



SCARCHITECT, INC.

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**RE-ROOF KINDERGARTEN CLASSROOM BUILDING
AT
CONLEY ELEMENTARY SCHOOL
623 ROSE AVENUE
TAFT, CA 93268
FOR
TAFT CITY SCHOOL DISTRICT
TAFT, KERN, CALIFORNIA**

**APPROVED
TAFT CITY SCHOOL DISTRICT**

By _____
Board Resolution

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01-NOTICE TO CONTRACTORS CALLING FOR BIDS

1. OWNER: Taft City School District
2. PROJECT IDENTIFICATION NAME: Re-Roof Kindergarten Classroom Building at Conley Elementary School
3. PROJECT LOCATION: 623 Rose Avenue, Taft, CA 93268
4. PROJECT DESCRIPTION: THE SCOPE OF WORK SHALL INCLUDE BUT NOT NECESSARILY LIMITED TO ALL LABOR, MATERIALS & EQUIPMENT AS REQUIRED & NECESSARY FOR THE DEMOLITION OF ALL EXISTING BUILT UP ROOFING TO ROOF DECK, ROOF FLASHINGS ETC IN ORDER TO HAVE A BARE ROOF FOR SHEATHING INSPECTION. CONTRACTOR SHALL PROVIDE IN THEIR BID A UNIT COST PER SQUARE FOOT FOR THE REMOVAL AND INSTALLATION OF 1/2" PLYWOOD SHEATHING AND A UNIT COST PER LINEAL FOOT FOR THE REMOVAL AND INSTALLATION OF THE 2x4 REDWOOD SUB FASCIA. CONTRACTOR SHALL ALSO REMOVE, STORE, PROTECT AND REINSTALL ROOF TOP SPLIT SYSTEM UNITS AFTER ROOFING IS COMPLETED, START UNIT AND RETURN TO A WORKING CONDITION. INSTALL BUILT UP ROOFING, CURB AND PIPE FLASHING, SHEET METAL CAPS, DRIP FLASHINGS, ETC, CAULKING AND SEALANTS AND REQUIRED FOR A COMPLETE RE-ROOF OF THE EXISTING KINDERGARTEN BUILDING.

This project is anticipated to start on approximately June 9, 2025 and is anticipated to have a duration of 45 calendar days for completion.

5. BID DEADLINE: Bids are due on March 26th, 2025 at 2:00pm or at any other date or time as set by Addendum.
6. PLACE OF BID RECEIPT: SCArchitect, Inc.
1601 New Stine Road, Suite 280
Bakersfield, CA 93309
7. METHOD OF BID RECEIPT: Personal delivery, courier, or mailed via United States Postal Service to above address.
8. PLACE PLANS ARE ON FILE: The plans and specifications are available for purchase at Blueprint Service Company, 1100 18th Street, Bakersfield, CA. 93301. Phone 661-327-2501, Fax 661-327-9265. This purchase is non-refundable. Contractor will be responsible for all costs relating to purchase of plans and specifications as well as all costs for deliveries utilizing a third-party company. Plans and Specifications are also available through the Bakersfield Builder's Exchange.
9. SEALED BID MARKING: 1382 - Re-Roof Kindergarten Classroom Building at Conley Elementary School
10. ALTERNATES: N/A

11. MANDATORY JOB WALK: Meet at: Date: March 12, 2025 Time: 10:00am

Location: Conley Elementary School
623 Rose Avenue
Taft, CA 93268

Attendance at the entire job walk is mandatory and failure to attend the entire job walk may result in your bid being rejected as non-responsive. Contact OWNER for details on required job walks and related documentation.

12. PLAN DEPOSIT REQUIRED: See paragraph 8.

13. This is a prevailing wage project. OWNER has ascertained the general prevailing rate of per diem wages in the locality in which this work is to be performed for each craft or type of worker needed to execute this contract. These rates are on file at OWNER's office, and a copy may be obtained upon request, or at www.dir.ca.gov. Contractor shall post a copy of these rates at the job site. ALL PROJECTS OVER \$1,000 ARE SUBJECT TO PREVAILING WAGE MONITORING AND ENFORCEMENT BY THE LABOR COMMISSIONER.

It shall be mandatory upon the contractor to whom the contract is awarded (CONTRACTOR), and upon any SUBCONTRACTOR, to pay not less than the specified rates to all workers employed by them in the execution of the contract.

14. A Payment Bond for contracts over \$25,000 and a Performance Bond for all contracts will be required prior to commencement of work. These bonds shall be in the amounts and form called for in the Contract Documents.

15. Pursuant to the provisions of Public Contract Code Section 22300, CONTRACTOR may substitute certain securities for any funds withheld by OWNER to ensure CONTRACTOR's performance under the contract. At the request and expense of CONTRACTOR, securities equivalent to any amount withheld shall be deposited, at the discretion of OWNER, with either OWNER or a state or federally chartered bank as the escrow agent, who shall then pay any funds otherwise subject to retention to CONTRACTOR. Upon satisfactory completion of the contract, the securities shall be returned to CONTRACTOR.

Securities eligible for investment shall include those listed in Government Code Section 16430, bank and 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 OWNER. CONTRACTOR shall be the beneficial owner of any securities substituted for funds withheld and shall receive any interest on them. The escrow agreement shall be in the form indicated in the Contract Documents.

16. To bid on or perform the work stated in this Notice, CONTRACTOR must possess a valid and active contractor's license of the following classification(s) B or C-39. No CONTRACTOR or subcontractor shall be qualified to bid on, be listed in a bid proposal, subject to the requirements of § 4104 of the Public Contract Code, for a public works project (submitted on or after March 1, 2015) unless currently registered with the

Department of Industrial Relations (DIR) and qualified to perform public work pursuant to Labor Code § 1725.5. No CONTRACTOR or subcontractor may be awarded a contract for public work on a public works project (awarded after April 1, 2015) unless registered with the DIR. DIR's web registration portal is:
www.dir.ca.gov/Public-Works/Contractors.html

17. CONTRACTOR and all subcontractors must furnish electronic certified payroll records (eCPR) to the Labor Commissioner [specify weekly, bi-weekly or monthly] in PDF format. Registration at www.dir.ca.gov/Public-Works/Certified-Payroll-Reporting.html is required to use the eCPR system.

The following notice is given as required by Labor Code Section 1771.5(b)(1): CONTRACTOR and any subcontractors are required to review and comply with the provisions of the California Labor Code, Part 7, Chapter 1, beginning with Section 1720, as more fully discussed in the Contract Documents. These sections contain specific requirements concerning, for example, determination and payment of prevailing wages, retention, inspection, and auditing payroll records, use of apprentices, payment of overtime compensation, securing workers' compensation insurance, and various criminal penalties or fines which may be imposed for violations of the requirements of the chapter. Submission of a bid constitutes CONTRACTOR's representation that CONTRACTOR has thoroughly reviewed these requirements.

18. OWNER will retain 5% of the amount of any progress payments.

19. This Project requires does not require prequalification pursuant to AB 1565 of all general contractors and all mechanical, electrical and plumbing subcontractors. If required, a Prequalification package may be obtained by downloading the necessary forms from _____. A bid package will not be accepted from any bidder that is required to submit a completed questionnaire and supporting documents pursuant to AB 1565, but has not done so at least ten (10) business days prior to the date fixed for the public opening of sealed bids or that has not been prequalified for at least five (5) business days prior to that date.

02-INSTRUCTIONS TO BIDDERS

**WARNING: READ THIS DOCUMENT CAREFULLY
DO NOT ASSUME THAT IT IS THE SAME AS OTHER
SIMILAR DOCUMENTS YOU MAY HAVE SEEN
EVEN IF FROM THE SAME OWNER**

PROJECT TITLE/BID #: Re-Roof Kindergarten Classroom Building at Conley
Elementary School
OWNER: Taft City School District

1. Preparation of Bid Form.

The Owner invites bids on the form attached to be submitted at the time and place stated in the Notice to Contractors Calling for Bids. Bids shall be submitted on the prescribed Bid Form, completed in full. All bid items and statements shall be properly and legibly filled out. Numbers shall be stated both in words and in figures where so indicated, and where there is a conflict in the words and the figures, the words shall govern. The signatures of all persons shall be in longhand. Prices, wording, and notations must be in ink or typewritten.

2. Form and Delivery of Bids.

The bid must conform to and be responsive to all Contract Documents and shall be made on the Bid Form provided. The complete bid, together with any additional materials required, shall be enclosed in a sealed envelope, addressed and hand-delivered or mailed to the Owner at the address set forth in the Notice to Contractors Calling for Bids, and must be received on or before the time set for the opening of bids. The envelope shall be plainly marked in the upper left-hand corner with the bidder's name, the project designation, and the date and time for the opening of bids. It is the bidder's sole responsibility to ensure that its bid is received prior to the bid deadline. In accordance with Government Code Section 53068, any bid received after the scheduled closing time for receipt of bids shall be returned to the bidder unopened.

At the time set for the opening of bids, the sealed bids will be opened and publicly read aloud at the place indicated in the Notice to Contractors Calling for Bids. However, if this project calls for prequalification of bidders pursuant to Public Contract Code Section 20111.5, only those sealed bids received from bidders who have been prequalified for at least one day prior to bid opening shall be opened and publicly read aloud.

3. Bid Security.

Each bid shall be accompanied by a bid security in cash, a certified or cashier's check, or bid bond in an amount not less than 10 percent of the total bid price payable to the Owner. The bid security shall be given as a guarantee that if awarded the contract the

bidder will execute and return the Construction Agreement within 10 working days after award of the contract and will furnish on the prescribed forms a satisfactory Payment (labor and material) Bond and separate Performance Bond, in accordance with the Contract Documents and Civil Code Sections 9550 et seq., and certificates evidencing that the required insurance is in effect in the amounts set forth in the Contract Documents. In case of refusal or failure to timely execute the Construction Agreement and furnish the required bonds and insurance certificates, the bid security shall be forfeited to the Owner. If the bidder elects to furnish a bid bond as its bid security, the bidder shall use the bid bond form included in the Contract Documents, unless the Owner elects to waive the use of the form provided, in its sole discretion.

4. Signature.

At the various times such documents are required to be submitted, the Bid Form, all bonds, the Designation of Subcontractors form, all Information Required of Bidder or prequalification forms, Workers Compensation Certificate, Drug-Free Workplace Certification, Non-Collusion Affidavit, Asbestos and Lead Based Paint Certification, Iran Contracting Act Certification, the Construction Agreement, and all Guarantees must be signed in the name of the bidder and must bear the signature of the person or persons duly authorized to sign these documents. Where indicated, if bidder is a corporation, the legal name of the corporation shall first be set forth, together with two signatures: one from among the chairman of the board, president, or vice president, and one from among the secretary, chief financial officer, or assistant treasurer. Alternatively, the signature of other authorized officers or agents may be affixed, if duly authorized by the corporation. Such documents shall include the title of such signatories below the signature and shall bear the corporate seal. Where indicated, if bidder is a joint venture or partnership, the bidder shall submit with the bid certifications signed by authorized officers of each of the parties to the joint venture or partnership, naming the individual (1) who shall be the agent of the joint venture or partnership, (2) who shall sign all necessary documents for the joint venture or partnership and, (3) should the joint venture or partnership be the successful bidder, who shall act in all matters relative to the resulting contract for the joint venture or partnership. If bidder is an individual, his/her signature shall be placed on such documents.

5. Modifications.

Changes in or additions to any of the bid documents, the summary of the work bid upon, or the alternative proposals, or any other modifications which are not specifically called for by the Owner, may result in the Owner's rejection of the bid as not being responsive. No oral or telephonic modification of any bid will be considered. However, prior to the opening of bids, a telegraphic modification signed by the bidder and postmarked and received prior to the opening of bids, or a facsimile modification duly signed by the bidder received prior to the opening of bids, may be considered if included within a sealed bid. Erasures, Inconsistent, or Illegible Bids.

The bid submitted must not contain any erasures, interlineations, or other corrections

unless each correction creates no inconsistency and is suitably authenticated and noted by signature of the bidder. In the event of inconsistency between words and figures in the bid, words shall control figures. In the event the Owner determines that any bid is unintelligible, illegible, or ambiguous, the Owner may reject the bid as not being responsive.

6. Examination of Site and Contract Documents.

At its own expense and prior to submitting bids, each bidder shall examine all documents relating to the project, visit the site, and determine the local conditions which may in any way affect the performance of the work, including the general prevailing rate of per diem wages and other relevant cost factors. Each bidder shall be familiar with all federal, state, and local laws, ordinances, rules, regulations, and codes affecting the performance of the work, including the cost of permits and licenses required for the work. Each bidder shall make such surveys and investigations, including investigation of subsurface or latent physical conditions at the site or where work is to be performed, as it may deem necessary for performance of the work at the price being bid. Each bidder shall determine the character, quality, and quantities of the work to be performed and the materials and equipment to be provided, and shall correlate its observations, investigations, and determinations with all requirements of the project.

The Contract Documents show and describe the existing conditions as they are believed to have been used in the design of the work and are only provided as information for the bidder. **The Owner is not making any warranties regarding this information. The Owner shall not be liable for any loss sustained by the successful bidder resulting from any variance between the conditions and design data given in the Contract Documents and the actual conditions revealed during the bidder's pre-bid examination or during the progress of the work.** Bidder agrees that the submission of a bid shall be incontrovertible evidence that the bidder has complied with and agrees to further comply with all the requirements of this section.

7. Withdrawal of Bids.

Any bid may be withdrawn, either personally, by written request, or by telegraphic or facsimile request confirmed in the manner specified above for bid modifications, at any time prior to the scheduled closing time for receipt of bids. In accordance with this paragraph, the bid security shall be returned for bids withdrawn prior to the scheduled closing time for receipt of bids. No bidder may withdraw any bid for a period of 60 days after the award of the contract. A bidder's unawarded alternative bids remain open for a period of six months after award of contract as irrevocable offers to enter into either change orders or separate contracts for the stated price adjustment.

8. Agreement and Bonds.

The Construction Agreement and the form of the Payment and Performance Bonds

which the successful bidder as Contractor will be required to execute are included in the Contract Documents and should be carefully examined by the bidder. The Payment Bond shall be in an amount not less than 100 percent of the amount of the contract in accordance with Civil Code section 9554. The successful bidder as Contractor will also be required to furnish a separate Performance Bond in the amount of 100 percent of the contract amount. Sufficient bonds shall be fully executed and returned to Owner with the executed Construction Agreement.

9. Interpretation of Contract Documents.

If any bidder is in doubt as to the true meaning of any part of the Contract Documents, or finds discrepancies in or omissions from the drawings and specifications, a written request for an interpretation or correction shall be submitted to the Owner. The bidder submitting the written request shall be responsible for its prompt delivery. Any interpretation or correction of the Contract Documents will be made only by addendum issued by the Owner, and a copy of any addendum will be hand-delivered, mailed, or faxed to each bidder known to have received a set of the Contract Documents. No person is authorized to make any oral interpretation of any provision in the Contract Documents, nor shall any oral interpretation be binding on the Owner. If there are discrepancies on drawings, plans, or specifications, or conflicts between drawings, plans, specifications, terms, or conditions, the interpretation of the Owner shall prevail. Bidder shall become familiar with the plans, specifications, and drawings.

SUBMISSION OF A BID WITHOUT REQUESTING CLARIFICATIONS SHALL BE INCONTROVERTIBLE EVIDENCE THAT THE BIDDER HAS DETERMINED THAT THE PLANS, SPECIFICATIONS, AND DRAWINGS ARE SUFFICIENT FOR BIDDING AND COMPLETING THE WORK, THAT BIDDER IS CAPABLE OF READING, FOLLOWING AND COMPLETING THE WORK IN ACCORDANCE WITH THE PLANS, SPECIFICATIONS, AND DRAWINGS, AND THAT THE PLANS, SPECIFICATIONS, AND DRAWINGS FALL WITHIN AN ACCEPTABLE STANDARD FOR THESE ITEMS, AND THAT BIDDER AGREES THAT THE PROJECT CAN AND WILL BE COMPLETED ACCORDING TO THE OWNER'S TIME LINES AND ACCORDING TO THE PROGRESS SCHEDULE TO BE SUBMITTED BY THE SUCCESSFUL BIDDER INCORPORATING THE OWNER'S TIME LINES FOR COMPLETION OF THE PROJECT.

10. Bidders Interested in More Than One Bid.

No person, firm, or corporation shall be allowed to make or file or be interested in more than one bid for the same work unless alternate bids are specifically called for by the Owner. A person, firm, or corporation that has submitted a sub-proposal to a bidder, or that has quoted prices of materials to a bidder, is not disqualified from submitting a proposal or quoting prices to other bidders or submitting a bid on the project.

11. Award of Contract.

(a) The Owner reserves the right to reject any or all bids, or to waive any irregularities or informalities in any bids or in the bidding process, and to award more than one contract. If two identical low bids are received from responsive and responsible bidders, the Owner will determine which bid will be accepted pursuant to Public Contract Code Section 20117.

(b) If made by the Owner, award of the contract will be by action of the governing board or other governing body to the lowest responsive and responsible bidder. In the event an award of the contract is made to a bidder and that bidder fails or refuses to execute the Agreement and provide the required documents within the time required, the Owner may award the contract to the next lowest responsive and responsible bidder or release all bidders. An election by the Owner to reject all bids does not release the bid security of any bidder who has previously been awarded the contract and failed or refused to execute the Agreement and provide the required documents.

(c) In ascertaining the low bidder, the bids will be examined without reference to any substitutions requested by any bidder, whether or not the substitution request would result in a modification of the contract price.

12. Alternatives.

If alternate bids are called for, the contract will be awarded to the lowest responsive and responsible bidder on the basis indicated in the Notice to Contractors Calling for Bids. Owner reserves the right to award or reject any, all, or any combination of the alternates called for in the bid documents, whether or not the alternate(s) was included in the calculations used to identify the low bidder. All bid alternates not part of the contract initially awarded by Owner shall remain open and valid for a period of six months after the contract is awarded as irrevocable offers to enter into either change orders or separate contracts on the items for the price adjustment contained in the bid alternate.

13. Public Contract Code Section 20111.5—Discretionary Prequalification of Bidders.

[check one]

- Discretionary Prequalification is not required to bid on this project.
- Discretionary Prequalification is required to bid on this project. Prospective bidders are required to submit to the Owner a completed prequalification questionnaire and financial statement, on forms provided by the Owner, no later

than five days prior to the date fixed for the public opening of sealed bids. These documents will be the basis for determining which bidders are qualified to bid the project. Bidders will be notified by telephone and mail of their prequalification status within four days after submission of prequalification documents. Bids will not be accepted from any bidder who has not been prequalified at least one day prior to the bid opening. Pursuant to Public Contract Code Section 20111.5, the information in the prequalification questionnaire and financial statement will be kept confidential. Prequalification documents may be obtained by contacting the Owner or by downloading them from

14. Public Contract Code Section 20111.6—Mandatory Prequalification of General Contractors and Mechanical, Electrical and Plumbing Subcontract Bidders.

[check one]

- Mandatory Prequalification of general contractors and mechanical, electrical and plumbing subcontractors is not required to bid on this project.
- Mandatory Prequalification of general contractors and mechanical, electrical and plumbing subcontractors is required to bid on this project. Prospective bidders holding licenses in classifications A, B, C-4, C-7, C-10, C-16, C-20, C-34, C-36, C-38, C- 42, C- 43 and C- 46 are required to submit to the Owner a completed prequalification questionnaire and financial statement, on forms provided by the Owner, no later than ten (10) working days prior to the date fixed for the public opening of sealed bids. These documents will be the basis for determining which bidders in the listed license categories are qualified to bid the project. Bidders will be notified by telephone, mail or email of their prequalification status within five (5) working days after submission of prequalification documents. Bids will not be accepted from any bidder who is required to prequalify and who has not been prequalified at least five (5) working days prior to the bid opening. Pursuant to Public Contract Code Section 20111.6, the information in the prequalification questionnaire and financial statement will be kept confidential. Prequalification documents may be obtained by contacting the Owner or by downloading them from

15. Competency of Bidders.

In selecting the lowest responsive and responsible bidder, consideration will be given not only to the financial standing but also to the general competency of the bidder for performance of the work. By submitting a bid, each bidder agrees that in determining the successful bidder and its eligibility for the award, the Owner may consider the bidder's experience, facilities, conduct, and performance under other contracts, financial condition, reputation in the industry, and other factors relating to or which could affect the bidder's performance of the project.

The Owner may also consider the qualifications and experience of subcontractors and other persons and organizations (including those who are to furnish the principal items of material and equipment) proposed for those portions of the work. Operating costs, maintenance considerations, performance data, and guarantees of materials and equipment may also be considered by the Owner. In this regard, the Owner may conduct such investigations as the Owner deems necessary to assist in the evaluation of any bid and to establish the responsibility, qualifications, and financial ability of the bidder, proposed subcontractors, and other persons and organizations to do the work to the Owner's satisfaction within the prescribed time. The Owner reserves the right to reject the bid of any bidder who does not pass any such evaluation to the satisfaction of the Owner, or in the Owner's sole discretion, to permit substitution of subcontractor(s) found non-responsible.

16. Listing Subcontractors.

Each bidder shall submit a list of the proposed subcontractors, including their address, California contractor's license number and DIR Registration number, on the project as required by the Subletting and Subcontracting Fair Practices Act (Public Contract Code Section 4100 and following sections) on the form furnished with the Contract Documents. If alternate bids are called for and the bidder intends to use different or additional subcontractors, a separate list of subcontractors must be submitted for each such alternate bid. The Owner may request that bidder submit information to assess the responsibility of the bidder's proposed subcontractors. The apparent low bidder shall, within 24 hours of the bid opening, provide a complete listing of all subcontractors, including full name, address, telephone numbers, contractor's license number and type and DIR Registration number.

17. Workers' Compensation.

In accordance with the provisions of Labor Code Section 3700, the successful bidder shall secure the payment of compensation to all employees. The successful bidder awarded the contract shall sign and file with the Owner, at the time of returning the executed Construction Agreement, the certificate which is included as a part of the Contract Documents.

18. Contractor's License.

At the bid opening date and time, if a bidder is not properly licensed and registered to perform the project in accordance with Division 3, Chapter 9, of the California Business and Professions Code, Labor Code section 1725.5 and the Notice Calling for Bids, as required, that bidder's bid will be rejected as non-responsive. Business and Professions Code Section 7028.15 precludes payment for work or materials unless the Registrar of Contractors verifies to the Owner that the bidder was properly licensed at the time the bid was submitted. If this project is federally funded, the bidder must be properly licensed prior to the award of the contract. Any bidder not properly licensed and registered with

DIR is subject to penalties under the law and the contract can be considered void. If the license classification specified in these Contract Documents is that of a “specialty contractor” as defined in Business and Professions Code Section 7058, the specialty contractor awarded the contract for this work shall construct a majority of the work in accordance with the provisions of Business and Professions Code Section 7059.

19. Anti-Discrimination.

It is the policy of the Owner that in all work performed under contracts there be no unlawful discrimination against any prospective or active employee engaged in the work because of race, color, ancestry, national origin, religious creed, sex, age, marital status, physical disability, mental disability, or medical condition. The successful bidder agrees to comply with applicable federal and state laws, including but not limited to the California Fair Employment and Housing Act, beginning with Government Code Section 12900 and Labor Code Section 1735. In addition, the successful bidder agrees to require like compliance by any subcontractors employed on the work by that bidder.

20. Hold Harmless.

The successful bidder awarded the contract shall hold harmless and indemnify various parties as more clearly set forth elsewhere in the Contract Documents.

21. Substitutions.

(a) All bids should be calculated and submitted on the project as described in the bid documents, and on the assumption that substitution requests submitted with the bid will not be approved. Notwithstanding the foregoing, substitution requests submitted with bids will be given due consideration and adjustments to the contract, which may include adjustment to contract price, will be contained in a change order should the request be approved. Bidders not desiring to bid without prior approval of a proposed substitution should follow the procedure contained in this section for pre-bid review of proposed substitutions.

(b) Should the bidder wish to request prior to bid opening any substitution for the specified materials, process, service, or equipment, the bidder shall submit a written request at least ten (10) working days before the bid opening date and time. If the requested substitution is acceptable, the Owner will approve it in an addendum issued to all bidders of record. Requests received less than ten (10) working days prior to bid opening will not be considered prior to the bid date. Extensions of the bid date shall not operate to extend the deadline for requesting substitutions unless the Owner so states in an addendum issued to all bidders of record.

(c) If a substitution is not requested and considered prior to the bid date, the bidder shall submit with the bid all proposed substitutions, if any, on the Substitution Listing form contained in the bid documents.

(d) With respect to any materials, process, service, or equipment listed in the bid, unless the bidder clearly indicates in its Substitution Listing that it is proposing to use an "equal" material, process, service, or equipment, its bid shall be considered as offering the specified material, process, service, or equipment referred to by the brand name or trade name specified.

(e) Unless expressly authorized in the bid documents, no bid may be conditioned on the Owner's acceptance of a proposed substitution. Any bid containing any such condition may be treated as a non-responsive bid.

(f) It is expressly understood and agreed that the Owner reserves the right to reject any proposed substitution. It is further expressly understood and agreed that in the event the Owner rejects a proposed "equal" item, or any other requested substitution, the specified material, process, service, or equipment designated by brand name or trade name, or other item as specified, will be provided.

(g) No substitution request of any kind or nature may be made after the bid date, except by the express written permission of the Owner and on such terms as Owner may require, or in an emergency, as in the case where a specified material, process, service, equipment, or other item has become unavailable through no fault of the bidder.

(h) These time limitations shall be complied with strictly, and in no case will an extension of time for completion be granted because of the failure to request the substitution of an item at the times and in the manner set forth herein.

(i) Prior to contract award, the Owner shall notify the bidder of the Owner's decision concerning proposed substitutions of "equal" items submitted with the bid. The Owner shall notify bidder of the Owner's decision on any other proposed substitutions as those decisions are made. Notification of all decisions by the Owner shall be in writing, and no proposed substitution shall be deemed approved unless the Owner has confirmed it in writing.

(j) With respect to all proposed substitutions, the requirements applicable to the Contractor in the Contract Documents shall be applicable to all bidders requesting substitutions.

22. Surety Qualifications.

Bid bonds executed by a surety insurer admitted in the State of California for purposes of issuance of such bonds will be accepted by Owner as sufficient.

Payment and/or performance bonds executed by a surety insurer admitted in the State of California with a minimum "A minus, VIII" rating (A minus V" when the price stated in the Contract Documents is less than \$500,000) as rated by the current edition of Best's Key Rating Guide published by A.M. Best Company, Oldwick, New Jersey 08858, shall be presumed by Owner to be sufficient for the issuance of such bonds. In the alternative, any admitted surety company which satisfies the requirements set forth in Code of Civil Procedure Section 995.660 shall be accepted and approved for the issuance of bonds, and documents demonstrating satisfaction of the requirements of Section 995.660 with respect to the bid bond must be submitted with the bid. No personal sureties will be accepted.

23. Liquidated Damages.

All work must be completed within the time limits set forth in the Contract Documents. Bidders must understand that the goodwill, educational process, and other business of the Owner will be damaged if the project is not completed within the time limits required. Should the work not be completed within the specified time for completion, the successful bidder awarded the contract may be liable for liquidated damages and for expenses incurred by the Owner for failure to timely complete the project. Such damages shall be deducted from any payments due or to become due to the successful bidder.

SUBMISSION OF A BID ON THIS PROJECT SHALL BE TAKEN AS CONCLUSIVE AND IRREFUTABLE EVIDENCE THAT BIDDER AGREES WITH THE REQUIREMENTS OF THIS SECTION.

24. Drug-Free Workplace Certification.

Pursuant to Government Code section 8350 and following, the successful bidder will be required to execute and return to Owner the Drug-Free Workplace Certificate contained in the Contract Documents with the executed Construction Agreement. The bidder will be required to take positive measures outlined in the certificate to ensure the presence of a drug-free workplace. Failure to abide with the conditions set forth in the Drug-Free Workplace Act could result in penalties, including termination of the Construction Agreement or suspension of payment under the Construction Agreement.

25. Non-Collusion Declaration.

In accordance with the provisions of Public Contract Code section 7106, each bid must be accompanied by a Non-Collusion Declaration executed under penalty of perjury under the laws of the State of California.

26. Implementation of Disabled Veteran Business Enterprises Requirements. NOT REQUIRED FOR THIS PROJECT

In accordance with Education Code Section 17076.11, the Owner has a participation goal for disabled veteran business enterprises of at least three percent per year of the overall dollar amount of funds allocated to the Owner by the State Allocation Board pursuant to the Leroy F. Greene School Facilities Act of 1998 for construction or modernization and expended each year by the Owner. Prior to and as a condition precedent for final payment under any contract for this project, the successful bidder will be required to provide appropriate documentation to the Owner identifying the amount paid to disabled veteran business enterprises in conjunction with the contract, so the Owner can assess its success at meeting this goal.

27. Asbestos and Lead-Based Paint Certification.

The form of Contractor's Certificate Regarding Non-Asbestos Containing Materials and Exclusion of Lead Products, as contained in the Contract Documents, shall be executed and submitted with the bid.

28. Fingerprinting Requirements.

The successful bidder and all subcontractors at any level will be required to comply with any applicable laws on fingerprinting construction workers. Minimum requirements are set forth in the Contract Documents, and the form for certification of compliance is contained in the Contract Documents. The successful bidder must complete and return this form when directed by Owner.

29. California Products.

Price, fitness, and quality being equal with regard to supplies, the Owner may prefer supplies grown, manufactured, or produced in California. The Owner may next prefer supplies partially grown, manufactured, or produced in California. Where the Owner has a preference, the bids of the suppliers or the prices quoted by them (i) must not exceed by more than five percent the lowest bids/prices quoted by out-of-state suppliers, (ii) the major portion of the manufacture of the supplies is not done outside of California, and (iii) the public good will be served. Refer to specifications for indications of Owner preferences. Government Code Sections 4330-4334.

30. Contractor License And DIR Registration Required.

To perform the work required for this project, Bidder must possess the type of contractor's license specified in the Notice to Contractors Calling for Bids, and must be registered with the Department of Industrial Relations (DIR) as a public works contractor. Contractor registration can be accomplished through the portal <https://efiling.dir.ca.gov/PWCR/>. No CONTRACTOR or subcontractor shall be qualified to bid on, be listed in a bid proposal, subject to the requirements of § 4104 of the Public Contract Code, for a public works project (submitted on or after March 1, 2015) unless currently registered with the DIR and qualified to perform public work pursuant to Labor Code § 1725.5. No CONTRACTOR or subcontractor may be awarded a contract for

public work on a public works project (awarded after April 1, 2015) unless registered with the DIR.

31. Post-Bid Credits.

Should any bidder or proposed subcontractor to any bidder issue any credit or otherwise reduce its bid or quote pertaining to the work of this project, the value of the credit or other reduction shall be passed on to the Owner less only the applicable markups for profit and overhead as specified in the Contract Documents on change orders.

32. Contents of Bid.

The bid will include the following documents: Bid Form, List of Subcontractors, Substitution Listing form, Non-collusion Declaration, Exclusion of Asbestos and Lead Based Paint Products Certification, Contractors' Qualification Questionnaire (if required) Mandatory Prequalification Package (if required), Iran Contracting Act Certification (if required), Bid Bond or other bid security, and Certification of Attendance at Mandatory Job Walk, if a job walk is required on this project.

33. Bid Protests.

Any bidder having submitted a bid on the project may file a protest against the proposed contract award or challenging the validity of other bids. The protest must meet all of the following requirements:

- (a) The protest shall be submitted in writing and shall contain all the materials required by these provisions; one that does not contain all the required material shall not be recognized.
- (b) The protest shall be received by the Owner no later than close of business on the second business day after bid opening; one received after that time shall not be recognized.
- (c) Each protest shall contain the following:
 - (i) Identification by name, address, and telephone number of the protesting person(s), company and/or organization and identification of the project to which the protest pertains.
 - (ii) The protest shall set forth in detail all grounds for the protest, including without limitation all facts, identification by name of any other bids or bidders involved in the protest, all supporting documentation, together with any legal authorities and/or argument in support of the grounds for the protest. Any matters not set forth in the written protest shall be deemed waived. All factual contentions must be supported by competent, admissible, and credible evidence.

(d) Any protest not conforming to the requirements of this section shall be rejected as invalid.

(e) Where a protest is filed in conformity with this section, the Owner's staff, or such individual(s) as may be designated by the Owner, shall review and evaluate the basis of the protest and provide a written decision to the protesting bidder. The written decision shall either concur with or deny the protest.

(f) Submission of a written protest to and receipt of a written decision from the Owner staff shall be considered an administrative remedy, and failure to follow this procedure shall be a bar to any legal action.

(g) The written decision by the Owner's staff may be appealed to the Owner. The appeal must be filed with the Owner's governing board or other governing body within two business days of the protesting bidder's receipt of the written decision of the Owner's staff.

(h) The appeal must clearly state the reasons and basis for appealing the decision of the Owner's staff, making specific reference to any portions of the material submitted with the protest required.

(i) A hearing on the appeal shall be held before the Owner's governing board or other governing body within 45 days of receipt of the appeal.

(j) The Owner's governing board or other governing body will make a decision within seven days following the hearing. The decision of the Owner's governing board or other governing body is not subject to arbitration, mediation, reconsideration, or further appeal.

(k) Submission of an appeal to and receipt of a decision from the Owner's governing board or other governing body shall be considered an administrative remedy, and failure to follow this procedure shall be a bar to any legal action.

34. Procedure for Protesting Being Deemed A Non-Responsible Bidder.

Any bidder or prospective bidder deemed non-responsible after having submitted a bid may file an appeal of the action to the Owner's governing board or other governing body. The protest must meet all of the following requirements:

(a) The appeal shall be submitted in writing, and shall contain all the materials required by these provisions; one that does not contain all the required material shall not be recognized.

(b) The appeal must be received by the Owner's governing board or other governing body within two business days of the action by Owner giving rise to the protest; one received after that time shall not be recognized.

(c) A hearing on the appeal shall be held before the Owner's governing board or other governing body prior to the award of contract.

(d) The decision of the Owner's governing board or other governing body is not subject to arbitration, mediation, reconsideration, or further appeal.

(e) Submission of a protest to and receipt of a decision from the Owner's governing board or other governing body shall be considered an administrative remedy, and failure to follow this procedure shall be a bar to any legal action.

35. All Projects Over \$1,000 Are Subject to Prevailing Wage Monitoring and Enforcement By the Labor Commissioner

The project is subject to prevailing wage monitoring and enforcement by the DIR, as indicated in the Notice Calling for Bids. The successful bidder and all subcontractors will be subject to the requirements of Subchapter 4.5 of Chapter 8 of Title 8 of the California Code of Regulations. The successful bidder and all subcontractors will be required to furnish certified payroll records to the Labor Commissioner on the frequency specified in the Notice Calling for Bids using the DIR's eCPR system. To access the DIR's eCPR system and to obtain additional information and assistance, bidders may go to DIR website www.dir.ca.gov/Public-Works/Certified-Payroll-Reporting.html. Failure to timely submit certified payroll records may result in debarment from public works projects by the Labor Commissioner for a period of one to three years.

03-BID FORM

Name of Bidder: _____

Project: # Re-Roof Kindergarten Classroom Building at Conley Elementary School

To: Taft City School District referred to as "OWNER."

In compliance with your Notice to Contractors Calling for Bids and related documents, the undersigned bidder, having familiarized itself with the terms of the contract, the local conditions affecting the performance of the contract, the cost of the work at the place where the work is to be done, and the drawings and specifications and other contract documents, proposes and agrees to perform the contract within the time stipulated, including all of its component parts and everything required to be performed, and to provide and furnish any and all of the labor, materials, tools, expendable equipment, and all applicable taxes, utility, and transportation services necessary to perform the contract and complete in a workmanlike manner all of the work required in connection with the above-referenced project, including sheeting, shoring, and bracing, or equivalent method for protection of life and limb in trenches and open excavation in conformance with applicable safety orders, within the time limits set for completion of all work, all in strict conformity with the drawings and specifications and other contract documents, including Addenda Nos. _____ thru _____ on file at the office of OWNER for the Base Bid sum of: *[list all]*

A.

_____ dollars.
[written in words]

\$ _____
[written in numbers]

Contractor shall also provide Bid for unit pricing per square foot for removal and replacement of roof sheathing for a unit price of: \$ _____.

Contractor shall also provide Bid for unit pricing per linear foot for removal and replacement of 2x4 Redwood Fascia & Paint for a unit price of: \$ _____.

B. The Bidder agrees that upon written notice of acceptance of this bid, he will execute the contract and provide all bonds and other required documents within ten (10) working days after contract award.

C. Attached is Bid security not less than 10 percent of the bid, in the amount of \$ _____, in the form of: cash bid bond certified check cashier's check
[check one]

D. The Bidder acknowledges that OWNER reserves the right to accept or reject any and/or all Base Bids and alternate bids. This entire bid shall remain open and active for sixty (60) days after bid opening, and any alternate bids not initially awarded shall remain active, as an irrevocable offer by the Bidder to enter into either a change order or separate contract, for up to six months after award of the contract.

E. It is understood and agreed that if written notice of the acceptance of this bid is mailed, telegraphed, or delivered to the Bidder after the opening of the bid, and within the time this bid is required to remain open, or at any time after that before this bid is withdrawn, the Bidder will execute and deliver to OWNER the Agreement and will also furnish and deliver to OWNER the Performance Bond and a separate Payment Bond as specified, certificates of insurance, and other required documents.

F. It is understood and agreed that should the Bidder fail or refuse to return executed copies of the Construction Agreement, bonds, insurance certificates, and other required documents to OWNER within the time specified, the bid security shall be forfeited to OWNER.

G. In submitting this bid, the Bidder offers and agrees that if the bid is accepted it will assign to OWNER 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. Section 15) or under the Cartwright Act (Business & Professions Code Section 16700 and following sections) arising from purchases of goods, materials, or services by the Bidder for sale to OWNER pursuant to the bid. Such assignment shall be made and become effective at the time OWNER tenders final payment under the contract. (Public Contract Code Section 7103.5; Government Code Section 4552.)

H. The Bidder hereby certifies that it is, and at all times during the performance of work under the Contract Documents shall be, in full compliance with the provisions of the Immigration Reform and Control Act of 1986 ("IRCA") in the hiring of its employees, and the Bidder shall indemnify, hold harmless, and defend OWNER against any and all actions, proceedings, penalties, or claims arising out of the Bidder's failure to comply strictly with the IRCA.

I. The Bidder understands that a licensed contractor shall not submit a bid to a public agency unless the Bidder's contractor's license number appears clearly on the bid, the license expiration date is stated, and the bid contains a statement that the representations made therein are made under penalty of perjury. Any bid not containing this information, or a bid containing information which is subsequently proven false, may be considered non-responsive and may be rejected by the public agency.

CORPORATION

Corporation Name: _____, a Corporation. _____ (State of Incorporation)

Business Address: _____

Date: _____ Telephone: _____

*By: _____ [Required] [Seal]
(President/Chief Executive Officer/Vice President) [Circle One]

Print Name: _____

*By: _____ [Required]
(Secretary/Treasurer/Chief Financial Officer/Assistant Treasurer) [Circle One]

Print Name: _____

JOINT VENTURE

Joint Venturer Name: _____

*Signed by: _____ (Joint Venturer)

Print Name: _____

Business Address: _____

Date: _____ Telephone: _____

Other Parties to Joint Venture:

If an individual joint venturer:

*By: _____ (Signature)
Print Name: _____

If a DBA joint venturer:

*By: _____ (Signature)
Print Name: _____

If a partnership joint venturer:

*By: _____ (Signature)

Print Name: _____

If a Corporation joint venturer: _____ **[Seal]**

(Name) _____ a _____ Corporation. (State of Incorporation)

*By: _____

Print Name: _____

Title: _____

***Important Notice:** Labor Code § 1771.1(a) provides that “A contractor or subcontractor shall not be qualified to bid on, be listed in a bid proposal, subject to the requirements of Section 4104 of the Public Contract Code, or engage in the performance of any contract for public work, as defined in this chapter, unless currently registered and qualified to perform public work pursuant to Labor Code Section 1725.5. It is not a violation of this section for an unregistered contractor to submit a bid that is authorized by Section 7029.1 of the Business and Professions Code or by Section 10164 or 20103.5 of the Public Contract Code, provided the contractor is registered to perform public work pursuant to Section 1725.5 at the time the contract is awarded.” Please go to <http://www.dir.ca.gov/Public-Works/PublicWorks.html> for more information and to register. This project is subject to monitoring by the Department of Industrial Relations.

04-SUBSTITUTION LISTING

****TO BE EXECUTED BY BIDDER AND SUBMITTED WITH BID****

TO: Taft City School District ("OWNER")

1. Pursuant to bidding and contract requirements for the work titled:

Project Title/Bid #: Re-Roof Kindergarten Classroom Building at Conley Elementary School

The contract sum, proposed by the undersigned on the Bid Form, is for the work as shown on the drawings, described in the specifications, and otherwise defined in the Contract Documents. However, the undersigned proposes the following substitutions for the Owner's consideration. Should the Owner accept any or all of the proposed substitutions, the Bidder agrees to reduce the contract sum by the amount shown. Proposed substitutions must be submitted not later than 10 working days prior to the date of bid opening in order for such request to be reviewed before bidding. All substitutions must be listed on this form and submitted prior to or with the bid or they will not be reviewed.

2. Please complete, attaching additional sheets as necessary:

Bidder proposes [check one]: no substitutions.
 the following substitutions:

Specified Product or Material	Drawing Number or Specification Section	Proposed Substitution	Proposed Price Reduction

3. All bids should be calculated and submitted on the assumption that substitution requests will not be approved.

4. Bidder hereby certifies that the requested substitutions are equal or better in all respects to what is specified, unless otherwise noted.

**SIGNATURE MUST BE IDENTICAL
TO THAT PROVIDED ON BID FORM**

BIDDER: _____

By: _____

Print Name: _____

05-LIST OF SUBCONTRACTORS

TO BE SUBMITTED WITH BID

PROJECT TITLE: BID #: Re-Roof Kindergarten Classroom Building at Conley Elementary School

OWNER: Taft City School District

A. In compliance with the Subletting and Subcontracting Fair Practices Act (Public Contract Code Section 4100 and following sections) and any amendments to the Act, each Bidder shall set forth below:

1. The name, location of the place of business California contractor license number and DIR registration number of:

a. Each subcontractor who will perform work or labor or render service to the Bidder in or about the construction of the work or improvement to be performed under the Construction Agreement;

b. Each subcontractor licensed by the State of California who, under subcontract to the Bidder, specially fabricates and/or installs a portion of the work or improvement according to detailed drawings contained in the plans and specifications, in an amount in excess of one-half of one percent of the Bidder's total bid or Ten Thousand Dollars (\$10,000), whichever is greater;

2. The portion of the work which will be done by each subcontractor.

B. The Bidder shall list only one subcontractor for each such portion as is defined by the Bidder in this bid.

C. If the Bidder fails to specify a subcontractor, or if the Bidder specifies more than one subcontractor for the same portion of work to be performed under the contract in excess of one-half of one percent of the Bidder's total bid, the Bidder shall be deemed to have agreed that the Bidder is fully qualified to perform that portion, and that the Bidder alone shall perform that portion.

D. No Bidder whose bid is accepted shall (i) substitute any subcontractor, (ii) permit any subcontractor to be voluntarily assigned or transferred, or allow it to be performed by anyone other than the original subcontractor listed in the original bid, or (c) sublet or subcontract any portion of the work in excess of one-half of one percent of the Bidder's total bid as to which the original bid did not designate a subcontractor, except as authorized in the Subletting and Subcontracting Fair Practices Act.

E. Violations of any provision of the Subletting and Subcontracting Fair Practices Act may be deemed by the OWNER to make the bid non-responsive and/or the Bidder non-responsible.

F. Attach additional sheets, as necessary.

SUBCONTRACTOR'S NAME & LOCATION	DESCRIPTION OF PORTION TO BE SUBCONTRACTED	CALIFORNIA CONTRACTOR LICENSE NO.	DIR REGISTRATION NUMBER

Firm Name: _____

By: _____
[Signature must match that on bid]

Print Name: _____

06-BID BOND

IF USED BY BIDDER, MUST BE COMPLETED AND SUBMITTED WITH BID

PROJECT TITLE/BID #: Re-Roof Kindergarten Classroom Building at Conley Elementary School

OWNER: Taft City School District

KNOW ALL MEN BY THESE PRESENTS, that we, _____ as Principal, and _____ as Surety, are held and firmly bound unto the _____ (referred to as Owner) in the sum of _____ percent of the total amount of the bid of the Principal submitted to the Owner for the work and obligations described below for the payment of which sum in lawful money of the United States, well and truly to be made, we jointly and severally bind ourselves, our heirs, executors, administrators, successors, and assigns.

