolition of existing roofing test each existing drain at Building 12 and all colonnades. Submit report to design professional clearly indicating which drains are functional and which are not.
- B. Replace existing strainers/clamping rings/accessories. Clean existing drain bowls.
- C. Alternate: Replace existing roof drains, and associated strainers/clamping rings/accessories, and tie into existing piping. Modify piping as required to connect to drains.
- D. Test 100 percent of drains and overflows. Clean plumbing drains and overflows from roof to storm sewer until fully functional.

1.2 REFERENCES

- A. American Society of Mechanical Engineers (ASME) Publications
 - 1. ASME A112.6.4 – Roof, Deck and Balcony Drains
- B. American Society for Testing and Materials (ASTM) Publications
 - 1. ASTM C 564 - Rubber Gaskets for Cast Iron Soil Pipe and Fittings.
 - 2. ASTM A 74 - Cast-Iron Soil Pipe and Fittings
 - 3. ASTM C 552 - Cellular Glass Thermal Insulation
- C. Cast-Iron Soil Pipe Institute (CISPI) Publications
 - 1. CISPI 301 - Cast-Iron Soil Pipe and Fittings for Hubless Cast-Iron Sanitary Systems
 - 2. CISPI 310 - Patented Joint for Use in Connection with Hubless Cast-Iron Sanitary Systems.
- D. International Code Council (ICC) Publication
 - 1. California Building Code, latest edition
- E. International Association of Plumbing and Mechanical Officials (IAPMO) Publication
- F. California Plumbing Code, latest edition

1.3 SUBMITTALS

- A. Manufacturer's Data: Submit the following manufacturer's data:
 - 1. Fittings
 - 2. Bowl Assemblies
 - 3. Strainers
 - 4. Drain bowl and pipe insulation
 - 5. Lead seals

- B. Product Samples:
 - 1. Bowl assemblies
 - 2. Drain Strainers

1.4 QUALITY ASSURANCE

- A. Company specializing in plumbing installation.
- B. Minimum of five (5) years documented experience.
- C. Licensed to do business as a plumbing contractor in the state of California.

1.5 REGULATORY REQUIREMENTS

- A. Conform to all local, county, and state building requirements.
- B. The Contractor shall be responsible for obtaining all necessary permits for demolition of existing plumbing fixtures and installation of the Work.
- C. The Contractor shall be responsible for scheduling all tests and inspections with municipal building inspectors.

PART 2 - PRODUCTS

2.1 GENERAL

- A. Only submitted and approved materials shall be utilized.
- B. No products utilized within this project shall contain asbestos.

2.2 MANUFACTURERS

- A. As manufactured by Zurn, Josam, or equal.

2.3 PIPING

- A. All fittings shall be long radius.
- B. Cast-Iron hubless pipe and fittings shall conform to CISPI 301 with CISPI 310 coupling joints.
- C. Cast-Iron hub and spigot pipe and fittings shall conform to ASTM A-74 with ASTM C-564 rubber compression gaskets joints.
- D. Lead seals at existing roof drains to remain and piping.
- E. Riser Clamp: Subject to compliance with requirements provide 1/2 inch nominal size zinc plated riser clamp, Part No. 46845; Fastenal or approved equal.

2.4 COPPER TUBE AND SUPPORTS AT OVERFLOW PIPES

- A. Copper Tube: Type “K” copper tube.
- B. Copper Drainage Support: Copper riser clips.

2.5 ROOF DRAINS AND OVERFLOW DRAINS

- A. ASME A112.6.4 cast iron roof drains and clamping rings for use with roofing.
- B. Hot dipped galvanized cast-iron drains.
- C. Minimum 10” diameter drain body.
- D. Drain Bowl: Cast iron.
- E. Cast Iron Strainer: Removable cast-iron locking dome strainer.
- F. Clamping Ring: Integral non-puncturing flashing clamp device.
- G. Include top-set deck plate.
- H. Include optional under deck clamping assembly for positive securement.
- I. Fasteners: Fasteners, washers and nuts shall be type 304 stainless steel.

PART 3 - EXECUTION

3.1 GENERAL

- A. Provide and install drain and overflow bowls, fittings and connections to obtain a fully functional roof drainage system.
- B. All work shall closely conform to the California Plumbing Code.
- C. The Contractor shall be responsible for locating and avoiding all hidden construction while installing Work. The Contractor is solely responsible for making all investigations required to install the Work without damage to other building components. Any such damage shall be repaired at the Contractor’s expense and to the Owner’s satisfaction. In the event that the Contractor’s repairs are unacceptable to the Owner, the Owner will take corrective action and back-charge the Contractor for all restoration costs resulting from the failure to satisfactorily restore the building to original condition.
- D. Closely coordinate all drain Work with that specified in Division 7.

3.2 LOWERING ROOF DRAINS

- A. Coordinate size and exact location of sump.
- B. Notify the Owner if existing drain bowl or connecting drain system is defective; also notify the Owner of any problem with using long radius fittings.

- C. Disconnect, reinstall and reinsulate in accordance with the Contract Documents.
- D. Water test the completed system.

3.3 FLASHING OF ROOF DRAIN

- A. Closely coordinate drain Work with roofing installation.

3.4 INSULATION

- A. Install glass batt drain bowl insulation jacket in accordance with the insulation and drain bowls manufacturer's printed instructions.
- B. All roof drains, overflow drains, and associated piping is to be insulated.

3.5 CLEANING OF DRAINAGE SYSTEM

- A. After drain Work and roofing is complete, clean all drain and overflow piping of debris and clogs such that the system is free flowing.
- B. Utilize "Roto-Rooter" type equipment down from the roof to the storm sewer connections for each drain location.
- C. Clean each roof drain and overflow drain.
- D. Owner's Representative must be present during cleaning. Provide the Owner 48 hours notice prior to cleaning to arrange for observation of Work.

3.6 FIELD TESTING

- A. Before final completion of Work, test each system as in service to demonstrate satisfactory performance.
- B. Immediately effect repairs to unacceptable conditions and retest system to confirm repair performance.

3.7 SITE CLEAN UP

- A. Clean-up shall be complete and to the satisfaction of the Owner.
- B. Restore all interior and exterior surfaces damaged or soiled by the Contractor's work to the Owner's satisfaction.
- C. Failure to restore surfacing in a satisfactorily manner will result in the Owner obtaining the service of a specialty contractor to effect satisfactory repairs. All costs incurred by the Owner for restoration Work shall be the sole responsibility of the Contractor.

END OF SECTION

SECTION 23 05 00

ROOFTOP MECHANICAL EQUIPMENT

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes provisions and procedures covering the protection, temporary disconnection/reconnection, relocating/raising, and installation of existing roof mounted mechanical equipment, including related systems such as sheet metal duct work, plastic and metal piping, electrical wiring and conduit and their related supports.

1.2 SCOPE OF WORK

- A. The work shall be governed by the provisions of this Section and can be assumed to include, but not limited to, the following:
1. Disconnection/Reconnection of electrical power to the heating, ventilating and air conditioning units, pumps, boilers and required for other units being raised.
 2. Disconnection/Reconnection of low voltage control power to the heating, ventilating and air conditioning units, pumps, boilers and required for other units.
 3. Temporarily raising or removal and storage, as may be required by the reroofing operations of the heating, ventilating and air conditioning units, pumps and required other units.
 4. Equipment modifications, as required for reinstallation on new supports, curbs, or other changes due to the reroofing work.
 5. Reinstallation of the heating, ventilation and air conditioning units, pumps, boilers and required other units with operating performances equal to or better than pre construction performances.
 6. Raise insulated sheet metal ductwork, as required by the reroofing operations, and provide all modifications required to the duct work or it's supports that result.
 7. Raise metal and P.V.C. piping, as required by the reroofing operations, and provide all modifications required to the piping or its support that result.
 8. Replace existing HVAC spring isolators in exhaust fans with seismically restrained isolators.
 9. Replace existing flex connectors with new flex connectors.
 10. Secure existing unsecured electrical conduit to deck to meet code.
- B. The extent of the work shall be verified by the contractor using the following means:
1. Going to the project site to view the mechanical equipment and related systems.
 2. Making a comprehensive study of the reroofing construction drawings.
 3. Discussing the project with the Owner's Representative.
 4. Using all other reasonable means he deems necessary, after approval by the Architect/Engineer.