The condition of this obligation is such that whereas the Principal has submitted the accompanying bid dated _____, 20__, for: \$ _____.

NOW, THEREFORE, if the Principal shall not withdraw said bid within the period specified therein after the opening of the same, or if no period be specified, within 60 days after said opening; and if the Principal is awarded the contract, and shall within the specified period, or if no period is specified, within five working days after the award of the contract, enter into a written contract with the Owner in accordance with the bid as accepted and give bonds with good and sufficient surety or sureties as may be required for the faithful performance and proper fulfillment of such contract and for the payment of labor and materials used for the performance of the contract, provide certificates evidencing the required insurance is in effect (in the amounts required in the contract documents), and provide any other documents required under the contract documents to be submitted at the time the contract is executed, then the above obligation shall be void and of no effect, otherwise to remain in full force and effect.

The Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration, or addition to the terms of the contract or the call for bids, or to the work to be performed thereunder, or the specifications accompanying the same, shall in any way affect its obligation under this bond, and it does hereby waive notice of any such change, extension of time, alteration, or addition to the terms of said contract or the call for bids, or to the work, or to the specifications.

In the event suit is brought upon this bond by the Owner and judgment is recovered, the Surety shall pay all costs incurred by the Owner in such suit, including a reasonable attorney's fee to be fixed by the court.

IN WITNESS WHEREOF, the parties have executed this instrument under their several seals this _____ day of _____, 20__, the name and corporate party being hereto affixed and duly signed by its undersigned authorized representative.

DATED: _____

PRINCIPAL _____

By: _____

Title: _____

DATED: _____

SURETY _____

By: _____

Title: _____

Note: Signatures of those executing for the Surety must be properly acknowledged.

**07-NONCOLLUSION DECLARATION
TO BE EXECUTED BY BIDDER AND SUBMITTED WITH BID**

PROJECT TITLE/BID #: Re-Roof Kindergarten Classroom Building at Conley Elementary School

OWNER: Taft City School District

The undersigned declares:

I am the _____ of _____, the party making the foregoing bid. The bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation. The bid is genuine and not collusive or sham. The bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid. The bidder has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or to refrain from bidding. The bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the 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. All statements contained in the bid are true. The bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof, to effectuate a collusive or sham bid, and has not paid, and will not pay, any person or entity for such purpose.

Any person executing this declaration on behalf of a bidder that is a corporation, partnership, joint venture, limited liability company, limited liability partnership, or any other entity, hereby represents that he or she has full power to execute, and does execute, this declaration on behalf of the bidder.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this declaration is executed on _____[date], at _____[city], _____[state].

Contractor: _____

By _____

Title: _____

Signature: _____

08-EXCLUSION OF LEAD AND ASBESTOS PRODUCTS

TO BE EXECUTED BY BIDDER AND SUBMITTED WITH BID

PROJECT TITLE/BID #: Re-Roof Kindergarten Classroom Building at Conley Elementary School

OWNER: Taft City School District

Pursuant to the provisions of the California Education Code for construction, modernization, or renovation of school facilities, lead based paint, lead plumbing, and solders, or other potential sources of lead contamination shall not be utilized in the construction of any new school facility or the modernization or renovation of any existing school facility.

The Contractor agrees that sources and potential sources of lead contamination, whether in products or materials, will not be used in performing work under the Agreement.

In addition, the Contractor agrees that asbestos containing products or materials will not be used in performing work under the Agreement.

At completion of work under the Agreement, the Contractor will warrant and represent to the Owner the following:

1. That no asbestos containing products or materials, or sources or potential sources of lead contamination, were used in performing work under the Agreement.
2. That should any asbestos containing products, or sources or potential sources of lead contamination, be found to have been used by the Contractor or any subcontractor, supplier, or vendor on the Project, the Contractor will replace them, together with all related materials, at no cost to the Owner.
3. That should the replacement require any interruption in the normal operation of the school, the Contractor will pay all costs necessarily incurred to keep the school functioning with the least possible disruption to its day-to-day operations.

Executed at _____, California, on _____, 20__.

Firm Name: _____

By: _____

Title: _____

Signed: _____

[Signature must match that on bid]

09-CONSTRUCTION AGREEMENT

THIS AGREEMENT, dated _____ in the County of _____, State of California, is by and between the _____ Taft ity chool istrict _____ ("OWNER") and _____ ("CONTRACTOR").

For the consideration stated in this Agreement, OWNER and CONTRACTOR agree as follows:

1. Contract Documents. The complete Agreement includes all of the Contract Documents as defined in the General Conditions and any other documents comprising any portion of the bid package, and all modifications, addenda, and amendments of or to any of these documents, all of which are incorporated by reference into this Agreement. The Contract Documents are complementary, and what is called for by any one shall be as binding as if called for by all.

2. Scope of Performance. CONTRACTOR shall perform within the time set forth in Paragraph 4 of this Agreement everything required to be performed, and shall provide and furnish all labor, materials, necessary tools, expendable equipment, and all utility and transportation services described in the Contract Documents and required for construction of **Re-Roof Kindergarten Classroom Building at Conley Elementary School**

All of the work to be performed and materials to be furnished shall be completed in a good workmanlike manner in strict accordance with the Plans, Drawings, Specifications and all provisions of the Contract Documents as defined above. CONTRACTOR shall be liable to OWNER for any damages arising as a result of a failure to fully comply with this obligation, and CONTRACTOR shall not be excused with respect to any failure to so comply by any act or omission of OWNER, the Architect, Engineer, Inspector, Division of State Architect, or representative of any of them, unless such act or omission actually prevents CONTRACTOR from fully complying with the requirements of the Contract Documents, and unless CONTRACTOR protests at the time of the alleged prevention that the act or omission is preventing CONTRACTOR from fully complying with the Contract Documents. The protest shall not be effective unless reduced to writing and filed with OWNER within three working days of the date of occurrence of the act or omission preventing CONTRACTOR from fully complying with the Contract Documents.

3. Contract Price. Subject to any additions or deductions as provided in the Contract Documents, as full consideration for the faithful performance of the contract OWNER shall pay to CONTRACTOR the sum of \$.

4. Construction Period. The work shall be commenced on or before the _____ day after receiving OWNER's Notice to Proceed and shall be completed within _____ consecutive calendar days from the date specified in the Notice to Proceed.

5. Liquidated and Other Damages. All work must be completed within the time limits set forth in the Contract Documents. If the work is not completed in accordance with the time limits set forth in this Agreement, in accordance with Government Code Section 53069.85, CONTRACTOR shall pay to OWNER as fixed and liquidated damages, and not as a penalty, the sum of \$1,500.00 for each calendar day of delay until work is completed and accepted.

Detailed requirements concerning liquidated damages and other damages which may be assessed if CONTRACTOR fails to complete the project within the time period provided in this Agreement are contained in the General Conditions.

6. Insurance. Prior to commencing the work, CONTRACTOR shall take out and maintain during the life of this contract, and shall require all subcontractors, if any, whether primary or secondary, to take out and maintain all insurance as required in the General Conditions.

7. Substitution of Securities. Public Contract Code Section 22300 permits the substitution of securities for any monies withheld by a public agency to ensure performance under a contract. At the request and expense of CONTRACTOR, securities equivalent to the amount withheld shall be deposited with the public agency, or with a state or federally chartered bank in California as the escrow agent, who shall then pay such monies to CONTRACTOR. OWNER retains the sole discretion to approve the bank selected by CONTRACTOR to serve as escrow agent. Upon satisfactory completion of the contract, the securities shall be returned to CONTRACTOR. Securities eligible for investment shall include those listed in Government Code Section 16430 or bank or savings and loan certificates of deposit. CONTRACTOR shall be the beneficial owner of any securities substituted for monies withheld and shall receive any interest thereon.

In the alternative, under Section 22300, CONTRACTOR may request OWNER to make payment of earned retentions directly to the escrow agent at the expense of CONTRACTOR. Also at CONTRACTOR's expense, CONTRACTOR may direct investment of the payments in securities, and CONTRACTOR shall receive interest earned on such investment upon the same conditions as provided for securities deposited by CONTRACTOR. Upon satisfactory completion of the contract, CONTRACTOR shall receive from the escrow agent all securities, interest, and payments received by escrow agent from OWNER pursuant to the terms of Section 22300. Not later than 20 days after receipt of such payment, CONTRACTOR shall pay to each subcontractor the respective amount of interest earned, net of costs attributed to retention withheld from each subcontractor, on the amount of retention withheld to ensure performance of CONTRACTOR.

8. Corporate Status and Authorization. If CONTRACTOR is a corporation, the undersigned hereby represents and warrants that the corporation is duly incorporated and in good standing in the State of _____, and that _____, whose title is _____, is authorized to act for and bind the corporation.

9. Posting. Contractor shall be responsible to post job site notices prescribed by Title 8 CCR § 16451 (d) pertaining to prevailing wage monitoring by the Department of Industrial Relations.

10. Entire Agreement. This Agreement, including the Contract Documents incorporated by reference, constitutes the final, complete, and exclusive statement of the terms of the agreement between the parties pertaining to construction of the project. It supersedes all prior and contemporaneous understandings or agreements of the parties. No party has been induced to enter into this Agreement by, nor is any party relying on, any representation or warranty outside those expressly set forth in this Agreement. The Agreement can only be modified by an amendment in writing, signed by both parties and approved by action of OWNER's governing board or other governing body.

11. Parties in Interest. Nothing in this Agreement, whether express or implied, is intended to confer any rights or remedies under or by reason of this Agreement on any person other than the parties to this Agreement and their respective successors and assigns. Nothing in this Agreement, whether express or implied, is intended to relieve or discharge the obligation or liability of any third person to any party to this Agreement, nor shall any provision give any third person any right of subrogation or action against any party to this Agreement.

12. Severability. If any provision of this Agreement is held by a court of competent jurisdiction to be invalid or unenforceable, the remainder of the Agreement shall continue in full force and effect and shall in no way be impaired or invalidated.

13. Governing Law. The rights and obligations of the parties and the interpretation and performance of this Agreement shall be governed by the laws of California, excluding its conflict of laws rules.

The parties have executed this Agreement by the signatures of their authorized representatives effective the date indicated above.

DISTRICT

CONTRACTOR

By: _____

*By: _____

Signature

Signature

Print Name Above

Print Name Above

Print Title Above

Print Title Above

[Continued on Following Page]

**[CORPORATE SEAL OF
CONTRACTOR, if a corporation]**

Contractor's License No. _____

Tax ID/Social Security No. _____

DIR Registration No. _____

***Important Notice:** Labor Code § 1771.1(a) provides that “A contractor or subcontractor shall not be qualified to bid on, be listed in a bid proposal, subject to the requirements of Section 4104 of the Public Contract Code, or engage in the performance of any contract for public work, as defined in this chapter, unless currently registered and qualified to perform public work pursuant to Labor Code Section 1725.5. It is not a violation of this section for an unregistered contractor to submit a bid that is authorized by Section 7029.1 of the Business and Professions Code or by Section 10164 or 20103.5 of the Public Contract Code, provided the contractor is registered to perform public work pursuant to Section 1725.5 at the time the contract is awarded.” Please go to <http://www.dir.ca.gov/Public-Works/PublicWorks.html> for more information and to register. This project is subject to monitoring by the Department of Industrial Relations.

10-INDEX TO GENERAL CONDITIONS-GC

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10-GENERAL CONDITIONS-GC

PROJECT TITLE/ BID #: Re-Roof Kindergarten Classroom Building at Conley Elementary School

OWNER: Taft City School District

ARTICLE 1 DEFINITIONS

A. Action of the Governing Board or Other Governing Body: An official act of the governing board or other governing body of OWNER.

B. Approve: The term “approve,” where used in conjunction with the Architect’s action on the CONTRACTOR’S submittals, applications, and request, is limited to the responsibilities and duties of the Architect stated in General and Supplementary Conditions. Approval shall not release CONTRACTOR from responsibility to fulfill Contract Document requirements, unless otherwise provided in the Contract Documents.

C. Architect: The person, persons, or entity selected by OWNER to provide architectural services to the Project. Architect is an independent contractor and is not an agent of OWNER.

D. Contract Documents: All contract documents, including all official documents on this Project, including the Notice Calling for Bids, Instructions to Bidders, Bid Form, Designation of Subcontractors, Workers’ Compensation Certificate, Performance Bond, Payment Bond, Change Orders, Shop Drawings and their Transmittals, Information Required of Bidder, all prequalification forms submitted pursuant to Public Contract Code sections 20111.5 or 20111.6, if any, Substitution Listing form on any approved substitutions, Non-Collusion Declaration, Insurance Certificates, Guarantees, Contractor’s Certificate Regarding Non-Asbestos and/or Lead Containing Materials, if any, Davis-Bacon Compliance Certification, Fingerprinting Certifications, Labor Compliance Program documents, General Conditions, Supplemental General Conditions, if any, Iran Contracting Act Certification, if any, Special Conditions and/or Requirements, if any, Plans, Drawings, Specifications, the Construction Agreement, and all Modifications, addenda, and amendments of those documents.

E. Modification:

1. A written amendment to the Contract Documents signed by both parties;
2. A fully executed Change Order;
3. A written interpretation issued by the Architect; or
4. A written order for a minor change in the Work issued by the Architect.

F. CONTRACTOR: That entity awarded this Construction Agreement by official action of OWNER. Throughout the Contract Documents CONTRACTOR is treated as being of singular number and neuter gender.

G. Date of Acceptance: The date when all of the following conditions are satisfied:

1. OWNER is able to occupy all portions of the project.
2. The notice of completion is recorded with local authorities.
3. The final verified report is filed with the Division of State Architect of the Department of General Services.
4. Acceptance of project by OWNER's governing board or other governing body.

H. Days: Calendar days unless noted otherwise.

I. Equivalent to: Equal or superior in function and quality and approved by the Architect.

J. Furnish: Means "supply and deliver to the project site, ready for unloading, unpacking, assembly, installation, and similar operations."

K. Indicated: Refers to graphic representations, notes or schedules on the Drawings, or other Paragraphs or Schedules in Specifications, and similar requirements in Contract Documents. Where terms such as "shown," "noted," or "scheduled" are used, it is to help locate the reference; no limitation on locations is intended except as specifically noted.

L. Install: Used to describe operations at the project site, including the actual "unloading, unpacking, assembly, erection, placing, anchoring, applying, working to dimension, finishing, curing, protection, cleaning and similar operations."

M. Installer: An entity engaged by CONTRACTOR, either as an employee, subcontractor, or sub-subcontractor for performance of a particular construction activity, including installation, erection, application, and similar required operations. Installers are required to be experienced in the operations they are engaged to perform and licensed as required in the individual specification sections.

N. Liquidated Damages: Pursuant to Government Code Section 53069.85, this is the specified sum of money that CONTRACTOR shall forfeit and pay to OWNER for

those specified portions of the Project that are uncompleted and delayed beyond the stated completion time.

O. Or Equal: Where named products in specification text are accompanied or are deemed by law to be followed by the term “or equal,” or other language of similar effect, CONTRACTOR shall comply with those Contract Document provisions for “substitutions” when obtaining Architect’s review and consideration.

P. OWNER: The school district, community college district, County Superintendent of Schools, or other public entity executing the Construction Agreement acting through its governing board or other governing body.

Q. Plans: The reproductions of the official drawings adopted and approved by OWNER showing locations, character, dimensions, and details of the work.

R. Project: The undertaking planned by OWNER and CONTRACTOR as provided in the Contract Documents.

S. Project Inspector/Inspector of Record: Any individual or firm retained by OWNER as the on-site inspector for a particular project hired by and paid by OWNER and under general direction of the Architect or registered engineer in charge. The Project Inspector shall be responsible for inspecting all work included in the Contract Documents. A special inspector shall be responsible only for inspecting the work for which he/she is approved. Inspectors are independent contractors and are not agents or employees of OWNER.

T. Project Manual: The volume(s) that include the bidding requirements, sample forms, and all of the initial Contract Documents, such as Conditions of the Contract, Schedules and Details Manual, the Specifications, and the addenda to be used on the Project.

U. Project Site: The space available to CONTRACTOR for performance of the Work, either exclusively or in conjunction with others performing other construction as part of the Project. The extent of the Project Site is shown on the Drawings, and may or may not be identical with the description of the land upon which the Project is to be built.

V. Provide: Includes “provide complete in place,” that is, furnish and install.

W. Refer: Indicates that the subject is defined or specified in further detail at another location in the Contract Documents or elsewhere as indicated. Except, as otherwise noted, “refer” does not imply that CONTRACTOR must purchase or subcontract the subject work in any special manner.

X. Related Work in Other Sections: A nonrestrictive term used throughout the Specifications to coordinate the Work and facilitate checking and bidding.

Y. Required: As required by Contract Documents.

Z. Safety Orders: Issued by Division of Industrial Safety and OSHA Safety and Health Standards for Construction.

AA. Specification: The printed instruction and requirements which complement the plans as to the methods and manner of performing the Work or to the quantities and qualities of the materials to be furnished.

BB. Subcontractor: Includes those having a direct contract with the CONTRACTOR and those who furnish material worked to a special design according to plans, drawings, and Specifications of this work, but does not include those who merely furnish material not so worked.

CC. Surety: The firm or corporation executing CONTRACTOR'S Performance Bond and/or Payment Bond as surety, as the context indicates.

DD. Testing Laboratory: An independent entity engaged to perform specific inspections or test, either at the Project Site or elsewhere, and to report on, and if required, interpret results of those inspections or tests. It is not an agent of OWNER.

EE. Unfinished: Refers to the status of the Work prior to reaching completion, as described in Article 61.

FF. Work: Work of the CONTRACTOR and subcontractors, including all labor or materials (including without limitation, equipment, and appliances), both incorporated in, or to be incorporated in the Project in order to fully meet the requirements of the Contract Documents.

ARTICLE 2 STATUS OF CONTRACTOR

A. CONTRACTOR is and shall at all times be deemed to be an independent contractor and shall be wholly responsible for the manner in which it performs the services required of it by the terms of the Contract Documents.

B. Nothing contained in the Contract Documents shall be construed as creating the relationship of employer and employee, or principal and agent, between OWNER and CONTRACTOR or any of CONTRACTOR'S agents or employees.

C. CONTRACTOR exclusively assumes the responsibility for the acts of its employees as they relate to the services to be provided during the course and scope of

their employment. CONTRACTOR, its agents, and employees shall not be entitled to any rights or privileges of OWNER employees and shall not be considered in any manner to be OWNER employees.

D. OWNER shall be permitted to monitor the activities of CONTRACTOR to determine compliance with the terms of the Contract Documents.

E. Contractors are required by law to be licensed and regulated by the Contractors' State License Board. Any contractor not so licensed is subject to penalties under the law and the Construction Agreement will be considered void pursuant to Business and Professions Code Section 7028.7. Any questions concerning a contractor may be referred to the Registrar, Contractors' State License Board, 3132 Bradshaw Road, Post Office Box 2600, Sacramento, California, 95826.

F. Contractors or subcontractors are not qualified to bid on, be listed in a bid proposal, subject to the requirements of Section 4104 of the Public Contract Code, or engage in the performance of any contract for public work, as defined in this chapter, unless currently registered and qualified to perform public work pursuant to Labor Code Section 1725.5. This project is subject to monitoring by the Department of Industrial Relations.

ARTICLE 3 CONTRACTOR SELECTION PROCESS AND PROHIBITED INTERESTS

A. As a means of maintaining the integrity of the formal selection process, contacts with individual members of OWNER's Board of Trustees or governing body on behalf of any bidding firm relative to this Project will be considered inappropriate.

B. No official of OWNER who is authorized in such capacity and on behalf of OWNER to negotiate, make, accept, or approve, or to take part in negotiating, making, accepting or approving, any architectural, engineering, inspection, construction, or material supply contract, or any subcontract in connection with construction of the Project, shall have any direct or indirect financial interest in any part of this Project.

C. No officer, employee, architect, attorney, engineer, or inspector of or for OWNER who is authorized in such capacity and on behalf of OWNER to exercise any executive, supervisory, or other similar functions in connection with construction of the Project shall have any direct or indirect financial interest in any part of this Project.

D. CONTRACTOR shall receive no compensation and shall repay OWNER for any compensation received should CONTRACTOR aid, abet, or knowingly participate in any violation of this Article.

ARTICLE 4 CHANGE IN NAME OR NATURE OF CONTRACTOR'S LEGAL ENTITY

Before CONTRACTOR makes any change in the name or legal nature of the CONTRACTOR'S entity, CONTRACTOR shall first notify OWNER in writing and cooperate with OWNER in making such changes as OWNER may request in the Contract Documents.

ARTICLE 5 DEBARRED CONTRACTOR

A. Pursuant to Labor Code Sections 1777.1 and 1777.7, a contractor may be prohibited from bidding or performing work as a subcontractor on a public works project.

B. Any contract on a public works project entered into between a contractor and a debarred subcontractor is void as a matter of law. A debarred subcontractor may not receive any public money for performing work as a subcontractor on a public works contract, and any public money that may have been paid to a debarred subcontractor by a contractor on the Project shall be returned to the awarding body. The contractor shall be responsible for the payment of wages to workers of a debarred subcontractor who has been allowed to work on the Project.

C. Pursuant to Public Contract Code Section 4701, CONTRACTOR shall request the substitution of any subcontractor who has been debarred by the California Labor Commissioner from working as a subcontractor on public work.

ARTICLE 6 SUBCONTRACTING

A. CONTRACTOR agrees to bind each and every subcontractor to the terms of the Contract Documents as far as the terms are applicable to the subcontractor's work. Each subcontract shall contain a reference to Contract Documents, and the terms of the Contract Documents shall be incorporated into and made a part of each subcontract. If CONTRACTOR subcontracts any part of its work under the Construction Agreement, CONTRACTOR shall be responsible to OWNER for any acts and omissions of its subcontractors and of persons either directly or indirectly employed by its subcontractors. Nothing contained in the Contract Documents shall create any contractual relationship between any subcontractor and OWNER.

B. OWNER'S consent to or approval of any subcontractor shall not in any way relieve CONTRACTOR of its obligations under the Contract Documents , and no such consent or approval shall be deemed to waive any provision of the Contract Documents.

C. CONTRACTOR must submit with its bid a Designation of Subcontractors. If CONTRACTOR specifies more than one subcontractor for the same portion of work or fails to specify a subcontractor, and such portion of the work exceeds one-half of one

percent of the total bid, CONTRACTOR agrees that it is fully qualified to perform and shall perform such work itself. The substitution or addition of subcontractors shall be permitted only as authorized by Public Contract Code Sections 4100, et seq.

D. All subcontractors shall be appropriately licensed and registered with DIR to perform the work for which employed in conformity with the laws of the State of California.

E. In accordance with California Business and Professions Code Section 7059, if CONTRACTOR is designated as a "specialty contractor" (as defined in Public Contract Code Section 7058), all of the work to be performed outside of the Contractor's license specialty, except "incidental" work as that term is used in Section 7059(a), shall be performed by a licensed subcontractor in compliance with the Subletting and Subcontracting Fair Practices Act, California Public Contract Code Section 4100, et seq.

F. A copy of each subcontract, if in writing, or if not in writing, then a written statement signed by the Contractor giving the name of the subcontractor and the terms and conditions of such subcontract, shall be filed with OWNER before the subcontractor begins work. Each subcontract will provide for termination in accordance with these General Conditions. Each subcontract shall provide for its annulment by CONTRACTOR at the order of the Architect if in the Architect's opinion the subcontractor fails to comply with the requirements of the Contract Documents insofar as the same may be applicable to this work.

G. Nothing contained in these General Conditions shall relieve CONTRACTOR of any liability or obligation under the Contract Documents, nor shall any permissible substitution or addition of a subcontractor result in any increase in the contract price or in an extension of time for completion of the Project.

H. CONTRACTOR shall require subcontractors to include the provisions of this article in their sub-subcontracts, if any.

I. Each subcontract applicable to this Project is hereby assigned to OWNER, such assignment to become effective only upon termination of the Construction Agreement for cause pursuant to the Contract Documents, and only as to such subcontracts as OWNER may, in its sole discretion, select and provide written notice of such assignment, and such assignments are subject to the rights and obligations of the surety on any applicable bonds, as detailed in the Contract Documents.

ARTICLE 7 ARCHITECT'S STATUS

A. The Architect shall be OWNER's representative during construction and shall observe the progress and quality of the Work on behalf of OWNER. The Architect shall have the authority to act on behalf of OWNER only to the extent expressly provided in the Contract Documents. The Architect shall have authority to stop work whenever necessary, in the Architect's reasonable opinion, to ensure the proper execution of the Work of the Project.

B. The Architect shall be, in the first instance, the judge of the performance of the Work. The Architect shall exercise authority under the Contract Documents to enforce CONTRACTOR's faithful performance.

C. The Architect shall have all authority and responsibility established by law, including Title 24 of the California Code of Regulations. The Architect has the authority to enforce compliance with the Contract Documents and CONTRACTOR shall promptly comply with instructions from the Architect or an authorized representative of the Architect.

D. On all questions related to quantities, acceptability of material, equipment, or workmanship, execution, progress, or sequence of work, the interpretation of plans, specifications, or drawings, and the acceptable performance of CONTRACTOR, the decision of the Architect shall govern and shall be a condition precedent to any payment, unless otherwise ordered by OWNER. CONTRACTOR shall not impair or delay the progress and completion of the Work by virtue of any question or dispute arising out of or related to the foregoing matters, or the instructions of the Architect relating to them.

E. General supervision and direction of the Work by the Architect shall in no way imply that the Architect or its representatives are in any way responsible for the safety of CONTRACTOR or its employees or that the Architect or its representatives will maintain supervision over CONTRACTOR'S construction methods, means, or personnel other than to ensure that the quality of the finished work is in accordance with the Contract Documents.

ARTICLE 8 PROJECT INSPECTOR AND INSPECTOR FACILITIES

A. One or more Project Inspectors ("IOR"), including specialty Inspectors as required, employed by OWNER and operating under direction of the Architect, in accordance with the requirements of the California Code of Regulations Titles 21 and 24, will be assigned to the Work. All work shall be performed under the observation of or with the knowledge of the Project Inspector. The Project Inspector shall have free access to all parts of the Work at any time. CONTRACTOR shall furnish the Project

Inspector with such information as may be necessary to keep the Project Inspector fully informed regarding the progress and manner of work and the character of materials.

B. Observations by the Project Inspector shall not in any way relieve CONTRACTOR from responsibility for full compliance with all terms and conditions of the Contract Documents, or be construed to lessen to any degree CONTRACTOR's responsibility for providing efficient and capable superintendence.

C. The Project Inspector is not authorized to make changes in the drawings or Specifications, nor shall the Project Inspector's approval of the Work and methods relieve CONTRACTOR of responsibility for the correction of subsequently discovered defects, or from its obligation to fully comply with the Contract Documents.

ARTICLE 9 COPIES FURNISHED

CONTRACTOR will be furnished five copies of the drawings and specifications free of charge. Additional copies may be obtained for the cost of reproduction.

ARTICLE 10 OWNERSHIP OF DRAWINGS

All documents prepared on behalf of OWNER including, without limitation the Plans, Specifications, drawings, and other documents, are instruments of service of the Architect and/or its consultants and are the property of OWNER. Neither CONTRACTOR nor any Subcontractor, Sub-subcontractor, material or equipment supplier or anyone else shall own or claim a copyright in such documents. Unless otherwise indicated, the Architect shall be deemed the author of such documents. Such documents are furnished to CONTRACTOR for use solely with respect to this Project, and are not to be used for any other purpose by CONTRACTOR or any Subcontractor, Sub-subcontractor, or material or equipment supplier, or anyone claiming through them without the express written consent of OWNER. CONTRACTOR, Subcontractors, Sub-subcontractors, and material or equipment suppliers are granted a limited license to use and reproduce applicable portions of the documents for use in the execution of their work under the Contract Documents.

ARTICLE 11 DOCUMENTS ON WORK

A. CONTRACTOR shall keep one copy of all Contract Documents, including addenda, change orders, shop drawings, and other modifications, and Titles 19, 21, and 24 of the California Code of Regulations, on the job at all times. The documents shall be kept in good order and accurately marked to record all changes made during construction. The documents shall be available to the Architect and its representatives at all times.

B. CONTRACTOR shall be acquainted with and comply with all statutes and regulations as they relate to this Project. (See particularly the duties of Contractor, Title 24 California Code of Regulations, Sections 4-343.) CONTRACTOR shall also be acquainted with and comply with all provisions of the California Code of Regulations relating to conditions on this Project, particularly Titles 8 and 17.

ARTICLE 12 DRAWINGS AND SPECIFICATIONS

A. Drawings and Specifications are intended to delineate and describe the Project and its component parts sufficiently to enable skilled and competent contractors to intelligently bid upon the work, and to carry the Work to a successful and timely conclusion.

B. Organization of the Specifications into divisions, sections, and articles, and arrangement of drawings, shall not control CONTRACTOR in dividing the Work among subcontractors or in establishing the extent of work to be performed by any trade.

C. The drawings and Specifications describe the work to be performed by CONTRACTOR. Generally, the Specifications describe work which cannot be readily indicated on the drawings and indicate types, qualities, and methods of installation of the various materials and equipment required for the Work. It is not intended to mention every item of work in the Specifications which can be adequately shown on the drawings, or to show on the drawings all items of work described or required by the Specifications even if they could have been shown.

D. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all. The Contract Documents are intended to encompass all labor and materials, equipment, and transportation necessary for proper execution of the Work. Any item of work mentioned in the Specifications and not shown on the drawings, or shown on the drawings and not mentioned in the Specifications, shall be provided by CONTRACTOR as if shown in both.

E. All materials or labor for the Work which are shown either by the Drawings or the Specifications (or are reasonably inferable from the Drawings or the Specifications as being necessary to complete the work) shall be provided by CONTRACTOR, whether or not the work is expressly covered in either the Drawings and/or the Specifications. It is intended that the Work be of sound, quality construction. CONTRACTOR must furnish adequate labor and materials to cover installation of all items indicated, described, or implied in the portion of the Work to be performed.

F. Drawings and Specifications are intended to comply with all laws, ordinances, rules and regulations of authorities having jurisdiction, and where referred to in the Contract Documents, such laws, ordinances, rules and regulations shall be considered as a part of the Contract Documents within the limits specified. If CONTRACTOR

observes that the drawings or Specifications are contrary to applicable law, ordinance, rule or regulation, CONTRACTOR shall immediately notify the Architect in writing, and any changes deemed necessary by the Architect shall be made as provided in the Contract Documents for changes in work. If CONTRACTOR performs any work which CONTRACTOR knows or through the exercise of reasonable diligence should have known to be contrary to any law, rule, regulation, or ordinance without seeking and obtaining clarification, CONTRACTOR shall bear any and all costs arising from it, including without limitation the costs of correction without increase or adjustment to the contract price or the time for performance.

G. Materials or work described in words which have a well known technical or trade meaning shall be deemed to refer to those recognized standards.

H. It is not the intention of the Contract Documents to go into detailed descriptions of any materials and/or methods commonly known to the trade under "trade name" or "trade term." The mere mention or notation of such "trade name" or "trade term" shall be considered a sufficient notice to CONTRACTOR that it will be required to complete the Work so named with all its incidental and accessory items according to the best practices of the trade.

I. Naming any material and/or equipment requires CONTRACTOR to furnish and install the named material/equipment, including all incidental and accessory items and/or labor necessary to achieve full and complete functioning of the material and/or equipment according to the best practices of the trade(s) involved, unless specifically noted otherwise.

J. Figured dimensions on drawings shall govern, but work not dimensioned shall be as directed. Work not particularly shown or specified shall be the same as similar parts that are shown or specified. Large scale drawings shall take precedence over smaller scale drawings as to shape and details of construction. Specifications shall govern as to materials, workmanship, and installation procedures, provided however that the drawing or specification calling for the higher quality material or workmanship shall prevail, without additional cost to OWNER.

K. In case of inconsistencies in the descriptions of work to be done, equipment to be provided or material to be used, it is intended that the more stringent, higher quality, and greater quantity of work shall apply, without additional cost to OWNER.

L. All items indicated on the drawings or in the Specifications as future items require CONTRACTOR to provide all the mechanical, electrical, and other necessary service hookups or provisions required to make the equipment function as intended. Such items shall be provided to the location where the future item is indicated to be installed.

M. In the event of an inconsistency between the Construction Agreement or General Conditions and the other various Contract Documents, the Construction Agreement or General Conditions shall control.

N. Drawings and specifications are intended to be fully cooperative and to agree. If CONTRACTOR observes that drawings and Specifications are in conflict, CONTRACTOR shall promptly notify the Architect in writing, requesting clarification. Should CONTRACTOR commence work on any part of the Work without seeking clarification, CONTRACTOR waives any claim for extra work or damages as a result of any ambiguity, conflict, or lack of information. Questions regarding interpretation of drawings and Specifications shall be clarified by the Architect in writing.

O. If CONTRACTOR or its subcontractors, material, or equipment suppliers, or any of their officers, agents, and employees performs, permits, or causes the performance of any work to be done under the Contract Documents which it knows, or should have known, to be in error, inconsistent, or ambiguous, or not sufficiently detailed or explained, CONTRACTOR shall bear any and all resulting costs, including without limitation the costs of correction without increase or adjustment to the contract price or the time for performance.

P. Should clarification by the Architect be deemed new or additional work, the cost shall be adjusted as provided in these General Conditions for "Changes and Extra Work," provided however that requirements calling for the higher quality material or workmanship shall prevail without additional cost to OWNER or time adjustment.

Q. In the event the Architect determines that CONTRACTOR's requests for clarification or interpretation are not justified, or do not reflect adequate, competent supervision or knowledge by CONTRACTOR, or by the subcontractors, CONTRACTOR shall be required to pay the Architect's reasonable and customary fees in processing and responding to such requests.

R. Some drawings or other documents may be required of CONTRACTOR. If CONTRACTOR performs, permits, or causes the performance of any work under the documents prepared by or on the behalf of CONTRACTOR which document is in error, inconsistent or ambiguous, or not sufficiently detailed or explained, CONTRACTOR shall bear any and all resulting costs, including, without limitation, the cost of correction, without increase to or adjustment in the contract price or the time for performance. In no case shall any subcontractor proceed with the work if uncertain without CONTRACTOR'S written direction and/or approval.

S. If it is found at any time, whether before or after completion of the work, that CONTRACTOR has varied from the drawings and/or Specifications in materials, quality, form, or finish, or in the amount or value of the materials and labor used, the Architect shall make a recommendation either: (1) that all such improper work should be

removed, remade, and replaced, and all work disturbed by these changes be made good at CONTRACTOR'S sole expense; or (2) that OWNER deduct from any amount due CONTRACTOR the sum of money equivalent to the difference in value between the work performed and that called for by the drawings and Specifications. The Architect shall determine such difference in value. At its option, OWNER may pursue either recommendation made by the Architect.

ARTICLE 13 DETAIL DRAWINGS AND SPECIFICATIONS

A In case of ambiguity, conflict, or lack of information, the Architect shall furnish additional instructions, by means of drawings or otherwise, necessary for proper execution of the Work. All drawings and instructions shall be consistent with the Contract Documents, true developments of them, and reasonably inferable from them. Any additional instructions shall be furnished with reasonable promptness, provided that CONTRACTOR informs the Architect of the relationship of the request to the critical path of construction.

B Work shall be executed in conformity with the Contract Documents and CONTRACTOR shall do no work without proper drawings and instructions.

C The Architect will furnish necessary additional details to more fully explain the work, which shall be considered as part of the Contract Documents.

D Should any details be more elaborate, in the opinion of CONTRACTOR, than scale drawings and specifications warrant, CONTRACTOR shall give written notice to the Architect within five days of receipt of the details. In case no notice is given to the Architect within five days, it will be assumed the details are reasonable development of the scale drawings. In case notice is given, the details will be considered and if found justified the Architect will either modify the drawings or shall recommend to OWNER a change order for any extra work involved.

E All parts of the construction shall be of the best quality of their respective kinds and CONTRACTOR shall use all diligence to become fully involved in the required construction and finish, and in no case to proceed with the different parts of the Work without first obtaining from the Architect directions and/or drawings as may be necessary for proper performance of the Work.

ARTICLE 14 SHOP DRAWINGS AND SUBMITTALS

A The term "shop drawing" shall be understood to include, but not be limited to detail design calculations, fabrication and installation drawings, lists, graphs, and operating instructions.

B. CONTRACTOR shall check and verify all field measurements and shall promptly submit six copies of all shop or setting drawings, schedules, and material lists required for the work of various trades, checked and approved by CONTRACTOR.

C. All submittals of shop drawings, catalog cuts, data sheets, schedules, and material lists shall be complete and shall conform to contract drawings and specifications. Except where the preparation of a shop drawing is dependent upon the approval of a prior shop drawing, all shop drawings pertaining to the same class or portion of the work shall be submitted simultaneously.

D. Shop drawings shall be submitted at a time sufficiently early to allow review by the Architect and the Division of State Architect (DSA) if required, and to accommodate the rate of construction progress required under the Contract Documents. CONTRACTOR will be required to pay the Architect's reasonable and customary fees to expedite review of shop drawings which are not submitted in timely fashion.

E. Calculations of a structural nature must be approved by the DSA.

F. All shop drawing submittals shall be accompanied by an accurately completed transmittal form using the format provided by OWNER. Any shop drawing submittal not accompanied by the transmittal form, or where all applicable items on the form are not completed, will be returned for resubmittal. CONTRACTOR may authorize a material or equipment supplier to deal directly with the Architect with regard to shop drawings, however ultimate responsibility for the accuracy and completeness of the information contained in the submittal shall remain with CONTRACTOR.

G. Normally, a separate transmittal form shall be used for each specific item or class of material or equipment for which a submittal is required. Transmittal of shop drawings on various items using a single transmittal form will be permitted only when the items taken together constitute a manufacturer's "package" or are so functionally related that expediency indicates review of the group or package as a whole. At its option, CONTRACTOR or suppliers may obtain quantities of the shop drawing transmittal form at reproduction cost from the Architect.

H. CONTRACTOR's review and approval of shop drawings shall include the following stamp:

"CONTRACTOR has reviewed and approved not only the field dimensions but the construction criteria and has also made written notation regarding any information in the shop drawings that does not conform to the Contract Documents. This shop drawing has been coordinated with all other shop drawings received to date by CONTRACTOR and this duty of coordination has not been delegated to subcontractors, material suppliers, the Architect, or the engineers on this Project.

Signature of CONTRACTOR"

I. The Architect's review of shop drawings will be limited to checking for general agreement with the Contract Documents, and shall in no way relieve CONTRACTOR of responsibility for errors or omissions contained in them, nor shall the review operate to waive or modify any provision contained in the Contract Documents. The Architect's approval of the drawings or schedules shall not relieve CONTRACTOR of its responsibility for deviations from drawings or specifications unless CONTRACTOR has called the Architect's attention to the deviations, in writing, at the time of submission, and secured the Architect's written approval.

J. Fabricating dimensions, quantities of material, applicable code requirements, and other contract requirements shall be CONTRACTOR's responsibility.

K. Within 21 calendar days after receipt of shop drawings, the Architect will return one or more prints of each drawing to CONTRACTOR with the Architect's comments noted on them.

L. If prints of the shop drawings are returned to CONTRACTOR marked "NO EXCEPTIONS TAKEN," formal revision of the drawings will not be required. If prints of the shop drawings are returned to CONTRACTOR marked "MAKE CORRECTIONS NOTED," formal resubmittal of the drawings will not be required. If prints of the shop drawings are returned to CONTRACTOR marked "REVISE AND RESUBMIT," CONTRACTOR shall revise the drawings and resubmit six copies of the revised drawings to the Architect. If prints of the shop drawings are returned to CONTRACTOR marked "REJECTED; RESUBMIT," CONTRACTOR shall resubmit six new copies of the drawing to the Architect.

M. CONTRACTOR shall make a complete and acceptable submittal to the Architect by the second submission of drawings. OWNER shall withhold funds due to CONTRACTOR to cover additional costs of the Architect's review beyond the second submission and any other costs incurred by OWNER.

N. Fabrication of an item shall not be commenced before the Architect has reviewed the pertinent shop drawings and returned copies to CONTRACTOR marked "NO EXCEPTIONS TAKEN," or "MAKE CORRECTIONS NOTED." Revisions indicated on shop drawings shall be considered changes necessary to meet the requirements of the Contract Documents and shall not be taken as the basis of claims for extra work.

O. No work represented by required shop drawings shall be purchased or commenced until the applicable submittal has been approved. The work shall conform to the approved shop drawings and all other requirements of the Contract Documents. CONTRACTOR shall not proceed with any related work which may be affected by the

work covered under shop drawings until the applicable shop drawings have been approved, particularly where piping, machinery, equipment, and/or the required arrangements and clearances are involved.

P. CONTRACTOR SHALL HAVE NO CLAIM FOR DAMAGES OR EXTENSION OF TIME DUE TO ANY DELAY RESULTING FROM CONTRACTOR HAVING TO MAKE REQUIRED REVISIONS TO SHOP DRAWINGS UNLESS THE ARCHITECT'S REVIEW OF THE DRAWINGS IS DELAYED BEYOND THE TIME PROVIDED IN THE CONTRACT DOCUMENTS AND CONTRACTOR CAN ESTABLISH THAT THE ARCHITECT'S DELAY IN REVIEW ACTUALLY RESULTED IN A DELAY IN CONTRACTOR'S CONSTRUCTION SCHEDULE. CONTRACTOR SHALL NOT BE ENTITLED TO ANY CLAIM FOR DAMAGES RESULTING FROM DSA REVIEW EXTENDING BEYOND 15 CALENDAR DAYS AFTER SUBMITTAL. HOWEVER, OWNER MAY CONSIDER AN EXTENSION OF TIME DUE TO ANY DELAY CAUSED BY DSA REVIEW.

ARTICLE 15 SAMPLES

A Within 35 calendar days following award of contract, or a shorter time as circumstances require, CONTRACTOR shall furnish for approval all samples required in the Specifications, together with catalogs and supporting data required by the Architect. This provision shall not authorize any extension of time for performance of the work. The Architect shall review the samples, as to conformance with design concept of work and compliance with information given in the Contract Documents, and approve or disapprove them within 10 working days from receipt.

B Unless specified otherwise, sampling, preparation of samples, and tests shall be in accordance with the latest standards of the American Society for Testing and Materials.

C Upon demand of the Architect or OWNER, designated samples shall be submitted or tests or examinations and considered before incorporation into the Work. CONTRACTOR shall be solely responsible for delays due to samples not being submitted in time to allow for tests. Acceptance or rejection will be expressed in writing. Work shall be equal to approved samples in every respect. Samples which are of value after testing will remain the property of CONTRACTOR.

D Work commenced before approval of samples subject to tests or examinations shall be at the sole risk of CONTRACTOR. CONTRACTOR alone shall bear the entire cost of repair, removal, or replacement of work commenced prior to approval of samples subject to tests or examinations.

ARTICLE 16 WORK TO COMPLY WITH APPLICABLE LAWS AND REGULATIONS

A. CONTRACTOR shall give all notices and comply with all laws, ordinances, rules, and regulations relating to the Work required by the Contract Documents.

B. If CONTRACTOR observes that the Drawings and/or Specifications are at variance with any applicable law, ordinance, rule, or regulation, CONTRACTOR shall promptly notify the Architect in writing, and any changes deemed necessary by the Architect shall be made as provided in the Contract Documents for changes in work. If CONTRACTOR performs any work which CONTRACTOR knows, or through the exercise of reasonable care should have known, to be contrary to any laws, ordinances, rules, or regulations, and fails to notify the Architect, CONTRACTOR shall bear all arising costs, including without limitation the costs of correction without increase or adjustment to the contract price or the time for performance. Where Plans, Drawings, or Specifications state that materials, processes, or procedures must be approved by the DSA, State Fire Marshall, or other body or agency, CONTRACTOR shall be responsible for satisfying the requirements of those bodies or agencies.

ARTICLE 17 WORK AND MATERIALS

A. Except as otherwise specifically stated in the Contract Documents, CONTRACTOR shall provide and pay for all materials, labor, tools, equipment, water, light, power, transportation, supervision, temporary construction of every kind, and all other services and facilities necessary to perform and complete the Work within the time specified.

B. Unless otherwise specified, all materials shall be new and the best of their respective kinds and grades as noted or specified, and workmanship shall be of good quality.

C. Materials shall be furnished in ample quantities and at times to ensure uninterrupted progress of the work and shall be properly stored and protected. CONTRACTOR shall be solely responsible for any damage or loss by weather, theft, or other causes to materials or work under the Contract Documents. After issuance of the Notice to Proceed by OWNER, CONTRACTOR shall place orders for materials and/or equipment as specified so that delivery may be made without delays to the Work. Upon demand from the Architect, CONTRACTOR shall furnish to the Architect documentary evidence showing that orders have been placed.

D. In the event of failure to comply with the above instructions, OWNER reserves the right to place orders for any materials and/or equipment as it may deem advisable in order that the Work may be completed at the date specified in the Contract Documents, and all expenses incidental to procuring the materials and/or equipment shall be paid for by CONTRACTOR.

E. No material, supplies, or equipment for work under the Contract Documents shall be purchased subject to any chattel mortgage or under a conditional sale or other agreement by which an interest in all or any part is retained by the seller or supplier. CONTRACTOR warrants good title to all material, supplies, and equipment installed or incorporated in the Work, and upon completion of all work agrees to surrender the premises to OWNER, together with all improvements and appurtenances constructed or placed by CONTRACTOR, free from any claims, liens, or charges. CONTRACTOR further agrees that neither CONTRACTOR nor any person, firm, or corporation furnishing any materials or labor for any work covered by the Contract Documents shall have any right to a lien upon the premises or any improvement or appurtenance, except that CONTRACTOR may install metering devices or other equipment of utility companies or political subdivisions, title to which is commonly retained by the utility company or political subdivision. In the event of the installation of any metering device or equipment, CONTRACTOR shall advise OWNER as to its owner. Nothing contained in this article however shall defeat or impair the legal right of persons furnishing material or labor to look to funds due and owing CONTRACTOR for payment. This provision shall be inserted in all subcontracts and material contracts and notice of its provisions shall be given to all persons furnishing material for work when no formal contract is entered into for such material.

F. Title to new materials and/or equipment, and attendant liability for their protection and safety, shall remain in CONTRACTOR until incorporated in the Work and accepted by OWNER. No part of these materials and/or equipment shall be removed from their place of storage except for immediate installation in the Work, and CONTRACTOR shall keep an accurate inventory of all materials and/or equipment in a manner satisfactory to OWNER or its authorized representative.

G. Price, fitness, and quality being equal with regard to supplies, OWNER may prefer supplies grown, manufactured, or produced in California. OWNER may next prefer supplies partially manufactured, grown, or produced in California provided the bids of suppliers or the prices quoted by them do not exceed by more than five percent the lowest bids/prices quoted by out-of-state suppliers, the major portion of the manufacture of the supplies is not done outside of California, and the public good will be served. (Government Code Sections 4330-4334)

ARTICLE 18 CONTRACTOR'S SUPERVISION, PROSECUTION, AND PROGRESS

A. Unless personally present on premises where the work is being done, CONTRACTOR shall maintain competent project supervision at all times during working hours, which includes but is not limited to a Project Manager and all additional personnel necessary to maintain progress of the Project within the approved contract schedule satisfactory to the Architect. The Project Manager shall not be changed except with the written consent of the Architect. The Project Manager shall represent

CONTRACTOR in its absence and all directions given to the Project Manager shall be binding on CONTRACTOR.

B. Unless personally present on premises where the work is being done, CONTRACTOR shall maintain a competent Superintendent on the work site at all times, satisfactory to the Architect. The Superintendent shall not be changed except with the written consent of the Architect. The Superintendent shall represent CONTRACTOR in its absence and all directions given to the Superintendent shall be binding on CONTRACTOR.

C. Before commencing the Work, CONTRACTOR shall give written notice to OWNER and the Architect of the name, qualifications, and experience of CONTRACTOR's proposed Project Manager and Superintendent. If either the Project Manager or Superintendent is found unsatisfactory by OWNER, CONTRACTOR shall replace that person with one acceptable to the OWNER.

D. CONTRACTOR shall supervise and direct the work competently and efficiently, devoting such attention and applying such skills as may be necessary to perform the Work in accordance with the Contract Documents.

E. Before commencing the Work, CONTRACTOR shall verify all grade lines, levels, and dimensions indicated on the Drawings and shall report any apparent error or inconsistencies to the Architect before commencing work. CONTRACTOR shall not proceed until reported apparent errors and inconsistencies are corrected or otherwise resolved by the Architect and OWNER.

F. CONTRACTOR shall establish and maintain all construction grades, lines, and bench marks, and be responsible for their accuracy and protection.

G. CONTRACTOR represents itself to OWNER as a skilled, knowledgeable, and experienced CONTRACTOR who will or has carefully studied and compared the Contract Documents with each other, and CONTRACTOR further represents it has or shall at once report to the Architect any errors, inconsistencies, or omissions discovered in them. CONTRACTOR shall be liable to OWNER for damage resulting from errors, inconsistencies, or omissions in the Contract Documents that CONTRACTOR either:

1. Recognized and knowingly failed to report; or
2. Should have recognized, and which a similarly skilled, knowledgeable, and experienced contractor would have discovered, which CONTRACTOR negligently failed to recognize and report.

H. CONTRACTOR shall verify all indicated dimensions before ordering materials or equipment, or before performing work. CONTRACTOR shall take field measurements,

verify field conditions, and carefully compare the field measurements and conditions and other information known to CONTRACTOR with the Contract Documents before commencing work. Errors, inconsistencies, or omissions discovered shall be reported to OWNER at once. Upon commencement of any item of work, CONTRACTOR shall be responsible for dimensions related to the item of work and shall make any corrections necessary to make work properly fit at no additional cost to OWNER. This responsibility for verification of dimensions is a non-delegable duty and may not be shifted to subcontractors or agents.

I. Omissions from the Plans, drawings, or Specifications, or the mis-description of details of work which are manifestly necessary to carry out the intent of the Plans, drawings, and Specifications, or which are customarily performed, shall not relieve CONTRACTOR from performing such omitted or mis-described work, but they shall be performed as if fully and correctly set forth and described in the Plans, drawings, and Specifications.

J. CONTRACTOR shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction. CONTRACTOR shall be responsible to see that the finished work complies accurately and completely with the Contract Documents

ARTICLE 19 SUBSTITUTIONS

A. CONTRACTOR shall follow all instructions and requirements for substitutions set forth in the Instructions to Bidders and in this article.

B. OWNER desires that whenever possible all substitution requests be resolved prior to contract award. For that reason, no substitution requests, whether of "equal" materials, process, service, equipment, or otherwise, may be made after the bid date except by the express written permission of OWNER and on such terms as OWNER may require, or in the case of an emergency as where a specified material, process, service, equipment or other item has become unavailable through no fault of CONTRACTOR.

C. As to any emergency substitution request, CONTRACTOR shall timely submit the request, together with substantiating data, including substitution warranties, in order to prevent delays arising from the substitution request.

D. With respect to all proposed substitutions:

1. Every substitution request shall be on the substitution request form designated by OWNER, if any, and shall be accompanied by all substantiating data.

2. CONTRACTOR shall furnish with its substitution request all drawings, Specifications, samples, performance data, calculations, and other information as may be required to assist the Architect and OWNER in determining whether the proposed substitution is acceptable, including but not limited to the following:

- a. Identify product by Specifications section and article numbers; provide manufacturer's name and address, trade name of product, and model or catalog number; list fabricators and suppliers as appropriate.
- b. Attach product data as required by Specifications.
- c. List similar projects using product, dates of installation, and names of Architect/Engineer and owner.
- d. Give itemized comparison of proposed substitution with specified product, listing variations and reference to Specifications section and article numbers.
- e. Give quality and performance comparison between proposed substitution and specified product.
- f. Give cost data comparing proposed substitution with specified product and amount of net change to contract sum.
- g. Identify any required license fees or royalties.
- h. List availability of maintenance services and replacement materials.
- i. State the effect of the substitution on the construction schedule, and the effect of any changes required in other work or products; include a document waiving rights to additional payment or time that may become necessary because of the failure of the substitution to perform adequately.

3. OWNER is not responsible for locating or securing any information which is not included in any substantiating data.

4. The proposed substitution must be, in the opinion of OWNER, substantially equal or better in every respect to what is specified. The burden of proof as to the quality or suitability of proposed substitutions shall be borne by CONTRACTOR.

5. With the assistance of the Architect, OWNER shall be the sole judge as to the quality and suitability of proposed substituted items, and decisions of the OWNER shall be final and conclusive.

6. All substitutions shall be submitted with a substitution warranty. Any substitution requests submitted without the warranty will not be considered, but will be returned to CONTRACTOR without review or evaluation. If required by OWNER, CONTRACTOR shall provide an extended warranty for the requested substitution.

7. No extension of time shall be granted if the extension request arises from a request for substitution, whether by reason of delay in making the request, delay in OWNER's approval of the request, delay in obtaining other governmental approvals, delay in coordination of substitutions into or with other work or equipment, delay in obtaining the substituted items, increased time of installation or performance, or for any other reason.

8. Once any part or all of a substitution request has been denied, it is considered always denied.

9. A substitution request shall be submitted separately from any other submittal and shall be clearly marked as a "request for substitution."

10. If the substitution is accepted, CONTRACTOR shall bear all costs and be solely and directly responsible for fitting accepted substitute materials and equipment into the available space in a manner acceptable to the Architect and OWNER, and for the proper operation of the substituted equipment with other equipment with which it may be associated. In addition, CONTRACTOR shall acknowledge in writing on CONTRACTOR's letterhead, that CONTRACTOR accepts complete responsibility for additional costs required for modifications to building or other materials and equipment and additional coordination of work.

11. Any additional time, including Architect review time, and any additional coordination, inspection, materials, equipment, labor, tools, warranty extension, or other items necessary to either accomplish a substitution or arising as a result of a substitution request will be the sole responsibility of and at the sole expense of CONTRACTOR, who will reimburse OWNER for review or redesign services associated with approval by the Architect and obtaining all required approvals by other agencies.

12. CONTRACTOR shall also be responsible for meeting all code requirements whether local, city, county, state, federal, or other.

F. If the substitution requested by CONTRACTOR is not substantially equal or better in every respect to that specified, in the opinion of DISTRICT, CONTRACTOR shall provide and/or perform as specified.

G. In the event CONTRACTOR furnishes a material, process, service, or equipment more expensive than that specified, the difference in cost of such material, process, service, or equipment furnished shall be borne by CONTRACTOR. Any difference in cost between an approved substitution which is lower in cost than the originally specified item shall be refunded by CONTRACTOR to OWNER.

H. Any engineering, design, or approval agencies' fees required to make adjustments in material or work of all trades directly or indirectly affected by the approved substitution shall be borne entirely by CONTRACTOR. If a substitution is approved, any additional time required to obtain shop drawings, order materials, make modifications, perform testing, or whatever else is necessary to make the substitution function properly in place of the originally specified item shall be borne solely by CONTRACTOR. It will also be CONTRACTOR's responsibility to acquire and install the substituted item in the time frame allowed under the Contract Documents. No time extension need be granted to CONTRACTOR for any substitution, except as OWNER in its sole discretion may deem appropriate.

ARTICLE 20 PROTECTION OF WORK AND PROPERTY

A. CONTRACTOR shall be responsible for all damages to persons or property which occur as a result of CONTRACTOR's fault or negligence in connection with performance under the Contract Documents, and for the proper care and protection of all materials delivered and work performed until completion and final acceptance by OWNER. With the exception of damage to the Work caused by "acts of God," as defined in Public Contract Code 7105, CONTRACTOR assumes the risk for damage or destruction of any or all work performed under the Contract Documents. CONTRACTOR shall adequately protect adjacent property from settlement or loss of lateral support as provided by law and this article.

B. CONTRACTOR shall take, and require subcontractors to take, all necessary precautions for safety of workers and shall comply with all applicable federal, state, local, and other safety laws, standards, orders, rules, regulations, and building codes to prevent accidents or injury to persons on, about, or adjacent to the work site and to provide a safe and healthful place of employment. CONTRACTOR shall furnish, erect, and properly maintain at all times, as directed by OWNER or the Architect, or required by conditions and progress of work, all necessary safety devices, safeguards, construction canopies, signs, audible devices for protection of the blind, safety rails, belts and nets, barriers, lights, and watchmen for protection of workers and the public, and shall post danger signs warning against hazards created by such features in the course of construction. CONTRACTOR shall designate a responsible employee whose

duty shall be to post information regarding protection and obligations of workers and other notices required under occupational safety and health laws, to comply with reporting and other occupational safety requirements, and to protect the life, safety, and health of workers. The name and position of the person so designated shall be reported in writing to OWNER by CONTRACTOR. CONTRACTOR shall correct any violation of safety laws, standards, orders, rules, or regulations. Upon issuance of a citation or notice of violation by the California Division of Occupational Safety and Health, the violation shall be corrected immediately by CONTRACTOR at CONTRACTOR's expense.

C. In an emergency affecting safety of life, work, or adjoining property, CONTRACTOR is permitted to act at its discretion without special instruction or authorization from the Architect or OWNER to prevent any threatened loss or injury, and CONTRACTOR shall act if authorized or instructed by the Architect or OWNER. Any compensation claimed by CONTRACTOR for emergency work shall be determined according to the Contract Documents.

D. CONTRACTOR shall (unless waived by OWNER in writing):

1. Provide heat, covering, and enclosures necessary to protect all work, materials, equipment, appliances, and tools against damage by weather conditions;
2. Take adequate precautions to protect existing sidewalks, curbs, pavements, utilities, adjoining property, and structures, and avoid damage to them, and repair any damage caused by construction operations;
3. When performing new construction on existing sites, become informed and take into specific account the maturity of the students on the site, and perform work which may interfere with school routine before or after school hours; enclose the work area with a substantial barricade and arrange work to cause a minimum of inconvenience and danger to students and staff in their regular school activities;
4. Provide substantial barricades around any shrubs or trees to be preserved;
5. Deliver materials to the building area over the route designated by the Architect;
6. Take preventative measures to eliminate excessive dust;

7. Confine apparatus, storage of materials, and the operations of its workers within limits indicated by law, ordinances, permits, or directions of the Architect and not unreasonably encumber the premises with materials;
8. Enforce all instructions of OWNER and the Architect regarding signs, advertising, fires, danger signals, barricades, and smoking, and require that all persons employed on the Work comply with all regulations while on the construction site;
9. Exercise reasonable care to prevent disturbing or covering any survey markers, monuments, or other devices marking property boundaries or corners; if markers are disturbed, they shall be replaced by an approved civil engineer at no cost to OWNER.

ARTICLE 21 USE OF ASBESTOS OR LEAD MATERIALS/PRODUCTS

A. CONTRACTOR shall not use any asbestos or lead containing products or materials in performing the work under the Contract Documents. Upon completion of the Project, CONTRACTOR shall certify in writing to OWNER that no asbestos or lead containing materials or products were used by CONTRACTOR or any subcontractor in performing the work required by the Contract Documents.

B. Should asbestos containing materials be installed by CONTRACTOR in violation of this certification, or if removal of asbestos containing materials is otherwise a part of the Project, decontaminations and removals will meet the following criteria:

1. Decontamination and removal of work found to contain asbestos or work installed with asbestos containing equipment shall be done only under the supervision of a qualified consultant, knowledgeable in the field of asbestos abatement and accredited by Cal-OSHA.
2. Any asbestos removal contractor shall be a Cal-OSHA accredited contractor qualified in the removal of asbestos and shall be chosen and approved by the asbestos consultant who shall have sole discretion and final determination in this matter.
3. The asbestos consultant shall be chosen and approved by OWNER who shall have sole discretion and final determination in this matter.
4. The work will not be accepted until asbestos contamination is reduced to levels deemed acceptable by the asbestos consultant.

C. Cost of all asbestos removal, including but not limited to the cost of an asbestos removal contractor, the cost of the asbestos consultant, analytical and laboratory fees,

time delays, and additional costs as may be incurred by OWNER shall be borne entirely by CONTRACTOR.

D. Interface of work for the Project with work containing asbestos shall be executed by CONTRACTOR at CONTRACTOR's risk and at CONTRACTOR's discretion with full knowledge of the currently accepted standards, hazards, risks, and liabilities associated with asbestos work and asbestos containing materials. By execution of the Construction Agreement, CONTRACTOR acknowledges the above and agrees to hold harmless OWNER, its governing board, or other governing body, employees, agents, and the Architect and assigns for all asbestos liability which may be associated with this work. CONTRACTOR further agrees to instruct CONTRACTOR's employees with respect to the above standards, hazards, risks, and liabilities.

E. Should lead containing materials be installed by CONTRACTOR in violation of this certification, or if removal of lead containing materials is part of the Project, decontaminations and removals will meet the criteria approved by OWNER.

F. The cost of all removals or decontaminations resulting from the installation of materials in violation of this certification shall be at the sole expense of CONTRACTOR.

ARTICLE 22 LAYOUT AND FIELD ENGINEERING

All field engineering required for laying out this Work and establishing grades for earthwork operations shall be furnished by CONTRACTOR at its expense. The work shall be done by a qualified civil engineer approved by the Architect. "As-Built" drawings of site development and utilities' locations and inverts shall be prepared by an approved civil engineer.

ARTICLE 23 UTILITIES

A. All utilities, including but not limited to electricity, water, gas, and telephone used on the Work, shall be furnished and paid for by CONTRACTOR. CONTRACTOR shall furnish and install necessary temporary distribution systems, including meters if necessary, from distribution points to points on the site where the utility is necessary to perform the work. Upon completion of the Work, CONTRACTOR shall remove all temporary distribution systems.

B. If this Project is for an addition to an existing facility, CONTRACTOR may use existing OWNER utilities, with the written permission of OWNER, by making prearranged payments to OWNER for utilities used by CONTRACTOR for construction.

ARTICLE 24 UTILITIES: REMOVAL, RESTORATION

A Pursuant to Government Code section 4215, OWNER assumes the responsibility for removal, relocation, and protection of utilities located on the construction site at the time of commencement of construction with respect to any main or trunkline utility facilities which are not identified in the Plans and Specifications. CONTRACTOR shall not be assessed any delay in completion of the Project caused by OWNER's failure to provide for removal or relocation of utility facilities. OWNER shall compensate CONTRACTOR for the costs of locating, repairing damage not due to CONTRACTOR's failure to exercise reasonable care, and removing or relocating any utility facilities not indicated in the Plans and Specifications with reasonable accuracy, and for equipment necessarily idle during the work, using the provisions of the Contract Documents on changes in the Work.

B. This article shall not be construed to preclude assessment against CONTRACTOR for any other delays in completion of the Work. Nothing in this article shall be deemed to require OWNER to indicate the presence of existing service laterals or appurtenances whenever the presence of those utilities on the construction site can be inferred from the presence of other visible facilities, such as buildings or meter junction boxes on or adjacent to the construction site.

C. If while performing work under the Contract Documents, CONTRACTOR discovers utility facilities not identified by OWNER in the contract Plans or Specifications, CONTRACTOR shall immediately notify OWNER and the utility in writing.

D. As part of the work to be performed, CONTRACTOR shall provide the notices and proceed in accordance with Government Code Sections 4216.2, 4216.3, and 4216.4, and pay all fees charged pursuant to Government Code Section 4216, et seq.

ARTICLE 25 SANITARY FACILITIES

CONTRACTOR shall provide temporary sanitary toilet facilities as required by law and additional facilities as directed by the Project Inspector for the use of all workers. The facilities shall be maintained in a sanitary condition and left at the site until removal is directed by the Project Inspector. Use of toilet facilities contained in the Work under construction shall not be permitted except with the approval of the Project Inspector.

ARTICLE 26 LABOR—FIRST AID

CONTRACTOR shall maintain emergency first aid treatment on the Project for all workers of CONTRACTOR or any subcontractors on the Project, and shall ensure compliance with the Federal Occupational Safety and Health Act of 1970 (29 U.S.C.A., Section 651 et seq.).

ARTICLE 27 CHANGES AND EXTRA WORK

A. As used in this article, the following definitions shall apply:

1. "Labor" means any amount(s) paid directly to non-supervisory workers (up to and including general foreman) in the form of employee wages and benefits in order to perform the Work. These costs shall include documented payroll cost (wages, payroll taxes, fringe benefits, workers compensation) and general liability insurance as submitted and approved by OWNER.

2. "Material" means all products, equipment, and devices that are physically incorporated into the work to be performed. Any costs or equipment, facilities, or services not physically incorporated in the work to be performed but necessary for its completion shall be considered "overhead." Cash or trade discounts available to the purchaser shall be credited to OWNER. Material costs secured by other than direct purchase and billing will be the price paid to the actual supplier as determined by OWNER. Markup will not be allowed. If cost of materials is deemed excessive, the price will be determined to be the lowest current wholesale price delivered to the site, less cash or trade discount.

3. "Equipment" costs shall include transportation and setup costs, if CONTRACTOR can substantiate that the Work could not have been performed economically with equipment already at the site. Rental costs shall not exceed rates set forth in the then-current "Rental Rate Blue Book," published by Dataquest, Inc., Palo Alto, California, as adjusted to this region. Owned equipment costs shall not exceed rates set forth in the then-current "Cost Reference Guide for Construction Equipment," published by Dataquest. Hours of usage must be documented by CONTRACTOR in order to be the basis for equipment utilization charges for Change Orders. CONTRACTOR will not be allowed to charge for idle equipment.

4. "Overhead" means any necessary costs and expenses incurred in the performance of the Work excluding "labor," "materials," and "equipment" as defined above.

B. Without invalidating the Contract Documents, OWNER may order extra work or make changes by altering, adding to, or deducting from the Work, and the contract sum shall be adjusted accordingly. All the work shall be subject to the conditions of the Contract Documents, except that any claim for extension of time caused by changes shall be adjusted at the time of ordering the change, with adjustments to time being made after CONTRACTOR has justified, through documentation, the impact on the critical path of the Project.

C. In giving instructions, the Architect shall have authority to make minor changes in the Work not involving a change in cost and not inconsistent with purposes of the Project, subject to DSA approval. If so authorized by OWNER, OWNER's Representative, if one has been identified, may authorize changes in work involving a change in cost that does not exceed \$15,000. Otherwise, except in an emergency endangering life or property, no extra work or change shall be performed unless pursuant to a written order from OWNER, and no claim for any addition to the contract amount or time shall be valid unless by written order of OWNER. A Change Order will not be officially approved until ratified by OWNER's Board of Trustees or other governing body.

D. If the Architect determines that the work required to be done constitutes extra work outside the scope of the Contract Documents, the Architect shall send a request for a detailed proposal to CONTRACTOR. CONTRACTOR will respond with a detailed proposal within five calendar days of receipt of the request for proposal. If the work is to be performed by a subcontractor, CONTRACTOR's proposal must include a bid from the subcontractor.

E. If the Architect determines the work required does not constitute extra work, or work for which CONTRACTOR may recover additional compensation, the Architect shall so notify CONTRACTOR. If CONTRACTOR is not in agreement with the determination by the Architect, CONTRACTOR shall immediately give notice of any claim as provided in the Contract Documents. CONTRACTOR shall perform the required work in timely fashion.

F. At the discretion of OWNER, the value of any extra work, change, or deduction shall be determined in one or more of the following ways:

1. By acceptable lump sum proposal from CONTRACTOR, a total sum for the changed work may be mutually determined by OWNER and CONTRACTOR. CONTRACTOR shall furnish a breakdown of the proposed lump sum cost satisfactory to OWNER, which shall be full and final compensation for the change, including time adjustment.

2. By contract unit prices contained in CONTRACTOR's original bid and incorporated in the Contract Documents, or fixed by subsequent agreement between OWNER and CONTRACTOR. Where payment for Change Orders is based on unit prices stipulated in CONTRACTOR's bid, those unit prices shall constitute the total equitable adjustment due for the change. If a change is ordered in an item or work covered by a contract unit price, and the change does not involve a substantial change in the character of the work from that shown on the Plans or included in the Specifications, an adjustment in payment will be made based upon the increase or decrease in quantity and the contract unit price. In the case of such an increase or decrease in a major bid item, the use

of this basis for the adjustment of payment will be limited to that portion of the change which, together with all previous changes to that item, is not in excess of 25 percent of the total cost of such item based on the original quantity and contract unit price. If a change is ordered in an item of work covered by a contract unit price, and the change does involve a substantial change in the character of the work from that shown on the Plans or included in Specifications, an adjustment in payment will be made in accordance with other sections of this article. Should any contract item be deleted in its entirety, payment will be made only for actual costs incurred prior to notification of such deletion.

3. Stipulated contract unit prices are those established by OWNER in the Contract Documents, as distinguished from contract unit prices submitted by CONTRACTOR, and may be used for the adjustment of contract changes. Whether set forth in the Contract Documents or subsequently agreed upon, all contract unit prices shall include overhead, profit, and increased premium on the Surety Bonds.

4. By cost of labor, material, equipment, and subcontract, plus a percentage for overhead and profit. If the value is determined by this method the following requirements shall apply:

a. Daily reports by CONTRACTOR, as follows:

(i) General. At the close of each working day, CONTRACTOR shall submit a daily report to the Architect and the Project Inspector on forms approved by OWNER, together with applicable delivery tickets listing all labor, materials, and equipment involved for that day, and for other services and expenditures, when authorized, concerning extra work items. An attempt shall be made to reconcile the report daily, and it shall be signed by the Architect and CONTRACTOR. In the event of disagreement, pertinent notes shall be entered by each party to explain points which cannot be resolved immediately. Each party shall retain a signed copy of the report. Reports by subcontractors or others shall be submitted through CONTRACTOR.

(ii) Labor. The report shall show names of workers, classifications, and hours worked and hourly rate. Project supervision expenses, including for foremen and above, are not allowed.

(iii) Materials. The report shall describe and list quantities of materials used and unit cost.

(iv) Equipment. The report shall show the type of equipment, size, identification number, and hours of operation, including loading and transportation, if applicable, and hourly/daily costs.

(v) Other Services and Expenditures. Other services and expenditures shall be described in such detail as OWNER may require.

b. Basis for Establishing Costs

(i) Labor. The costs of labor will be the actual cost for wages prevailing locally for each craft classification or type of worker at the time the extra work is done, plus employer payments of payroll taxes and insurance, health and welfare, pension, vacation, apprenticeship funds, and other direct costs resulting from federal, state, or local laws, as well as assessments or benefits required by lawful collective bargaining agreements. The use of labor classifications which would increase the extra work cost will not be permitted unless CONTRACTOR establishes the necessity for such additional costs. Labor costs for equipment operators and helpers shall be reported only when such costs are not included in the invoice for equipment rental.

(ii) Materials. The cost of materials reported shall be at invoice or lowest current price at which such materials are locally available and delivered to the work site in the quantities involved, plus sales tax, freight, and delivery. OWNER reserves the right to approve materials and sources of supply, or to supply materials to CONTRACTOR if necessary for the progress of the work. No markup shall be applied to any material provided by OWNER.

(iii) Tool and Equipment Rental. No payment will be made for the use of tools which have a replacement value of \$100 or less or where an invoice is not provided. Regardless of ownership, the rates to be used in determining equipment rental costs shall not exceed listed rates prevailing locally at equipment rental sources or distributors at the time the work is performed. The rental rates paid shall include the cost of fuel, oil, lubrication, supplies, small tools, necessary attachments, repairs and maintenance of any kind, depreciation, storage, insurance, and all incidentals. Necessary loading and transportation costs for equipment used on the extra work shall be included. If equipment is used intermittently, and when not in use could be returned to its rental source at less expense to OWNER than holding it at the work site, it shall be

returned, unless CONTRACTOR elects to keep it at the work site at no expense to OWNER. All equipment shall be acceptable to the Architect in good working condition, and suitable for the purpose for which it is to be used. Manufacturer's ratings and manufacturer's approved modifications shall be used to classify equipment and it shall be powered by a unit of at least the minimum rating recommended by the manufacturer.

(iv) Other Items. OWNER may authorize other items which may be required on the extra work. These items include labor, services, material, and equipment which are different in their nature from those required by the work and which are of a type not ordinarily available from CONTRACTOR or any of the Subcontractors. Detailed invoices covering all such items shall be submitted with the request for payment.

(v) Invoices. Vendors' invoices for material, equipment rental, and other expenditures shall be submitted with the request for payment. If the request for payment is not substantiated by invoices or other documentation, OWNER may establish the cost of the item involved at the lowest price which was current at the time of the report.

c. The following form shall be used by OWNER and CONTRACTOR as applicable to communicate proposed additions and deductions to the Contract Documents.

EXTRA CREDIT

(i) Material (attached itemized quantity and unit cost plus sales tax

(ii) Labor (attached itemized hours and rates)

(iii) Subtotal

(iv) If Subcontractor performed work, add Subcontractor's overhead and profit to portions performed by it, not to exceed 10% of Item (iii) above

(v) Subtotal

(vi) CONTRACTOR's Overhead and Profit, including any increased bond costs, not to exceed 10% of Item (v)

(viii) Total

5. IT IS EXPRESSLY UNDERSTOOD THAT THE VALUE OF SUCH EXTRA WORK OR CHANGES AS DETERMINED BY ANY OF THESE METHODS EXPRESSLY INCLUDES ANY AND ALL OF CONTRACTOR'S COSTS AND EXPENSES, BOTH DIRECT AND INDIRECT, RESULTING FROM DELAYS OR ADDITIONAL TIME REQUIRED ON THE PROJECT, OR RESULTING FROM ACCELERATED WORK TO AVOID DELAYS TO THE PROJECT.

G. For changes that increase the contract price, CONTRACTOR may include amounts for overhead and profit. CONTRACTOR's overhead (general and administrative) and profit shall include, but not be limited to additional bond costs, additional job site facilities costs, additional home and field office costs, additional administrative costs, additional cleaning, and additional project supervision costs (which includes but is not limited to a Project Manager and any and all additional personnel necessary to maintain the project progress within the approved contract schedule).

H. CONTRACTOR'S overhead, profit, and additional bond costs on the cost of work performed by CONTRACTOR shall be a total sum not exceeding 10 percent of the cost of work.

I. CONTRACTOR'S overhead, profit, and additional bond costs on the cost of work performed by Subcontractors of all tiers shall be a total sum not exceeding 10 percent of those costs.

J. Subcontractors' (all tiers) overhead and profit on the cost of work performed by Subcontractor shall be a total sum not exceeding 10 percent of the cost of labor, materials, rentals, etc.

K. Overhead and profit shall not be applied to taxes, delivery charges, and insurance by CONTRACTOR or its subcontractors or sub-subcontractors.

L. Before CONTRACTOR is authorized to proceed with extra work or changes on the basis set forth in this Article, OWNER and CONTRACTOR shall be in complete agreement on what the term "costs" shall include and the percentage amount of fixed fee CONTRACTOR is to charge.

M. If CONTRACTOR should claim that any instruction, request, drawing, specification, action, condition, omission, default, or other situation constitutes a change, extra work, or otherwise obligates OWNER to pay additional compensation to CONTRACTOR or to grant an extension of time, or constitutes a waiver of any provision in the Contract Documents, CONTRACTOR shall notify OWNER in writing of such claim within five calendar days from the date CONTRACTOR has actual or constructive notice of the factual basis supporting the claim. The notice shall state the

factual basis for the claim and cite in detail the Contract Documents (including plans and specifications) upon which the claim is based. CONTRACTOR's failure to notify OWNER within the five-day period shall be deemed a waiver and relinquishment of such a claim. If the notice is given within the specified time, the procedure for its consideration shall be as stated in these General Conditions. In the event of failure to agree, the matter shall be treated as a claim following the claims procedures in the Contract Documents.

N. Costs which shall not be paid in Change Orders under the Contract Documents include but are not limited to interest costs of any type, claim preparation or filing costs, costs in preparing or reviewing proposed change orders or proposals, CQR's, ASI's, etc., lost revenue, lost profit, lost income or earnings, rescheduling costs, costs of idled equipment, lost earnings or interest on unpaid retainage, claims consulting costs, costs of corporate officers or staff visiting the site, fluctuation of foreign currency conversion or exchange rate costs, or loss of other business.

O. Notwithstanding any other provision in the Contract Documents, the adjustment in the contract price, if any, and the adjustment in the contract time, if any, set out in a change order shall constitute the entire compensation and/or adjustment in the contract time due CONTRACTOR arising out of the change in the work covered by the change order, including any extensions of time, unless otherwise expressly stated in the change order. The amount of any compensation due CONTRACTOR shall be calculated pursuant to this Article. The compensation shall not include any additional charges not set forth in this Article and shall not include delay damages due to processing a change order or refusal to sign a change order, or any indirect, consequential, or incidental costs, including any project management costs, extended home office and field office overhead, administrative costs, or profit except as such matters may be authorized under this Article.

P. In furtherance of the intent to settle all change orders fully and finally at the issuance date of the change order, the following shall be expressly incorporated in writing and deemed incorporated in all change orders:

THE COMPENSATION (TIME AND COST) SET FORTH IN THIS CHANGE ORDER COMPRISES THE TOTAL COMPENSATION DUE CONTRACTOR FOR THE CHANGE DEFINED IN THE CHANGE ORDER, INCLUDING IMPACT ON UNCHANGED WORK. ACCEPTANCE OF THIS CHANGE ORDER CONSTITUTES A FULL AND COMPLETE ACCORD AND SATISFACTION OF ANY AND ALL CLAIMS BY CONTRACTOR ARISING OUT OF OR RELATING TO THE CHANGE ORDER, INCLUDING BUT NOT LIMITED TO CLAIMS FOR CONTRACT BALANCE AND RETENTION, TIME, EXTENDED FIELD OR HOME OFFICE, OR OTHER OVERHEAD, ALL ACCELERATION, IMPACT, DISRUPTION AND DELAY DAMAGES, ANY AND ALL OTHER

DIRECT AND/OR INDIRECT COSTS, CLAIMS BY SUBCONTRACTORS AND SUPPLIERS, AND ANY AND ALL OTHER CLAIMS AGAINST OWNER FOR TIME OR MONEY, FROM ANY SOURCE AND UNDER ANY LEGAL THEORY WHATSOEVER, AS TO THE SUBJECT OF THIS CHANGE ORDER. NO SIGNATURE UNDER PROTEST OR ACCOMPANIED BY RESERVATION OF RIGHTS OR PROTEST LANGUAGE, OR ANY OTHER ATTEMPTS TO AVOID SUCH WAIVER SHALL BE OF ANY FORCE OR EFFECT WHATSOEVER. NO ADDITIONS OR DELETIONS TO THIS CHANGE ORDER SHALL BE ALLOWED, EXCEPT WITH WRITTEN PERMISSION OF OWNER.

Q. Within 10 days of the notice to proceed, CONTRACTOR shall submit a detailed list of the field office overhead cost components which are time related and which represent costs incurred as a direct result of time extensions. No allowance for overhead costs and no profit allowance will be allowed on the extended daily field overhead cost component of the change Order. The deviation of an extended home office overhead rate and its application to contract time extensions shall not be allowed.

ARTICLE 28 CORRECTION OF WORK BEFORE FINAL PAYMENT

A. CONTRACTOR shall promptly remove from the premises all work identified by OWNER as failing to conform to the Contract Documents, whether incorporated or not. CONTRACTOR shall promptly replace and repair its own work to comply with the Contract Documents, without additional expense to OWNER, and shall bear the expense of making good all work of other contractors destroyed or damaged by that removal or replacement, including compensation for the Architect's additional services.

B. If CONTRACTOR does not remove work within a reasonable time following written notification, OWNER may remove and store the material at CONTRACTOR'S expense. If CONTRACTOR does not pay the expenses of removal within 10 days, OWNER may sell the materials at auction or private sale upon 10 days' written notice, and shall account for any net proceeds after deducting all costs and expenses that should have been borne by CONTRACTOR.

ARTICLE 29 DEDUCTIONS FOR UNCORRECTED WORK

A. If CONTRACTOR defaults or neglects to carry out the Work in accordance with the Contract Documents, or fails to perform any provision of the Contract Documents, after 10 days' written notice to CONTRACTOR, OWNER may make good such deficiencies without prejudice to any other remedy it may have.

B. OWNER shall reduce the total contract price by the cost of making good such deficiencies.

C. If OWNER deems it inexpedient to correct work not performed in compliance with the Contract Documents, an equitable deduction from the contract price shall be made.

ARTICLE 30 CLEANING UP

A. CONTRACTOR shall at all times keep the work site free from debris such as waste, rubbish, and excess materials and equipment caused by this Work. CONTRACTOR shall not leave debris under, in, or about the work site, but shall promptly remove all items.

B. Upon completion of the Work, CONTRACTOR shall clean the interior and exterior of each building, including fixtures, equipment, walls, floors, ceilings, roofs, window sills and ledges, horizontal projections, and any areas where debris has collected. CONTRACTOR shall clean and polish all glass, plumbing fixtures, and finish hardware and similar finish surfaces and equipment, and remove temporary fencing, barricades, planking, sanitary facilities, and similar temporary facilities from the site.

C. If CONTRACTOR fails to clean up at the completion of the Work, OWNER may do so and the cost for such cleanup shall be charged back to CONTRACTOR and may be deducted from future progress or final payments.

D. CONTRACTOR shall not include cleaning as an additional line item for change order payments. Cleaning is included in the overhead expenses included in the CONTRACTOR's and/or Subcontractor's overhead and profit percentage.

ARTICLE 31 ACCESS TO WORK

OWNER and its representatives shall at all times have access to the Work wherever it is in preparation or progress. CONTRACTOR shall provide safe and proper facilities for access so OWNER's representatives may perform their functions under the Contract Documents.

ARTICLE 32 GUARANTEE

A. CONTRACTOR warrants that the Work, including any equipment furnished by CONTRACTOR, shall be:

1. Free from defects in workmanship and material;
2. Free from defects in any design performed by CONTRACTOR;

3. New, and conform and perform to the requirements stated in the Specifications, and where detail requirements are not so stated, shall conform to applicable industry standards; and

4. Suitable for the use stated in the Specifications.

B. The warranty period for discovery of defective work shall commence on the date stamped on the Notice of Completion to verify recording with the County, and shall continue for the period set forth in the Specifications or for one year if not so specified. If during the warranty period the Work is not available for use due to defective work, such time of unavailability shall not be counted as part of the warranty period. The warranty period for corrected defective work shall continue for a duration equivalent to the original warranty period.

C. OWNER shall give CONTRACTOR prompt written notice after discovery of any defective work. CONTRACTOR shall correct any such defective work, as well as any damage to any other part of the Work resulting from such defective work, and provide repair, replacement, or reimbursement, at its sole expense, in a manner approved by OWNER and with due diligence and dispatch as required to make the Work ready for use by OWNER, ordinary wear and tear, unusual abuse, or neglect excepted. Such corrections shall include but not be limited to any necessary adjustments, modifications, changes of design (unless of OWNER's design), removal, repair, replacement, or reinstallation, and shall include all necessary parts, materials, tools, equipment, transportation charges, and labor as may be necessary, and cost of removal. Replacement shall be performed at a time and in such a manner so as to minimize the disruption to OWNER's use of the Work.

D. In the event CONTRACTOR or Surety fails to commence and pursue with diligence any replacements or repairs within one week after being notified in writing, OWNER is authorized to proceed to have any defects repaired at the expense of CONTRACTOR and Surety, and CONTRACTOR and Surety agree to pay the costs and charges immediately on demand.

E. If defective work creates a dangerous condition, in the opinion of OWNER, or requires immediate correction or attention to prevent further loss to OWNER or to prevent interruption or operations of OWNER, OWNER shall attempt to give the notice required by this Article. If CONTRACTOR or Surety cannot be contacted or neither complies with OWNER's request for correction within a reasonable time, as determined by OWNER, without regard to the provisions of this Article, OWNER may proceed to make the correction or provide the attention, and the costs of correction or attention shall be charged against CONTRACTOR. Any action by OWNER shall not relieve CONTRACTOR of the guarantees provided in this Article or elsewhere in the Contract Documents.

F. This article does not in any way limit the guarantee on any items for which a longer guarantee is specified, or any items for which a manufacturer gives a guarantee for a longer period. CONTRACTOR shall furnish OWNER with all appropriate guarantee or warranty certificates upon completion of the Project.

G. All guarantees required under this Article shall be considered to be in writing on the guarantee provided by CONTRACTOR, and CONTRACTOR shall use the form included in the Contract Documents unless otherwise agreed by OWNER.

H. OWNER may collect its reasonable costs and attorneys' fees in any action to enforce this Article.

ARTICLE 33 SURVEYS

OWNER shall furnish all surveys describing the physical characteristics, legal limitations, and utility locations for the site of the Project and a legal description of the site. Surveys to determine locations of construction, grading, and site work shall be provided by CONTRACTOR.

ARTICLE 34 SOILS INVESTIGATION REPORT

A. When a soils investigation report has been obtained from test holes at the site, that report is available for CONTRACTOR's use in preparing its bid and work under the Contract Documents. Any information obtained from the report or any information given on drawings as to subsurface soil conditions or as to elevations of existing grades or elevations of underlying rock, is approximate only, is not guaranteed, and **is not part of the Contract Documents**. CONTRACTOR is required to make a visual examination of the site and must make whatever tests it deems appropriate to determine the actual underground condition of the soil.

B. CONTRACTOR agrees that it will make no claim against OWNER for damages in the event that during progress of the Work, CONTRACTOR encounters subsurface or latent conditions at the site materially different from those shown on drawings or indicated in Specifications or soils reports, or for unknown conditions of an unusual nature which differ materially from those ordinarily encountered in work of the type provided for in the Plans and Specifications.

C. If during the course of work under the Contract Documents CONTRACTOR encounters subsurface or latent conditions which differ materially from those indicated in the soils investigation report, or drawings, or Specifications, CONTRACTOR shall notify OWNER of same within five working days of discovery of the condition.

WARNING: OWNER does not warrant the soils at the project site. A soils investigation report is provided for CONTRACTOR'S information only.

CONTRACTOR represents it has conducted an independent investigation of the project site and the soil conditions of the site. CONTRACTOR is solely responsible to ascertain site conditions for the purposes of determining construction means and methods before commencing construction.

ARTICLE 35 PERMITS AND LICENSES

A. All necessary permits and licenses shall be secured and paid for by CONTRACTOR unless otherwise provided in the Contract Documents.

B. All permits, licenses, and certificates shall be delivered to the Architect before demand is made for the certificate of final payment.

C. CONTRACTOR shall, and shall require subcontractors to, maintain appropriate contractor's licenses in effect as required by law throughout the entire Project.

D. Easements for permanent structures or permanent changes in existing facilities shall be secured and paid for by OWNER unless otherwise specified.

E. Permits and charges for installation and inspection of utility services by serving utilities shall be secured and paid for by OWNER.

ARTICLE 36 CUTTING AND PATCHING

A. CONTRACTOR shall do all cutting, fitting, or patching of the Work as required to make its several component parts come together properly, and fit it to receive or be received by any work of other contractors indicated on, or reasonable implied by, the drawings and Specifications, and shall follow all directions given by the Architect.

B. Any cost caused by defective or ill-timed work shall be borne by CONTRACTOR.

C. CONTRACTOR shall not endanger any work by cutting, excavating, or otherwise altering work, and shall not cut or alter work of any other contractor except with the written consent of the Architect.

D. CONTRACTOR shall be solely responsible for protecting existing work on adjacent properties and shall obtain all required permits for shoring and excavations near property lines.

E. When modifying existing work or installing new work adjacent to existing work, CONTRACTOR shall match the finishes, textures, and colors of the original work as closely as conditions of site and materials will allow, refinishing existing work as required, at no additional cost to OWNER.

F. CONTRACTOR is aware that this Project may be split into several phases. If the Project is split into phases, CONTRACTOR has made allowances for any delays or damages which may arise from coordination with contractors for other phases. If any delays should arise from a contractor working on a different phase, CONTRACTOR's sole remedy for damages, including delay damages, shall be against the contractor who caused such damage and not against OWNER. CONTRACTOR shall provide access to contractors for other phases as necessary to prevent delays and damages to contractors working on other phases of construction.

ARTICLE 37 TESTS AND INSPECTIONS

A. If the Contract Documents, OWNER's instructions, laws, ordinances, or any public authority requires any work to be specially tested or approved, CONTRACTOR shall give notice, in accordance with requirements of such authority, of CONTRACTOR's readiness for observation or inspection. Such notice shall be given at least two working days prior to being tested or covered up. If inspection is by authority other than OWNER, CONTRACTOR shall inform OWNER's Inspector of the date fixed for such inspection. Required certificates of inspection shall be secured by CONTRACTOR. Observations by OWNER shall be promptly made, and where practicable, at the source of supply. If any work is covered up without approval or consent of OWNER, if required by OWNER, it must be uncovered for examination and satisfactorily reconstructed at CONTRACTOR's expense, in compliance with the Contract Documents. The cost of inspection or testing of any materials which are not in compliance with the Contract Documents shall be borne by CONTRACTOR. If the inspection or testing was paid for by OWNER, it will be charged back to and paid by CONTRACTOR. Other costs for tests and inspection of materials shall be paid by OWNER, unless otherwise provided in the Contract Documents.

B. Where the inspection and testing will be conducted by an independent laboratory or agency, the materials or samples of materials to be tested shall be selected by the laboratory or agency, or OWNER's representative, and not by CONTRACTOR.