1.3 STANDARDS

- A. All work required by this section shall be performed in accordance with the applicable sections of the following standards.
1. American Society of Heating, Refrigerating and Air Conditioning Engineers, ASHRAE.
 2. Sheet Metal and Air Conditioning Contractors National Association, SMACNA.
 3. National Electrical Code, NEC.
 4. American Gas Association, AGA.
 5. American Water Works Association, AWWA.

6. American Institute of Steel Construction, AISC.
7. American Welding Society, AWS.
8. National Fire Protection Association, NFPA.
9. American Society for Testing and Materials, ASTM.
10. Underwriters Laboratories, UL.
11. American National standards Institute, ANSI.
12. American Wood Preservers Association, AWP.

1.4 STANDARD OF TESTING LABORATORIES:

- A. Fire Ratings: Where specifications require, Contractor shall submit proof that material to be furnished conforms to requirements of Underwriters Laboratories, Inc. (UL) or Factory Mutual Laboratories (FM). Contractor may, in lieu of the UL/FM listing, submit a written certificate from any testing agency satisfactory to Owner's Representative. Furnish materials with labels attached whenever fire labeling is specified; no exceptions are allowed.
- B. Certified tests on material or equipment to be incorporated into this project will be acceptable provided they are conducted in accordance with standards established by the authority cited in the referenced specification and the tested materials or equipment meet the specified requirements. Preprinted certification will not be acceptable.
- C. All certifications shall be in the original. Certificates shall itemize the specified material or equipment tested, the standard or other authority used in testing for the specified quality, and the test method used. Attach certified copies of all test reports of such certification.

1.5 QUALITY ASSURANCE

- A. A single contractor shall perform the work of this section; and shall be a licensed mechanical contractor, with not less than three (3) years of successful experience in work similar to the nature and scope of the work required in this section.
- B. Use adequate numbers of skilled workman who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and methods needed for proper performance of the work in this section.

1.6 SCHEDULING AND PROGRESS MEETINGS

- A. Weekly Meetings: Contractor shall coordinate and schedule work with the Owner and the Owner's representative. While work is in progress, contractor shall attend a mandatory work in progress meeting once a week, on a predetermined time and day.

1.7 SUBMITTALS

- A. Schedule: Submit a schedule indicating the proposed methods and sequence of operations for mechanical equipment disconnect/reconnect work, which indicates coordination with both the Roofing Contractors and the Owner's project requirements, to the Architect for review and approval prior to commencement of work.
- B. Provide detailed sequence of mechanical system interruptions to ensure limited down-time and uninterrupted progress of Owner's on site operations.

- C. Performance Logs: In accordance with requirements of this Section, performance logs will be completed, prior to and after roofing operations; to insure mechanical equipment post construction performance is equal to pre-construction performance. Submit three (3) copied to the Architect.

1.8 SAFETY AND ENVIRONMENTAL PROTECTION

- A. Contractor shall comply with all OSHA, EPA, and Owner regulations for safety and environmental protection. Do not start work unless all safety and environmental regulations are met.
- B. For scaffolding, Staging and rigging apparatus, contractor must ensure that safety belts, slip shields, railings, etc. Are in place to adequately protect workers.
- C. Evenly distribute materials and equipment on rooftop so as not to over load and damage the roof structure. Locate and verify column locations, and store materials and equipment over columns. Provide temporary sleepers as necessary.
- D. Contractor shall not use any roof, sanitary or storm drain, to dispose of solvents, mastics, or any other foreign material, nor shall such materials be disposed of on the ground. Materials, including empty containers, likely to be hazardous to health shall be packed into suitable containers, removed from the site, and disposed of in a manner conforming to applicable environmental regulations.
- E. Contractor shall not allow any refrigeration gases to be released into the atmosphere.