C. CONTRACTOR shall notify OWNER in writing a sufficient time in advance of the manufacture of any materials to be supplied to CONTRACTOR under the Contract Documents, which materials must be tested according to the terms of the Contract Documents, in order that OWNER may arrange for testing at the source of supply. Materials shipped by CONTRACTOR from the source of supply without having satisfactorily passed testing and inspection, or prior to receipt of notice from OWNER that testing and inspection will not be required, shall not be incorporated into the Work without the prior approval of OWNER and subsequent testing and inspection.

D. Reexamination or retesting of questioned work may be ordered by OWNER, and if so ordered any work must be uncovered by CONTRACTOR. If the work is determined to be in accordance with the Contract Documents, OWNER shall bear the

costs of reexamination or retesting and replacement. If the work is not in accordance with the Contract Documents, CONTRACTOR shall bear the costs.

ARTICLE 38 EXCAVATION DEEPER THAN FOUR FEET

A CONTRACTOR shall provide adequate sheeting, shoring, and bracing, or equivalent method, for the protection of life and limb in trenches and open excavation. Any such method used shall conform to applicable safety standards.

B. If the Contract Documents involve the excavation of any trench or trenches more than four feet in depth, in advance of excavation CONTRACTOR shall submit to OWNER, or to whomever OWNER designates, a detailed plan showing the design of shoring, bracing, sloping, or other provisions to be made for worker protection from the hazard of caving ground during the excavation of any trench or trenches. If the plan varies from the Shoring System Standards established by the Construction Safety Orders of the Division of Industrial Safety of the Department of Industrial Relations, the plan shall be prepared by a registered civil or structural engineer employed by CONTRACTOR, and all costs of the plan shall be included in the contract price. In no case shall the plan be less effective than that required by the Construction Safety Orders. No excavation of any trench or trenches shall be commenced until the plan has been accepted by CAL-OSHA and a CAL-OSHA permit for the plan is delivered to OWNER.

C. If the Contract Documents involve digging trenches or excavations that extend deeper than four feet below the surface, the following shall apply:

1. Before the following conditions are disturbed, CONTRACTOR shall promptly notify OWNER in writing of any:

a. Material that CONTRACTOR believes may be hazardous waste, as defined in Health and Safety Code Section 25117, that is required to be removed to a Class I, Class II, or Class III disposal site in accordance with provisions of existing law.

b. Subsurface or latent physical conditions at the site different from those indicated.

c. 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 in the Contract Documents.

2. OWNER shall promptly investigate the conditions, and if it finds that the conditions do so materially differ, or do involve hazardous waste, and cause a

decrease or increase in CONTRACTOR's cost or the time required for performance of any part of the Work, shall issue a change order under the procedures described in the Contract Documents.

3. In the event of a dispute between OWNER and CONTRACTOR concerning whether or not the conditions materially differ or involve hazardous waste, or cause a decrease or increase in CONTRACTOR's cost or time required for performance of any part of the Work, CONTRACTOR shall not be excused from any scheduled completion date provided for by the Contract Documents, but shall proceed with all the work to be performed. CONTRACTOR shall retain any and all rights provided either by contract or by law which pertain to the resolution of disputes and protests between the contracting parties.

ARTICLE 39 WORKERS

A. At all times, CONTRACTOR shall enforce strict discipline and good order among its employees, shall not employ any unfit person or anyone not skilled in the work assigned, and shall require the same of all subcontractors of all tiers. It shall be the responsibility of CONTRACTOR to ensure subcontractor compliance with this Article.

B. Any person in the employ of CONTRACTOR or subcontractors whom OWNER may deem to be incompetent, unfit, troublesome, or otherwise undesirable, shall be excluded from the work site and shall not again be employed on it except with written consent of OWNER.

ARTICLE 40 FINGERPRINTING WORKERS

A. CONTRACTOR shall comply with the applicable requirements of Education Code sections 45125.1 and 45125.2 with respect to fingerprinting CONTRACTOR's employees and pupil safety. CONTRACTOR shall also ensure that each of its subcontractors on the Project complies with the applicable requirements of sections 45125.1 and 45125.2. To this end, CONTRACTOR must complete and submit to OWNER the certification form included in the Contract Documents for itself and its subcontractors prior to commencing work on the Project. At CONTRACTOR's expense, CONTRACTOR shall comply with any directive from OWNER specifying measures to ensure the safety of pupils, including but not limited to one or more measures described in Education Code section 45125.2(a).

B. Should CONTRACTOR or any subcontractor feel its employees will have limited or less contact with OWNER's pupils, application shall be made to OWNER for a determination on that question. The determination by OWNER shall be final. In the event OWNER makes a determination of limited or less contact with pupils, CONTRACTOR shall comply with any directive by OWNER to ensure the safety of pupils, at CONTRACTOR's expense.

C. Use of Education Code section 45125.2(a)(1), (2), or (3) for compliance with these fingerprinting requirements is subject to prior OWNER approval. The determination by OWNER on the application of any of these sections shall be final.

D. In no event shall any employee of CONTRACTOR or its subcontractors come into contact with OWNER's pupils before the certification is completed and approved by OWNER.

ARTICLE 41 WAGE RATES AND PAYROLL RECORDS

A. Pursuant to the provisions of Article 2 (commencing at Section 1770), Chapter 1, Part 7, Division 2, of the California Labor Code, OWNER has ascertained the general prevailing rate of per diem wages for each craft, classification, or type of worker needed to execute the work of the Project in the locality in which this public work is to be performed. The general prevailing rates of per diem wages are available at OWNER's office. CONTRACTOR is responsible to pay those rates determined to be applicable by the Director of the Department of Industrial Relations and OWNER shall not be responsible for any damages arising from the error.

B. When permitted by law, holiday and overtime work shall be paid at a rate of at least one and one-half times the specified rate of per diem wages, unless otherwise specified.

C. CONTRACTOR shall pay and shall cause to be paid to each worker engaged in work on the Project not less than the general prevailing rate of per diem wages, regardless of any contractual relationship which may exist between CONTRACTOR or any Subcontractor and such workers.

D. Pursuant to Labor Code Section 1775, CONTRACTOR shall forfeit and OWNER shall withhold from payments to CONTRACTOR not more than \$200 for each calendar day any worker is paid less than the established prevailing wage rates for the work or craft in which the worker is employed by CONTRACTOR on the Project. The difference between the established prevailing wage rates and the amount paid to each worker for each whole or partial calendar day for which each worker was paid less than the established prevailing wage rates shall be paid to each worker by CONTRACTOR.

E. Any worker employed to perform work on the Project which is not covered by any classification available in OWNER's office, shall be paid not less than the minimum rate of wages specified for the classification which most nearly corresponds with work to be performed by him, and that minimum wage rate shall be retroactive to the time of initial employment of the person in the classification.

F. Pursuant to Labor Code Section 1773.1, per diem wages are deemed to include employer payments for health and welfare, pension, vacation, travel, subsistence, apprenticeship, and similar purposes.

G. At appropriate conspicuous points on the site of the Project, CONTRACTOR shall post job site notices prescribed by the Department of Industrial Relations, including but not limited to, a schedule showing all determined minimum wage rates and all authorized deductions, if any, from unpaid wages actually earned.

H. CONTRACTOR shall submit a breakdown of all labor costs for this Project by trade. This breakdown shall be for all labor that CONTRACTOR or any subcontractor supplies to the Project. This information shall be provided to OWNER before the **first payment request** after the Notice to Proceed has been issued. Failure to provide the labor cost breakdown will result in delay in processing the payment request until the complete cost breakdown is provided by CONTRACTOR and received and approved by OWNER. No other labor expenses will be considered unless approved in writing by OWNER.

I. Pursuant to the provisions of Labor Code Section 1776, CONTRACTOR shall keep and shall cause each Subcontractor performing any portion of the work on the Project to keep an accurate payroll record, 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 CONTRACTOR in connection with the Work. Each payroll record shall contain or be verified by a written declaration that it is made under penalty of perjury, stating that (1) the information contained in the payroll record is true and correct, and (2) the employer has complied with the requirements of Sections 1771, 1811, and 1815 for any work performed by the employer's employees on the Project.

J. The payroll records required under this article shall be certified and shall be available for inspection at all reasonable hours at CONTRACTOR's principal office on the following basis:

1. A certified copy of an employee's payroll record shall be made available for inspection or furnished to the employee or his or her authorized representative on request;

2. A certified copy of all required payroll records shall be made available for inspection or furnished upon request to a representative of OWNER, the Division of Labor Standards Enforcement, and/or the Division of Apprenticeship Standards of the Department of Industrial Relations;

3. A certified copy of all payroll records required under this article shall be made available for inspection or copies made upon request by the public;

provided, however, that a request by the public shall be made through either OWNER, the Division of Apprenticeship Standards, or the Department of Industrial Relations. If the requested payroll records have not been provided pursuant to Paragraph 2 above, prior to being provided the records, the requesting party shall reimburse the costs of preparation by CONTRACTOR, Subcontractors, and the entity through which the request was made. The public shall not be given access to the records at CONTRACTOR's principal office.

4. The form of certification shall be as follows:

I, _____ (*printed name*), the undersigned, am the _____ (*position in business*) with the authority to act for and on behalf of _____ (*name of business and/or CONTRACTOR*), and certify under penalty of perjury that the records or copies submitted _____ and _____ consisting _____ of (*description, number of pages*) are the originals or true, full, and correct copies of the originals which depict the payroll record(s) of the actual disbursements by way of cash, check, or whatever form to the individual or individuals named.

Dated: _____ Signature: _____

K. CONTRACTOR shall file a certified copy of the required payroll records with the entity requesting the records within 10 days after receipt of a written request. In the event CONTRACTOR fails to comply within the 10-day period, as a penalty to OWNER CONTRACTOR shall forfeit \$100 for each calendar day, or portion of each calendar day, for each worker until strict compliance is effectuated. Upon request by the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement, these penalties shall be withheld from progress payments then due.

L. Payroll records made available for inspection as copies and furnished upon request to the public by OWNER, the Division of Apprenticeship Standards, or the Division of Labor Standards Enforcement shall be marked or obliterated to prevent disclosure of an individual's name, address, and social security number. Payroll records furnished to agencies that are included in the Joint Enforcement Strike Force on the Underground Economy and other law enforcement agencies investigating violations of law shall be unredacted. The name and address of CONTRACTOR shall not be marked or obliterated in either case.

M. CONTRACTOR shall inform OWNER of the location of the payroll records, including the street address, city, and county, and within five working days shall provide a written notice of a change of location and address.

N. It shall be CONTRACTOR's responsibility to ensure compliance with the provisions of this article and the provisions of Labor Code Section 1776.

O. This project is subject to prevailing wage monitoring and enforcement by the Department of Industrial Relations. CONTRACTOR and all subcontractors shall be subject to the requirements of Subchapter 4.5 of Chapter 8 of Title 8 of the California Code of Regulations. Contractor and all subcontractors must furnish electronic certified payroll records to the DIR on the frequency specified in the Notice Calling for Bids using the DIR's eCPR system. To enroll in the eCPR system or obtain additional information and assistance, CONTRACTOR is directed to the DIR website at www.dir.ca.gov/Public-Works/Certified-Payroll-Reporting.html. CONTRACTOR shall comply with all requirements of the Labor Code and attendant regulations pertaining to prevailing wage monitoring and compliance as indicated in the Contract Documents, and/or as required by the DIR. CONTRACTOR shall permit OWNER, the DIR or their designee to interview CONTRACTOR's employees concerning compliance with prevailing wage, apprenticeship, and related matters, whether or not during work hours, and shall require each subcontractor to provide OWNER, the DIR or their designee with such access to its employees.

ARTICLE 42 APPRENTICES

A. CONTRACTOR acknowledges and agrees that the Contract Documents are governed by the provisions of Labor Code Section 1777.5 where applicable. It shall be CONTRACTOR's responsibility to ensure compliance with this article and with Labor Code Section 1777.5 for all apprenticing occupations.

B. Apprentices of any crafts or trades may be employed, and when required by Labor Code Section 1777.5, shall be employed provided they are properly registered in full compliance with the provisions of the Labor Code.

C. Every apprentice shall be paid the prevailing rate of per diem wages for apprentices in the trade to which the apprentice is registered, and shall be employed only at the work of the craft or trade to which the apprentice is registered.

D. Only apprentices as defined in Labor Code Section 3077 who are in training under apprenticeship standards that have been approved by the Chief of the Division of Apprenticeship Standards, and who are parties to written apprentice agreements under Chapter 4 (commencing at Section 3070), Division 3, of the Labor Code, are eligible to be employed on public works. The employment and training of each apprentice shall be in accordance with either (1) the apprenticeship standards and apprentice agreements under which the apprentice is in training, or (2) the rules and regulations of the California Apprenticeship Council.

E. Pursuant to Labor Code Section 1777.5, CONTRACTOR and any subcontractors employing workers in any apprenticeship craft or trade performing any work under the Contract Documents shall employ apprentices in at least the ratio set forth in Labor Code Section 1777.5, and may apply to any apprenticeship program in the craft or

trade that can provide apprentices to the project site for a certificate approving CONTRACTOR or Subcontractor under the applicable apprenticeship standards for the employment and training of apprentices in the area of industry affected.

F. Prior to commencing work on the Project, CONTRACTOR shall submit contract award information to an applicable apprenticeship program that can supply apprentices to the project site. The information submitted shall include an estimate of journeyman hours to be performed on the Project, the number of apprentices proposed to be employed, and the approximate dates the apprentices would be employed. A copy of this information shall also be submitted to OWNER if requested. Within 60 days after concluding work on the Project, CONTRACTOR and all Subcontractors shall submit a verified statement of the journeyman and apprentice hours performed on the Project to the awarding body, if requested, and to the apprenticeship program. This information shall be public.

G. If in performing any of the Work, CONTRACTOR employs journeymen or apprentices in any apprenticeable craft or trade, CONTRACTOR shall contribute to the California Apprenticeship Council the same amount that the Director of Industrial Relations determines is the prevailing amount of apprenticeship training contributions in the area of the Project, subject to any credits permitted by law.

H. If CONTRACTOR or any Subcontractor is determined by the Chief of the Division of Apprenticeship Standards to have knowingly violated Labor Code Section 1777.5, it shall:

1. Forfeit as a civil penalty an amount not exceeding \$100 (\$300 for knowing subsequent violations) for each full calendar day of noncompliance. Notwithstanding Labor Code Section 1727, upon receipt of a determination that a civil penalty has been imposed by the Labor Commissioner, OWNER shall withhold the amount of the civil penalty from contract progress payments then due or to become due.

2. In lieu of the monetary penalty, for a first-time violation and with the concurrence of a specified apprenticeship program, the Labor Commissioner may order CONTRACTOR or any Subcontractor to provide apprentice employment equivalent to the work hours that would have been provided for apprentices during the period of noncompliance.

3. In the event CONTRACTOR or any Subcontractor is determined by the Labor Commissioner to have knowingly committed a serious violation of any provision of Section 1777.5, the Labor Commissioner may also deny CONTRACTOR or any Subcontractor, and their responsible officers, the right to bid on or be awarded or perform work as a subcontractor on any public works

contract for a period of up to one year for the first violation and up to three years for a subsequent violation.

CONTRACTOR or any Subcontractor (or responsible officer) shall have the right to obtain a review of the determination imposing a debarment or civil penalty as provided by law.

I. CONTRACTOR and all Subcontractors shall comply with Labor Code Section 1777.6, which forbids certain discriminatory practices in the employment of apprentices.

J. CONTRACTOR shall become fully acquainted with the law regarding apprentices prior to commencement of the work. Special attention is directed to Labor Code Sections 1777.5, 1777.6, and 1777.7, and Title 8, California Code of Regulations, Section 200 et seq. Questions may be directed to the State Division of Apprenticeship Standards, 455 Golden Gate Avenue, San Francisco, California.

ARTICLE 43 HOURS OF WORK

A. CONTRACTOR shall furnish, and shall require all Subcontractors to furnish, sufficient forces to ensure the Work is prosecuted in accordance with the detailed project schedule without payment of overtime wage rates whenever possible.

B. As provided in Article 3 (commencing at Section 1810), Chapter 1, Part 7, Division 2 of the Labor Code, eight hours of labor shall constitute a legal day of work. The time of service of any worker employed at any time by CONTRACTOR, or by any subcontractor, upon the Work or upon any part of the work contemplated by the Contract Documents is limited and restricted to eight hours per day and 40 hours during any one week. Upon completion of all hours worked in excess of eight hours per day, work shall be permitted upon this Project at not less than one and one-half times the basic rate of pay.

C. CONTRACTOR shall keep, and shall cause all subcontractors to keep, an accurate record showing the name and actual hours worked each calendar day and each calendar week by each worker employed in connection with the Work or any part of the Work contemplated by the Contract Documents. The record shall be kept open at all reasonable hours to the inspection of OWNER and to the Division of Labor Standards Enforcement, Department of Industrial Relations.

D. Saturdays, Sundays, holidays (including all OWNER designated holidays), and any day with work hours before 7:30 a.m. and/or after 4 p.m. shall be considered overtime for OWNER's representatives, consultants, and inspectors, and shall be compensated as such by CONTRACTOR per OWNER's submitted invoice. Such cost shall be billed to CONTRACTOR and deducted from subsequent progress payments or the final payment.

E. As a penalty, CONTRACTOR shall pay \$25 to the Department of Industrial Relations or OWNER for each worker employed by CONTRACTOR or by any subcontractor in the performance of the Contract Documents for each calendar day during which the worker is required or permitted to work more than eight hours in any calendar day and 40 hours in any one calendar week in violation of the provisions of Article 3 (commencing at Section 1810), Chapter 1, Part 7, Division 2 of the Labor Code.

F. Any work performed before or after regular working hours or on Saturdays, Sundays, or holidays (including all OWNER designated holidays) shall be performed without additional expense to OWNER. Should inspection or testing services be necessary on a Saturday, Sunday, or holiday (including all OWNER designated holidays), CONTRACTOR shall pay all additional expenses incurred. Such cost shall be billed to CONTRACTOR and deducted from the next payment.

G. CONTRACTOR shall anticipate work that would occur outside the normal work hours of 7:30 a.m. to 4 p.m. Such activities would include but are not limited to early morning concrete pours (because of hot weather), early or late material deliveries, required off-site inspections, or any other activity that would require the Project Inspector or OWNER personnel to work longer than an eight-hour day.

H. The Project Inspector cannot be asked to leave the Project after eight hours of work so CONTRACTOR would not have to pay overtime. If the extended work day is a result of CONTRACTOR'S work, the Project Inspector will perform its DSA assigned work as necessary to assure the Project is kept on schedule and CONTRACTOR is responsible to pay all costs associated with fulfilling these DSA assignments, including the Project Inspector's overtime. These costs shall be billed to CONTRACTOR and deducted from subsequent progress payments or the final payment.

ARTICLE 44 NONDISCRIMINATION

In the performance of the terms of the Contract Documents, CONTRACTOR agrees that it will not engage in or permit any Subcontractor it may employ to engage in unlawful discrimination in employment of persons because of the race, religious creed, color, national origin, ancestry, physical handicap, medical condition, marital status, or sex of such persons.

ARTICLE 45 COST BREAKDOWN AND PERIODICAL ESTIMATES

A. On forms approved by OWNER, CONTRACTOR shall furnish the following:

1. Within 10 calendar days of award of contract, a detailed estimate giving a complete breakdown of contract price for each Project or site, which shall include

all Subcontractor/supplier agreements showing dollar amounts of these agreements to justify the schedule of values; and

2. A periodical itemized estimate of work done for the purpose of making partial payments; and

3. A schedule of estimated monthly payments due CONTRACTOR within 10 days of request by OWNER.

B. Values employed in making up any of these schedules are subject to the Architect's written approval and will be used only for determining basis of partial payments and will not be considered as fixing a basis for additions to or deductions from contract price unless OWNER in its sole discretion so elects.

ARTICLE 46 PAYMENTS

A. Unless otherwise specified in writing, each month within 30 days after receipt by OWNER of the monthly progress schedule and the certification of application for payment by the Architect, OWNER shall pay to CONTRACTOR a sum equal to 95 percent of the value of work performed and materials delivered subject to or under the control of OWNER and unused up to the last day of the previous month, less aggregate previous payments. In its sole discretion, OWNER may also deduct from these payments any amounts deemed due from CONTRACTOR.

B. Monthly payments shall be made only on the basis of monthly estimates which shall be prepared by CONTRACTOR on a form approved by OWNER and filed before the fifth day of the month during which payment is to be made.

C. Before consideration of a request for payment, a certificate in writing shall be obtained from the Architect stating that the work for which the payment is demanded has been performed in accordance with the terms of the Contract Documents and that the amount stated in the certificate is due under the terms of the Contract Documents. The certificate shall be attached to and made a part of the payment request filed with OWNER. The certificate of the Architect shall not be conclusive upon OWNER, but advisory only.

D. If within three days after written demand the Architect fails to deliver such certificate, CONTRACTOR may file its payment request with OWNER without the certificate, but the request shall be accompanied by a statement that demand was made for the certificate and was refused. OWNER will then either allow the payment request as presented or shall by an order entered on the minutes of OWNER state the reasons for refusing to make payment.

E. Work completed as estimated shall be an estimate only and no inaccuracy or error in an estimate shall operate to release CONTRACTOR or Surety from any damages arising from such work or from enforcing each and every provision of the Contract Documents, and OWNER shall have the right to subsequently correct any error made in any estimate for payment.

F. CONTRACTOR SHALL NOT BE ENTITLED TO HAVE ANY PAYMENT REQUESTS PROCESSED OR ANY PAYMENT FOR WORK PERFORMED SO LONG AS CONTRACTOR HAS FAILED TO COMPLY WITH ANY LAWFUL OR PROPER DIRECTION CONCERNING THE WHOLE OR ANY PORTION OF THE WORK GIVEN BY OWNER OR THE ARCHITECT.

G. OWNER has discretion to require from CONTRACTOR any of the following information with the application for payment: (1) certified payroll covering the period of the prior application for payment, (2) unconditional waivers and releases from all Subcontractors/suppliers for which payment was requested under the prior application for payment, (3) receipts or bills of sale for any items. In addition, upon submittal of the first payment request, a complete per diem wage rate breakdown for all trades must be submitted in order for the payment request to be processed.

H. PAYMENT BY OWNER OF ANY PAYMENT REQUEST IS NOT AN INDICATION THAT OWNER HAS INSPECTED, APPROVED, OR ACCEPTED ANY PART OF THE WORK, NOR SHALL PAYMENT CONSTITUTE A WAIVER IN ANY RESPECT OF ANY OWNER RIGHTS.

I. The final payment of 5 percent of the value of the work done under the Contract Documents, if unencumbered, may be made 35 days after the Notice of Completion is recorded by OWNER. ACCEPTANCE WILL BE MADE ONLY BY ACTION OF THE GOVERNING BOARD OR OTHER GOVERNING BODY OF OWNER IN ACCORDANCE WITH THE PROVISIONS ON "COMPLETION."

J. Unless otherwise agreed in writing, on or before making request for final payment of the undisputed amount due under the Contract Documents, CONTRACTOR shall submit to OWNER the following in writing:

1. Information on CONTRACTOR's results in attaining compliance with the OWNER's three percent participation goal for Disabled Veterans Business Enterprises;
2. A summary of all claims for compensation under or arising out of the Contract Documents, stating whether the claims are settled or unsettled and the amounts of the claims, and further specifying the date(s) upon which any required protest and/or notice was given to OWNER;

3. A written release of all claims against OWNER arising by virtue of the Project, the Work, and the Contract Documents. Payment of undisputed amounts is contingent upon receipt of this waiver.

ARTICLE 47 PAYMENTS BY CONTRACTOR

CONTRACTOR shall pay:

A. All transportation and utility services not later than the 20th day of the calendar month following the month in which the services are rendered;

B. Ninety-five percent of the cost of all materials, tools, and other expendable equipment, not later than the 20th day of the calendar month following the month in which the materials, tools, and equipment are delivered to the project site, and the balance of the cost not later than the 30th day following completion of that part of the work in which the materials, tools, and equipment are incorporated or used; and

C. To each of its subcontractors the respective amounts allowed CONTRACTOR on account of work performed by each subcontractor not later than the fifth day following each payment to CONTRACTOR.

ARTICLE 48 PAYMENTS WITHHELD

A. In addition to any amount(s) which OWNER may retain under the article entitled "PAYMENTS," OWNER may withhold sufficient amount(s) of any payment(s) otherwise due to CONTRACTOR, as in its judgment may be necessary to cover the following:

1. Payments which may be past due and payable for claims against CONTRACTOR or any Subcontractors at any level for labor or materials furnished in the performance of work under the Contract Documents.

2. Defective work not remedied.

3. Failure of CONTRACTOR to make proper payments to its subcontractor(s) or material suppliers for materials or labor.

4. Completion of work if there exists a reasonable doubt that the work can be completed for the balance then unpaid.

5. Damage to another contractor.

6. All costs and expenses associated with OWNER having to acquire alternate educational facilities if CONTRACTOR fails to complete the Project within the period of time required by the Contract Documents.

7. Project schedule not up-to-date with the current payment request.
8. Overtime charges due consultants, Project Inspectors, the Architect, and OWNER or others as a result of extra services that were provided at CONTRACTOR's request or as a result of actions of CONTRACTOR or those employed by CONTRACTOR, including subcontractors, material suppliers, or others will be withheld from current payment requests.
9. CONTRACTOR agrees that OWNER may withhold 150 percent of the estimated cost of any additional testing or retesting required as a result of the fault or negligence of CONTRACTOR, or Subcontractors, vendors, or suppliers, until such time as OWNER receives confirmation that payment for such additional testing or retesting has been made.
10. Failure to maintain a current record set of drawings. The drawings shall be updated to the date when the payment request is submitted.
11. Failure to submit daily reports.
12. Failure to submit items required to accompany payment requests at initial and final completion.
13. Failure to submit and keep current any construction schedule required by the Contract Documents.
14. Failure to compensate the Architect for substitution review within the required time period.
15. Failure to compensate OWNER for overtime charges for OWNER representatives and employees incurred as a result of services provided during the current payment period.
16. Failure to compensate OWNER and/or the Architect for the cost of review time to evaluate CONTRACTOR'S proposed solutions to effect repair of work not in accordance with Contract Documents.
17. Failure to submit per diem wage rates for all trades pursuant to appropriate provisions of the General Conditions.
18. Penalties for violation of labor laws.
19. Cost of site clean-up.

20. Required payments to indemnify, hold harmless, or defend OWNER.

21. Compensation for unpaid extra services for the Architect caused by CONTRACTOR.

22. Compensation for unpaid extra services for the Project Inspector, including but not limited to reinspection required due to CONTRACTOR's failed tests, installation of unapproved or defective materials, or CONTRACTOR's requests for inspection and failure to attend the requested inspection.

23. Any liquidated damages, forfeiture of fees, or other damages assessed against CONTRACTOR by reason of failure to complete the Project on time.

B. OWNER may apply the withheld amount(s) to the payment of any claims or obligations at its discretion. In so doing, OWNER shall be deemed the agent of CONTRACTOR and any payment made by OWNER shall be considered to be a payment made under the Contract Documents by OWNER to CONTRACTOR, and OWNER shall not be liable to CONTRACTOR for the payments made in good faith. The payments may be made without prior judicial determination of the claim or obligations. OWNER shall submit to CONTRACTOR an accounting of the funds disbursed on behalf of CONTRACTOR.

ARTICLE 49 SUBSTITUTION OF SECURITIES

A. Pursuant to the provisions of Public Contract Code section 22300, CONTRACTOR may substitute certain securities for any funds withheld by OWNER to ensure its performance under the Contract Documents. At the request and expense of CONTRACTOR, securities equivalent to any amount withheld shall be deposited, at the discretion of OWNER, with either a state or federally chartered bank as the escrow agent, who shall then pay any funds otherwise subject to retention to CONTRACTOR. Upon satisfactory completion of the Project, the securities shall be returned to CONTRACTOR.

B. Securities eligible for investment under this article shall include those listed in Government Code section 16430, bank and 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 OWNER.

C. CONTRACTOR shall be the beneficial owner of any securities substituted for funds withheld and shall receive any interest.

D. All expenses relating to the substitution of securities under Public Contract Code section 22300 and this article, including but not limited to OWNER's overhead and administrative expenses and expenses of escrow agent, shall be CONTRACTOR's responsibility.

E. Should the value of the substituted security at any time fall below the amount for which it was substituted, or any other amount which OWNER determines to withhold, CONTRACTOR shall immediately and at CONTRACTOR'S expense deposit additional security qualifying under Public Contract Code section 22300 until the total security deposited is no less than equivalent to the amount subject to withholding under the Contract Documents.

F. In the alternative, under Public Contract Code section 22300, at its own expense, CONTRACTOR may request OWNER to make payment of earned retention funds directly to the escrow agent.

G. All escrow agreements shall be in conformance with the Escrow Agreement for Security Deposits in Lieu of Retention set forth in Public Contract Code section 22300, and shall be in the form of agreement provided by OWNER unless otherwise agreed in advance.

ARTICLE 50 PROGRESS SCHEDULE

A. Immediately after being awarded the Construction Agreement, CONTRACTOR shall prepare an estimated progress schedule and submit it to OWNER for review. The schedule shall indicate the beginning and completion dates of all phases of construction.

B. The schedule shall be updated at reasonably required intervals throughout the Project, unless specifically required to be updated at more frequent intervals.

C. Additional scheduling requirements may be contained in the attached Supplemental General Conditions.

D. While OWNER does not discourage efforts by CONTRACTOR to accomplish an early completion of the Project, CONTRACTOR is directed to utilize and schedule the entire construction period set forth in the Construction Agreement. Any portion of the construction period not so scheduled shall be considered "float" and used the same as other float under the Contract Documents.

ARTICLE 51 EXTENSION OF TIME—LIQUIDATED DAMAGES

A. The parties understand and agree that the goodwill, educational process, and other business of OWNER will be damaged if the Project is not completed within the time limits required. The parties have further agreed that the exact amount of damages for failure to complete the Work within the time specified is, in some cases, extremely difficult, impractical, or impossible to determine. As to those damages that are difficult, impractical, or impossible to determine, CONTRACTOR shall be assessed the sum set

forth in the Contract Documents per day as liquidated damages for each and every calendar day until the work required under the Contract Documents is complete. CONTRACTOR will pay to OWNER or OWNER may retain such damages from amounts otherwise payable to CONTRACTOR. For purposes of this article, the Work shall be considered "complete" in accordance with the provisions of the article on "COMPLETION," except that the work may be considered complete without formal acceptance by the OWNER's governing board or other governing body so long as the governing board, at its next regularly scheduled meeting, accepts the work.

B. Providing CONTRACTOR has protested and/or given notice of delays on the Project as required by these Contract Documents, CONTRACTOR shall not be charged for liquidated damages as set forth above because of any delays in completion of work which are not the fault or negligence of CONTRACTOR, including but not restricted to acts of God. CONTRACTOR shall provide documentation and justification to substantiate the delay and its relation to the Project's critical path. OWNER shall ascertain the facts and extent of delay and grant extension of time for completing work when, in its judgment, the facts justify an extension. OWNER's findings of fact shall be final and conclusive on the parties. Extension of time shall apply only to that portion of work affected by the delay, and shall not apply to other portions of work not so affected. Any dispute pertaining to a request for time or assessment of liquidated damages shall be resolved pursuant to the provisions on resolution of construction claims in the Contract Documents.

C. In addition to any liquidated damages which may be assessed, if CONTRACTOR fails to complete the Project within the time period provided in the Contract Documents, and if as a result OWNER finds it necessary to incur any costs and/or expenses, or if OWNER receives any claims by other contractors, subcontractors, or third parties claiming time or other compensation by reason of CONTRACTOR's failure to complete work on time, CONTRACTOR shall pay all those costs and expenses incurred by OWNER. These costs and expenses may include but are not limited to such items as rental payments, inspection fees, and additional architectural fees, whether related to the acquisition of facilities or caused by the delay in completion. These costs and expenses may be retained by OWNER from any payments otherwise due to CONTRACTOR.

D. Within 10 days of the beginning of any delay (unless OWNER grants in writing a further period of time to file notice prior to the date of final completion of the Project), CONTRACTOR shall notify OWNER in writing of the causes for the delay. Failure to give the required notice in writing within the time provided shall be interpreted as a failure by CONTRACTOR to properly administer the Contract Documents, Project, and Work, and shall constitute a waiver by CONTRACTOR of all claims of any kind and nature, without limitation, arising from the delay. In addition to this notice, in any instance where CONTRACTOR claims delay was caused by OWNER, the Architect or Architect's consultants, Inspector of Record, Division of State Architect, or anyone

claimed to be an agent of them, and as a precondition to any right to claim additional time, prior to making any request for time, CONTRACTOR shall have satisfied the obligation of the Contract Documents to protest the delay.

E. Extensions of time shall be based solely upon the effect of delays to the work as a whole and will not be granted unless CONTRACTOR can demonstrate through analysis of the current updated schedule that the delay was caused by one of the causes for which an extension is authorized. A time extension will not be granted unless CONTRACTOR submits a Time Impact Analysis which utilizes networking techniques (fragments) and a written analysis of the facts which are alleged to have caused the delay. Time extensions will not be allowed for delays to parts of the work not on the critical path of the currently approved monthly updated construction schedule. Time extensions will not be granted until all available float, slack, or contingency time on the Project is used and the end date of the Work is moved beyond the current adjusted contract completion date. CONTRACTOR's sole remedy for delay or extensions of time in all cases except those due to unanticipated or unreasonable delay caused by OWNER shall be an extension of the contract time at no cost to OWNER. Additional scheduling requirements in cases of delay or requests for time may be included in supplementary conditions.

ARTICLE 52 OCCUPANCY

OWNER reserves the right to occupy buildings and/or portions of the site at any time before completion, and occupancy shall not constitute final acceptance of any part of the Work covered by the Contract Documents, nor shall such occupancy extend the date specified for completion of the Work. Beneficial occupancy of building(s) does not commence any warranty period or entitle CONTRACTOR to any additional compensation due to such occupancy, or affect in any way or amount CONTRACTOR's obligation to pay liquidated damages for failure to complete the Project on time.

ARTICLE 53 CONTRACT CLOSEOUT

A. Utility Connections: The building and/or buildings shall be connected to water, gas, sewer, and electric services, complete and ready for use. Service connections shall be made and existing services reconnected.

B. Record Drawings:

1. CONTRACTOR shall keep the following:

a. One complete set of blue line prints of all drawings which form a part of the Project in good order and available on the job site. They shall be used only for the purpose intended. Drawings shall be kept up-to-date as the Work progresses and shall be available at all times for inspection.

b. One set of annotated Specifications reflecting any and all changes to the original documents from change orders, substitutions, or any other deviations from the original specifications.

2. The intent of this procedure is to obtain an exact "as built" record of the work upon completion of the Project. The following information shall be carefully and correctly drawn on the prints and all items shall be accurately located and dimensioned from finished surfaces of building walls on all record drawings:

a. Any work not installed as indicated on drawings.

b. The exact locations and elevations of all covered utilities, including valves, cleanouts, etc.

3. CONTRACTOR shall certify to OWNER the accuracy of the record drawings and annotated Specifications and is liable and responsible for inaccuracies in as-built and/or record drawings and the annotated Specifications, even if they do not become evident until a future date.

4. Upon completion of the Work and correction of all punch list items and as a condition precedent to approval of final payment, CONTRACTOR shall obtain the Architect's review of the marked up record set of prints and annotated Specifications and employ an appropriately trained individual to transfer the as-built information to a form of electronic media, acceptable to the Architect and OWNER, containing the original Drawings. CONTRACTOR shall provide the electronic as-built drawings to the Architect. When as-built information has been transferred to the acceptable electronic medium and the record drawings have been reviewed by the Architect, CONTRACTOR shall pay for a duplicate set of contract drawings to be used for CONTRACTOR's record drawings. Those final corrected record drawings shall also be saved on electronic media, in a format designated by OWNER, and shall be given to OWNER. Reproduction expenses for the drawings shall be paid for by CONTRACTOR out of the allowance and any difference returned to OWNER.

5. CONTRACTOR shall deliver to the Architect three complete sets of operating manuals, repair parts lists, and service instructions for all electrical and mechanical equipment, together with equipment warranties.

C. Maintenance Manuals: At least 30 days prior to final inspection, three copies of complete operational and maintenance manuals shall be submitted for review. All installation, operating, and maintenance information and drawings shall be bound in 8½ x 11" binders, indexed with tabs, and include tables of contents. Each manual shall also contain a list of subcontractors, with their addresses and the names of persons to

contact in case of emergencies. Identifying labels shall provide names of manufacturers, their addresses, ratings, and capacities of equipment and machinery.

D. Inspection Requirements:

1. Before calling for final inspection, CONTRACTOR shall determine that the following work has been performed:

- a. General construction has been completed;
- b. Mechanical and electrical work complete, fixtures in place, connected and ready for tryout and test;
- c. Electrical circuits scheduled in panels and disconnect switches labeled;
- d. Painting and special finishes complete;
- e. Doors complete with hardware, cleaned of protective film, in good working order without sticking or binding;
- f. Tops and bottoms of doors stained/painted and sealed;
- g. Floors waxed and polished as specified;
- h. Broken glass replaced and glass cleaned;
- i. Grounds cleared of CONTRACTOR'S equipment, raked clean of debris, and trash removed from site;
- j. Work cleaned, free of stains, scratches, and other foreign matter, replacement of damaged and broken material;
- k. Finished and decorative work shall have marks, dirt, and superfluous labels removed;
- l. All flatwork shall have all stains removed including but not limited to oil, gas, rust, paint, etc.

2. Final inspection will be made by the Architect and specified OWNER personnel upon written notification from CONTRACTOR that work has been completed. CONTRACTOR must prearrange a final inspection with OWNER and Project Inspector. There should be a minimum of seven days' notice to OWNER and Project Inspector before the final inspection is scheduled.

CONTRACTOR shall receive a list (punch list) of items found unacceptable and shall promptly correct them. Upon written notification from CONTRACTOR that all items have been corrected the Architect and Project Inspector or OWNER will reinspect for final acceptance of the Project. Failure of CONTRACTOR to complete punch list items will necessitate further reinspection by the Architect and Project Inspector or OWNER. Cost of reinspection will be deducted from the amounts owing to CONTRACTOR.

3. Deliver keys (labeled) to OWNER's representative. Master keys shall be accounted for in writing.

4. Furnish a letter to OWNER stating that a responsible representative of OWNER (give name and position) has been instructed in working characteristics of mechanical and electrical equipment.

E. Guarantee: Upon completion of final inspection, CONTRACTOR is to submit the guarantee to OWNER as specified in the Contract Documents.

F. Manufacturer Warranties: CONTRACTOR shall deliver 10 days prior to final inspection, original manufacturer warranties for all materials, equipment and/or supplies purchased and/or installed under the Contract Documents.

G. Equipment Training: Prior to final inspection, CONTRACTOR is responsible for providing the appropriate training for a minimum of two personnel of OWNER for each trade for the newly installed mechanical and electrical equipment required under the Contract Documents.

H. Contract Closeout Items Specified Within this Article are Mandatory: The parties agree that, should the required items not be furnished to OWNER, as stated or within 30 days of completion of all other work, OWNER will suffer damage which damage will be difficult, impossible or impractical to assess. For that reason, in accordance with Government Code Section 53069.85, the parties agree the following sums shall be assessed as fixed and liquidated damages and not as a penalty:

1. Record Drawings—\$25,000 or 10 percent of contract price, whichever is less;

2. Maintenance Manuals—\$5,000 or 10 percent of contract price, whichever is less;

3. Guarantee—\$25,000 or 10 percent of contract price whichever is greater;

4. Manufacturer Warranties—\$5,000 for each product or 10 percent of contract price whichever is greater;

5. Equipment Training—\$10,000 for each system or 10 percent of contract price whichever is greater.

I. In addition, the Notice of Completion will not be filed until either such amounts are paid or the items are provided. However, OWNER may also elect to file the Notice of Completion and pay retention after deducting such amounts. If CONTRACTOR disputes the amounts or OWNER's right to withhold these amounts, OWNER may withhold up to 150 percent of the disputed amount.

ARTICLE 54 COMPLETION

A. OWNER shall accept the completion of the Project when all of the following conditions have been met:

1. The entire Work or Project (including all phases if a project is phased) including minor corrective items is completed to the satisfaction of OWNER;
2. The final DSA report has been filed with the State;
3. By action of its governing board or other governing body, OWNER has accepted the Project to be complete.
4. The Notice of Completion for the entire Project has been filed and recorded.

B. A final walk-through of the Project to determine completion of the Work and to record the Notice of Completion shall occur only upon a valid claim by CONTRACTOR that the Project is complete, including minor corrective items.

1. CONTRACTOR's Project Manager and Superintendent(s) shall attend the final walk-through. A representative(s) of OWNER shall also attend.
2. Should OWNER incur any costs by reason of an erroneous or premature claim of completion by CONTRACTOR that results in a premature walk-through, OWNER may withhold such costs from any money due or to become due to CONTRACTOR.
3. Any incomplete or corrective items shall be identified in the final walk-through of the Project.
4. Incomplete and corrective items identified in any walk-through shall be completed before CONTRACTOR calls for a subsequent walk-through, which

shall be treated as and bear the same consequences as the initial call for a walk-through.

C. Alternative Process: OWNER shall have the option in its sole discretion to accept completion of the Work and have the Notice of Completion recorded when the entire Work is completed to OWNER's satisfaction, except for minor corrective items as distinguished from incomplete items.

1. Should OWNER elect to accept the Work as complete prior to completion of the entire Work or Project, it shall be on the following conditions:

a. The entire Work or Project (including all phases if a project is phased), excluding minor corrective items, is complete to OWNER's satisfaction;

b. The final DSA report shall be filed with the State as soon as appropriate;

c. By action of its governing board or other governing body, OWNER has accepted the Project to be complete.

d. The Notice of Completion for the entire project has been filed and recorded.

2. Should OWNER elect to accept the Work as complete prior to completion of the entire Work or Project, there shall be a final walk-through of the Project, as follows:

a. Final walk-through shall be made upon a valid claim by CONTRACTOR that the Project is complete, excepting only minor corrective items;

b. CONTRACTOR's Project Manager and Superintendent(s) shall attend the final walk-through. OWNER may be represented by anyone designated by OWNER's Representative, including but not limited to the Project Inspector, management, and/or representatives from Maintenance and Operations;

c. Should OWNER incur any costs by reason of an erroneous or premature claim of completion by CONTRACTOR that results in a premature walk-through, OWNER may withhold such costs from any money due or to become due to CONTRACTOR.

d. All remaining work, including minor incomplete or corrective items, shall be identified in the final walk-through of the Project;

e. Incomplete and corrective items identified in any walk-through shall be completed before CONTRACTOR calls for a subsequent walk-through, which shall be treated as, and bear the same consequences as, the initial call for a walk-through.

3. Should OWNER elect to accept the Work as complete prior to completion of the entire Work or Project, and if CONTRACTOR fails to complete the minor corrective items prior to the expiration of a 35-day period immediately following recording of the Notice of Completion, OWNER shall withhold from the final payment an amount equal to 150 percent of the estimated cost, as determined by OWNER, of each incomplete or corrective item until such time as the item is completed.

4. If at the end of an additional 30-day period, there are items remaining to be corrected, OWNER may elect to:

a. Permit additional time for completion;

b. Complete the Work at the expense of CONTRACTOR, deducting the cost of work from any amounts being withheld.

5. CONTRACTOR shall have no claim or offset as against OWNER arising or in any way connected with an election by OWNER not to accept completion of the Work until the entire Work or Project, including minor corrective items, has been completed to OWNER's satisfaction. The time taken by CONTRACTOR to complete the Work or Project, including minor corrective items, shall be a basis for assessment of liquidated damages as provided in the Contract Documents, and is not affected by any decision by OWNER to occupy all or any portion of the Work prior to completion.

ARTICLE 55 CLAIMS FOR DAMAGES

A. Pursuant to Public Contract Code section 9204, CONTRACTOR shall make all claims for payment for 1) work done by or on behalf of contractor for which payment is not otherwise expressly provided for in the Contract, 2) damages allegedly sustained by reason of any acts or omissions of OWNER or its agents, 3) time extensions, 4) relief from damages or penalties for delay or, 5) an amount disputed by OWNER by registered mail or certified mail, return receipt requested. Such written claim shall be submitted, within 10 days after the claim has arisen, is discovered or reasonably should have been discovered. CONTRACTOR shall furnish reasonable documentation to support the claim.

IF CONTRACTOR FAILS TO COMPLY WITH ANY OF THE PROVISIONS OF THIS ARTICLE CONCERNING THE SUBMISSION OF CLAIMS, ITS CLAIM(S) SHALL BE FORFEITED AND INVALIDATED.