1.9 FIRE PROTECTION REQUIREMENTS:

- A. Inspection: This Project will be inspected periodically by the Owner and/or the Architect/Engineer for compliance with all fire codes and standards listed or referenced in the Contract Documents.
- B. Codes and Standards: If the listed or referenced fire code or standard requires any equipment or material items not specifically shown in the Contract Documents, the Contractor shall not be relieved of the responsibility for providing the items and requesting installation instructions from the Architect/Engineer.
- C. Fire Extinguisher: Extinguisher of a type and quantity acceptable to the Owner shall be provided by the Contractor and maintained in the construction area, in the Contractor's temporary buildings, and at storage piles of flammable materials. These shall be of a type conforming to National Fire Codes (NFC) (1985), Volume 1, and National Fire Protection Association (NFPA) Standard Number 10 (1984); and shall remain the property of the Contractor.
- D. Flame Cutting, Welding, and Soldering: The Contractor shall observe all precautions involving open flame. No flame cutting, welding, or soldering of any description shall be permitted until the work site has been inspected and the operation approved by the Owner. All individuals who will perform this type of work shall attend a fire prevention class within 6 months prior to the start of the Work. The Contractor shall place open flame caution signs on the work site and ensure that these signs are clearly visible to Contractor's employee's while the Work is on-going.

1.10 UTILITY SHUTDOWNS:

- A. No utility service, including fire protection, shall be interrupted for any purpose without prior approval of the Owner.

- B. The request for permission to interrupt service shall be submitted in writing to the Owner at least ten days (10) prior to the date of the proposed interruption. The request shall give the following information:
 - 1. Locations of proposed interruptions
 - 2. Hours and dates of proposed interruptions, and
 - 3. Services affected
- C. Services shall not be interrupted until receipt of approval of proposed hours and dates from the Owner. The Owner will notify the Contractor, within five days after receipt of the request for interruption, of his approval or disapproval.
- D. Only the Owner shall approve utility interruptions.
- E. Operation of valves on water mains will be only by Owner. Where shutoff of water lines interrupts service to fire hydrants or fire sprinkler systems, the Contractor shall arrange for his operation and have sufficient personnel available to restore service without delay on the event of emergency as determined by the Owner.
- F. Fire Protection Systems: Where interruption of electrical power affects service, the Contractor shall notify the Owner before making such interruptions and shall restore service prior to leaving work site each day.

1.11 JOB CONDITIONS

- A. Occupancy: Owner will be continuously occupying all areas of the building during the construction period. Conduct mechanical system interruptions in a manner that will minimize the need for disruption of Owner's normal operations. Provide Owner advance notice of all service interruptions.
- B. Condition of Mechanical Systems: Owner assumes no responsibility for actual condition of mechanical units that are a part of the work of this section. It is the contractor's responsibility to properly document all existing conditions prior to the start of work.

1.12 EXISTING CONDITIONS

- A. Examine the areas, surfaces and conditions under which work of this Section will be performed. Identify and correct conditions detrimental to timely and proper completion of the work. Do not proceed until unsatisfactory conditions are corrected.

1.13 PROTECTION REQUIREMENTS

- A. Membrane Protection: Provide protection against staining and mechanical damage to newly applied roofing and adjacent surfaces throughout this project.
- B. Limited Access: Prevent access by the public to materials, tools and equipment during the course of the project.
- C. Debris Removal: Remove all debris daily from the project site and take to a legal dumping area authorized to receive such materials.
- D. Site Conditions: Complete, to the Owner's satisfaction, all job site clean up of areas affected by the construction.

1.14 WARRANTY

- A. A warranty shall be provided for each item of work performed and shall include manufacturer's warranties as required.
- B. The warranties shall be of the type and for a time considered as industry standard for the item of work being warranted, and shall be subject to verification by the Architect prior to approval.

PART 2 - PRODUCTS

2.1 PRODUCTS OF REINSTALLATION

- A. General: All re-installation work shall be complete, in accordance with recognized proper mechanical and electrical practices and standards, and as required to provide at least equal performance to that existing prior to the start of the Work.
- B. Provide same products and/or type of construction consistent to the standards of quality as the intent of the original construction, as needed, to re-install the existing equipment to the performance requirements of this Section.
- C. Generally, the Contract Documents will not define products or standards of workmanship present in the existing mechanical equipment. The Contractor shall determine products by inspections and any necessary testing, and workmanship by use of the existing as a sample of comparison.
- D. Presence of a product, finish, or type of equipment requires that re-installation shall be performed as necessary to make the work complete and consistent to the standards of quality as the intent of the original construction.
- E. Mastics, coatings and sealants for sealing duct work joints, as manufactured by Mon-Eco Industries, Inc. (MEI) or approved equal.