B. In no event shall CONTRACTOR be permitted to reserve rights to make or pursue claims of any kind, whether for compensation in any form, or for time extensions, without the OWNER's express written consent. Any attempt to make such reservation or otherwise avoid the effect of this Article shall be void and of no force or effect whatsoever.

C. Any change order executed by CONTRACTOR with such reservation or other language of qualified acceptance shall be read and interpreted as though such language did not exist. No action by OWNER is required to invalidate such language, and no oral communication or other act or omission by OWNER or anyone acting on OWNER's behalf, except OWNER's express written consent, shall be construed as acquiescence in or consent to such reservation or other qualified acceptance language.

D. CONTRACTOR shall diligently proceed with performance of the Work, and OWNER shall continue to make payment of undisputed amounts, during any time period while claims are pending.

ARTICLE 56 RESOLUTION OF CONSTRUCTION CLAIMS

A. Upon receipt of a claim, OWNER shall conduct a reasonable review of the claim, and, unless extended by mutual agreement of the parties, provide CONTRACTOR a written statement identifying what portion of the claim is disputed and what portion is undisputed within 45 days.

B. If OWNER needs approval from its governing body to provide CONTRACTOR a written statement identifying the disputed portion and the undisputed portion of the claim, and OWNER'S governing body does not meet within the 45 days or within the mutually agreed to extension of time following receipt of a claim sent by registered mail or certified mail, return receipt requested, OWNER shall have up to three days following the next duly publicly noticed meeting of its governing body after the 45-day period, or extension, expires to provide CONTRACTOR a written statement identifying the disputed portion and the undisputed portion.

C. Any payment due on an undisputed portion of the claim shall be processed and made within 60 days after OWNER issues its written statement. If OWNER fails to issue a written statement, paragraph H. (below) shall apply.

D. If CONTRACTOR disputes OWNER'S written response, or if OWNER fails to respond to a claim issued pursuant to this section within the time prescribed,

CONTRACTOR may demand in writing an informal conference to meet and confer for settlement of the issues in dispute. Upon receipt of a demand in writing sent by registered mail or certified mail, return receipt requested, OWNER shall schedule a meet and confer conference within 30 days for settlement of the dispute.

E Within 10 business days following the conclusion of the meet and confer conference, if the claim or any portion of the claim remains in dispute, OWNER shall provide CONTRACTOR a written statement identifying the portion of the claim that remains in dispute and the portion that is undisputed. Any payment due on an undisputed portion of the claim shall be processed and made within 60 days after OWNER issues its written statement. Any disputed portion of the claim, as identified by the CONTRACTOR in writing, shall be submitted to nonbinding mediation, with OWNER and CONTRACTOR sharing the associated costs equally. OWNER and CONTRACTOR shall mutually agree to a mediator within 10 business days after the disputed portion of the claim has been identified in writing. If the parties cannot agree upon a mediator, each party shall select a mediator and those mediators shall select a qualified neutral third party to mediate with regard to the disputed portion of the claim. Each party shall bear the fees and costs charged by its respective mediator in connection with the selection of the neutral mediator. If mediation is unsuccessful, the parts of the claim remaining in dispute shall be subject to applicable procedures described in sections K through O (below).

F. For purposes of this Article, mediation includes any nonbinding process, including, but not limited to, neutral evaluation or a dispute review board, in which an independent third party or board assists the parties in dispute resolution through negotiation or by issuance of an evaluation. Any mediation utilized shall conform to the timeframes in sections D and E, (above).

G. Unless otherwise agreed to by OWNER and CONTRACTOR in writing, the mediation conducted pursuant to section E (above) shall excuse any further obligation under Public Contract Code section 20104.4 to mediate after litigation has been commenced.

H. Failure by OWNER to respond to a claim from a contractor within the time periods described in this subdivision or to otherwise meet the time requirements of this section shall result in the claim being deemed rejected in its entirety. A claim that is denied by reason of OWNER's failure to have responded to a claim, or its failure to otherwise meet the time requirements of this section, shall not constitute an adverse finding with regard to the merits of the claim or the responsibility or qualifications of the CONTRACTOR.

I. CONTRACTOR may present to OWNER a claim on behalf of a subcontractor or lower tier subcontractor. A subcontractor may request in writing, either on his or her own behalf or on behalf of a lower tier subcontractor, that the CONTRACTOR present a

claim for work which was performed by the subcontractor or by a lower tier subcontractor on behalf of the subcontractor. The subcontractor requesting that the claim be presented to OWNER shall furnish reasonable documentation to support the claim. Within 45 days of receipt of this written request, the CONTRACTOR shall notify the subcontractor in writing as to whether the CONTRACTOR presented the claim to OWNER and, if the CONTRACTOR did not present the claim, provide the subcontractor with a statement of the reasons for not having done so.

J. Except for tort claims, all claims or any portion of the claim(s) by CONTRACTOR remaining in dispute of \$375,000 or less shall be subject to the provisions of Public Contract Code Section 20104 et seq., except that the provisions of Public Contract Code section 20104.4 relating to mediation after litigation has commenced are excused, unless a written agreement to the contrary has been entered into between the parties.

Only claims, regardless of size, for which timely notice has been given, which have been subjected to the procedures specified in Public Contract Code section 9204, remaining "unresolved" may be pursued through litigation. All other CONTRACTOR claims are deemed waived.

K. The parties shall attempt to resolve all claims during the course of the Project using the procedures set forth in Articles 55 and 56. Pending resolution of a claim, CONTRACTOR shall diligently continue to work on the Project to completion. CONTRACTOR agrees it will neither rescind the Contract Documents nor stop the progress of the work, and CONTRACTOR'S sole remedy shall be the procedures set forth in Articles 55 and 56.

ARTICLE 57 PERFORMANCE/PAYMENT BOND

A. Unless otherwise specified in the Contract Documents, CONTRACTOR shall furnish a Performance Bond, and for any contract of \$25,000 or more, a Payment Bond, each in an amount equal to 100 percent of the price stated in the Contract Documents. All bonds shall be provided by a corporate surety admitted in California. Personal sureties and unregistered sureties are unacceptable. The Performance Bond shall remain in full force and effect through the guarantee period as specified in the Contract Documents and through such extended period as permissible to cover latent conditions.

B. All surety companies with a minimum rating of "A minus, VIII," ("A minus V" when the price stated in the Contract Documents is less than \$500,000) as rated by the current edition of Best's Key Rating Guide, published by A.M. Best Company, Oldwick, New Jersey, 08858, and admitted in California shall be presumed to be satisfactory to OWNER for the issuance of bonds. In the alternative, any admitted surety company

which satisfies the requirements set forth in California Code of Civil Procedure Section 995.660 shall be accepted and approved for the issuance of bonds.

ARTICLE 58 INSURANCE REQUIREMENTS

A. CONTRACTOR shall provide the following insurance coverages, which shall remain in full force and effect during the Project:

1. Workers' Compensation;
2. Comprehensive General Liability;
3. Comprehensive Auto Liability;
4. Asbestos Abatement (on all modernization projects and on any other projects where asbestos-containing products may be affected by construction);

B. All insurance companies must meet the following criteria:

1. California admitted, as confirmed by the California Department of Insurance, or listed in the California Department of Insurance's List of Eligible Surplus Line Insurers ("LESLI list")
2. A minimum rating of "A-,VIII," as rated by the current edition of Best's Key Rating Guide, published by A.M. Best Company, Oldwick, New Jersey, 08858.

C. All CONTRACTOR'S insurance policies shall name OWNER's governing board or other governing body, OWNER's consultants, the Architect, and the Architect's consultants, their officers, agents and employees as additional insureds with regard to damages and defense of claims arising from:

1. Activities performed by or on behalf of the Named Insured;
2. Products and completed operations of Named Insured;
3. Premises owned, leased or used by the Named Insured;
4. The ownership, operation, maintenance, use, loading, or unloading of any auto owned, leased, hired, or borrowed by the Named Insured.

D. Should CONTRACTOR fail to provide insurance as required by the Contract Documents, OWNER may, at OWNER's option, take out and maintain at the expense

of CONTRACTOR, insurance in the name of CONTRACTOR, or subcontractor, as OWNER may deem proper. OWNER may deduct the cost of taking out and maintaining such insurance from any sums which are due or to become due to CONTRACTOR under the Contract Documents.

E. Insurance coverage shall not be less than the following:

1. WORKERS' COMPENSATION

a. In accordance with the provisions of Section 3700 of the California Labor Code, CONTRACTOR and every subcontractor shall be required to secure the payment of compensation to its employees.

b. In accordance with the provisions of Section 3700 of the California Labor Code, CONTRACTOR and every subcontractor shall be required to secure the payment of compensation to its employees.

c. CONTRACTOR shall at all times maintain workers' compensation insurance for all of its employees engaged in work under the Contract Documents, on or at the site of the Project. In case any of its work is sublet, CONTRACTOR shall require the subcontractor to similarly provide workers' compensation insurance for all of the subcontractors' employees. Any class of employee or employees not covered by a subcontractor's insurance shall be covered by CONTRACTOR's insurance. In case any class of employees engaged in work under the Contract Documents, on or at the site of the Project, is not protected under the workers' compensation statutes, CONTRACTOR shall provide or shall cause a subcontractor to provide adequate insurance coverage for the protection of such employees not otherwise protected before subcontractor commences work. CONTRACTOR shall file with OWNER certificates of its insurance protecting workers and a 30-day notice shall be provided to OWNER before the cancellation or reduction of any policy of CONTRACTOR or subcontractor. CONTRACTOR shall submit proof of insurance and provide endorsements on the forms provided by OWNER or on forms approved by OWNER.

d. The certificate shall reflect coverage in at least the following amounts:

(1) State workers' compensation statutory benefits policy—limits of not less than \$1,000,000.

(2) Employer's liability policy—limits of not less than \$1,000,000.

2. COMMERCIAL GENERAL LIABILITY

a. CONTRACTOR shall take out and maintain such commercial general liability insurance as shall protect CONTRACTOR and OWNER from all claims for personal injury, including accidental death, to any person (including, as to OWNER, injury or death to CONTRACTOR's or subcontractor's employees), as well as from all claims for property damage arising from operations under the Contract Documents, in amounts set forth in this article.

b. CONTRACTOR shall require its subcontractors, if any, to take out and maintain similar general commercial liability insurance in like amounts.

c. Coverage must be written on an occurrence versus a "claims made" form with policy limits not less than \$1,000,000 per occurrence and \$2,000,000 aggregate per project on bodily injury and property damage, and include coverage for the following:

- (1) Premises - operations;
- (2) Contractual liability;
- (3) Products;
- (4) Completed operations;
- (5) Broad form property damage including explosion, collapse, and underground coverages;
- (6) Personal injury;

d. In the event of any payment under the Commercial General Liability Policy, the insurer shall be subrogated to the extent of such payment to all the insured's rights of recovery, but the insurer shall have no rights of subrogation against OWNER, OWNER's consultants, the Architect, and the Architect's consultants, their elected or appointed officials, or employees, except as respects the negligence of OWNER, the Architect, and Architect's consultants.

3. COMPREHENSIVE AUTO LIABILITY INSURANCE

Such insurance shall have combined single limits of not less than \$1,000,000, bodily injury, property damage, including coverage for owned, non-owned and hired autos.

4. ASBESTOS ABATEMENT

a. Must be occurrence coverage versus "claims made" coverage.

b. \$1,000,000 per occurrence with not less than \$2,000,000 annual aggregates limits required.

c. Certificates of insurance must specify "asbestos abatement."

5. COURSE OF CONSTRUCTION (COC)/BUILDER'S RISK INSURANCE

a. When required by OWNER, on new school construction project, CONTRACTOR may be required to provide builders risk coverage with limits equal to 100 percent of the insurable value of the Project, including all items of labor and materials in or adjacent to the structure insured, all materials in place or to be used as part of the permanent construction, including surplus materials, shanties, protective fences, bridges, or temporary structures, miscellaneous materials and supplies incident to the work, and such scaffolding, staging, towers, forms, and equipment as are not owned or rented by CONTRACTOR, the cost of which are included in the cost of the Work. Such insurance shall be maintained for the life of the Contract.

b. If required by OWNER, CONTRACTOR shall maintain a Builder's Risk Completed Value Form providing all risk coverage, naming CONTRACTOR and OWNER as insureds and subcontractors to all levels as additional insureds, as their respective interests appear.

c. A maximum deductible of \$5,000 per occurrence will be allowed on projects. CONTRACTOR shall be responsible for any deductibles under the property insurance policy.

d. The builder's risk insurance limits shall initially be for the full amount of the Project price shown in the Agreement document and shall be maintained in full force and effect at all times between the signing of the contract and final acceptance of the completed work by OWNER at an amount equaling the estimated cost to OWNER of rebuilding.

F. CONTRACTOR shall be responsible for payment of any deductibles under any of the above named coverages.

ARTICLE 59 PROOF OF INSURANCE COVERAGE

A. CONTRACTOR shall deliver in triplicate proof of carriage of required insurance. This proof shall be presented with the required Payment and Performance Bonds and return of other Contract Documents.

B. CONTRACTOR shall not commence work or allow any subcontractor to commence work under this contract until CONTRACTOR has obtained all required insurance and certificates, which shall be delivered to and approved by OWNER.

C. Certificates and insurance policies shall include the following:

1. A clause stating:

"This policy shall not be canceled or reduced in required limits of liability or amount of insurance until notice has been mailed to certificate holder stating the date of cancellation or reduction. The date of cancellation or reduction may not be less than 30 days after the date of mailing the notice."

2. Transcripts from the policies authenticated by the proper office of the insurer evidencing, in particular, those insured, the extent of the insurance, the location of and the operations to which the insurance applies, expiration date, and cancellation and reduction notice.

3. A statement that OWNER is a named additional insured under the policy described and that the insurance policy shall be primary to any insurance or self-insurance maintained by OWNER.

E. OWNER shall be named as certificate holder and additional insured and all certificates with endorsements shall be forwarded in triplicate to OWNER.

F. In the event of modification or cancellation of the policy or policies during the periods of coverage stated in this article, 30 days' prior written notice of such cancellation shall be delivered or mailed by certified mail, return receipt requested, to OWNER.

G. Acceptance of the certificates of insurance shall not relieve or decrease CONTRACTOR's liability. Insurance coverage in the minimum amounts set forth in the Contract Documents shall not be construed to relieve CONTRACTOR of liability in excess of such coverage, nor shall it preclude OWNER from taking such other actions

as are available to it under any other provisions of the Contract Documents or otherwise in law.

ARTICLE 60 INDEMNIFICATION

A CONTRACTOR shall hold harmless, defend, and indemnify OWNER, the Architect, and Inspector of Record and the officials, officers, employees, volunteers, and agents, and each of them, from any and all claims, demands, causes of action, costs, expenses, liability, loss, damage or injury, in law or equity, to property or persons, including wrongful death, in any manner arising out of or incident to any acts, omissions, or willful misconduct of CONTRACTOR, its officials, officers, employees, agents, consultants, and subcontractors arising out of or in connection with the performance of the Work or the Contract Documents, including without limitation the payment of all consequential damages and attorneys fees and other related costs and expenses. At CONTRACTOR's own cost, expense, and risk and with counsel reasonably satisfactory to OWNER, CONTRACTOR shall defend any and all such suits, actions, or other legal proceedings of every kind that may be brought or instituted against OWNER, the Architect, Inspector of Record, and their directors, officials, officers, employees, agents, or volunteers. CONTRACTOR shall pay and satisfy any judgment, award, or decree that may be rendered against OWNER, the Architect, Inspector of Record or their directors, officials, officers, employees, agents, or volunteers, in any such suit, action, or other legal proceeding. CONTRACTOR shall reimburse OWNER, the Architect, Inspector of Record and their directors, officials, officers, employees, agents, and volunteers, for any and all legal expenses and costs incurred by each of them in connection with any suit, action, or legal proceeding, or in enforcing the indemnity provided under this Article.

B. CONTRACTOR shall require each subcontractor to hold harmless, defend, and indemnify OWNER, the Architect, Inspector of Record and their officials, officers, employees, volunteers and agents, from any and all claims, demands, causes of action, costs, expenses, liability, loss, damage, or injury, in law or equity, to property or persons, including wrongful death, in any manner arising out of or incident to any acts, omissions, or willful misconduct of subcontractor its officials, officers, employees, agents, consultants and subcontractors arising out of or in connection with the performance of the Work or the Contract Documents, including without limitation the payment of all consequential damages and attorneys' fees and other related costs and expenses. At subcontractor's own cost, expense and risk, subcontractor shall defend any and all such suits, actions, or other legal proceedings of every kind that may be brought or instituted against OWNER, the Architect, Inspector of Record, and their directors, officials officers, employees, agents or volunteers. Subcontractor shall pay and satisfy any judgment, award, or decree that may be rendered against OWNER, the Architect, Inspector of Record, or their directors, officials, officers, employees, agents or volunteers, in any such suit, action, or other legal proceeding. Subcontractor shall reimburse OWNER, the Architect, Inspector of Record, and their directors, officials,

officers, employees, agents, and volunteers, for any and all legal expenses and costs incurred by each of them in connection with any suit, action, or legal proceeding, or in enforcing the indemnity provided under this article.

C. The obligations of this Article expressly include but are not limited to the obligations of indemnification and defense of OWNER, the Architect, Inspector of Record, and their directors, officials, officers, agents and employees arising in any manner out of any claims against them brought by other contractors, subcontractors, material suppliers, or other third parties alleging any of them owe the claimant either time, compensation, or damages due to any act, omission, or occurrence caused or contributed to in any degree by CONTRACTOR or any of its subcontractors.

ARTICLE 61 ASSIGNMENT

CONTRACTOR shall not assign any rights, delegate any duties, transfer, convey, sublet, or otherwise dispose of the Construction Agreement or of its rights, title, or interest in or to the Construction Agreement or any part of it. If CONTRACTOR assigns, transfers, conveys, sublets, or otherwise disposes of the Construction Agreement or its right, title, or interest in it, or any part of it, any attempted or purported assignment, transfer, conveyance, sublease, or other disposition, shall be null, void, and of no legal effect whatsoever, and at OWNER's option the Construction Agreement may be terminated, revoked, and annulled, and OWNER shall then be discharged from any and all liability and obligations to CONTRACTOR, and to its purported assignee or transferee, arising out of the Construction Agreement. This expressly includes but is not limited to any attempts to create "pass through" or similar rights for subcontractors to pursue claims directly against OWNER.

ARTICLE 62 SEPARATE CONTRACTS

A. OWNER reserves the right to let other contracts in connection with this Work. CONTRACTOR shall afford other contractors reasonable opportunity for introduction and storage of their materials and execution of their work, and shall coordinate its work with those other contractors.

B. If any part of CONTRACTOR's work depends upon work of any other contractor for proper execution of results, CONTRACTOR shall inspect and promptly report in writing to the Architect any defects in the other contractor's work that render it unsuitable for proper execution or results. CONTRACTOR's failure to inspect and report shall constitute its acceptance of any other contractor's work as fit and proper for reception of its work except as to defects which may develop in another contractor's work after execution of CONTRACTOR's work.

C. To ensure proper execution of CONTRACTOR's subsequent work, CONTRACTOR shall measure and inspect work already in place and shall report in

writing to the Architect any discrepancy between executed work and the Contract Documents.

D. CONTRACTOR shall ascertain to CONTRACTOR's satisfaction the scope of the Project and nature of any other contracts that have been or may be awarded by OWNER in connection with the Project, in order that CONTRACTOR may perform the work in light of any other contracts. Nothing contained in the Contract Documents shall be interpreted as granting to CONTRACTOR exclusive occupancy of the Project site. CONTRACTOR shall not cause any unnecessary hindrance or delay to any other contractor working on the Project. If simultaneous execution of any contract for the Project is likely to cause interference with performance of some other contract or contracts, OWNER shall decide which contractor shall cease work temporarily and which contractor shall continue or whether work can be coordinated so that the contractors may proceed simultaneously. OWNER shall not be responsible for any damage suffered or extra costs incurred by CONTRACTOR resulting directly or indirectly from the award or performance or attempted performance of any other contract or contracts on the Project, or caused by any decision or omission of OWNER regarding the order in performing or coordinating the contracts.

ARTICLE 63 OWNER'S RIGHT TO TERMINATE CONTRACT

Termination for Cause:

A. OWNER may serve upon CONTRACTOR and its surety written notice of OWNER's intention to terminate the Construction Agreement, without prejudice to any other right or remedy, upon the occurrence of any of the following circumstances:

1. If CONTRACTOR refuses or fails to pursue the Work or any part with sufficient diligence to ensure its completion within the time specified, or any extension of time;
2. If CONTRACTOR refuses or fails to complete the Work within the time required;
3. If CONTRACTOR is adjudged a bankrupt, or makes a general assignment for the benefit of its creditors;
4. If a receiver is appointed on account of CONTRACTOR's insolvency;
5. If CONTRACTOR persistently or repeatedly refuses or fails to supply enough properly skilled workers or proper materials to complete the Work in the time specified, except in cases for which extension of time is provided;

6. If CONTRACTOR fails to make prompt payment to subcontractors or for material or labor;
7. If CONTRACTOR persistently disregards laws, ordinances, or instructions of OWNER;
8. If CONTRACTOR or its SUBCONTRACTORS violates any of the provisions of the Contract Documents.

B. The notice of intent to terminate shall contain the reasons for termination.

C. Unless the identified condition(s) or violation(s) ceases and arrangements satisfactory to OWNER for correction are made within 10 days after service of the notice, the Construction Agreement may be terminated, in the total discretion of OWNER. In that event, CONTRACTOR shall not be entitled to receive any further payment until the Work is completed.

D. In the event of OWNER's election to terminate, OWNER shall immediately serve written notice of termination upon CONTRACTOR and upon surety on CONTRACTOR's Performance Bond, and the surety shall then have the right to take over and perform this contract; provided however that if within seven days after service upon the surety of the notice of election to terminate, the surety does not give OWNER written notice of its intention to take over and perform the Construction Agreement, or does not commence performance within 15 days after the date of service of the notice of termination by OWNER on surety, OWNER may take over and complete the Work by contract or by any other method it deems advisable.

E. CONTRACTOR and its surety shall be liable to OWNER for any excess cost or other damages incurred by OWNER. If OWNER takes over the Work as provided above, OWNER may exclude CONTRACTOR and the surety from the premises, or any portion of the premises, and take control of the premises without liability and without affecting the liability of CONTRACTOR and the surety for completion of the Work. In addition, OWNER may take possession of and utilize in completing the Work any materials, appliances, equipment, and other property belonging to CONTRACTOR on the work site necessary for completion of the Project, without liability.

F. If the unpaid balance of the contract price exceeds the expense of finishing the Work, including without limitation compensation for additional architectural, managerial, inspection, and administrative services, the excess shall be paid to CONTRACTOR. If the expense exceeds the unpaid balance, CONTRACTOR shall pay the difference to OWNER. Any expenses incurred by OWNER, and any damage incurred through CONTRACTOR's default, shall be certified by the Architect.

G. These provisions are in addition to and not a limitation on any other rights or remedies available to OWNER.

Termination for Convenience:

H. OWNER has discretion to terminate this Agreement at any time and require CONTRACTOR to cease all work on the project by providing CONTRACTOR written notice of termination specifying the desired date of termination. Upon receipt of written notice from OWNER of such termination for OWNER's convenience, CONTRACTOR shall:

1. Cease operations as directed by OWNER in the notice;
2. Take any actions necessary, or that OWNER may direct, for the protection and preservation of the Work; and
3. Maintain any insurance provisions required by the Contract Documents.

In case of termination for OWNER's convenience, CONTRACTOR shall be entitled to receive payment from OWNER for work satisfactorily executed and for proven loss with respect to materials, equipment, and tools, including overhead and profit for that portion of the work completed. In the case of termination for convenience, OWNER shall have the right to accept assignment of subcontractors. The foregoing provisions are in addition to and not in limitation of any other rights or remedies available to OWNER.

ARTICLE 64 NO WAIVER

The failure of OWNER in any one or more instances to insist upon strict performance of any of the terms of the Contract Documents, or to exercise any option conferred in them, shall not be construed as a waiver or relinquishment to any extent of the right to assert or rely upon any such terms or option on any future occasion.

ARTICLE 65 EXCISE TAXES

If any transaction under the Contract Documents constitutes a sale on which a federal excise tax is imposed under federal excise tax law, and the sale is exempt from the excise tax because it is a sale to a state or local government for its exclusive use, upon request OWNER will execute a certificate of exemption which will certify that

- (1) OWNER is a political subdivision of the State for the purpose of such exemption, and
- (2) the sale is for the exclusive use of OWNER. No excise tax for such materials shall be included in any bid price.

ARTICLE 66 NOTICE OF TAXABLE POSSESSORY INTEREST

The terms of the Contract Documents may result in the creation of a possessory interest. If a possessory interest is vested in a private party to the Contract Documents, the private party may be subjected to the payment of property taxes levied on such interest.

ARTICLE 67 ASSIGNMENT OF ANTITRUST ACTIONS

A. Public Contract Code Section 7103.5(b) provides:

“In entering into a public works contract or a subcontract to supply goods, services, or materials pursuant to a public works contract, the contractor or subcontractor offers and agrees to assign to the awarding body (OWNER) 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. Sect. 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 the awarding body tenders final payment to the contractor, without further acknowledgment by the parties.”

B. For itself and all subcontractors, CONTRACTOR agrees to assign to OWNER all rights, title, and interest in and to all such causes of action CONTRACTOR and all subcontractors may have under the Contract Documents. This assignment shall become effective at the time OWNER tenders final payment to CONTRACTOR, and CONTRACTOR shall require assignments from all SUBCONTRACTORS to comply with this requirement.

ARTICLE 68 PATENTS, ROYALTIES, AND INDEMNITIES

CONTRACTOR shall hold harmless OWNER and its governing board or other governing body, officers, agents, and employees from liability of any nature or kind, including cost and expense, for or on account of any patented or unpatented invention, process, article, or appliance manufactured or used in the performance of the Work of the Contract Documents, including its use by OWNER, unless otherwise specifically provided in the Contract Documents and unless such liability arises from the sole negligence, active negligence, or willful misconduct of OWNER.

ARTICLE 69 STATE AUDIT

Pursuant to and in accordance with the provisions of Government Code Section 8546.7, CONTRACTOR and any subcontractor connected with the performance of the

Contract Documents involving the expenditure of public funds in excess of \$10,000, including, but not limited to the cost of administration of the Contract Documents, shall be subject to examination and audit by the State of California, either at the request of OWNER or as part of any audit of OWNER, for a period of three years after final payment is made under the Contract Documents.

ARTICLE 70 PROVISIONS REQUIRED BY LAW DEEMED INSERTED

Every provision of law and clause required by law to be inserted in the Contract Documents shall be deemed to be inserted, and the Contract Documents shall be read and enforced as though it were included. If through mistake or otherwise any provision is not inserted or is not correctly inserted, upon application of either party the Contract Documents shall be amended to make the insertion or correction. All references to statutes and regulations shall include all amendments, replacements, and enactments on the subject which are in effect as of the date of the Contract Documents and any later changes which do not materially and substantially alter the positions of the parties.

ARTICLE 71 NOTICE AND SERVICE

A. Any notice from one party to the other under the Contract Documents shall be in writing and shall be dated and signed by the party giving the notice or by a duly authorized representative of the party. Any notice shall not be effective for any purpose unless served in one of the following ways:

B. If notice is given to OWNER, by personal delivery to OWNER or by depositing the notice in the United States mail, enclosed in a sealed envelope addressed to OWNER and sent by registered or certified mail with postage prepaid.

C. If notice is given to CONTRACTOR, by personal delivery to CONTRACTOR or to CONTRACTOR's superintendent at the Project Site, or by depositing the notice in the United States mail, enclosed in a sealed envelope addressed to CONTRACTOR at its regular place of business or at such address as may have been established for the conduct of work under the Contract Documents, and sent by registered or certified mail with postage prepaid.

D. If notice is given to surety or other persons, by personal delivery or by depositing the notice in the United States mail, enclosed in a sealed envelope addressed to the surety or person at the address last communicated by the surety or other person to the party giving notice, and sent by registered or certified mail with postage prepaid.

ARTICLE 72 DISABLED VETERAN BUSINESS ENTERPRISE COMPLIANCE

A. In accordance with Education Code Section 17076.11, OWNER has a participation goal for disabled veteran business enterprises of at least three percent per

year of the overall dollar amount of funds allocated to OWNER by the State Allocation Board pursuant to the Leroy F. Greene School Facilities Act of 1998 for construction or modernization and expended each year by the school district.

B. Prior to, and as a condition precedent for final payment under any contract for such project, CONTRACTOR shall provide appropriate documentation to OWNER identifying the amount paid to disabled veteran business enterprises in conjunction with the Contract Documents, so that OWNER can assess its success at meeting this goal.

**11-SUPPLEMENTAL GENERAL CONDITIONS
TAFT CITY SCHOOL DISTRICT**

PROJECT TITLE: Re-Roof Kindergarten Classroom Building at Conley Elementary School

OWNER: Taft City School District

SUPPLEMENTAL GENERAL CONDITION NO. 1

Add Article on Progress Meetings, as follows:

ARTICLE PROGRESS MEETINGS

CONTRACTOR shall attend all progress meetings and take clear and complete notes of the meetings and all subjects discussed at the meetings, submitting the notes within 48 hours of the end of the meeting to the Architect for review and comment. Notes shall be kept in a manner, which will permit easy tracking of the progress of each topic of discussion.

SUPPLEMENTAL GENERAL CONDITION NO. 2

CONTRACT CLOSEOUT

a. 1.04 Contract Closeout:

Notwithstanding Article 53 paragraph B.2, the intent of the "As-built record drawing shall be to accurately locate the exact locations and elevations of all covered utilities, including, valves, cleanouts, etc. "As-Built" record drawings shall not necessarily reflect or depict changes to the construction drawings that are made by addendum, change order, shop drawing, or submittals unless such changes indicate work that will be covered or otherwise hidden from view.

b. 1.05 Allowance: **(NOT USED FOR THIS PROJECT)**

Notwithstanding Article 53, paragraph B.4, the Contractor shall provide an allowance, which shall be itemized on the Schedule of Values, to be used to employ the services of an approved qualified draftsman to draft, update and incorporate the "As-Built" record information to include but not necessarily limited to, all addendum, change orders, Field (Construction) Change Documents, Architect's Supplemental Instructions, and field verified locations and installation of all materials and products above and below grade, etc., into electronic data files of the originally approved plans and specifications (AutoCAD) as provided by the Architect and provide a complete set of plans in a reproducible transparent digital film and "Auto CAD Architectural Desktop 2010 on CD upon the approval of the Architect that all "As-Built" record information has been properly included. The allowance shall be a minimum of \$5000.00. The contractor shall be responsible for the cost of all reproduction, which shall not be included as a part of the allowance. In the event the services of the approved qualified draftsman exceeds the allowance amount the Contractor shall be responsible to pay the full and actual amount to approved qualified draftsman without seeking compensation from the District. In the event, the cost of the services of the approved qualified draftsman is less than the amount of the allowance the Contractor shall return the difference to the District.

SUPPLEMENTAL GENERAL CONDITION NO. 3

ADD TO ARTICLE 19.D.11 OF GENERAL CONDITIONS

a. Substitution Request:

1.) Cost to Contractor or Bidder for review of Substitution Request.

a) Each review of a Substitution Request by the Architect will be billed to the submitter (Contractor or Bidder at an hourly rate of \$200.00 per hour, two hour minimum for each review, whether approved or rejected.

i) The Architect may waive the review cost if, in his sole opinion, the submittal was complete and the time involved in the review was not substantial, and it was in the best interest of the owner.

2.) Content of Request:

a.) Complete the attached Substitution Request Form (EXHIBIT "A" at the end of this Section) and the Substitution Warranty (at the end of this Section), substantiating compliance of proposed substitution with Contract Documents.

b.) For products, attach to the Substitution Request Form (EXHIBIT "A"):

i) Product identification, including manufacturer's name and address.

ii) Manufacturers literature including product description, performance and test data and reference standards.

iii) Samples.

c.) For construction methods, attach to the Substitution Request Form:

i) Detailed description of Proposed methods.

ii) Drawings illustrating methods.

d) Attach to the Substitution Request Form an itemized comparison of proposed substitution with product or method specified.

3.) In making request for substitution, Contractor or Bidder attests that:

a.) He has personally investigated proposed product or method, and determined that it is equal or superior in all respects to that specified.

b.) He will provide the same guarantee or warranty for substitution as for product or method specified.

c.) He will coordinate installation of accepted substitution into work, making such changes as may be required for work to be complete in all respects.

d.) He waives all claims for additional costs related to substitution which subsequently become apparent.

i) Submit three (3) copies of Substitution Request and Substitution Warranty (EXHIBIT "A") prior to submittals required.

- b. Acceptance of Substitutions
 - 1.) Procedures:
 - a.) The Contract is based on materials, equipment and methods described in the Contract Documents.
 - b.) Architect will consider proposals submitted in accordance with the Substitution Request.
 - c.) Substitutions will be considered when submitted no later than ten (10) working days prior to bid date.
 - d.) Architect is solely responsible for judging the acceptance of substitutions.
 - e.) Substitute materials, equipment or methods shall not be used unless such substitution has been specifically approved for this work by the Architect and DSA.
 - f.) Substitutions will not be considered if:
 - i) They are indicated or implied on product submittals without formal request submitted in accordance with Substitution Request.
 - ii) Acceptance will require substantial revision of Contract Documents.
 - iii) They are submitted no later than ten (10) working days prior to bid, unless the specified or drawing item has been verified to be discontinued or is otherwise unavailable, or the owner desires a cost savings for the product or system.
 - 2.) In the event BIDDER/CONTRACTOR furnishes any material, process, or article more expensive than that specified, the difference in cost of the material, process or article so furnished shall be borne by BIDDER/CONTRACTOR.
 - 3.) If the substitution is accepted, the BIDDER/CONTRACTOR shall be solely and directly responsible for fitting accepted substitute materials and equipment into the available space in a manner acceptable to the Architect, and for the proper operation of the substituted equipment with all other equipment with which it may be associated. The BIDDER/CONTRACTOR shall bear all costs of meeting the above requirements for presenting a proposed substitution, and if the substitution is accepted the BIDDER/CONTRACTOR must bear all costs involved.

SUPPLEMENTAL GENERAL CONDITION NO. 4 (Not Used)

SUPPLEMENTAL GENERAL CONDITION NO. 5

GENERAL CONDITIONS ARTICLE 46.B.: Shall be amended to read as follows:

B. Monthly payments shall be made only on the basis of monthly estimates which shall be prepared by CONTRACTOR on a form approved by OWNER and filed before the fifth day of the month during which payment is to be made. With the approved payment request form, CONTRACTOR shall submit a completed "PROGRESS PAYMENT REQUEST - SUPPLEMENTAL FORM REGARDING STATUS OF CLAIMS UPDATE, AND WAIVER AND RELEASE OF UNLISTED

CLAIMS” form, using the form attached as part of the Contract Documents (EXHIBIT “B”). Submission of a completed and fully executed form shall be a prerequisite to the CONTRACTOR’s right to payment. No other form is acceptable. Contractor shall also submit Conditional and Unconditional Waiver for Progress and Final Payments received and requested using the attached forms. (Exhibits E, F, G and H). Failure to use the specified form shall constitute a waiver and release of any claim for damages, additional compensation or time.

SUPPLEMENTAL GENERAL CONDITION NO. 6

GENERAL CONDITIONS ARTICLE 51.F.: Add the following paragraph:

F. Within 10 days of the beginning of any delay (unless OWNER grants in writing a further period of time to file notice prior to the date of final completion of the Project), CONTRACTOR shall notify OWNER in writing of the causes for the delay. Contractor shall use the form of “Notice of Claim” (EXHIBIT “C”) included in the Contract Documents. No other form of notice is acceptable. Failure to use the specified form of notice shall constitute a waiver and release of any claim for damages, additional compensation or time. Failure to give the required notice in writing within the time provided shall be interpreted as a failure by CONTRACTOR to properly administer the Contract Documents, Project, and Work, and shall constitute a waiver by CONTRACTOR of all claims of any kind and nature, without limitation, arising from the delay. In addition to this notice, in any instance where CONTRACTOR claims delay was caused by OWNER, the Architect or Architect’s consultants, Inspector of Record, Division of State Architect, or anyone claimed to be an agent of them, and as a precondition to any right to claim additional time, prior to making any request for time, CONTRACTOR shall have satisfied the obligation of the Contract Documents to protest the delay.

SUPPLEMENTAL GENERAL CONDITIONS NO. 7

GENERAL CONDITIONS, ARTICLE 27.M – CHANGED AND EXTRA WORK – shall be changed to read as follows:

M. If CONTRACTOR should claim that any instruction, request, drawing, specification, action, condition, omission, default, or other situation constitutes a change, extra work, or otherwise obligates OWNER to pay damages, additional compensation to CONTRACTOR or to grant an extension of time, or constitutes a waiver of any provision in the Contract Documents, CONTRACTOR shall notify OWNER in writing of such claim within five calendar days from the date CONTRACTOR has actual or constructive notice of the factual basis supporting the claim. Contractor shall use the form of “Notice of Claim” included in the Contract Documents. No other form of notice is acceptable. Failure to use the specified form of notice shall constitute a waiver and release any claims for damages, additional compensation or time. The notice shall state the factual basis for the claim and cite in detail the Contract Documents (including plans and specifications) upon which the claim is based. CONTRACTOR’S failure to notify OWNER within the five-day period shall be deemed a waiver and relinquishment of such a claim. If the notice is given within the specified time, the procedure for its consideration shall be as stated in these General Conditions. In the event of failure to agree, the matter shall be treated as a claim following the claims procedures in the Contract Documents. (See Exhibit C for Claim form)

SUPPLEMENTAL GENERAL CONDITIONS NO. 8 (Not Used)

EXHIBIT A

To: _____

Item: _____ Specified or Drawing

Project: _____

We hereby submit for your consideration the following product instead of the specified item for the above product:

Section	Page	Paragraph	Description
---------	------	-----------	-------------

The undersigned requests consideration of the following:

PROPOSED SUBSTITUTION/S:

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

Attached data also includes a description of changes to the Contract Documents which the proposed substitution will require for its proper installation.

The undersigned certifies that the following paragraphs, unless modified by attachments, are correct:

1. The proposed substitution does not affect dimensions shown on the Drawings.
2. The undersigned will compensate the architect at a rate of \$200.00 an hour for changes required to the building design, including engineering design, detailing, and construction costs caused by the requested substitution. The Architect is herein defined as any of those firms or individuals listed by reference on the Drawings, including all Consultants identified herein.
3. The proposed substitution will have no adverse affect on other trades, the construction schedule, or specified warranty requirements.
4. Maintenance and service parts will be locally available for the proposed substitution.
5. Attach all cost data with explanations if different from Specified or Drawing item. Include in that explanation a discussion on quality or proposed substitution and cost differential.
6. The undersigned will pay for any subsequent changes in incorporating the proposed substitution that were not apparent at the time of approval into the Work, including compensation to the Architect as described in item 2 above.

The undersigned states that the function, appearance and quality are equivalent or superior to the specified or drawing item.

Submitted By:

Signature _____

Firm _____

Address _____

Date _____

Telephone (_____) _____

Fax # (_____) _____

For Use by Architect/Engineer		
Accepted	as	noted
Not Accepted		_____
By _____		
Date _____		
Remarks _____		

EXHIBIT A (con't)

SUBSTITUTION WARRANTY

In addition to other requirements, the General Contractor shall warrant in writing that substituted materials shall perform as specified, and assume complete responsibility for same, including responsibility and costs required for modifications to building or other materials or equipment, and any additional coordination with work of other trades. Testing, if required, shall be paid by the General Contractor. **The following is an example of the type of Substitution warranty, which shall be executed by the Contractor, on his own letterhead.**

SUBSTITUTION WARRANTY

We propose to provide

(Describe items being proposed for substitution)

for _____ in lieu of and as

(List project name)

an equivalent to _____.

(Describe specified product)

As indicated on the drawings and described in Section _____ of the Specifications.

We agree to assume the cost of any modifications to other portions of the work as necessary to accommodate our material (s) and system(s).

We hereby warrant that _____

(Provide description)

is the equivalent of _____

(Specified product)

In every respect and will perform satisfactorily under the conditions and use indicated on the Drawings and described in the Specifications

Signed: _____ Date _____

(Manufacturer/Supplier/Other)

Signed: _____ Date _____

(Subcontractor)

Signed: _____ Date _____

(Contractor)

NOTE: Affix Corporate Seal over Signatures.

EXHIBIT "B"

**PROGRESS PAYMENT REQUEST - SUPPLEMENTAL FORM
REGARDING STATUS OF CLAIMS UPDATE, AND
WAIVER AND RELEASE OF UNLISTED CLAIMS**

**This form must be submitted as part of every progress payment request.
Each prior and new claim must be identified.**

Progress payments will not be processed without submission of this form.

**WARNING: FAILURE TO LIST PRIOR AND NEW CLAIMS IN THIS DOCUMENT WILL
CONSTITUTE A WAIVER AND RELEASE OF ANY CLAIM AND ALL
DAMAGE RELATED THERETO.**

CONTRACTOR'S NAME: _____

PROJECT NAME: _____

DATE OF THIS REQUEST: _____

CLAIMS AS TO WHICH NOTICE HAS ALREADY BEEN GIVEN:
[List all] [Use additional sheets as needed]

**NEW CLAIMS, AS TO WHICH NOTICE HAS NOT PREVIOUSLY BEEN GIVEN, AND AS
TO WHICH THE REQUIRED FORM OF WRITTEN NOTICE IS ATTACHED:**
[List all] [Use additional sheets as needed]

By executing and submitting this supplement to my request for a progress payment, I am certifying to the Owner that I have listed all claims, including claims as to which notice has already been given in compliance with the requirements of the Contract Documents, and including any new claims arising since the prior progress payment request. The foregoing information is accurate, complete and true, except as expressly noted. I am authorized on behalf of the claimant in such claims to make these representations, and to waive and release claims. Any claim not expressly and specifically identified herein is hereby waived, and the Owner, its Trustees, officers, agents and employees are hereby released from any and all claims not expressly identified herein.

I, the undersigned, declare under penalty of the perjury laws of the State of California, that the foregoing is true and correct.

CLAIMANT'S TYPED/PRINTED NAME: _____

CLAIMANT'S SIGNATURE: _____

EXHIBIT "C"

NOTICE OF CLAIM

**This form must be used for giving written Notice of any claim.
No other form of written Notice is permitted.**

**One copy, each, of this Notice must be given to both the
Construction Manager and to the Owner to be considered effective
Notice.**

**WARNING: FAILURE TO GIVE THIS WRITTEN NOTICE WITHIN THE TIME
SPECIFIED IN THE CONTRACT DOCUMENTS CONSTITUTES A
WAIVER AND RELEASE OF ANY CLAIM AND DAMAGE RELATED
THERETO.**

TO: **CONSTRUCTION
MANAGER OWNER**

CLAIMANT'S NAME: _____

PROJECT NAME: _____

DATE OF THIS NOTICE:

DATE OF OCCURRENCE GIVING RISE TO THIS CLAIM:

AMOUNT OF CLAIM: _____

IS A TIME EXTENSION REQUESTED AS PART OF THIS CLAIM?

NO: _____ YES: _____ IF YES, AMOUNT REQUESTED: _____ DAYS

STATE THE FACTUAL BASIS FOR THIS CLAIM: *[Attach additional sheets as needed]*

STATE THE NATURE OF THE DAMAGES CLAIMED: *[Attach additional sheets as needed]*

I am aware of the penalties for submitting a false claim to a public agency. By executing and submitting this Notice, I am certifying to the Owner that I have investigated this claim and have found the foregoing information to be accurate, complete and true, except as expressly noted.

The foregoing is true and correct, and this Notice of Claim is given under penalty of the perjury laws of the State of California.

CLAIMANT'S TYPED/PRINTED NAME _____

CLAIMANT'S SIGNATURE: _____

11-SUPPLEMENTAL GENERAL CONDITIONS

11-SUPPLEMENTAL GENERAL CONDITIONS

EXHIBIT "E"
UNCONDITIONAL WAIVER AND RELEASE ON FINAL PAYMENT

NOTICE TO CLAIMANT: THIS DOCUMENT WAIVES AND RELEASES LIEN, STOP PAYMENT NOTICE, AND PAYMENT BOND RIGHTS UNCONDITIONALLY AND STATES THAT YOU HAVE BEEN PAID FOR GIVING UP THOSE RIGHTS. THIS DOCUMENT IS ENFORCEABLE AGAINST YOU IF YOU SIGN IT, EVEN IF YOU HAVE NOT BEEN PAID. IF YOU HAVE NOT BEEN PAID, USE A CONDITIONAL WAIVER AND RELEASE FORM.