2.2 REPLACEMENT ITEMS

- A. New vibration isolators shall be seismically restrained with all necessary accessories. Acceptable manufacturers are California Dynamic, type OX series, designation E or QS series, as necessary for the weight of the unit. Other acceptable manufacturer is Vibrex type RMS-EQ or approved equal.
- B. New flex connectors shall be rubber impregnated cloth with metal skirting attached at each end, as manufactured by Duradyne or approved equal.
- C. New sheet metal offset for duct extension, minimum 24 gauge galvanized sheet metal, with G-90 galvanization.
- D. For new Miscellaneous Iron components comply with following standards, as pertinent.
 - 1. Steel plates, shapes, and bars: ASTM A36;
 - 2. Steel plates to be bent or cold-formed: ASTM A283, grade C;
 - 3. Steel tubing (hot-formed, welded, or seamless): ASTM A501;
 - 4. Steel bars and bar-size shapes: ASTM A306, grade 65, or ASTM A36;

- E. Concrete inserts:
 - 1. Threaded or wedge type galvanized ferrous castings of malleable iron complying with ASTM A27;
 - 2. Provide required bolts, shims, and washers, hot-dip galvanized in accordance with ASTM A153.

2.3 NEW SUPPORT BRACKET

- A. Mount existing and new disconnect switch to existing equipment, off the roof, where possible.
- B. Provide new lateral supports for existing disconnect switches, where necessary to meet Code. Provide shop drawings for proposed mounting system.

PART 3 - EXECUTION

3.1 MECHANICAL EQUIPMENT ALTERATION AND RE-INSTALLATION

- A. General: Prior to disconnection of equipment for removal / raising, prepare a performance log for each piece of equipment that will be re-installed.
- B. Storage: All equipment stored either for re-installation, or the Owner's salvage shall be the responsibility of the Contractor and shall be properly stored in a secure location.
- C. Re-notify the Owner 24 hours in advance of any disconnect operations.
- D. Coordinate the work of this Section with the work of other trades to insure the dry-in of all equipment penetrations.
- E. Remove, or temporarily raise, existing roof top equipment as required by provisions of this section. Use all means necessary to protect existing structures and equipment during removal.
- F. Install new miscellaneous iron sleepers, and curbs in accordance with construction drawings and as necessary to complete this project.
- G. Perform industry recommended procedure for the proper storage of mechanical units.
- H. Re-install mechanical equipment in accordance with the original manufacturer's recommendations.
- I. Re-connect electrical and control wiring to equipment and comply with equipment manufacturer's recommendations.
- J. Modify electrical and control wiring, as required, due to any changes in existing conditions caused by roof renovation work. Route wiring to limit or eliminate roof penetrations when possible.
- K. Start-up mechanical equipment after reinstallation.
- L. Prepare performance logs for each unit at start-up and submit to Architect.
- M. Perform tests on ductwork and piping as required to ensure their proper performance.

3.2 INSTALLATION OF NEW FLEXIBLE CONNECTIONS & OFFSETS

- A. Install new flexible connections in accordance with manufacturer's published literature.
- B. Slip metal flange (male to female lap). Set lap joints in sealant, where possible. Screw male/female connections with self-tapping stainless steel screws with neoprene washers minimum 3" on center.
- C. Install new duct offsets as required to match new height of duct.
- D. Seal sheet metal duct joints with MEI Eco Duct seal, in accordance with their published instructions.
- E. Install a sheet metal hood over the flex connector, attached to one side. The hood shall provide UV protection to the entire length of the flex connector, but shall not bind the flex connection from its intended purpose.

3.3 LATERAL SUPPORTS

- A. All equipment being removed and reinstalled shall be installed in accordance with current seismic codes.
- B. Reinstall all equipment, conduits, and disconnect switches with proper lateral support for seismic restraint.

3.4 PROTECTION OF PROPERTY

- A. Contractor shall protect existing property against damage, stains and excessive wear during performance of this work.
- B. The Contractor shall be responsible for replacement or repair of all damaged landscaping, grounds, plantings, finished surfaces, utilities, equipment, and structures or parts thereof that he/she has damaged, or had to remove or cut into in order to perform Work specified in this Project.

END OF SECTION