Identifying Information
Name of Claimant:
Name of Customer:
Job Location:
Owner:

Unconditional Waiver and Release

This document waives and releases lien, stop payment notice, and payment bond rights the claimant has for all labor and service provided, and equipment and material delivered, to the customer on this job. Rights based upon labor or service provided, or equipment or material delivered, pursuant to a written change order that has been fully executed by the parties prior to the date that this document is signed by the claimant, are waived and released by

Exceptions

This document does not affect any of the following:
Disputed claims for extras in the amount of: \$

Signature
Claimant's Signature:
Claimant's Title:
Date of Signature:

EXHIBIT "F"
CONDITIONAL WAIVER AND RELEASE ON FINAL PAYMENT

NOTICE: THIS DOCUMENT WAIVES THE CLAIMANT'S LIEN, STOP PAYMENT NOTICE, AND PAYMENT BOND RIGHTS EFFECTIVE ON RECEIPT OF PAYMENT. A PERSON SHOULD NOT RELY ON THIS DOCUMENT UNLESS SATISFIED THAT THE CLAIMANT HAS RECEIVED PAYMENT.

Identifying Information
Name of Claimant:
Name of Customer:
Job Location:
Owner:

Conditional Waiver and Release

This document waives and releases lien, stop payment notice, and payment bond rights the claimant has for labor and service provided, and equipment and material delivered, to the customer on this job. Rights based upon labor or service provided, or equipment or material delivered, pursuant to a written change order that has been fully executed by the parties prior to the date that this document is signed by the claimant, are waived and released by this document, unless listed as an Exception

below. This document is effective only on the claimant's receipt of payment from the financial institution on which the following check is drawn:

Maker of Check:
Amount of Check: \$
Check Payable to:

Exceptions

This document does not affect any of the following:
Disputed claims for extras in the amount of: \$

Signature
Claimant's Signature:
Claimant's Title:
Date of Signature:

EXHIBIT "G"

UNCONDITIONAL WAIVER AND RELEASE ON PROGRESS PAYMENT

NOTICE TO CLAIMANT: THIS DOCUMENT WAIVES AND RELEASES LIEN, STOP PAYMENT NOTICE, AND PAYMENT BOND RIGHTS UNCONDITIONALLY AND STATES THAT YOU HAVE BEEN PAID FOR GIVING UP THOSE RIGHTS. THIS DOCUMENT IS ENFORCEABLE AGAINST YOU IF YOU SIGN IT, EVEN IF YOU HAVE NOT BEEN PAID. IF YOU HAVE NOT BEEN PAID, USE A CONDITIONAL WAIVER AND RELEASE FORM.

Identifying Information
Name of Claimant:
Name of Customer:
Job Location:
Owner:

Unconditional Waiver and Release

This document waives and releases lien, stop payment notice, and payment bond rights the claimant has for all labor and service provided, and equipment and material delivered, to the customer on this job. Rights based upon labor or service provided, or equipment or material delivered, pursuant to a written change order that has been fully executed by the parties prior to the date that this document is signed by the claimant, are waived and released by

Exceptions

This document does not affect any of the following:
Disputed claims for extras in the amount of: \$

Signature
Claimant's Signature:
Claimant's Title:
Date of Signature:

11-SUPPLEMENTAL GENERAL CONDITIONS

EXHIBIT "H"
CONDITIONAL WAIVER AND RELEASE ON PROGRESS PAYMENT

NOTICE: THIS DOCUMENT WAIVES THE CLAIMANT'S LIEN, STOP PAYMENT NOTICE, AND PAYMENT BOND RIGHTS EFFECTIVE ON RECEIPT OF PAYMENT. A PERSON SHOULD NOT RELY ON THIS DOCUMENT UNLESS SATISFIED THAT THE CLAIMANT HAS RECEIVED PAYMENT.

Identifying Information
Name of Claimant:
Name of Customer:
Job Location:
Owner:

Conditional Waiver and Release

This document waives and releases lien, stop payment notice, and payment bond rights the claimant has for labor and service provided, and equipment and material delivered, to the customer on this job. Rights based upon labor or service provided, or equipment or material delivered, pursuant to a written change order that has been fully executed by the parties prior to the date that this document is signed by the claimant, are waived and released by this document, unless listed as an Exception below. This

document is effective only on the claimant's receipt of payment from the financial institution on which the following check is drawn:

Maker of Check:
Amount of Check: \$
Check Payable to:

Exceptions

This document does not affect any of the following:
Disputed claims for extras in the amount of: \$

Signature
Claimant's Signature:
Claimant's Title:
Date of Signature:

11-SUPPLEMENTAL GENERAL CONDITIONS

12-PAYMENT BOND

KNOW ALL PERSONS BY THESE PRESENTS:

WHEREAS, the Taft City School District, (referred to as "Owner"), has awarded to _____ (referred to as the "Contractor/ Principal") a contract for the work described as follows:

Re-Roof Kindergarten Classroom Building at Conley Elementary School

WHEREAS, Contractor/Principal is required by Division 4, Part 6, Title 3, Chapter 5 (commencing at Section 9550) of the California Civil Code to furnish a bond in connection with the contract;

NOW, THEREFORE, we, the Contractor/Principal and _____ as Surety, are held firmly bound unto Owner in the penal sum of _____ Dollars (\$_____), lawful money of the United States of America for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH that if the Contractor/Principal, his/her or its heirs, executors, administrators, successors, or assigns, or a subcontractor, shall fail to pay any person or persons named in Civil Code Section 9100 or fail to pay for any materials or other supplies used in, upon, for, or about the performance of the work contracted to be done, or for any work or labor thereon of any kind, or for amounts due under the Unemployment Insurance Code with respect to work or labor thereon of any kind, or shall fail to deduct, withhold, and pay over to the Employment Development Department any amounts required to be deducted, withheld, and paid over by Section 13020 of the Unemployment Insurance Code with respect to work and labor thereon of any kind, then said Surety will pay for the same, in or to an amount not exceeding the amount set forth above, and in case suit is brought upon this bond Surety will also pay such reasonable attorney's fees as shall be fixed by the court, awarded and taxed as provided in Division 4, Part 6, Title 3, Chapter 5 (commencing at Section 9550) of the California Civil Code.

This bond shall inure to the benefit of any of the persons named in Section 9100 of the California Civil Code so as to give a right of action to such person or their assigns in any suit brought upon this bond.

It is further stipulated and agreed that the Surety of this bond shall not be exonerated or released from the obligation of the bond by any change, extension of time for performance, addition, alteration, or modification in, to, or of any contract, plans, specifications, or agreement pertaining or relating to any scheme or work of improvement described above or pertaining or relating to the furnishing of labor, materials, or equipment therefor, nor by any change or modification of any terms of payment or extension of the time for any payment pertaining or relating to any scheme or work of improvement described above, nor by any rescission or attempted rescission of the contract, agreement, or bond, nor by any conditions precedent or subsequent in the bond attempting to limit the right of recovery of claimants otherwise entitled to

recover under any such contract or agreement or under the bond, nor by any fraud practiced by any person other than the claimant seeking to recover on the bond, and that this bond be construed most strongly against the Surety and in favor of all persons for whose benefit such bond is given, and under no circumstances shall Surety be

released from liability to those for whose benefit such bond has been given, by reason of any breach of contract between the Owner and original contractor or on the part of any obligee named in such bond, but the sole conditions of recovery shall be that claimant is a person described in Section 8400 and 8402 of the California Civil Code and has not been paid the full amount of his/her or its claim and that Surety does hereby waive notice of any such change, extension of time, addition, alteration, or modification.

Any claims under this bond may be addressed to:

Name & address of Surety

Name & address of agent or
representative in California, if different
than above

Telephone # of Surety, or agent or
representative in California

IN WITNESS WHEREOF, we have hereto set our hands and seals on this _____ day of _____, 20__.

[SEAL]

Contractor/Principal _____

By: _____
Signature

Print Name Above

Print Title Above

Surety: _____

By: _____
Signature

Print Name Above

Print Title Above

[SEAL AND NOTARIAL ACKNOWLEDGMENT OF SURETY]

13-PERFORMANCE BOND

KNOW ALL PERSONS BY THESE PRESENTS:

WHEREAS, the Taft City School District (referred to as "Owner"), has awarded to _____ (referred to as "Contractor/Principal") a contract for the work described as follows:

Re-Roof Kindergarten Classroom Building at Conley Elementary School

NOW, THEREFORE, we, the Contractor/Principal and _____, as Surety, are held firmly bound unto Owner in the penal sum of \$ _____ Dollars (\$ _____), lawful money of the United States of America for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITIONS OF THIS OBLIGATION IS SUCH THAT, if the hereby bonded Contractor/Principal, its heirs, executors, administrators, successors, or assigns, shall in all things stand to and abide by and well and truly keep and perform all the undertakings, terms, covenants, conditions, and agreements in the said contract and any alteration thereof, made as therein provided, including but not limited to the provisions regarding contract duration, indemnification, and liquidated damages, all within the time and in the manner therein designated in all respects according to their true intent and meaning, then this obligation shall become null and void; otherwise, it shall be and remain in full force and effect.

As a condition precedent to the satisfactory completion of the contract, the above obligation shall hold good for a period of _____ year(s) after the acceptance of the work by the Owner, during which time if Contractor/Principal shall fail to make full, complete, and satisfactory repair and replacements and totally protect the Owner from loss or damage made evident during the period of _____ year(s) from the date of completion of the work, and resulting from or caused by defective materials or faulty workmanship, the above obligation in penal sum thereof shall remain in full force and effect. The obligation of Surety under this bond shall continue so long as any obligation of Contractor/Principal remains.

Whenever Contractor/Principal shall be, and is declared by the Owner to be, in default under the contract, the Owner having performed the Owner's obligations under the contract, the Surety shall promptly remedy the default, or shall promptly:

1. Complete the contract in accordance with its terms and conditions; or
2. Obtain a bid or bids for completing the contract in accordance with its terms and conditions, an upon determination by Surety of the lowest responsive and responsible bidder, arrange for a contract between such bidder and the Owner, and make available as work progresses sufficient funds to pay the cost of completion less the balance of the contract price, but not exceeding, including other costs and damages for which Surety may be liable under this Performance Bond, the amount set forth above. The term "balance of the contract price" as used in this paragraph shall mean the total amount payable to Contractor/Principal by the Owner under the contract and any modifications to it, less the

amount previously paid by the Owner to the Contractor/Principal. Surety expressly agrees that the Owner may reject any contractor or subcontractor which may be proposed by Surety in fulfillment of its obligations in the event of default by the Contractor/Principal.

Surety shall not utilize Contractor/Principal in completing the contract nor shall Surety accept a bid from Contractor/Principal for completion of the work if the Owner, when declaring the Contractor/Principal in default, notifies Surety of the Owner's objection to Contractor/Principal's further participation in the completion of the work.

No right of action shall accrue on this bond to or for the use of any person or corporation other than the Owner named herein or the successors or assigns of the Owner. Any suit under this bond must be instituted within the applicable statute of limitations period.

FURTHER, for value received, the Surety hereby stipulates and agrees that no change, extension of time, alternation, or modification of the Contract Documents, or of the work to be performed under them, shall in any way affect its obligations on this bond; and it does hereby waive notice of any change, extension of time, alteration, or modification of the Contract Documents or of work to be performed under them.

Contractor/Principal and Surety agree that if the Owner is required to engage the services of an attorney in connection with the enforcement of this bond, each shall pay Owner's reasonable attorney's fees incurred, with or without suit, in addition to the above amount.

Any claims under this bond may be addressed to:

Name and address of Surety:

Name and address of agent or representative in California, if different than above:

Telephone number of Surety, or agent or representative in California:

IN WITNESS WHEREOF, we have hereto set our hands and seals on this _____ day of _____, 20____.

[SEAL]

CONTRACTOR _____

By _____
Signature

Type or Print Name Above

Type or Print Title Above

SURETY _____

By _____
Signature

Type or Print Name Above

Type of Print Title Above

[SEAL AND NOTARIAL ACKNOWLEDGMENT OF SURETY]

14-WORKERS' COMPENSATION CERTIFICATE

PROJECT TITLE: Re-Roof Kindergarten Classroom Building at Conley Elementary School

OWNER: Taft City School District

Labor Code Section 3700 provides:

"Every employer except the state shall secure the payment of compensation in one or more of the following ways:

"(a) By being insured against liability to pay compensation in one or more insurers duly authorized to write compensation insurance in this state.

"(b) By securing from the Director of Industrial Relations a certificate of consent to self-insure either as an individual employer, or as one employer in a group of employers, which may be given upon furnishing proof satisfactory to the Director of Industrial Relations of ability to self-insure and to pay any compensation that may become due to his or her employees.

"(c) For any county, city, city and county, municipal corporation, public district, public agency, or any political subdivision of the state, including each member of a pooling arrangement under a joint exercise of powers agreement (but not the state itself), by securing from the Director of Industrial Relations a certificate of consent to self-insure against workers' compensation claims, which certificate may be given upon furnishing proof satisfactory to the Director of Industrial Relations of ability to administer workers' compensation claims properly, and to pay workers' compensation claims that may become due to its employees. On or before March 31, 1979, a political subdivision of the state which on December 31, 1978, was uninsured for its liability to pay compensation, shall file a properly completed and executed application for a certificate of consent to self-insure against workers' compensation claims. The certificate shall be issued and be subject to the provisions of Section 3702."

I am aware of the provisions of Labor Code Section 3700 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 I will comply with such provisions before commencing and during the performance of the work on this Project.

Contractor: _____

By: _____

Date: _____

Print Name: _____

Title: _____

[In accordance with Article 5 (commencing at Section 1860), Chapter 1, Part 7, Division 2 of the Labor Code, the above certificate must be signed and filed with the awarding body prior to performing any work under the contract.]

15-GUARANTEE

PROJECT TITLE: BID #: Re-Roof Kindergarten Classroom Building at Conley Elementary School

OWNER: Taft City School District

We guarantee that the construction work described above has been performed in accordance with, and complies with, the Contract Documents. We agree to repair or replace any or all of the work, together with any other adjacent work which may be required in connection with it, that may prove to be defective in workmanship or material within a period of one year from the date of acceptance of the project by Owner and the filing of the final verified report with the Division of State Architect (DSA), ordinary wear and tear excepted.

In the event of our failure to comply with these conditions within the applicable time frame as determined by Owner pursuant to the Contact Documents, in no event later than one week after being notified in writing by Owner, we authorize Owner to proceed to have the defects repaired at our expense, for which we will pay the costs and charges upon demand.

Date: _____

Name of Contractor _____

By: _____
Signature

Print Name: _____

Title: _____

Representative of Contractor
to be Contacted for Service:

Name: _____

Address: _____

Telephone number of Contact: _____

16-FINGERPRINTING CERTIFICATION BY CONTRACTORS

Taft City School District (referred to as "Owner")
Re-Roof Kindergarten Classroom Building at Conley Elementary School (Project *Identification*)

I, _____, am an
[type or print name]

- [check one]
- Owner of the company named below
 - Partner of the partnership named below
 - President or CEO of the corporation named below
 - Principal of the joint venture named below
 - Other [specify]

The contracting entity named below is a contractor on the referenced project and as such hereby certifies:

- [For compliance with Education Code Section 45125.2(a)(1)] That a physical barrier will be erected at the workplace to limit employee contact with Owner's pupils.
- [For compliance with Education Code Section 45125.2(a)(2)] That the contracting entity named below will provide continual supervision and monitoring of the employees of the entity and its subcontractors through its employee _____. It has been ascertained by the Department of Justice that the named employee has not been convicted of a violent or serious felony. Contractor has requested subsequent arrest information from the Department of Justice concerning such employee and will immediately notify District and remove the employee from the Project if subsequent arrest information indicates the employee has been convicted of a serious or violent felony.
- [For compliance with Education Code Section 45125.2(a)(3)] That the contracting entity named below has contracted with Owner for reimbursement of Owner expense incurred in providing surveillance by school personnel of the employees of the entity and its subcontractors on the Project.
- [For compliance with Education Code Section 45125.1(g). Note: We believe this section may still be applicable to construction contractors where 45125.2(a) is insufficient to ensure pupil safety, e.g., where workers will be simultaneously working at various locations on a school site.]
- That neither myself nor any employees of the contracting entity named below or its subcontractors on the Project who are required by law to submit or have their fingerprints submitted to the Department of Justice, and who may come in contact with pupils, have been convicted of a felony defined in Education Code Section 45122.1.
- [For compliance where there is limited contact or less with pupils] That the contracting entity named below is exempt from fingerprinting requirements as the Owner has determined the employees of the entity and its subcontractors will have no more than limited contact with Owner's pupils during the Project.

_____ [name of contracting entity]

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

DATE: _____

SIGNATURE _____

**18-ESCROW AGREEMENT FOR
SECURITY DEPOSITS IN LIEU OF RETENTION**

This Escrow Agreement is made and entered into by and between Owner Taft City School District, whose address is 820 6th Street, Taft, CA, and Contractor _____ whose address is _____, and Escrow Agent _____, whose address is _____.

For the consideration set forth in this Agreement, the Owner, Contractor, and Escrow Agent agree as follows:

1. Pursuant to Section 22300 of the 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 Owner pursuant to the Construction Agreement entered into between the Owner and Contractor to Re-Roof Kindergarten Building at Conley Elementary School in the amount of _____ Dated _____ (referred to as the "Construction Agreement"). Alternatively, on written request of Contractor, Owner shall make payments of the retention earnings directly to the Escrow Agent. When Contractor deposits the securities as a substitute for retention earnings, the Escrow Agent shall notify the Owner within 10 days of the deposit. The market value of the securities at the time of the substitution shall be at least equal to the cash amount then required to be withheld as retention under the terms of the Construction Agreement between the Owner and Contractor. Securities shall be held in the name of _____ and shall designate the Contractor as the beneficial owner.

2. Owner shall make progress payments to Contractor for those funds which otherwise would be withheld from progress payments under the provisions of the Construction Agreement, provided the Escrow Agent holds securities in the form and amount specified above.

3. When Owner makes payments of retentions earned directly to the Escrow Agent, the Escrow Agent shall hold them for the benefit of Contractor until the time the escrow created under this Escrow Agreement is terminated. Contractor may direct 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 Owner pays the 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 Owner. These expenses and payment terms shall be determined by Owner, Contractor, and Escrow Agent.

5. The interest earned on the securities, or the money market accounts held in escrow, and all interest earned on that interest, shall be for the sole account of Contractor and shall be subject to withdrawal by Contractor at any time and from time to time without notice to the Owner. 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 Owner to Escrow Agent that Owner consents to withdrawal of the amount sought to be withdrawn by Contractor.

6. Owner shall have a right to draw upon the securities in the event of default by Contractor. Upon seven days' written notice of the default to the Escrow Agent from Owner, Escrow Agent shall immediately convert the securities to cash and distribute the cash as instructed by Owner.

7. Upon receipt of written notification from Owner certifying that the work under the Construction Agreement is final and complete, and that Contractor has complied with all requirements and procedures applicable to the Construction Agreement, 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 monies and securities on deposit and payment of fees and charges.

8. Escrow Agent shall rely on the written notifications from Owner and Contractor pursuant to Sections 6 to 8, inclusive, of this Escrow Agreement and Owner and Contractor shall hold Escrow Agent harmless from Escrow Agent's release and disbursement of the securities and interest as set forth above.

9. The names of the persons who are authorized to give written notice or to receive written notice on behalf of Owner and on behalf of Contractor in connection with the foregoing, and exemplars of their respective signatures, are as follows:

On behalf of Owner:

On behalf of Contractor:

Title

Title

Name Above [typed or printed]

Name Above [typed or printed]

Signature

Signature

Address:

Address:

On behalf of Escrow Agent:

_____ Title

Name Above [typed or printed]

Address:

At the time the Escrow Account is opened, the Owner and Contractor shall deliver to the Escrow Agent a fully executed counterpart of this Escrow Agreement.

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

Owner

Contractor

Title Above

Title Above

Name Above [typed or printed]

Name Above [typed or printed]

Signature

Signature

Escrow Agent

Title Above

Name Above [typed or printed]

Signature

19-SHOP DRAWING TRANSMITTAL

PROJECT TITLE/ BID #: 1382 - Re-Roof Kindergarten Classroom Building at Conley Elementary School

OWNER: Taft City School District

The procedure governing shop drawing submittals is contained in the Contract Documents. All requirements must be followed by the Contractor. Failure to comply with all requirements will constitute grounds for return of the shop drawing for proper resubmittal. The Contractor shall sequentially number each submittal, using this form.

Date: _____ Submittal No. _____

From: _____ To: _____

This is: an original submittal
 a 2nd submittal
 a [] submittal

Subject of Submittal:

Material or Equipment Designation:

Specification Section(s):

Check either (a) or (b)

- (a) We have verified that the material or equipment contained in this submittal meets all the requirements specified or shown (no exceptions).
- (b) We have verified that the material or equipment contained in this submittal meets all the requirements specified or shown, except for the following deviations (List deviations on attached sheet).

The Contractor has reviewed and approved not only the field dimensions but the construction criteria and has also made written notation regarding any information in the shop drawings that does not conform to the Contract Documents. This shop drawing has been coordinated with all other shop drawings received to date by Contractor and this duty of coordination has not been delegated to subcontractors, material suppliers, the architect, or the engineers on this project.

Signature of Contractor or Supplier

20-DRUG-FREE WORKPLACE CERTIFICATION

PROJECT TITLE/BID #: Re-Roof Kindergarten Classroom Building at Conley Elementary School

OWNER: Taft City School District

This Drug-Free Workplace Certification is required pursuant to Government Code Section 8350 and following sections, and the Drug-Free Workplace Act of 1990. The Drug-Free Workplace Act of 1990 requires that every person or organization awarded a contract for the procurement of any property or services from any state agency must certify that it will provide a drug-free workplace by doing certain specified acts. In addition, the Act provides that each contract awarded by a state agency may be subject to suspension of payments or termination of the contract and the contractor may be subject to debarment from future contracting, if the state agency determines that specified acts have occurred.

Pursuant to Government Code Section 8355, every person or organization awarded a contract from a state agency shall certify that it will provide a drug-free workplace by doing all of the following:

- A. Publishing a statement notifying employees that the unlawful manufacture, distribution, dispensation, possession, or use of a controlled substance is prohibited in the person's or organization's workplace, and specifying actions which will be taken against employees for violations of the prohibition;
- B. Establishing a drug-free awareness program to inform employees about all of the following:
 - 1. The dangers of drug abuse in the workplace;
 - 2. The person's or organization's policy of maintaining a drug-free workplace;
 - 3. The availability of drug counseling, rehabilitation, and employee-assistance programs;
 - 4. The penalties that may be imposed upon employees for drug abuse violations;
- C. Requiring that each employee engaged in the performance of work on the Project be given a copy of the statement required by subdivision (a), and that as a condition of employment on the Contract the employee agrees to abide by the terms of the statement.

I, the undersigned, agree to fulfill the terms and requirements of Government Code Section 8355 listed above and will publish a statement notifying employees concerning (a) the prohibition of controlled substances at the workplace, (b) establishing a drug-free awareness program, and (c) requiring that each employee engaged in the performance of the Contract be given a copy of the statement required by Section 8355(a) and requiring that the employee agree to abide by the terms of that statement.

I also understand that if the Owner determines that I have either (a) made a false certification or (b) violated this certification by failing to carry out the requirements of Section 8355, the contract awarded is subject to suspension of payments, termination, or both. I further understand that should I violate the terms of the Drug-Free Workplace Act of 1990, I may be subject to debarment in accordance with the requirements of Section 8350 and following sections.

I acknowledge that I am aware of the provisions of Government Code Section 8350 and following sections, and hereby certify that I will adhere to the requirements of the Drug-Free Workplace Act of 1990.

Name of Contractor

Signature

Print Name Above

Print Title Above Date:_____

22- CERTIFICATE OF ATTENDANCE AT MANDATORY JOB WALK

On projects including a mandatory job walk, this form must be submitted with the bid or bidder will be declared "non-responsive"

PROJECT TITLE/ BID #: Re-Roof Kindergarten Classroom Building at Conley Elementary School

OWNER: Taft City School District

It is the Owner's intention to provide all contractors with equal access to information regarding this project. Further, the Owner has issued plans and specifications to bidders and has allowed bidders the opportunity to inspect the site with knowledgeable personnel at the job walk. Therefore it is understood that the Owner may declare the bid non-responsive for any of the following conditions:

1. If a bidder attends the entire mandatory job walk but fails to complete this form;
2. If a bidder fails to attend the entire mandatory job walk;
3. If a bidder fails to attend the entire mandatory job walk but certifies that he was in attendance. *[NOTE: This may also lead to a determination that the bidder is non-responsive.]*

Please check one of the following:

- I attended the entire mandatory job walk
-OR-
 I did not attend the entire mandatory job walk.

I hereby certify under penalty of the perjury laws of the State of California that the foregoing is true and correct.

Executed at _____, California, on _____, 20____.

Firm Name: _____

By: _____

Print Name Above

Signed _____

Print Title: _____

23-CONTRACTOR'S QUALIFICATIONS QUESTIONNAIRE

TO BE SUBMITTED WITH THE BID WHEN THERE
HAS BEEN NO PREQUALIFICATION PROCESS

PROJECT TITLE/BID #: Re-Roof Kindergarten Building at Conley Elementary School

OWNER: Taft City School District

The prospective Bidder shall furnish all the following information accurately and completely. Failure to fully and completely comply with this requirement may result in rejection of any bid submitted. Additional sheets may be attached if necessary. "You" or "your" as used in this questionnaire refers to the Bidder's firm and any of its owners, officers, directors, shareholders, parties, or principals. Owner has discretion to request additional information depending on the project.

—WARNING—

Certain information may lead to a determination of non-responsibility and rejection of the bid.

(1) Firm name and address:

(2) Telephone: _____

(3) Type of firm: (check one) Individual Partnership Corp.

(4) License No.: _____

Class: _____

DIR Registration No. _____

Name of license holder: _____

(5) Have you or any of your principals ever been licensed under a different name or different license number? Response must include information pertaining to principals' association outside of the firm bidding this Project. If yes, give name and license number:
No.

(6) Names and titles of all principals of the firm:

(7) Number of years as contractor. Include only years in this type of construction and only the years with the current entity in its current form: _____ Years

(8) Person who inspected work site for your firm:

Name: _____
Title: _____
Date of Inspection: _____

(9) Years of experience your firm has in public school construction work:

As general contractor: _____ Years
As subcontractor: _____ Years

(10) In the last five years has your firm or any of its principals defaulted so as to cause a loss to a surety? Response must include information pertaining to principals' associations outside of the firm bidding this Project. If the answer is yes, give date, name, and address of surety and details: _____

(11) In the last five years have you or any of your principals been assessed liquidated damages for any project? Response must include information pertaining to principals' associations outside of the firm bidding this Project. If yes, explain: _____

(12) In the last five years have you or any of your principals been in litigation or arbitration or a dispute of any kind on a question or questions relating to a public construction project? Response must include information pertaining to principals' association outside of the firm bidding this Project. If yes, provide name of public agency and details of the dispute. Attach additional pages as necessary. _____

(13) In the last five years have you or any of your principals ever failed to complete a project? Response must include information pertaining to principals' association outside of the firm bidding this Project. If yes, provide owner's name and details. Attach additional pages as necessary. _____

(14) In the last five years have you or any of your principals been assessed back-charges on any public works construction project? If so, explain, including the identity of the public entity, the basis for their claims, and the final result. Attach additional pages as necessary. _____

(15) In the last five years have you or any of your principals ever failed to complete a project within the time frame originally set for completion, plus any extension of time granted for weather delays? An extension of time for any reason other than weather delays

requires an explanation. Response must include information pertaining to principals' association outside of the firm bidding this Project. If yes, provide owner's name and details. Attach additional pages as necessary. _____

(16) List names, addresses, and telephone numbers of three architects or engineers with whom you have worked on a public works project in the last five years:

Project One: _____

Project Two: _____

Project Three:

(17) Conflicts of Interest: Do you now or have you in the last five years had any direct or indirect business, financial, or other connection with any official, employee, or consultant of the OWNER or architect? If yes, describe. Attach additional pages as necessary. _____

(18) In the last five years have you or any of your principals filed a claim for additional compensation from a public entity on a construction project? If yes, explain and include the identity of the public entity, the basis for the claim, the response by the public entity, and the final result. Attach additional pages as necessary. _____

(19) In the last five years have you or any of your principals ever failed to pre-qualify, or been deemed unqualified, on any public works construction project? If yes, explain and include the identity of the public entity, the basis for their claims, and the final result. Attach additional pages as necessary. _____

(20) In the last five years have you or any of your principals ever been declared a “non-responsible” bidder on any public works construction project? If yes, explain and include the identity of the public entity, the basis for their claims, and the final result. Attach additional pages as necessary. _____

(21) Staff/Roster Functions: List all members of your staff who will be assigned or responsible for work as a team member on this Project (except clerical) and show job titles, functions, years with firm, and projects completed for company. Include company officers,

responsible managing employee (RME), project manager, and superintendent. Provide the following information for each individual (copy this page as many times as required).

Name and Title: _____

Function: _____

Years with firm:_____

Has the individual had prior exposure as a team member on one of your projects?

Yes No

List of all school projects this person has completed for you:

Provide an organizational chart reflecting your proposed project team for the Project, including all persons on your project team.

(22) Surety: Indicate the names of all surety companies utilized by you in the last 10 years. Attach additional pages as necessary.

Surety Name & Address

Period Covered

Surety Name & Address

Period Covered

Surety Name & Address

Period Covered

Surety Name & Address

Period Covered

(23) Attach a notarized statement from surety company(ies) proposed to be utilized on this Project, indicating your total bonding capacity and certifying that:

A. Currently available bonding capacity exceeds the value of your contract, as estimated by the OWNER, and;

B. Surety(ies) will provide bonding of the project in the event you are awarded Project.

(24) Insurance: Provide a notarized statement from your workers' compensation carrier specifying your current "Experience Modification Rate" for workers' compensation for the State of California. Provide a list of above-referenced ratings and corresponding companies for the last five years.

(25) Safety:

A. Does your firm have a written Safety Program:

Yes No (If yes, attach copy.)

B. Does your firm have personnel permanently assigned to safety?

Yes No (If yes, provide names and duties.)

(26) Give the public entity's name, telephone number, and the name of the contact person for the three largest public works projects performed for a public entity, other than a school/college/university, that you have completed in the last five years: Attach additional sheets as necessary.

(27) List of References: Provide information on the three largest projects performed for a public school, college, or university in the last five years.

Contract 1: See Attached.

Name: _____

Address: _____

Telephone: _____

Contact Person: _____

Type of construction project: _____

Dates of commencement and completion of construction project: _____

Contract amount: _____

Architect: _____

Architect's address: _____

Telephone: _____

DSA or public agency inspector: _____

Address: _____

Telephone: _____

Contract 2:

Name: _____

Address: _____

Telephone: _____

Contact Person: _____

Type of construction project: _____

Dates of commencement and completion of construction project: _____

Contract amount: _____

Architect: _____

Architect's address: _____

Telephone: _____

DSA or public agency inspector: _____

Address: _____

Telephone: _____

Contract 3:

Name: _____

Address: _____

Telephone: _____

Contact Person: _____

Type of construction project: _____

Dates of commencement and completion of construction project: _____

Contract amount: _____

Architect: _____

Architect's address: _____

Telephone: _____

DSA or public agency inspector: _____

Address: _____

Telephone: _____

I certify and declare under penalty of perjury under the laws of the State of California that the foregoing information is true, correct, and complete.

Executed this _____ day of _____, 2024, at _____, _____
(City, County), State of _____.

Signature

Print Name Above

Print Title Above

**27 - IRAN CONTRACTING ACT CERTIFICATION
(Public Contract Code Section 2200 et seq.)**

District Project Name: Re-Roof Kindergarten Classroom Building at Conley Elementary School

District Project Number: TBD

Contractor Name: _____

Subject to the penalties for perjury in the state of California, I (the person identified below and who has signed this certification) hereby certify that: (i) I have inherent authority or have been duly authorized by the Contractor to execute this certification on behalf of the Contractor; and (ii) the option checked below relating to the Contractor's status in regard to the Iran Contracting Act of 2010 (Public Contract Code Section 2200 et seq.) is true and correct:

The Contractor is not:

(i) Identified on the current list of persons and entities engaging in investment activities in Iran prepared by the California Department of General Services in accordance with subdivision (b) of Public Contract Code Section 2203; or

(ii) A financial institution that extends for 45 days or more credit in the amount of \$20,000,000 or more to any other person or entity identified on the current list of persons and entities engaging in investment activities in Iran prepared by the California Department of General Services in accordance with subdivision (b) of Public Contract Code Section 2203, if that person or entity uses or will use the credit to provide goods or services in the energy sector in Iran.

The District has exempted the Contractor from the requirements of the Iran Contracting Act of 2010 after making a public finding that, absent the exemption, the District will be unable to obtain the goods and/or services to be provided pursuant to the Contract

The price payable to the Contractor for the Project as of the date of this certification does not exceed \$1,000,000.

Certifier Signature: _____

Printed Name: _____

Title: _____

Executed at: _____, California

Date Executed: _____

Note: In accordance with Public Contract Code Section 2205, false certification of this form may result in civil penalties equal to the greater of \$250,000 or twice the contract amount, termination of the contract, and/or ineligibility to bid on contracts with a public entity for three years.

ROOF PROJECT CERTIFICATION

Public Contract Code § 3006(a)(b)

Owner: Taft City SCHOOL DISTRICT

Project: Re-Roof Kindergarten Classroom Building at Conley Elementary School
Kern COUNTY, CALIFORNIA

I, _____, of _____, certify that I have not offered, given, or agreed to give, received, accepted, or agreed to accept, any gift, contribution, or any financial incentive whatsoever to or from any person in connection with the above-referenced Project contract. As used in this certification, "person" means any natural person, business, partnership, corporation, union, committee, club, or other organization, entity, or group of individuals. Furthermore, I certify that I do not have, and throughout the duration of the contract, I will not have, any financial relationship in connection with the performance of this contract with any architect, engineer, roofing, consultant, materials manufacturer, distributor, or vendor that is not disclosed below.

I, _____, of _____, have the following financial relationships, with an architect, engineer, roofing consultant, materials manufacturer, distributor, or vendor, or other person in connection with the following roof project contract:

[name and address of building, contract date and number]

I certify that to the best of my knowledge, the contents of this disclosure are true, or are believed to be true.

Signature

Date

Print Name

Print Name of Employer

Does not apply to (1) School Districts with ADA of 2,500 or fewer, or (2) projects involving repair of 25% or less of a roof, or \$21,000 or less in price.

*Roof Certification
Re-Roof Kindergarten Classroom Building
at Conley Elementary School Project*

SUBMITTALS

The following Supplemental Conditions apply to school projects and are in addition to the General Conditions, Section 10. Items in this Section modify the General Conditions and shall take precedence thereover. Unaltered portions of the General Conditions shall remain in effect.

PART 1 GENERAL

1.01 SECTION INCLUDES

- a. Submittal procedures
- b. Construction Progress Schedules
- c. Proposed Products List
- d. Shop Drawings
- e. Product Data
- f. Samples
- g. Manufacturers' Instructions
- h. Manufacturers' Certificates

1.02 RELATED SECTIONS

- a. Section 01 45 00 - Quality Control: Manufacturers' field services and reports.
- b. Section 10, Article 53, Contract Closeout.

1.03 SUBMITTAL PROCEDURES

- a. Transmit each submittal with AIA Form G810 or Architect-approved form.
- b. Sequentially number the transmittal forms. Resubmittals to have original number with an alphabetic suffix.
- c. Identify project, general contractor, construction manager, prime contractor or supplier; pertinent drawing sheet and detail number(s), and specification section number, as appropriate.
- d. Apply general contractor's stamp, signed or initialed certifying that review, verification of products required, field dimensions, adjacent construction work, and coordination of information, is in accordance with the requirements of the work and contract documents.
- e. Deliver to Architect at business email address. Coordinate submission of related items. Architect shall have a minimum of 21 calendar days for review of all submittals.

- f. Identify variations from contract documents and product or system limitations, which may be detrimental to successful performance of the completed work.
- g. Provide space 4" x 4" for contractor and architect review stamps.
- h. Revise and resubmit submittals as required, identify all changes made since previous submittal.
- i. Distribute copies of reviewed submittals to concerned parties. Instruct parties to promptly report any inability to comply with provisions.
- j. All submittals, except shop drawings, required shall be submitted within 15 days unless noted otherwise or as shown on drawing from date of award of contract for shop drawings, product data, samples, and product delivery dates, including those furnished by Owner.

1.04 PROPOSED PRODUCTS LIST

- a. Within 15 days after date of award of contract, submit complete list of major products proposed for use, with name of manufacturer, trade name, and model number of each product.
- b. For products specified only by reference standards, give manufacturer, trade name, model or catalog designation, and reference standards.

1.05 SHOP DRAWINGS

- a. Submit in the form of .pdf to the business email of the Architect.
- b. After review, distribute in accordance with Paragraph 1.03 above and for Record Documents described in Section 10, Article 53 - Contract Closeout.
- c. All shop drawings shall be submitted within 30 days after the award of the contract.

1.06 PRODUCT DATA

- a. Submit the number of copies, which the contractor requires, plus three copies, which will be retained by the Architect.
- b. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information unique to this project.
- c. After review, distribute in accordance with Paragraph 1.03 above and provide copies for Record Documents described in Section 10, Article 53 - Contract Closeout.

1.07 SAMPLES

- a. Submit samples to illustrate functional and aesthetic characteristics of the Product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
- b. Submit samples of finishes from the full range of manufacturers' standard colors, textures, and patterns for Architect's selection.
- c. Include identification on each sample, with full project information.
- d. Submit the number or samples specified in individual specification sections; one of which will be retained by Architect.
- e. Reviewed samples, which may be used in the work, are indicated in individual specification sections.

1.08 MANUFACTURER'S INSTRUCTIONS

- a. When specified in individual specification sections, submit manufacturers' printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, in quantities specified for Product Data.
- b. Identify conflicts between manufacturers' instructions and contract documents.

1.09 MANUFACTURER'S CERTIFICATES

- a. When specified in individual specification sections, submit manufacturers' certificate to Architect for review, in quantities specified for Product Data.
- b. Indicate material or product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
- c. Certificates may be recent or previous test results on material or product, but must be acceptable to the Architect.

END OF SECTION
07/16/2024

REGULATORY REQUIREMENTS

DIVISIONS 00 AND 01 ARE A PART OF THIS SECTION

The following Supplemental Conditions apply to school projects and are in addition to the General Conditions, Section 10. Items in this Section modify the General Conditions and shall take precedence thereover. Unaltered portions of the General Conditions shall remain in effect.

PART 1 GOVERNING (REVIEWING AND APPROVING) AGENCY

The Governing (Reviewing and Approving) Agency for this project shall be:

TAFT CITY SCHOOL DISTRICT

PART 2 STATE LAWS AND REGULATIONS

2.01 The project shall be constructed under the complete jurisdiction of all laws of the State of California governing the construction of public buildings, to-wit:

2021 I.B.C., Volumes 1 & 2 with 2022 C.B.C. Amendments

- a. Contractor shall comply with California Building Code C.B.C., Titles 19 and C.C.R. Title 24 (2022 C.B.C.), Parts 1, 2, 6, 9, 11 & 12 in addition to all other applicable regulations. Contractor shall keep a copy of the latest edition of Titles 19, and Title 24, Parts 1, 2, 6, 9 & 12 on the job site at all times, and keep it available for reference use. Nothing in these plans or specifications shall be construed to permit work not conforming to these codes. A copy of stamped plans and specifications shall be kept on the job site and made available to the Owner's Inspector. The provisions of all applicable building codes and ordinances shall be considered a minimum requirement. Where the requirements of these Contract Documents exceed those of such codes or ordinances, these Contract Documents shall govern.
- b. All laws governing the employment of labor, qualifications for employment, posting of minimum wage rates, hours of work, employment of aliens, payment of employees, convict-made materials, domestic and foreign materials and accident prevention.
- c. Title 19 of the California Code of Regulations entitled "Public Safety".
- d. General Industrial Safety Orders: Each and every Contractor shall observe and conform to the provisions of Title 8, California Code of Regulations bearing upon safe and proper use, construction, disposal, etc., of materials, machinery and building appurtenances as therein set forth.
- e. Code Rules and Safety Orders: All work and materials shall be in full accordance with the latest rules and regulations of the California State Fire Marshal; the safety orders of the Division of Industrial Safety, Department of Industrial Relations, and any State Laws or Ordinances. Nothing in these plans and specifications is to be construed to permit work not conforming to these Codes.
- f. Title 24, CBC, Part 2, 2022 C.B.C. (2021 IBC)
- g. Title 24, CBC, Part 3, 2022 C.E.C. (2020 NEC w/NFPA 70)
- h. Title 24, CBC, Part 4, 2022 C.M.C. (2021 UMC)
- i. Title 24, CBC, Part 5, 2022 C.P.C. (2021 UPC)
- j. Title 24, CBC, Part 9, 2022 C.F.C. (2021 IFC)
- k. Title 24, CBC, Part 6, 2022 C.E.C.
- l. Title 24, CBC, Part 11, 2022 C.G.C.
- m. Title 19, CCR, Public Safety, Div. 1, State Fire Marshal Regulations.
- n. Occupational Health & Safety Act. (OSHA)

All of the above laws and regulations, through referral herein, are as much a part of the Contract as if they were incorporated in their entirety in this Section.

2.02 ALTERATION REHABILITATION OR RECONSTRUCTION PROJECTS

Pursuant to Section 4-317 (c) Part 1, Title 24, CCR, requires the following notes to be **added** to the specifications:

“Should any existing conditions such as deterioration or non-complying construction be discovered which is not covered by the DSA approved documents wherein the finished work will not comply with Title 24, California Code of Regulations, a construction change document, or a separate set of plans and specifications , detailing and specifying the required repair work shall be submitted to and approved by DSA before proceeding with the repair work .”

PART 3 TESTS AND INSPECTIONS

- a. Tests and Inspections shall be as specified in Section 01 45 00 00.
- b. The Architect or Registered Engineer in general responsible charge shall designate the testing of materials consistent with the needs of the project and shall issue specific instructions to the testing agency.

END OF SECTION
07/16/2024

QUALITY CONTROL

DIVISIONS 00 AND 01 ARE A PART OF THIS SECTION

PART 1 GENERAL

1.01 SCOPE OF WORK

The work of this Section shall include the furnishing of all labor, materials and equipment required to complete all the tests and inspections of materials indicated on the drawings and as specified herein.

1.02 OWNER'S INSPECTOR

- a. A DSA Certified project inspector employed by the Owner in accordance with the requirements of State of California Code of Regulations, Title 24 will be assigned to the work. Their duties are specifically defined in Part 1, Title 24, C.C.R., Sec. 4-342.
- b. The work of construction in all stages of progress shall be subject to the personal continuous observation of the inspector. He shall have free access to any or all parts of the work at any time. The General Contractor shall furnish the inspector reasonable facilities for obtaining such information as may be necessary to keep him fully informed respecting the progress and manner of the work and the character of the materials. Inspection of the work shall not relieve the General Contractor from any obligation to fulfill this Contract.
- c. Defective, or to require their correction. Rejected workmanship shall be satisfactorily corrected and rejected materials shall be removed from the premises without charge to the Owner. If the General Contractor does not correct such rejected work within a reasonable time, fixed by written notice, the Owner may correct same and charge the expense to the General Contractor. Should it be considered necessary or advisable by the Owner at any time before final acceptance of the entire work to make an examination of the work already completed by removing or tearing out the same, the General Contractor shall on request promptly furnish all necessary facilities, labor and materials. If such work is found to be defective in any respect due to the fault of the General Contractor or his subcontractor, he shall defray all expenses of such examinations and of satisfactory reconstruction. If, however, such work is found to meet the requirements of the Contract, the additional cost of labor and material necessarily involved in the examination and replacement shall be allowed the General Contractor.

1.03 COOPERATION

- a. Laboratory: Shall cooperate with all trades whose work affects or is affected by the tests and inspections.
- b. Cooperation: The General Contractor to cooperate with and provide testing laboratory opportunity and assistance in taking samples, making field tests and making inspections.

1.04 SPECIAL PROVISIONS

- a. Governing Agency: Shall be as specified in Section 01 41 00.

- b. Laboratory: A DSA Accepted testing laboratory directly employed by the District (Owner) shall conduct all the required tests and inspection for the project and shall be approved by Owner, Architect, Structural Engineer and Governing Agency. (Laboratory of Record may not be selected or known at time of bid or award of contract).
- c. Duties of Testing Laboratory: Inspect stock, mark identified stock, select and mark test specimens, perform required tests, inspections as specified, furnish required reports and certificates.
- d. Reports: To be executed immediately upon conclusion of each procedure and forwarded to:

Architect	Structural Engineer	Contractor
Owner	Subcontractor	Job Inspector
Governing Agency		

- (1) One copy of all tests reports shall be forwarded to The Division of the State Architect by the testing agency. Such reports shall include all tests made, regardless of whether such tests indicate that the material is satisfactory or unsatisfactory. Samples taken but not tested shall also be reported. Records of special sampling operations as required shall also be reported. The reports shall show that the material or materials were sampled and tested in accordance with the requirements of Title 24 and with the approved specifications. Test reports shall show the specified design strength. They shall also state definitely whether or not the material or materials tested comply with requirements.
- (2) Verification of Test Reports: Each testing agency shall submit to the Division of the State Architect a verified report in duplicate covering all of the tests which are required to be made by that agency during the progress of the project. Such report shall be furnished each time that work on the project is suspended, covering the tests up to that time, and at the completion of the project, covering all tests.
- e. Payment: The Owner shall pay for all tests. When in the opinion of the Architect or the Division of the State Architect, additional tests are required, then such tests and inspection shall be paid for by the Owner but the amount paid shall be deducted from the Contract Price. Examples of such additional tests are: Tests of material substituted for previously accepted materials, unidentified materials, retests made necessary by the failure of materials to comply with the requirements of the specifications and load tests necessary because certain portions of the structure have not fully met specification or plan requirements.
- f. Selection of Samples: All samples and specimens for testing shall be selected by the inspector or by the testing laboratory, but not by the Contractor. The Contractor shall, at his own expense, furnish, package, mark and deliver all samples to be tested, when so directed by the inspector, testing laboratory, or as required by the specifications. Delivery of samples to the testing laboratory shall be made in ample time to allow tests to be made without delaying construction. No extra time will be allowed for the completion of the work by reason of delay in testing samples. The General Contractor shall allow free access at all times to the representatives of the testing laboratory to the sources from which samples are taken.
- g. Preparation of Specimens: Taken by and at expense of fabricator under direction of testing laboratory and machined or prepared to conform to appropriate ASTM specification. Cost of machining specimens is considered part of the testing.

- h. Architect and Structural Engineer reserve the right to demand for test and special examination any materials or part thereof to insure compliance with specifications, and may reject for satisfactory replacement, any material or part judged defective as a result thereof. Applies also to materials or sources of same substituted for those previously approved. Such tests or examinations, even though not specified shall be performed as and when required. Costs paid for by Owner, but the amount paid shall be deducted from the Contract.

1.05 RELATED & APPLICABLE CODES

TITLE 24, PART 2 (2022 CBC) VOLUME 2 TESTS AND INSPECTION REQUIREMENTS

FOUNDATIONS AND RETAINING WALLS CHAPTER 18A

INSPECTION:

- | | |
|---------------------|----------|
| 1. Piles | 1705 A.7 |
| 2. Pier Foundations | 1705 A.8 |

CONCRETE CHAPTER 19A

MATERIALS:

- | | |
|-------------------------------------|----------------------|
| 1. Portland Cement | 1705 A.3.2; 1910 A.1 |
| 2. Concrete Aggregates | 1705 A.3.2; 1903 A.5 |
| 3. Shotcrete Aggregates | 1908 A.3 |
| 4. Reinforcing Bars | 1705 A.3.2; 1910 A.2 |
| 5. Prestressing Steel and Anchorage | 1705 A.3.2; 1910 A.3 |

QUALITY:

- | | |
|---------------------------------|------------------------------------------------------------------|
| 1. Proportions of Concrete | 1910 A.1; Table 1705 A.3, Item 5 |
| 2. Strength Tests of Concrete | 1905 A.1.15; Table 1705 A.3, Item 5,
ACI 318 Sec. 26.4, 26.12 |
| 3. Splitting Tensile Tests | |
| 4. Shotcrete Proportions | 1908 A.2 |
| 5. Shotcrete Cores | 1908 A.5 |
| 6. Composite Construction Cores | 1910 A.4 |

INSPECTION:

- | | |
|---------------------------------------|-------------------------------------------------------------------------|
| 1. Batch Plant | 1705 A.3.3 |
| 2. Waiver of Batch Plant | 1705 A.3.3.1 |
| 3. Preplacement and Placing | 1705A.3.5; 1705A.3.6 |
| 4. Prestressed Concrete | 1705 A.3.4 |
| 5. Shotcrete | 1705 A.19; 1908 A |
| 6. Reinforcing Bar Welding | 1903 A.8; Table 1705 A.2.1 |
| 7. Post-Installed Anchors in Concrete | 1910 A.5; Table 1705 A.3, Items 4a&4b |
| 8. Reinforcing Bar Welding | 1903A.8; 1705A.3.1; Table 1705 A.3
Item 2; Table 1705 A.2.1, Item 5b |

ALUMINUM CHAPTER 20A

MATERIALS:

- | | |
|-------------------|--------|
| 1. Alloys | 2002.1 |
| 2. Identification | 2002.1 |

INSPECTION:

- | | |
|------------|--------|
| 1. Welding | 2003.1 |
|------------|--------|

MASONRY
Chapter 21A**MATERIALS:**

- | | |
|------------------------------|--------------------|
| 1. Masonry Units | 2103 A.1 |
| 2. Portland Cement, Lime | 2103 A |
| 3. Mortar & Grout Aggregates | 2103 A.2; 2103 A.3 |
| 4. Reinforcing Bars | 2103 A.14 |

QUALITY:

- | | |
|---------------------------|------------------------------|
| 1. Portland Cement Tests | 1910 A.1 |
| 2. Mortar and Grout Tests | 2105 A.3 |
| 3. Masonry Prism Tests | 2105 A.2 |
| 4. Masonry Core Tests | 2105 A.4 |
| 5. Masonry Unit Tests | 2105 A.2, 2105 A.3; 1705 A.4 |
| 6. Reinforcing Bar Tests | 1910 A.2 |

INSPECTION:

- | | |
|--------------------------------------|------------------------------------------------------------------------|
| 1. Reinforced Masonry | 1705 A.4 |
| 2. Reinforced Bar Welding | 1903 A.8, 1705A.3.1, Table 1705 A.3, Item 2, Table 1705 A.2.1, Item 5b |
| 3. Post-Installed Anchors in Masonry | 1705 A.4; 1910 A.5; 1616 A.1.19, Table 1705 A.3, Items 4a & 4b |

STEEL
CHAPTER 22A**MATERIALS:**

- | | |
|----------------------|----------|
| 1. Structural Steel | 2205 A.1 |
| 2. Cold Formed Steel | 2210 A.1 |
| 3. Identification | 2202 A.1 |

QUALITY:

- | | |
|------------------------------------------------|----------------------|
| 1. Tests of Structural and Cold Formed Steel | 2211 A.1 |
| 2. Tests of High Strength Bolts, Nuts, Washers | 2213 A.1 |
| 3. Tests of End Welded Studs | 2213 A.2 |
| 4. Steel Joists | 2207 A; 1705 A.2.3.1 |
| 5. Non Destructive Weld Tests | 1705 A.2.1 |

INSPECTION:

- | | |
|------------------------------------|-----------------------------|
| 1. Shop Fabrication | 1704 A.2.5; 1705 A.2 |
| 2. Welding | 1705 A.2.1 |
| 3. Nelson Stud Welding | 1705 A.2.1 |
| 4. High Strength Bolt Installation | 1705 A.2.1; Table 1705A.2.1 |

WOOD

CHAPTER 23A

MATERIALS:

- | | |
|--------------------------|----------|
| 1. Lumber and Plywood | 2303.1 |
| 2. Glu-Laminated Members | 2303.1.3 |

INSPECTION:

- | | |
|--------------------------|--------------------------------|
| 1. Glu-Laminated Members | 1705 A.5.4; 2303.1.3 |
| 2. Timber Connectors | 1705 A.5.6 |
| 3. Manufactured Trusses | 1705 A.5.2; 1705.5.3; 2303.4.7 |

END OF SECTION
07/16/2024

CONSTRUCTION WASTE MANAGEMENT

DIVISION 00 AND 01 ARE A PART OF THIS SECTION.

PART 1 GENERAL

1.01 Waste Management Goals:

1. This project will recycle or salvage for reuse a minimum of **50%** by weight of the non-hazardous waste generated on-site.
2. This project shall reuse or recycle **100%** of trees, stumps, rocks and associated vegetation and soils resulting primarily from land clearing.
3. Waste reduction will be achieved through building design, and reuse and recycling efforts will be maintained throughout the construction process.
4. The General Contractor shall be responsible for monitoring the documentation of all waste generated during the project. Sub-contractors and the General Contractor will be required to provide designated dumpsters/bins for particular categories of waste. All contractors hauling waste or responsible for hauling waste shall be required to provide documentation of the amount of waste removed from the site, location to which waste was hauled, and the amount of waste that was recycled. The General Contractor will coordinate locations of such bins so as to not impact access to work on the project while maintaining proximity to the work.

1.02 Waste Prevention Planning:

1. Compliance with CCR, Title 24, Part 11 2022 Green Building Standards Code, City of Bakersfield Solid Waste Division and the Kern County Waste Management Department mandatory recycling requirements for businesses. C.O.B.S.W.D. and K.C.W.M.D. recyclables include:
 - a. newspaper
 - b. corrugated cardboard
 - c. white and colored office paper
 - d. glass bottles and jars
 - e. metal cans
2. Compliance with C.O.B.S.W.D., K.C.W.M.D. and Kern County Bena Road Landfill bans, i.e. no disposal of tires, appliances, yard waste, mandatory recyclables, hazardous waste, batteries, fluorescent tubes, and large metal items.
3. Project Construction Documents – Requirements for waste management which will be included in all work. The General Contractor will contractually require all subcontractors to comply with the CCR, Title 24, Part 11 2022 Green Building Standards Code and the C.O.B.S.W.D., K.C.W.M.D. recycling requirements. A copy of this Construction Waste Management Plan will accompany all Subcontractor Agreements and require subcontractor participation.
4. The Construction Waste Reduction Plan shall be implemented and executed as follows and as on the chart:
 - a. Salvageable materials will be diverted from disposal where feasible.
 - b. There will be a designated area on the construction site reserved for a row of dumpsters each specifically labeled for respective materials to be received.
 - c. Before proceeding with any removal of construction materials from the construction site, Recycling Coordinators will inspect containers for compliance with CCR, Title 24, Part 11 2022 Green Building Standards Code and C.O.B.S.W.D.. K.C.W.M.D. requirements.
 - d. Wood cutting will occur in centralized locations to maximize reuse and make collection easier.
 - e. Hazardous waste will be managed by a licensed hazardous waste vendor.

1.03 Communication & Education Plan:

1. The General Contractor will conduct an on-site pre-construction meeting with subcontractors. Attendance will be required for the subcontractor’s key field personnel. The purpose of the meeting is to reinforce to subcontractor’s key field employees the commitments made by their companies with regard to the project goals and requirements.
2. Waste prevention and recycling activities will be discussed at the beginning of each weekly subcontractor coordination meeting to reinforce project goals and communicate progress to date.
3. As each new subcontractor comes on site, the recycling coordinators will present him/her with a copy of the Waste Management Plan and provide a tour of the recycling areas.
4. The subcontractor will be expected to make sure all their crews comply with the Waste Management Plan.
5. All recycling containers will be clearly labeled. Containers shall be located in close proximity to the building(s) under construction in which recyclables/salvageable materials will be placed.
6. Lists of acceptable/unacceptable materials will be posted throughout the site.
7. All subcontractors will be informed in writing of the importance of non-contamination with other materials or trash.
8. Recycling coordinators shall inspect the containers on a weekly basis to insure that no contamination is occurring and precautions shall also be taken to deter any contamination by the public.

1.04 Motivation Plan:

1. The project team will develop and publish a project mission statement that can be distributed to the subcontractors, attached to subcontracts, and posted at the jobsite.
2. The General Contractor will conduct a pre-award meeting for subcontractors. Subcontractors under consideration will be required to attend the meeting to review project goals and requirements with the project team. Attendance will be a prerequisite for award of subcontracts. A sign-off will be required by subcontractors attending the meeting that the project goals are understood. This document will be an attachment to every subcontract. Copies of the attachment will be posted prominently at the jobsite.

1.05 Evaluation Plan:

1. The General Contractor will develop, update, and post at the jobsite a graph indicating the progress to date for achieving the project’s waste recycling goal of 50% by weight of the total project waste stream.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.01 Expected Project Waste, Disposal, and Handling:

The following charts identify waste materials expected on this project, their disposal method, and handling procedures:

Material	Quantity	Disposal Method	Handling Procedure
Land clearing debris		Keep separate for reuse and or wood sale	Keep separated in designated areas on site.
Clean dimensional wood and palette wood		Keep separate for reuse by on-site construction or recycle at designated recycle location.	Keep separated in designated areas on site. Place in “Clean Wood” container.

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Material	Quantity	Disposal Method	Handling Procedure
Plywood, OSB, particle board		Reuse, landfill	Keep separated in designated areas on site. Place in "Trash" container.
Asphalt		Grind, reuse, recycle	Store on site until reuse on project or recycle by hauling to designated location.
Painted or treated wood		Reuse, landfill	Keep separated in designated areas on site. Place in "Trash" container.
Concrete		Recycle	
Concrete Masonry Units		Keep separate for re-use by on-site construction or by site employees	Keep separated in designated areas on site
Metals		Recycle	Keep separated in designated areas on site. Place in "Metals" container.
Gypsum drywall (unpainted)		Recycle	Keep scraps separate for recycling – stack on pallets in provided on site. All scrap drywall will be taken back by contractor to drywall supplier
Paint		Reuse or recycle	Keep separated in designated areas on site
Insulation		Reuse, landfill	
Flooring		Reuse, landfill	
Carpet and pad		Reuse or recycle with carpet manufacturer	
Glass		Glass Bottles	Keep separated in designated areas on site. Place in "Glass/Plastic bottles/Metal Cans/Mixed Paper/Cardboard" container
Plastics		Plastic Bottles Plastic bags/scrap Reuse, Recycle	Keep separated in designated areas on site. Place in "Glass/Plastic bottles/Metal Cans/Mixed Paper/Cardboard" container
Beverage		Recycle	Keep separated in designated areas on site. Place in "Glass/Plastic bottles/Metal Cans/Mixed Paper/Cardboard" container
Cardboard		Recycle	Keep separated in designated areas on site. Place in "Glass/Plastic bottles/Metal Cans/Mixed Paper/Cardboard" container

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Material	Quantity	Disposal Method	Handling Procedure
Paper and newsprint		Recycle	Keep separated in designated areas on site. Place in "Glass/Plastic bottles/Metal Cans/Mixed Paper/Cardboard" container
TOTAL			

3.02 Responsible Party for Waste Disposal:

1. General Contractor shall monitor all waste management activities and collect all documentation of recycling and disposal.
2. Earthwork Contractor shall regrind existing paving and haul to location designated by Owner including documentation of amounts hauled. Reuse as required or permitted on this project.
3. Concrete Contractor shall provide separate bins for concrete waste, including hauling to recycling facility and documentation of all amounts.
4. Concrete Masonry Contractor shall provide separate bins for CMU was including hauling to recycling facility and documentation.
5. Metal Stud/Drywall Contractor shall provide separate bins for metal stud waste and drywall waste including hauling to recycling facility and documentation.
6. Demolition Contractor shall provide hauling and recycling or disposal of materials generated from demolition of existing building/s including documentation of material recycled and disposed of in landfill.
7. The General Contractor shall provide separate bins for metal (other than metal studs), cardboard, plastic, glass and aluminum containers and general trash and debris including documentation and hauling to recycling facility.
8. Name of landfill for disposal of non-recyclable waste: Contractor shall determine
 - a. Transfer Stations: Contractor shall determine
 - b. Landfills (ultimate disposal location): Contractor shall determine
9. Landfill tipping fee: \$_____ / ton Contractor shall verify
10. Estimate of waste for landfill disposal: Contractor shall verify

3.03 Recycling Calculation example:

1. If all construction waste was disposed in landfill:
 _____ tons = _____ lbs/2000 lbs/ton , _____ tons x \$_____/ton = \$_____
2. With recycling: TOTAL = \$_____

3.04 Recycling locations:

1. Asphalt
 - a. A/C Materials, 4717 Mendian Ave., Bakersfield, CA 93308 – 322-3424

- b. A&M Disposal & Recycling, 4233 Quinn Rd., Bakersfield, CA 93308 – 399-5575
 - c. Asphalt & Concrete Recycling, 4801 Wible Rd., Bakersfield – 396-8695
 - d. Griffith Company, 3950 Shell St., Bakersfield, CA – 831-7331
 - e. Granite Company, 21541 Bear Mountain Blvd., Arvin, CA 93203 – 854-3051
 - f. Valley Tree Construction, 4233 Quinn Rd., Bakersfield, CA 399-1783 or 872-5145
2. Building Materials
- a. California Material Exchange (CalMax) – 877-520-9703
3. Cardboard & Corrugated
- a. BARC – 397-3622
 - b. Golden State Metal, 2000 E Brundage Ln, 327-3559
 - c. JC Pallet Co., 5800 State Rd., 393-2229
 - d. Sierra Metals, 1620 E Brundage Ln, 327-7073
4. Commercial Recycling
- a. Revive Recycling, 3624 Buck Owens Blvd., Ste 7, 322-7374
5. Concrete
- a. See Asphalt – above
6. Drywall
- a. Hondo Inc., 20807 Stockdale Hwy, 589-1042
 - b. Quality Soil Amendments, 20807 Stockdale Hwy, 587-4457
7. Glass/Plastic Containers
- a. Golden State Metals, 1620 E Brundage Ln, 327-3559
 - b. Sierra Metals, 1620 E Brundage Ln, 327-7073
 - c. Smurfit-Stone Recycling, 2710 O St, 327-3841
8. Pallets
- a. JC Pallet Co., 5800 State Rd., 393-2229
 - b. Kern County Bena Road Landfill, 17 miles east of Bakersfield, off Tower Line Rd on Bena Rd, open Sunday-Saturday 8 am to 4 pm.
9. Paper – Office/Mixed
- a. BARC – 2240 S Union Ave, 834-2272
 - b. Sierra Metals, 1620 E Brundage Ln, 327-7073

- c. Smurfit-Stone Recycling, 2710 O St, 327-3841
- 10. Scrap Metals
 - a. Golden State Metals, 1620 E Brundage Ln, 327-3559
 - b. Sierra Metals, 1620 Brundage Ln, 327-7073
 - c. Midway Recycle/Western Scrap, 7200 Downing Ave., 589-9712
 - d. Nix Scrap Metals, 1100 James Rd., 387-1216
 - e. Rick's Recycling, 2200 S. Union Ave, 832-3248
- 11. Mixed Waste
 - a. Metro Recycling Corp, 58 Mt Vernon Ave., 1 mi south of 58, 661-201-3535
- 12. Landfill
 - a. General Trash
 - i. Kern County Bena Road Landfill, 17 miles east of Bakersfield, off Tower Line Rd on Bena Rd, open Sunday-Saturday 8 am to 4 pm. Also accepts for recycling: large appliances, asphalt, concrete, pallets, and green waste.

RECYCLING OPERATIONS

Action ***	Who	When
<input type="checkbox"/> Choose bins/collection methods	_____	_____
<input type="checkbox"/> Order bins - oversee deliver	_____	_____
<input type="checkbox"/> Site bins/collection sites for optimum convenience	_____	_____
<input type="checkbox"/> Sort or process wood	_____	_____
<input type="checkbox"/> Sort or process metal	_____	_____
<input type="checkbox"/> Sort or process cardboard	_____	_____
<input type="checkbox"/> Sort or process drywall	_____	_____
<input type="checkbox"/> Sort or process <u>CSWD mandatory items</u> (material)	_____	_____
<input type="checkbox"/> Sort or process _____ (material)	_____	_____
<input type="checkbox"/> Schedule material pickups/dropoffs	_____	_____
<input type="checkbox"/> Protect Materials from Contamination	_____	_____
<input type="checkbox"/> Document material pickups/dropoffs	_____	_____

*** Depending on the service option chosen, these may be the responsibility of either the field personnel, the hauler, a full-service recycling contractor, or the subcontractors.

COMMUNICATION PLAN - Except for mandatory items (*), check other items intended to be used.

Action	Who	When	Completed
<input type="checkbox"/> Complete Construction Waste Mgmt. Plan*	_____	_____	<input type="checkbox"/>
<input type="checkbox"/> Hold Orientation/Kick-off Meeting*	_____	_____	<input type="checkbox"/>
<input type="checkbox"/> Update & Progress in Weekly Job-Site Meetings*	_____	_____	<input type="checkbox"/>
<input type="checkbox"/> Encourage Just-In-Time Deliveries	_____	_____	<input type="checkbox"/>
<input type="checkbox"/> Post Targeted Materials (Signage)	_____	_____	<input type="checkbox"/>
<input type="checkbox"/> Distribute Tip Sheets for Job-Site Personnel	_____	_____	<input type="checkbox"/>
<input type="checkbox"/> Post Goals/Progress (Signage)	_____	_____	<input type="checkbox"/>
<input type="checkbox"/> _____	_____	_____	<input type="checkbox"/>

MOTIVATION PLAN - Except for mandatory items (*), check other items intended to be used.

Action	Who	When	Completed
<input type="checkbox"/> Use formal agreements committing Subs to program	_____	_____	<input type="checkbox"/>
<input type="checkbox"/> Require Mis-Sorters to Re-Sort Bin	_____	_____	<input type="checkbox"/>
<input type="checkbox"/> Provide Stickers, T-Shirts, or Hats	_____	_____	<input type="checkbox"/>
<input type="checkbox"/> Public Recognition of Participating Subs	_____	_____	<input type="checkbox"/>
<input type="checkbox"/> Letters of Recognition	_____	_____	<input type="checkbox"/>
<input type="checkbox"/> Awards Luncheon	_____	_____	<input type="checkbox"/>
<input type="checkbox"/> _____	_____	_____	<input type="checkbox"/>

EVALUATION PLAN - Except for mandatory items (*), check other items intended to be used.

Action	Who	When	Completed
<input type="checkbox"/> Perform Short Form Waste Audit	_____	_____	<input type="checkbox"/>
<input type="checkbox"/> Perform Full Waste Audit	_____	_____	<input type="checkbox"/>
<input type="checkbox"/> Perform Mid-Course Assessment	_____	_____	<input type="checkbox"/>
<input type="checkbox"/> Perform Monthly Cost and Materials Tracking*	_____	_____	<input type="checkbox"/>
<input type="checkbox"/> Perform Final Evaluation*	_____	_____	<input type="checkbox"/>
<input type="checkbox"/> _____	_____	_____	<input type="checkbox"/>

SECTION 01 74 19A
CONTRACTOR'S CONSTRUCTION WASTE AND RECYCLING PLAN

(Submit After Award of Contract and Prior to Start of Work)

Project Title:		
Contract or Work Order No.:		
Contractor's Name:		
Street Address:		
City:	State:	Zip:
Phone: ()	Fax: ()	
E-Mail Address:		
Prepared by: (Print Name)		

Date Submitted:		
Project Period:	From:	TO:

Reuse, Recycling or Disposal Processes To Be Used

Describe the types of recycling processes or disposal activities that will be used for material generated in the project. Indicate the type of process or activity by number, types of materials, and estimated quantities that will be recycled or disposed in the sections below:

- 01 - Reuse of building materials or salvage items on site (i.e. crushed base or red clay brick)
- 02 - Salvaging building materials or salvage items at an off site salvage or re-use center (i.e. lighting, fixtures)
- 03 - Recycling source separated materials on site (i.e. crushing asphalt/concrete for reuse or grinding for mulch)
- 04 - Recycling source separated materials at an off site recycling center (i.e. scrap metal or green matls)
- 05 - Recycling commingled loads of C&D matls at an off site mixed debris recycling center or transfer station
- 06 - Recycling material as Alternative Daily Cover at landfills
- 07 - Delivery of soils or mixed inerts to an inert landfill for disposal (inert fill).
- 08 - Disposal at a landfill or transfer station.
- 09 - Other (please describe)

Types of Material To Be Generated

Use these codes to indicate the types of material that will be generated on the project

- | | | | | |
|-----------------------------------------|---------------------|------------------|--------------------------|-----------------|
| A = Asphalt | C = Concrete | M = Metals | I = Mixed Inert | G = Green Matls |
| D = Drywall | P/C=Paper/Cardboard | W/C = Wire/Cable | S= Soils (Non Hazardous) | |
| M/C = Miscellaneous Construction Debris | R = Reuse/Salvage | W = Wood | O = Other (describe) | |

Facilities Used: Provide Name of Facility and Location (City)

Total Truck Loads: Provide Number of Trucks Hauled from Site During Reporting Period

Total Quantities: If scales are available at sites, report in tons. If not, quantify by cubic yards. For salvage/reuse items, quantify by estimated weight (or units).

SECTION I - RE-USED/RECYCLED MATERIALS

Include all recycling activities for source separated or mixed material recycling centers where recycling will occur.

Type of Material	Type of Activity	Facility to be Used/Location	Total Truck Loads	Total Quantities		
				Tons	Cubic YD	Other Wt.
(ex.) M	04	ABC Metals, Los Angeles	24	355		
a. Total Diversion			0	0	0	0

**SECTION 01 74 19A
CONTRACTOR'S CONSTRUCTION WASTE AND RECYCLING PLAN**

Continued

SECTION II - DISPOSED MATERIALS						
<i>Include all disposal activities for landfills, transfer stations, or inert landfills where no recycling will occur.</i>						
Type of Material	Type of Activity	Facility to be Used/Location	Total Truck Loads	Total Quantities		
				Tons	Cubic YD	Other Wt.
(ex.) D	08	DEF Landfill, Los Angeles	2	35		
b. Total Disposal				0	0	0

SECTION III - TOTAL MATERIALS GENERATED						
<i>This section calculates the total materials to be generated during the project period (Reuse/Recycle + Disposal = Generation)</i>						
				Tons	Cubic YD	Other Wt.
a. Total Reused/Recycled				0	0	0
b. Total Disposed				0	0	0
c. Total Generated				0	0	0

SECTION IV - CONTRACTOR'S LANDFILL DIVERSION RATE CALCULATION						
<i>Add totals from Section I + Section II</i>						
			Tons	Cubic Yards	Other Wt.	
a. Materials Re-Used and Recycled			0			
b. Materials Disposed			0			
c. Total Materials Generated (a. + b. = c.)			0	0	0	
d. Landfill Diversion Rate (Tons Only)*			#DIV/0!			

* Use tons only to calculate recycling percentages: $Tons\ Reused/Recycled/Tons\ Generated = \% \text{ Recycled}$

Contractor's Comments (Provide any additional information pertinent to planned reuse, recycling, or disposal activities):

Notes:

- Section 01151A is a Division 01 General Requirement under CSI MasterFormat 1998 Edition.
For CSI MasterFormat 2004 Edition, this Section may be renumbered as follows:
Under Division 00, Procurement and Contracting Requirements, Project Forms 00 60 00
Use: Section 00 62 22 Construction Waste Diversion Plan
- Suggested Conversion Factors: From Cubic Yards to Tons (Use when scales are not available)
Asphalt: .61 (ex. 1000 CY Asphalt = 610 tons. Applies to broken chunks of asphalt)
Concrete: .93 (ex. 1000 CY Concrete = 930 tons. Applies to broken chunks of concrete)
Ferrous Metals: .22 (ex. 1000 CY Ferrous Metal = 220 tons)
Non-Ferrous Metals: .10 (ex. 1000 CY Non-Ferrous Metals = 100 tons)
Drywall Scrap: .20
Wood Scrap: .16

SECTION 01 74 19B
CONTRACTOR'S REUSE, RECYCLING, AND DISPOSAL REPORT

(Submit With Each Progress Payment)

Project Title:		
Contract or Work Order No.:		
Contractor's Name:		
Street Address:		
City:	State:	Zip:
Phone: ()	Fax: ()	
E-Mail Address:		
Prepared by: (Print Name)		

Date Submitted:		
Period Covered:	From:	To:

Reuse, Recycling or Disposal Processes Used

Describe the types of recycling processes or disposal activities used for material generated in the project. Indicate the type of process or activity by number, types of materials, and quantities that were recycled or disposed in the sections below:

01 - Reuse of building materials or salvage items on site (i.e. crushed base or red clay brick)
 02 - Salvaging building materials or salvage items at an off site salvage or re-use center (i.e. lighting, fixtures)
 03 - Recycling source separated materials on site (i.e. crushing asphalt/concrete for reuse or grinding for mulch)
 04 - Recycling source separated materials at an off site recycling center (i.e. scrap metal or green matls)
 05 - Recycling commingled loads of C&D matls at an off site mixed debris recycling center or transfer station
 06 - Recycling material as Alternative Daily Cover at landfills
 07 - Delivery of soils or mixed inerts to an inert landfill for disposal (inert fill).
 08 - Disposal at a landfill or transfer station.
 09 - Other (please describe)

Types of Material Generated

Use these codes to indicate the types of material that were generated on the project

A = Asphalt C = Concrete M = Metals I = Mixed Inert G = Green Matls
 D = Drywall P/C=Paper/Cardboard W/C = Wire/Cable S= Soils (Non Hazardous)
 M/C = Miscellaneous Construction Debris R = Reuse/Salvage W = Wood O = Other (describe)

Facilities Used: Provide Name of Facility and Location (City)

Total Truck Loads: Provide Number of Trucks Hauled from Site During Reporting Period

Total Quantities: If scales are available at sites, report in tons. If not, quantify by cubic yards. For salvage/reuse items, quantify by estimated weight (or units).

SECTION I - RE-USED/RECYCLED MATERIALS

Include all recycling activities for source separated or mixed material recycling centers where recycling occurred.

Type of Material	Type of Activity	Facilities Used/Location	Total Truck Loads	Total Quantities		
				Tons	Cubic YD	Other Wt.
(ex.) M	04	ABC Metals, Los Angeles	24	355		
a. Total Diversion			0	0	0	0

DEMOLITION

DIVISIONS 00 AND 01 ARE A PART OF THIS SECTION

PART 1 GENERAL

1.01 CODES AND ORDINANCES

All work is to be conducted in complete accordance with all applicable provisions of local and State safety and health ordinances.

1.02 DESCRIPTION AND CONDITION OF PREMISES

- a. The building(s) affected by this Contract is set forth under Part 2, Paragraph 2.07, Schedule.
- b. Plans for the structure(s) may be available at the office of the Architect (verify) for review by the contractor. It is the intent and purpose of this Contract that the Contractor demolish all of the work as specified herein, regardless of material of which constructed.
- c. Contractor shall accept the premises in the condition as found on the first day of work under the Contract. He shall assume all risk regarding damage or loss, whether by reason of fire, theft or other casualty or happening to specified building(s). No such damage or loss shall relieve the Contractor from Contract obligation to complete this work.

1.03 SCOPE OF WORK

- a. Scope of work shall include all labor, materials, equipment, transportation and appliances to complete the work of demolition as specified under Part 2, Paragraph 2.07, Schedule, and as per drawings and as reasonably required to complete the contract.
- b. Disposal legally and off the site of all debris, rubbish and salvage.
- c. Construction and provision of proper barricades, signs and protective structures and devices, as required by City and/or County.
- d. Responsibility of cleanliness and safety of work area and all other affected premises during the period of the Contract.

1.04 SURVEY OF EXISTING CONDITIONS

The bidders are required to examine the building(s) and site and determine for themselves the extent of the work included in this Contract.

1.05 RESPONSIBILITY AND COORDINATION

- a. Responsibility accrues to the Contractor for the condition, good order, health and safety of all premises and individuals his work may affect.
- b. It shall be the responsibility of the Contractor to notify any utility companies concerning the cutting off or restoring of service or of relocating or modifying any such service that the work of this contract may require. He shall protect and maintain in operation any utility or sewer line that is required to remain operative during the period of the contract that his work may affect.
- c. The Contractor shall coordinate and require such cooperation of the various trades as will be necessary to complete each and every part of the work, even though not specifically indicated, noted or detailed on the drawings or specified.

1.06 PERMITS AND LICENSES

- a. The Contractor shall secure, take out and/or maintain all required permits, approvals and licenses necessary to legally complete this work and shall be responsible for insuring that each and every one of his subcontractors is properly and duly licensed and have required permits to perform any of their work requiring same.
- b. Prior to start of any demolition, the County of Kern Environmental Health Services Department and Basic Compliance Engineering shall be given 48 hour notice by the Contractor.
- c. Comply with San Joaquin Valley Air Pollution Control District Regulations

1.07 SALVAGE MATERIALS

- a. The Owner reserves the right to retain ownership of any equipment or fixtures removed from the building (if any) and/or any item determined to be of value including but not necessarily limited to: casework, stainless steel, toilet accessories, toilet partitions, copper piping, plumbing fixtures, mechanical equipment, copper wiring, light fixtures. All removed equipment and/or fixtures shall be removed, cleaned and stored neatly in an area designated by the Owner for a period of 72 hours after the Owner's representative has been notified. The district's facilities planning representative shall be notified in writing. All items that are not claimed by the Owner within the specified time period shall be removed from the site and the contractor shall legally dispose of them. The specified time period is exclusive of weekends or holidays and shall start upon the Facilities Planning's receipt of written notice.
- b. The District shall be given the opportunity to examine and remove any of the items salvaged from the project. It is the Contactor's responsibility to protect the salvaged items during the 72 hour period. Should any of the salvaged items be

disposed before the District has examined them, the Contractor shall reimburse the District for these items. All salvage materials removed from the building shall be placed in neat piles and stacks in the working area and removed from the site at the earliest practicable date once it has been determined that the District does not wish to retain the item or items in question..

- c. The Contractor shall not dispose of the improvements or materials removed from the building at the site by sale, gift or in any manner what so ever to the general public; provided however, that these provisions shall not be construed as limiting or prohibiting the sale or disposal of such salvage to duly licensed contractors or material men. The Contractor shall assume all responsibility arising out of such operation.

PART 2 EXECUTION

2.01 DEBRIS

All debris resulting from the demolition shall be removed and hauled away from the site immediately. Debris and rubbish shall not be allowed to accumulate on the site. Such material shall be sprinkled while being handled or loaded to relive annoyance to the balance of the premises and the neighborhood. No burning of rubbish shall be permitted at the site.

2.02 PROTECTION

- a. The Contractor shall enclose the area with fence barricades as per City and/or County Code requirements. Barricades shall be substantially and neatly erected and braced and in areas near existing buildings where hazards may exist from falling materials, shall be constructed in a manner to intercept any materials that may fall as a result of demolition work.
- b. Barricades and fences shall have substantial gates, equipped with good locks and the working area shall be kept securely locked at all times work is in progress.
- c. The Contractor shall provide signs and post warnings in all necessary places to exclude all persons except those directly connected with the work from entering the working area or where vehicles are operating or materials are being stored. The Contractor shall be responsible for preventing unauthorized persons from entering the working area.
- d. The Contractor shall execute demolition work to insure protection of adjacent buildings, shrubs, trees and lawns from damage, which might occur from any cause and shall not interfere with use of adjacent buildings or safe passage to and from same.

2.03 USE OF EXPLOSIVES will not be permitted.

2.04 UTILITIES

This Contractor shall keep a record as to location and size of all capped pipe and/or conduit during demolition on a blue line print furnished by the Architect.

2.05 SCAFFOLDING, LADDERS, ETC.

All temporary construction, scaffolding, ladders, runways, hoistways, etc., shall be furnished and maintained by the Contractor as required and shall comply with all laws, ordinances, rules and regulations governing the construction and use of same.

2.06 CLEANING

- a. Upon completion of the work, this Contractor shall remove all protections, tools, materials, plant apparatus and rubbish or debris of any sort and leave the premises neat and orderly.
- b. The Contractor shall also inspect any other areas or premises of public or private property that may have been damaged, made dirty or otherwise disorderly as a result of his work and restore to good order any such area or premises.

2.07 SCHEDULE OF WORK

- a. See Demolition Plan(s).

END OF SECTION
07/17/2024

HAZARDOUS MATERIALS ABATEMENT

DIVISIONS 00 AND 01 ARE A PART OF THIS SECTION



**Hazardous Materials Specifications
Taft City School District
Conley Elementary School
Kindergarten Roofing Project**

Site Information

Conley Elementary School
623 Rose Avenue
Taft, CA 93268

Contacts

TCSD – Matt Jones – (661) 699-4249
FACS – Christian Gonzalez – (661) 426-0927

Background

Taft City School District will be replacing the Kindergarten Roof at Conley Elementary School as part of general facilities upgrades. As part of this renovation activity, asbestos-containing roof materials will be abated prior to renovation of the structure in compliance with the San Joaquin Valley Air Pollution Control District requirements. The contractor awarded the project shall ensure that all applicable aspects of these specifications, as well as Federal, State, and local regulations are followed by either their own firm, or their sub-contractors as applicable for the site work to be completed.

Scope of Work

The following table identifies the asbestos-containing materials, percent content and type of asbestos, location of material, approximate amount, and US EPA National Emissions Standard for Hazardous Air Pollutants (NESHAP) category. The approximate amount of material provided in the table is provide as a courtesy and contractor is responsible for own measurements for bidding.

MATERIAL	ASBESTOS CONTENT & TYPE	LOCATIONS OF MATERIAL	APPROXIMATE AMOUNT	NESHAP CATEGORY
Rolled Composition Roofing w/ Silver Paint	1% Chrysotile in Silver Paint 25% Chrysotile in Felt	Kindergarten Roof	~2,800 square feet	RACM
Roof Mastic w/ Silver Paint	1% Chrysotile in Silver Paint 5% Chrysotile in Roof Mastic	Kindergarten Roof	~40 square feet	RACM

In addition to the asbestos-containing materials, the beige paint on wood fascia and stucco walls of the building were found to be lead-containing and would need to be handled using lead-safe work practices if to be removed as part of the project.

The brown paint on metal flashing was found to be lead-free.



Project Requirements

Contractor performing abatement work must be registered with the Division of Occupational Safety and Health (DOSH) as an asbestos abatement contractor. Contractor must hold either the C-22 asbestos abatement license or C-39 roofing license with asbestos certification.

Notifications

The abatement contractor is responsible for filing the "report of use" temporary worksite notification to the local Cal/OSHA office for the abatement of asbestos-containing materials at least 24 hours prior to mobilizing to the site.

In addition, a 10-day notification shall be filed for the abatement of the silver-painted roof materials at the material is recognized by the San Joaquin Valley Air Pollution Control District as a regulated asbestos-containing material.

Copies of the notifications must be provided to the FACS Project Manager prior to any work commencing. Copies of notifications shall be provided as part of the contractor's pre-start submittal package. Any revisions to notifications shall be provided prior to the revised work commencing.

Submittals

The abatement contractor is responsible for providing all submittals outlined in Sections 2.31, 2.4, 2.41, and 2.7 of the Asbestos General Requirements. Pre-Start submittals shall be provided to FACS Project Manager for review and approval.

Daily submittal documents shall be provided at the conclusion of the work shift. Failure to submit documents in a timely manner may, at FACS Project Manager's discretion, cause project to be stopped until all overdue submittals are received. This stoppage of work will not affect contractor's completion date, nor the District's ability to charge liquidated damages for work exceeding scheduled completion date of the abatement work.

HVAC, Water, and Electricity

Water and electricity are available onsite, but long cords and hoses may be required. Contractor shall provide a GFCI at each electrical train primary plug-in for equipment to be used. If connections of hoses are necessary, Contractor shall provide seals to prevent leaking at connections of hoses. Contractor is responsible for costs to repair or replace any damage caused by their use of District systems.

All HVAC units shall be sealed as critical barriers and it is anticipated that HVAC units will not be in operation at the time of the project. However, if the HVAC units are still energized, the abatement contractor shall ensure all units have been shut down and locked-out / tagged-out before sealing with poly.

Equipment

All equipment to be used on this project shall arrive onsite clean. HEPA-vacuums shall have bags which are free of debris and dust, and all equipment shall be free of visible debris or dust from any source.



All equipment that arrives onsite must be in proper functioning order. Ladders may not be missing feet, cords must not be cut or missing grounds, etc.

Any equipment that arrives onsite dirty or not in proper functioning order will be removed from the site at no extra charge to the District for cleaning or repairs/replacement.

Contractor is responsible for providing sufficient lighting for any abatement activities that may take place during the evening. This lighting shall sufficiently illuminate work area, traverse area to the waste bin, and allow a thorough final visual inspection to be completed at the conclusion of removal. Lights shall meet requirements of OSHA for use within a construction area.

Training

All workers used to perform abatement of asbestos-containing materials must have current AHERA worker training certificates. One worker on the work crew must be a valid AHERA Contractor-Supervisor. The AHERA Contractor-Supervisor shall remain on site at all times while abatement activities are underway.

Copies of worker training certifications shall be provided to the FACS Project Manager for approval prior to any work, including containment setup, being performed onsite.

Personal Protection Equipment

Personnel entering a regulated work area will wear respiratory protection consisting of half-mask respirator fitted with HEPA (P-100) filters. Disposable coveralls of Tyvek-quality with attached hood and booties are required to be worn in regulated areas. Workers shall wear hard hats, safety glasses, and gloves in addition to respiratory protection and protective clothing.

Street clothes may be worn beneath disposable coveralls, but HEPA-vacuum cleaning of clothing in the event that suits become ripped or torn will be required.

Current copies of each worker's fit test and medical clearance shall be provided to FACS Project Manager for approval prior to any work being performed onsite.

The abatement contractor may opt for additional personal protection equipment (tie-offs, lanyards, and harnesses for example) based on their own job hazard assessment, but personal protection equipment may not be any less than the specified requirements.

Personal Air Monitoring

The contractor shall collect personal air samples for each shift of asbestos abatement activities. Personal samples shall be collected in accordance with Cal/OSHA requirements. Samples results shall be provided to the FACS Project Manager within 72 hours of collection. Failure to submit personal sample results to FACS Project Manager in a timely fashion will result in contractor being required to raise respiratory protection for all workers conducting asbestos abatement on this project or halt abatement activities until results are provided.



Security and Safety

The contractor is responsible for security of their own equipment and tools used to complete this project. Contractor is responsible for worker safety and following all applicable Cal/OSHA requirements.

A tailgate safety meeting shall be held by the contractor's supervisor at the start of the project. Additional safety meetings may be required if job hazards change, or there is an accident, during the project. Copies of safety meeting agenda, including a signed list of workers that attended, shall be provided to the FACS Project Manager.

Occupancy

Except for emergency repair activities, the abatement contractor will have exclusive access to the area of abatement. Site occupants, District staff or other trades may be working in adjacent areas of the site during the work.

Challenge Testing

All HEPA-filtered equipment used on this project shall be challenge tested at least 30 days prior to the use of equipment. Testing must be completed by a testing company independent of the contractor. Copies of the challenge test results shall be provided to the FACS Project Manager prior to the use of any HEPA-filtered equipment.

Pre-Cleaning

Pre-cleaning of asbestos-containing contamination is not required for this project. Small amount of dust and debris may need to be cleaned for secure attachment of poly containment barriers.

The abatement contractor will be responsible for preventing or limited fall through of asbestos-containing roof debris into interior spaces of the building. The abatement contractor will be responsible for the cleaning of interior spaces that become contaminated by asbestos roofing fall through debris. The contractor may opt to prep these areas with poly sheeting to capture fall through to ease cleaning of areas at the conclusion of work.

Asbestos Abatement and Containment Requirements

All poly used for containment setup shall be 6-mil in thickness and fire-retardant unless exempted in requirements below.

1. All rooftop openings and any other openings within 30 feet of the work area, shall be sealed with one layer of 6-mil poly as critical barriers to prevent asbestos fibers from migrating into the building. This includes doors, HVAC units, wall louvers, operable windows, etc. These critical barriers may remain in place beyond the work shift if approved by the District, General Contractor, and FACS Project Manager. Critical barriers within a regulated area will be required to be cleaned as part of the work shift final cleaning.
2. One layer of 6-mil poly shall be placed at ground level and extend out at least 10 feet in each direction to capture any material that may fall from the roof.

3. Asbestos hazard tape shall be placed at least 20 feet out from work area to generate a regulated area. Personal protection equipment must be worn within this demarcated work area.
4. The hazard tape and regulated area will include ground level areas as needed during removal of sections and around waste bins as applicable. Contractor is responsible for providing pylons or similar to mount barrier tape to if existing fixed items are not available at ground and roof level.
5. Poly drop sheets shall be secured with weights to prevent billowing and creation of a trip hazard or movement of drop sheet.
6. In the event that wind speed or gusts are sufficient to cause debris, whether asbestos or not, to be blown out of the regulated area or off any poly within the regulated area, work will be halted until wind gusts subside.
7. One layer of 6-mil poly shall be placed at the edge of the regulated work area to act as a decontamination area. This area shall include soap, water, and towels to allow workers to decontaminate themselves and equipment as exiting the regulated area. A waste bag shall be provided for the disposal of decontamination waste and personal protection equipment as applicable.
8. Roof materials shall be removed using hand tools only. Materials shall be abated as intact as possible.
9. Amended water, being applied using an airless sprayer, shall be applied to surfaces being disturbed prior to, and during, removal to prevent visible emissions. Use of a hose alone to wet materials is not allowed.
10. No loose or removed material may remain in the work area at a work stoppage. All waste must be packaged or loaded into the waste prior to any work stoppages, including lunch and work breaks. Contractor shall monitor roof material being removed to ensure unpackaged waste is not building up to a point of causing shift overruns to allow packaging of waste.
11. Contractor is responsible for removal of all appreciable (three-dimensional) mastic, felts, etc. associated with the asbestos-containing roofing materials down to the substrate. This includes materials that are impregnated into tar materials but does not mean all tar material must be removed from roof area.
12. Contractor shall remove or nail into substrate any nails or screws used to attach roofing to substrate.
13. The removal area shall be HEPA-vacuumed clean of all dust and debris once the materials have been abated. A broom shall not be used to dry sweep material from surfaces as it may allow debris to intrude into interior spaces at gaps in the substrate. Workers shall use caution to control material to roof area.
14. Contractor shall ensure any debris that falls into gutters or drains is captured and to prevent release at a later time. Contractor may opt to place barriers in drains as needed to prevent debris from entering, but plugs must be removed if inclement is forecasted.
15. Contractor is responsible for the cleaning of interior spaces that become contaminated by asbestos roofing fall through debris. FACS will perform a visual inspection of interior areas at the conclusion of each shift to verify if any fall through debris exists. The contractor may opt to prep these areas with poly sheeting to capture fall through to ease cleaning of areas at the conclusion of work.
16. A final visual inspection will be performed by FACS Project Manager once all materials have been abated and the work area has been cleaned of all dust and debris. Details of final visual inspection are detailed in section below.



Waste Handling Requirements

Asbestos

1. Bulk loading of roofing material will be allowed using a leak-tight chute if contractor shows that they can maintain loading in a controlled and safe manner. This includes the prevention of visible emissions or failure of packaging evidenced by the release of fugitive emissions from container, and/or debris present on the ground around the waste container. Fugitive emissions include water from the waste packaging due to oversaturation of material in an attempt to prevent visible emissions.
2. Waste bins shall be lined with two separate layers of at least 6-mil poly in a manner to allow "burrito-wrapping" of all waste prior haul-off if roofing is bulk loaded. Contractor may opt to use thicker poly sheeting if they feel it is required to maintain integrity of waste packaging.
3. If contractor cannot meet requirements of bulk loading, all asbestos-containing materials shall be double-bagged in 6-mil poly waste bags or wrapped in two separate layers of 6-mil poly. Bags shall be sealed in a "gooseneck" tie and "burrito-wraps" shall have staggered seams to create leak-tight containers.
4. Packaged waste shall be wet, but not contain "loose" water in packaging.
5. Waste bags shall be properly labeled for disposal as the appropriate waste classification (Cal/OSHA, DTSC, EPC, DOT, etc.). Waste bin shall have asbestos signage posted once waste has been loaded into the bin.
6. If waste is to remain onsite past the shift, it must be stored in a fully-enclosed and lockable waste bin.
7. Any waste bags or wrappers must be clean of dust or debris prior to removal from containment area.
8. All waste must be manifested, whether hazardous or not. Contractor shall notify FACS at least 24 hours prior to waste collection from the site to arrange for signing of waste manifests. Contractor shall not sign any waste manifest themselves, even if waste is non-hazardous.
9. All waste bins must arrive onsite clean and free of debris/waste. The FACS Project Manager shall inspect and must approve waste bins before they are lined with poly for use on this project.
10. Contractor shall install plywood below wheels / casters of waste bins to protect asphalt or concrete surfaces. Contractor is responsible for repair costs associated with damage caused by the delivery, storage, and haul-off of waste bin that may occur.
11. Waste bins shall be in proper functioning order and load worthy when they arrive on site. Contractor is responsible for all costs for cleanup, any citations, consultant fees and other applicable expenses in the event that waste bin fails and allows asbestos waste to be released.
12. Contractor equipment or supplies and waste may not be stored in the same bin at any point.

Clearance

At the conclusion of removal, the crew supervisor shall perform their own visual inspection of the regulated work area to ensure all materials have been removed and the work area is clean of all dust and debris. Once they pass their own visual inspection, they may request a visual inspection from the FACS Project Manager. To pass a final visual inspection, all materials need to be removed, the work area must be dry, and no dust or debris may be present.



Once the final visual inspection is passed at the roof area, FACS will review interior spaces for fall through debris. If no debris is found at interior areas, then the final visual inspection is passed and will constitute completion of abatement for the work shift.

Written by: Christian Gonzalez, Cal/OSHA CAC #22-7113
Reviewed by: Chris Chipponeri, Cal/OSHA CAC #10-4633
Created: May 5, 2024

ASBESTOS GENERAL REQUIREMENTS

Forensic Analytical Consulting Services, Inc.
200 New Stine Road, Suite 158
Bakersfield, CA 93309
661-735-7779
facs.com

January 1, 2019

To whom it may concern,

The enclosed specifications were created by Hazard Management Services, Inc.(HMS, Inc. or HMS). HMS, Inc. is now Forensic Analytical Consulting Services, Inc. (FACS).

This document has not been updated to reflect our new company name. Any references within this document to Hazard Management Services, Inc., HMS, Inc., or HMS should be presumed to now refer to FACS. If there is any ambiguity or if any clarification is needed regarding this issue, please contact me via email or by phone.

Sincerley,



Chris Chipponeri, Local Director
Forensic Analytical Consulting Services, Inc.

GENERAL ASBESTOS REQUIREMENTS

SECTION 1. DEFINITIONS

Abatement - Procedures beyond a special operations and maintenance program to control fiber release from asbestos-containing materials. Includes removal, encapsulation, enclosure, repair.

ACGIH - American Conference of Governmental Industrial Hygienists

AHERA - Asbestos Hazard Emergency Response Act (40 CFR 763)

AIHA - American Industrial Hygiene Association

Air Filtration Device - A portable exhaust system equipped with HEPA filtration and capable of maintaining a constant low velocity air flow into contaminated areas from adjacent uncontaminated areas. At a minimum, the air intake for the air filtration device, must have a pre-filter on it which can be changed within the containment area.

Airlock - A system for permitting ingress and egress with minimum air movement between a contaminated area and an uncontaminated area. The airlock shall consist of a minimum of two curtained Z-flap doorways separated by a distance of at least three (3) feet such that one passes through one doorway into the airlock, allowing the doorway sheeting to overlap and close off the opening before proceeding through the second doorway, thereby preventing flow-through contamination.

Air Monitoring - The process of measuring the fiber content of a known volume of air collected during a specific period of time. The procedure normally utilized for asbestos follows the NIOSH Standard Analytical Method for Asbestos in Air Method 7400. For clearance air monitoring, transmission electron microscopy methods may be utilized for detection of smaller fibers and specific fiber identification.

Air Sampling Professional - The professional contracted or employed by the Owner to supervise and/or conduct air monitoring and analysis schemes. The air sampling professional must be a Cal/OSHA Certified Asbestos Consultant or Certified Site Surveillance Technician. This individual shall not be affiliated in any way other with the contractor performing the abatement work.

Ambient Air - The air outside buildings and structures or the air as it normally exists in a space prior to abatement.

Amended Water - Water to which a surfactant has been added.

ANSI - American National Standards Institute

Approval/Acceptance - A written means of approving/accepting a product, containment set-up, work practice. Approval/Acceptance by HMS, Inc. Project Manager may be given verbally, if followed in written format. Failure of HMS, Inc. Project Manager to address an issue either verbally or in writing does not imply Approval/Acceptance.

Asbestos - Means the asbestiform varieties of serpentine (chrysotile), riebeckite (crocidolite), cummingtonite grunerite (amosite), anthophyllite, actinolite, and tremolite.

Asbestos-Containing Construction Material (ACCM) - Cal/OSHA term used to describe construction materials that contain asbestos in amounts greater than one-tenth of one percent (0.1%) either alone or mixed with fibrous or non-fibrous materials. With the exception of waste issues, for the purposes of this contract the terms ACM and ACCM shall be interchangeable.

Asbestos-Containing Material (ACM) - Term used by Cal/OSHA, and U.S. EPA to include any material containing more than one-percent (1%) asbestos. With the exception of waste issues, for the purposes of this contract the terms ACM and ACCM shall be interchangeable.

Asbestos-Containing Hazardous Waste - Materials defined by the State of California to be packaged, labeled, transported, and disposed of as an asbestos hazardous waste. This includes all friable asbestos-containing material over one-percent (1%) asbestos. This also includes all asbestos-containing material containing less than one-percent asbestos for which one or more bulk samples have not been point counted and found to contain less than one-percent (1%) asbestos.

Asbestos-Containing Waste Material - Asbestos-containing material or asbestos-contaminated objects requiring disposal.

Asbestos Project Manager - An individual who is qualified by virtue of experience and education, designated as the Owner's representative and responsible for overseeing the asbestos abatement portion of the project. This person is generally the same as the HMS, Inc. Project Manager.

ASTM - American Society for Testing and Materials

Authorized Visitor - The Owner (and any designated representative) and any representative of a regulatory or other agency having jurisdiction over the project.

Bidder - A duly licensed and accredited asbestos contractor who has submitted a bid. If bid walk is mandatory, bidder must attend the walk in order for bid to be considered responsive.

Cal/OSHA - California Division of Occupational Safety and Health. Acronym of DOSH is interchangeable with this term.

Certified Industrial Hygienist (CIH) - An industrial hygienist certified in Comprehensive Practice by the American Board of Industrial Hygiene.

Cleaning Barriers - Cleaning barriers are used in addition to critical barriers and are primarily to aid in the decontamination of the area after the completion of asbestos removal work. Cleaning barriers are normally comprised of plastic sheeting placed over non-asbestos-containing surfaces (e.g. walls, floors, ceilings, casework, etc.), and asbestos-containing surfaces not scheduled for removal, in the regulated area.

Clean Room - An uncontaminated area or room which is a part of the worker decontamination enclosure system with provisions for storage of workers' street clothes and clean protective equipment. Also, the term includes uncontaminated area or room of a Waste Transfer Airlock.

Competent Person - The Contractor's employee who meets the requirements of and is responsible for the activities of the Competent Person as described in Title 8 CCR 1529. The includes but is not limited to an individual who has current AHERA Contractor/Supervisor accreditation and has the responsibility and authority to ensure that the Contractor's employees comply with the contract documents and all relevant Cal/OSHA regulations.

Containment - The temporary isolation of the work area from the rest of the building to prevent escape of asbestos fibers.

Contract Documents - Written contractual agreements between the Owner and the Contractor that pertain to the work on this project.

Contractor - The Contractor is the person or entity identified as such in the Contract Documents; references to "Contractor" include the Contractor's authorized representative.

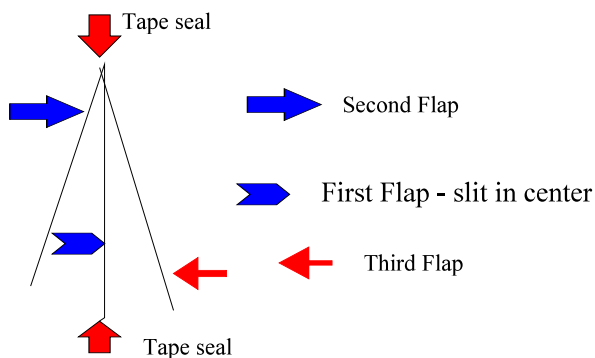
Contractor/Supervisor - A person who successfully completed an initial U.S. EPA and/or state-approved five-day AHERA-accreditation course and who has maintained that training through approved annual refresher training, and possesses current and valid AHERA-accreditation documentation as a AHERA-accredited Contractor/Supervisor

Cal/OSHA Class I, II, III, or IV Work- Work classes described in 8 CCR 1529 that describe different levels of asbestos work.

Critical Barrier - Critical Barriers used to restrict water and air flow. Critical Barriers are the barriers placed over openings in the walls and ceilings of a work area in order to ensure that airborne fibers cannot escape the work area via these openings. The Contractor will construct impermeable barriers at all exits or openings, including doorways, duct chases, mechanical shafts, elevator shafts, floor openings, drains, and the like, so that all possible exit or entrance routes are effectively barricaded and sealed. Unless otherwise specified in the Contract documents, critical barriers shall be constructed of at least one layer of 6-mil thick poly.

Critical Barrier Negative Pressure Test - Required test for negative pressure with only critical barriers and air filtration units installed. This test must be conducted prior to the installation of cleaning barriers, but may be conducted with or without the decontamination unit in place.

Curtained Doorway, Z-Flapped - A device to allow ingress or egress from one room to another while permitting minimal air movement between spaces (such as the various rooms of the decontamination chamber). Each Curtained Doorway will consist of three sheets of poly. The first barrier will be a sheet of poly covering the entire passage and taped to the ceiling, walls, and floor. This sheet will be slit vertically in order for the workers to pass through it. Another sheet of poly will cover the first sheet but be taped only to the ceiling (or top of the first barrier) and down one wall. The third sheet of poly will be placed on the opposite side of the slit poly from the second sheet. The third sheet of poly will be attached in a similar manner as the second sheet except the wall attachment will be to the opposite wall. Each barrier must be weighted at the bottom in order to ensure that it will lay flat against the slit sheet opening should the negative pressure system fail. Please see diagram:



Other designs are permissible, if approved by the HMS, Inc. onsite project manager.

Decontamination Enclosure System - (Also known as Decon or Waste Transfer Decon) A series of connected rooms designed for the decontamination of workers and equipment that is separated from the work area and from each other by z-flapped curtained doorways. This unit shall be constructed with at least two layers of six-mil poly for the floors, walls, and ceiling. The floor of the dirty room shall consist of two layers of six-mil poly plus a third layer of poly, four-mil or thicker, to be used as a removable drop layer. Drop layer is to be removed as needed, but not less than daily. All decontamination enclosure systems used for worker entry and exit shall be equipped with a shower. At no time shall z-flaps of Decontaminations Enclosure System chambers be taped, held or otherwise blocked open.

DOP - Dioctylphthalate particles which are normally used as an agent for testing the efficiency of HEPA filters.

Demolition - The wrecking or taking out of any load-supporting structural member, casework, items or surfaces of a facility together with any related handling operations and disposal.

Dust or Debris - Material visible to the HMS, Inc. Project Manager. Dust and debris may be contaminated with asbestos, and may affect the asbestos work practices, containment or clearance air samples required on this project, whether contaminated with asbestos or not.

Encapsulant, Bridging/Penetrating - A liquid material which can be applied to asbestos-containing

material to control the possible release of asbestos fibers from a material either by creating a membrane over the surface (bridging encapsulant) or by penetrating into the material and binding its components together (penetrating encapsulant).

Encapsulant, Lock-down - A liquid product designed to mist the air within a contained area after the containment has passed visual clearance by the HMS, Inc. Project Manager. Lock-down encapsulant is designed to bind asbestos fibers together and to create a tacky surface causing non-visible asbestos fibers, settling out of the air, to adhere to containment poly.

U.S. EPA - U.S. Environmental Protection Agency

Equipment Decontamination Enclosure System - That portion of a decontamination enclosure system designed for controlled transfer of materials and equipment into or out of the work area, consisting of a clean room, washroom and holding area.

Equipment Room - A contaminated area or room which is part of the worker/equipment decontamination enclosure system with provisions for storage of contaminated clothing and equipment.

Exterior of Containment HEPA Filtered Pressure Differential Unit - An air-purifying unit positioned outside, rather than inside the regulated work area. The face, or filter portion of the unit is integrated within the work area, and the remainder of the unit (housing, wheels, rivets, control panel, etc.) is located outside of the work area. This allows filters on the air intake to be changed from within the regulated area but access to the machine itself is available to those outside the area. Pressure differential units which pass DOP testing across the HEPA filter, but fail at rivets, control panels, wheels, etc. may be used in this fashion as long as the failure point of the unit can remain on the exterior of containment while the face of the unit and filters are inside containment.

Facility - Any institutional, commercial or industrial structure, installation, or building.

Facility Component - Any item (pipe, duct, boiler, tank, reactor, turbine, furnace, etc.) at or in a facility, any portion of a facility or any structural member in or at a facility.

Federal OSHA or **OSHA** - Federal Occupational Safety and Health Administration.

Fixed object - A piece of equipment or furniture in the work area which cannot be removed, or will not be removed by Owner's decision, from the work area.

Friable asbestos - Asbestos-containing material which, when dry, can be crumbled to dust by hand pressure.

Glovebag Technique - A method with limited applications for removing small amounts of friable asbestos-containing materials from ducts, short piping runs, valves, joints, elbows, and other non-planar surfaces. The glovebag assembly is a manufactured or fabricated device consisting of a glovebag (typically constructed of 6 mil transparent polyethylene or polyvinylchloride plastic), two inward projecting long sleeves, an internal tool pouch, and an attached, labeled receptacle for asbestos waste. The glovebag 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. Glovebags must meet the specification requirements for glovebags as listed in 8 CCR 1529. All workers who are permitted to use the glovebag technique must be highly trained, experienced and skilled in this method. All techniques and procedures employed by the contractor shall be approved by the HMS, Inc. Project Manager.

HVAC - Heating, ventilation and air conditioning system.

HEPA Filter - A high efficiency particulate air filter capable of removing particles 0.3 microns in diameter from an air stream with 99.97% efficiency.

HEPA Vacuum - A vacuum system equipped with HEPA filtration.

HMS, Inc. Project Manager - An individual, employed by (or sub contracted to) Hazard Management

Services, Inc., who is qualified by virtue of experience and education, designated as the Owner's representative and responsible for overseeing the asbestos abatement, and/or other activities.

Holding Area - A clean space where clean supplies and equipment are stored before being placed into containment. Also, a contaminated space, adjacent to a shower or equipment washing chamber, where dirty equipment or packaged waste is stored prior to removal from containment.

Lock-down - To mist the air and to wet surfaces with an agent designed to bind asbestos fibers together and to create a tacky surface causing non-visible asbestos fibers, settling out of the air, to adhere to containment poly.

Magnehelic Gauge - Instrument for measuring the static air-pressure differential across a barrier.

Manometer - See "Magnehelic gauge". This project requires at least one properly calibrated and fully functioning recording manometer.

Mil - An abbreviation for millimeter. Generally used when referring to the thickness of plastic (poly) sheeting used to contain the regulated area.

Mini-Enclosures - Mini-enclosures may be used where glovebag setups are not feasible. The use of them must be approved by the HMS, Inc. Project Manager. Mini-enclosures shall be constructed of six-mil polyethylene (attached with tape and/or glue to walls and floors) and shall be small enough for a maximum of two workers who can enter the enclosure one time, complete the abatement exercise, pass out the containerized debris and exit. The workers shall have available a change room contiguous to the work area where they can remove their coveralls prior to leaving the area.

Monitoring - May include:

- a) Visual inspection for the presence of visible emissions; or
- b) Air monitoring performed in accordance with accepted methods;
- c) Collecting core samples of encapsulated or bridged materials.
- d) Collecting other bulk samples during and following abatement.
- e) Sampling substrata following abatement.
- f) Inspection of abatement contractor's, and contractor's employees, work practices for compliance to these and other specifications and applicable regulations.

Movable object - An unattached piece of equipment or furniture in the work area which can be removed from the work area.

NVLAP - National Voluntary Laboratory Accreditation Program.

NESHAP - The National Emission Standards for Hazardous Air Pollutants (40 CFR Part 61, Nov. 20, 1990)

NIOSH - The National Institute for Occupational Safety and Health

Outside Air - The air outside of containment. See also Ambient Air.

Owner - The Owner includes the individual or entity that owns the property and, unless otherwise stated, the Owner's authorized representatives, including the HMS, Inc. Project Manager, the Owner's Board of Trustees and the Owner's officers, employees, agents and representatives.

PCM - Phase contrast microscopy according to NIOSH Method 7400A.

Poly - Polyethylene sheeting.

Pre-start Meeting - Meeting held before the beginning of the project in which final details of the project are discussed and Contractor provides Project Monitor with pre-job submittal packet.

Prior experience - Experience required of the contractor on asbestos projects of similar nature and scope to ensure capability of performing the asbestos abatement in a satisfactory manner. Similarities shall be in areas related to material composition, project size, abatement methods required, number of employees and the engineering, work practice and personal protection controls required.

Regulated Area - An area established by a contractor to demarcate areas where the contractor's employees may conduct Class 1, 2, or 3 work as described in 8 CCR 1529 or airborne concentrations of asbestos exceed, or there is a reasonable possibility they may exceed, the permissible exposure limit. Additionally, "regulated area" means any measure used to restrict access to an area where personnel impacting asbestos-containing materials are required to wear respiratory protection and/or protective clothing by the project specifications, or applicable regulations, regardless of airborne asbestos concentration levels.

Regulations - shall include all relevant federal, state, and local regulations including but not limited to:

- a. U.S. Environmental Protection Agency Regulations for Asbestos (Title 40, Code of Federal Regulations, Part 61, Subparts A & B)
- b. Title 8, Chapter 4, Subchapters 1 through 21, California Administrative Code, General Industry Safety orders, Section 5208 "Asbestos" or the applicable sections of the Federal Asbestos Regulations. Cal/OSHA Construction Safety Orders, Section 1529.
- c. "Asbestos Hazard Emergency Response Act", U. S. Environmental Protection Agency, 40 CFR, Part 763. Final Rule and Notice.
- d. Applicable local county Air Pollution Control Districts and Air Quality Management Districts or other local NESHAPs Enforcement.

Removal - The stripping of any asbestos-containing materials from surfaces, substrates or components of a facility. As per various regulations, the ground is considered a substrate.

Regulated Area- An area where asbestos-containing materials are going to be disturbed and may release asbestos fibers into the air and whose entrances have been posted. A regulated area is required for all Class I, II, or III work as described in 8 CCR 1529 or whenever the work may release asbestos in concentrations over the OSHA Permissible Exposure Limit (PEL) or Excursion Limit.

Renovation - Altering in any way one or more facility components.

Scope of Work - Job specific information and specifications used in combination with these Asbestos General

Requirements. If conflicts exist between the Scope of Work and these specifications, the stricter requirement will be enforced unless the conflict is specifically addressed in writing in the Scope of Work for this project.

Shower Room - A room between the clean room and the equipment room in the decontamination enclosure with hot and cold or warm running water controllable at the tap and suitably arranged for complete showering during decontamination. The shower room must be equipped with an overflow pan to contain water splashed, leaked or spilled out of the shower unit.

Staging Area - The secured area outside of containment where clean equipment and supplies are stored. Waste must not be stored within the staging area unless placed within an additional lockable container or area approved by the HMS, Inc. Project Manager.

Strip - To take off friable asbestos materials from any part of a facility.

Structural Member - Any load-supporting member of a facility, such as beams and load-supporting walls or any non-load-supporting member, such as ceilings and non-load supporting walls.

Submittals - Pre, in-progress and post job documents submitted by contractor to Owner's representative as indicated in General Requirements and Bidding Requirements.

Surfactant - A chemical wetting agent added to water to improve penetration.

Temporary Enclosure System - A system by where the regulated work area is isolated from the rest of the building or structure in a manner that prevents the escape of airborne asbestos fibers. Also see "Containment"

TEM - Transmission Electron Microscopy according to AHERA specifications for Level II analysis on all AHERA projects. Non-AHERA projects may employ other levels of TEM analysis.

Visible Emissions - Any emissions, whether containing particulate asbestos material or not, that are visually detectable without the aid of instruments. This does not include condensed uncombined water vapor.

Waste Load-out/Transfer System - A decontamination system utilized for transferring containerized waste from inside to outside of the work area. A series of three connected rooms used for the load-out of asbestos-containing materials that have been properly containerized. The waste loadout chamber system shall normally consist of three connected chambers adjacent to the work area. Each chamber shall be constructed with at least two layers of six-mil thick poly for the floors, walls, and ceiling. The chamber located closest to the work area is known as the dirty chamber, and in addition to the two layers of six-mil thick poly on the floor, shall also have a third layer of poly, four-mil or thicker, to be used as a removable drop layer. The drop layer is to be removed as needed but at least daily. The chamber located closest to the outside the work area is known as the clean chamber. See Section 15 for proper use of waste Load-out/Transfer System.

Wet cleaning - The process of eliminating asbestos contamination and visible dust and debris from building surfaces and objects by using cloths, mops, or other utensils which have been dampened with water and afterwards thoroughly decontaminating them or disposing of them as asbestos contaminated waste.

Work area - Designated rooms, spaces, or areas of the project in which asbestos abatement actions are to be undertaken or which may become contaminated as a result of such abatement actions. A contained work area or temporary enclosure is a work area that is isolated from the rest of the facility by the use of critical barriers and cleaning barriers, a decontamination system, and additional means of signs and barriers to reduce access by unauthorized persons. A contained work area is a work area which has been sealed, polyed, and equipped with a decontamination enclosure system. The work area includes all decontamination chambers, waste transfer system and the abatement area. A non-contained work area is an isolated or controlled-access work area which has not had poly installed nor been equipped with a decontamination enclosure system.

Worker - A person who successfully completed an initial U.S. EPA and/or state-approved four-day AHERA-accreditation course and who has maintained that training through approved annual refresher training, and possesses current and valid AHERA-accreditation documentation as a AHERA-accredited asbestos worker.

SECTION 2. NOTIFICATIONS, SUBMISSIONS, POSTINGS**2.1 Site Investigations**

By submitting a bid to the primary contractor, and being listed by the primary contractor as the sub-contractor for asbestos related work, the asbestos abatement contractor acknowledges that they have investigated and satisfied themselves as to:

A) the conditions affecting the work, including but not limited to, physical conditions of the site which may bear upon site access, handling, and storage of tools and materials, access to water, electric, or other utilities, or otherwise affect performance of required activities.

B) the character and quality of all surface and subsurface materials or obstacles to be encountered, in so far as, this information is reasonably ascertainable from an inspection of the site, including exploratory work done by the District or a designated consultant, as well as, information presented in drawings and specifications included with this contract. Any failure by the asbestos abatement contractor to acquaint themselves with available information will not relieve them from the responsibility for estimating properly the difficulty or cost of successfully performing the work. The District is not responsible for any conclusions or interpretations made by the asbestos abatement contractor on the basis of the information made available by the District.

2.2 Notification

Prior to commencement of work the Contractor shall send notices of the work to be completed to the agencies listed below with a copy of each to be provided to the Owner or its representative at the pre-start meeting.

For compliance with 40 CFR part 61.146 of Subpart M, send notice at least ten (10) working days prior to start of work to the all of the following appropriate agencies:

EPA, Region 9 Asbestos Program Enforcement 75 Hawthorne Street San Francisco, CA 94105	Chief Compliance Division California Air Resources Board P.O. Box 2815 Sacramento, CA 95812 (for non-EPA delegated counties)
Local Air Pollution Control District (APCD) or Local Air Quality Management District (AQMD)	

For compliance with 8 CCR 1529 and 8 CCR 5203, send written notice at least one day prior to start of work to:

State of California
Department of Occupational Safety and Health
District Office

These notices shall include, at a minimum, the name and address of the contractor, the name and address of the worksite, the type of work to be done including the percent asbestos content of the material, the methods used to prevent migration of the fibers, personal protective measures, the number of his workers involved, any union representation of the workers and the methods of disposal including the names and EPA numbers of both the certified hauler and the waste disposal site. The notices shall also include start and finish dates. Changes in start and completion dates shall be reported immediately to the proper agency. Use forms provided by agency whenever possible.

2.31a Prestart Submittals - Contractor

- A. Contractor shall provide a copy of the notification for NESHAP compliance along with a receipt of fees paid.
- B. Contractor shall provide a copy of the notification for Cal/OSHA compliance along with the fax confirmation receipt.
- C. Contractor Notification to Local Hospital, Police, and Fire Department
- D. Contractor shall provide a copy of their active CSLB License with Asbestos Certification.
- E. Contractor shall provide a copy of their active Cal/OSHA (DOSH) registration.
- F. The asbestos abatement contractor shall submit a statement, signed by an officer of the company, containing the following information:
 - 1. A record of any citations issued by Federal, State, or Local regulatory agencies within the last 3 years, relating to asbestos abatement activity. Include projects, dates, and resolutions.
 - 2. A list of penalties incurred through non-compliance with asbestos abatement project specifications, including liquidated damages, overruns in scheduled time limitations, and resolutions.
 - 3. Situations in which an asbestos-related contract has been terminated including projects, dates, and reasons for terminations.
 - 4. A list of any asbestos-related legal proceedings/claims in which the Contractor (or employees scheduled to participate in this project) has participated or is currently involved. Include descriptions or role, issue, and resolution to date.
- G. Submit copies of insurance certificates which meet requirements as outlined below:

Contractor shall purchase and maintain insurance that will protect them from claims that may arise out of or result from the activities under this Contract, whether those activities are performed by the asbestos abatement contractor, by any subcontractor, or by anyone directly or indirectly employed by any of them or by anyone for whose acts any of them may be liable.

Contractor shall submit proof of coverage for the asbestos abatement contractor and subcontractors under the Worker's Compensation insurance system of the State of California or other similar benefit acts.

Contractor shall submit a certificate of general liability insurance protecting against liability for bodily injury and property damage arising from the asbestos abatement contractor's activities under this contract.

Such certificate of insurance must contain the following provisions:

- (a) The limit of liability shall not be less than \$1,000,000.00 per occurrence for bodily injury and property damage liability combined.
- (b) The Owner, Owner's Agents, and Hazard Management Services, Inc. (HMS, Inc.) must be named as additional insured, but only in respect to liability arising or resulting from activities under this contract.

- (c) In the event of cancellation of the insurance policy, the Owner and HMS, Inc. shall be given thirty days advance written notice.
 - (d) The insurance certificate must state that the insurance includes liability coverage for asbestos abatement work.
- H. Copy of Contractor's Bonding for Project
- I. Submit proof satisfactory to the Owner that required permits have been acquired applicable to the project being performed and specific to the project site and location. If no city, county, or other permits for parking, waste bin location, or variances for scheduled work hours are required, this should be stated in writing and submitted to the Owner.
- J. Submit Subcontractors information or statement that subcontractors will not be required or used during this project. This statement should also include that if it becomes necessary to use a subcontractor during this project that the subcontractor will not be allowed to perform work until all required documentation has been submitted for review by the Owner or HMS, Inc., and the Contractor receives written approval for use of the subcontractor on this project.
- K. Submit a complete list of all rented equipment, or equipment expected to be rented from an outside contractor for use in "Regulated Areas," "Work Areas," or "Containments," where the equipment may be exposed to elevated levels of airborne asbestos. If no equipment is to be rented a statement should be submitted stating no rental equipment will be used on the project. The statement should also include that, if it becomes necessary to use rented equipment, written statements from each rental company will be provided to the Owner prior to its use, indicating the rental company's acknowledgment that the equipment is provided for and may be used in areas where airborne levels of asbestos may be present.
- L. Submit emergency and non-emergency telephone numbers for the appropriate Police, Hospital, and Fire Departments. This list of numbers shall also include the name, pager or cell phone numbers of the onsite supervisor and his immediate company supervisor.
- M. Submit detailed written directions from the project site to the medical facility to be used in case of an emergency. Also include a map which sufficiently shows the route to be taken from the site to the designated medical facility.
- N. Submit written emergency procedures pertinent to the work to be performed and which can be implemented by site personnel if the need arises.
- O. Submit detailed information on preparation of work area, personal protective equipment, employee experience, training and assigned responsibilities during the project. Also list decontamination procedures for personnel, work area and equipment, abatement methods and procedures, required air monitoring program, procedures for handling and disposing of waste materials and procedures for final decontamination and cleanup.
- P. Submit a detailed work schedule. The schedule shall have, as a minimum, the work area and the day/month for beginning and terminating work in each work area. During progress of work, it shall be the Contractor's responsibility to keep the schedule current and up to date.
- Q. Submit to the Owner shop drawings, on projects where requested in the Scope of Work, for layout and construction of decontamination enclosure systems and barriers for isolation of the work area as detailed in this specification and required by applicable regulations.
- R. Submit Material Safety Data Sheets (MSDS) for any and all applicable materials, supplies, etc. These documents must be legible and completely reveal information required to be communicated to the Contractor's employees, visitors, and Owner Representatives.

- S. Submit manufacturers' certifications that high efficiency particulate air (HEPA) vacuums, pressure differential units and other local exhaust ventilation equipment conform to ANSI Z9.2-79.
- Submit manufacturer's documentation pertaining to the capability of waste water filters to filter particles of 1.0 micron in size.
- T. Submit name of laboratory/person to be used for Phase Contrast Microscopy (PCM) analysis and copy of current NVLAP Certificate of Accreditation (if applicable), and most recent NIOSH Proficiency Analytical Testing Program results.
- U. Submit a written statement that OSHA monitoring will be performed for all asbestos-related activities performed during this project. This statement must be on company letterhead, dated, include name of the site or project being worked on, and signed by an authorized agent of the company performing the asbestos-related work.
- V. With the Owner's representative, inspect the premises wherein all abatement and abatement related activities will occur and submit a statement signed by both, agreeing on building and fixture condition prior to the commencement of work.
- W. Submit a copy of the Contractor's Injury and Illness Prevention Program
- X. Submit a copy of written Respiratory Protection Program

2.31b Pre-Start Submittals-Contractor Waste Documentation

- Section 7, C. Submit copy of waste transporters Department of Toxic Substances Control, Hazardous Waste Transporter Registration if hazardous asbestos-containing waste is to be removed during the project. If hazardous asbestos-containing waste will not be generated submit the name, address, and registration information for the waste hauler to be used for transporting the waste.
- Section 7, D. Submit documentation listing the name and site address of the waste facility designated to receive asbestos-containing waste generated during this project. This documentation shall also include the EPA identification number, and a copy of the current permit authorizing the waste facility to accept and dispose of asbestos-containing waste.

2.31c Pre-Start Submittals-Worker Certifications (Section 5, Letter B)

Submit documentation satisfactory to the Owner that the Contractor's employees, including foremen, supervisor, and any other company personnel or agents who may be exposed to airborne asbestos fibers or who may be responsible for any aspects of abatement activities, have received required US EPA AHERA training.

Submit documentation from physician that all employees or agents who may be exposed to airborne asbestos in excess of background levels, action level, or the PEL have been provided with an opportunity to be medically monitored to determine whether they are physically capable of working while wearing the respirator required without suffering adverse health effects. In addition, document that personnel have received medical monitoring as required by Cal/OSHA regulations. The Contractor must be aware of and provide information to the examining physician about unusual conditions in the workplace environment (e.g., high temperatures, humidity, chemical contaminants) that may impact on the employee's ability to perform work activities.

Submit documentation of respirator fit-testing for all Contractor employees and agents who must enter any work area where asbestos-containing materials may or will be impacted. This fit-testing shall be in accordance with qualitative or quantitative procedures as required by OSHA regulations or be quantitative in nature. Documentation pertaining to NIOSH approvals for all respiratory protective devices utilized on site shall also be included.

Submit each of the following and other pre-abatement documents required above, unless exempted in the scope of work or the bidding requirements, prior to the start of abatement. This list is to be used a checklist only and specific requirements are outlined in Sections 2.31a, b, and c of the General Requirements.

2.31a Checklist

- A. _____ Notification to Regional Air Resource Board, Regional EPA, or local APCD/AQMD
- B. _____ Notification to CAL/OSHA (prior to start)
- D. _____ Contractor notification to Local Police, Hospital, Fire Department
- E. _____ State Contractor's license with asbestos certification
- F. _____ Contractor Cal/OSHA Registration
- G. _____ Notification of Prior Environmental Citations/Legal Proceedings/Contract Termination
- H. _____ Insurance Certificate
 - a) General liability
 - b) Asbestos liability certificate
 - c) Automobile Insurance
 - d) Workers' compensation insurance
 - e) Client and HMS, Inc. named as additional insured
- H. _____ Payment or Performance Bonds (if required)
- I. _____ City permits e.g. parking or dumpster (when required)
- J. _____ Names of all Subcontractors, license numbers and copies of general liability insurance with a minimum coverage of \$1,000,000.00. Client & HMS, Inc. named as additional insured.
- K. _____ List of Rental Equipment and acknowledgment from Rental Company
- L. _____ Emergency and non-emergency phone list
- M. _____ Written Directions/Map to nearest Hospital
- N. _____ Written emergency plan
- O. _____ Written Work Plan
- P. _____ Project Schedules
- Q. _____ Contractor Map/Drawings for Containment Setup

- R. _____ Material Safety Data Sheets
- S. _____ Manufacturers' Equipment Specification Sheets
- T. _____ Contractor Laboratory Accreditations
- U. _____ Contractor OSHA Air Monitoring Statement
- V. _____ Pre-Start Site Condition Statement
- W. _____ Contractor Injury and Illness Prevention Program
- X. _____ Contractor Written Respiratory Program

2.31b Checklist

- _____ Name and number of transporters
- _____ Name and EPA number of Waste Sites

2.31c Checklist

- _____ Training records - AHERA (Supervisor and worker)*
- _____ Respiratory fit tests for each employee*
- _____ Medical records for each employee*

Note *No contractor worker will be allowed inside containment prior to verification of AHERA, respirator and medical documentation. This verification must either be onsite or faxed to HMS, Inc.'s office prior to entry.

2.32 Prestart Submittals - Owner

Owner shall provide to the Contractor prior to commencement of work:

- a. Any available pre-abatement air sampling data to Contractor.
- b. List of Owner's employees/agents who will or may require worksite access.
- c. Data on equipment access protection and/or shutdown procedures.

2.4 Submittals During the Work Process

The following documentation shall be submitted to the HMS, Inc. Project Manager:

- A. The contractor shall submit daily- a copy of the worker roster identifying all employees onsite and the hours worked.

- B. The contractor shall submit daily - a copy of a one page summary of job progress. This summary must include a brief description of the work completed at the site(s), number of employees, and any issues that arose. This summary is in addition to the daily documentation required to be submitted by OSHA and AHERA regulations and other HMS, Inc. specifications.
- C. The contractor shall submit daily - copies of work site entry/exit logbooks with information on worker and visitor access.
- D. The contractor shall submit daily - copies of the air-differential manometer readings
- E. The contractor shall submit results of air sampling data collected during the course of the abatement including OSHA compliance air monitoring results. Contractor shall submit sample results within 72 hours of collection of the samples for samples to be considered valid indicators of employee exposures within containment. Lack of valid exposure assessments may, at HMS, Inc. Project Manager's discretion, result in the contractor being required to raise worker personal protection levels.
- F. Submit weekly copy of on-site safety meeting documentation. Each safety meeting must be signed by all employees working on the project for that week.
- G. Proof of DOP or equivalent (Challenge) testing of HEPA-filtered units
- H. Contractor shall submit copies of any Regulatory Agency Inspection/Enforcement Documents
- I. Accident Report Forms
- J. Other Contract Documents as required by Scope of Work
- K. Construction Meeting Minutes

2.41 Submittals During the Work Process-Waste Disposal (Section 7)

- A. The contractor shall submit copies of all transport manifests, Land Ban Certifications, trip tickets, weights and disposal receipts for all asbestos hazardous waste materials.
- B. The contractor shall submit copies of all transport manifests, trip tickets, weights and disposal receipts for all asbestos non-hazardous waste materials.

2.5 Clean-Room Area Postings

Postings may be in a prominent area adjacent to the clean room, but must be visible to workers entering and exiting the containment.

List of persons authorized to enter restricted area. The list shall include, among others, the following names with addresses and phone numbers:

Contractor	Testing Laboratory
Air-sampling Professional	Owner's representatives
Asbestos Project Manager	Any other designated by the Owner
Regulatory Agency Personnel	

A copy of the daily entry/exit log book shall be maintained in the clean room area of the worker decontamination system and provided to the HMS, Inc. Project Manager weekly or as otherwise requested.

Telephone numbers, other than 911, of all emergency response personnel shall be prominently posted in the clean change area and equipment room. The locations of the nearest telephones shall be indicated on a map or diagram.

Written emergency procedures shall be posted in the clean room.

Written entry/exit procedures shall be posted in the clean room and equipment room. (See Section 9)

All of the contractor's personnel and area air sampling results shall be posted in the clean room area within 72 hours of collection, unless otherwise noted.

A copy of the CAL-OSHA and EPA or Local APCD notification shall be posted in the clean room area.

A CAL-OSHA Information poster and a CAL-OSHA Construction Site poster shall be posted in the clean room area.

Copies of Material Safety Data Sheets (MSDS) for all materials onsite shall be posted in the clean room area. Bag out/load out/waste transfer procedures must be listed in writing at the load out exit.

A copy of the contractor's written Respiratory Protection Program shall be posted in the clean room.

2.6 Job Site Documents

The following shall be available at each job site:

1. List of all AHERA-accredited workers and supervisors entering the regulated area.
2. An updated list of all contractor and subcontractor employees who have worked on this job.
3. All contract specifications, Scope of Work, addendums, change orders, etc.. Contractor competent person must sign a document stating he has full knowledge of the Scope of Work and contract specifications.
4. Written Injury and Illness Prevention Program.
5. Training records.
6. Medical records.
7. Written Respiratory Protection Program
8. Fit test records for all contractor employees

2.7 Project Close-out Documentation and Submittals

The Contractor shall generate a demolition "as built" drawing detailing all walls, floors, ceilings, mechanical items, plumbing, wiring and structural components which were removed, to what extent each of these items was removed (e.g. entire wall demolished from floor to ceiling), and in what areas. The contractor must provide this drawing to the Owner and HMS, Inc. at the conclusion of the interior asbestos abatement activities when required in the Scope of Work or requested by HMS, Inc. or Owner. Digital pictures of remaining conditions would be helpful, but are not required.

Unless submitted during the project, the Contractor shall submit the following post-job submittals to the Owner within thirty (30) days of the completion of asbestos abatement work.

_____ Copies of revised notifications to regulatory agencies.

- Receipts and weight tickets from the landfill operator acknowledging the Contractor's delivery of wastes and including dates, container types and quantities, and tarred weights of material delivered, and all appropriate signatures.

- A copy of the worker/visitor log showing the following for all persons entering the work area: date, name, social security number, entering and leaving times, company or agency represented, and reason for entry. The contractor's time records will not be accepted in lieu of a worker/visitor log. Include a signed cover sheet certifying that the copy is a complete copy of the log from the job.

- Copies of all accident reports submitted during the course of work.

- A copy of worker exposure monitoring results collected in compliance with Cal/OSHA regulations (Title 8 CCR, Section 1529) including daily/representative/full-shift/breathing-zone air samples and 30-minute excursion samples. Include a cover sheet signed by an authorized representative of the testing laboratory performing the work, indicating that the data is complete and accurate.

- If applicable, a copy of the asbestos waste documentation showing dates, times, manifest numbers, quantities of wastes, types of containers removed from the work area, the hauler, and the signature of the recorder.

- A Land Disposal Restrictions Notification and Certification.

- Completed Uniform Hazardous Waste and Non-Hazardous Wasteforms including information required for the Waste Shipment Record.

- A complete record of the air filtration devices used certifying DOP testing (if performed) and printed record, indicating continuous operation and documenting differential air pressure.

- All submittals required before, during, or after the project that have not been submitted must be received by HMS, Inc. prior to HMS, Inc. signing off on contractors final payment or pay retention release.

- Copies of Prevailing Wage Certification Records (unless project is not a prevailing wage project)

SECTION 3. SITE SECURITY

The regulated area shall be restricted to authorized, trained personnel wearing appropriate personal protective equipment.

If required in the Scope of Work and whenever an entire building is placed under containment, the work area(s) under construction must be isolated from the remainder of the property and/or adjacent properties with temporary chain link fencing. This fencing does not eliminate or reduce plywood barrier requirements for any portion of containment that exists on exteriors of buildings. Temporary fencing must be supported at least once every section of fencing by concrete block or equivalent.

Unless exempted in the Scope of Work any portion of containment on the exterior of the buildings must be protected by a burglar resistant, lockable plywood structure. This structure must have a roof and be

at least 8 feet tall. This plywood barrier must be solid plywood and be constructed in a manner sufficient to withstand expected weather conditions (i.e. wind, rain, etc.). A soffit overhang may be used for the roof of this structure, barrier walls must extend completely up to soffit overhang ceiling.

Entry into the work area by unauthorized individuals shall be reported immediately to the Owner by the Contractor.

A log book shall be maintained in the clean room area of the worker decontamination system. Anyone who enters the work areas must record name, affiliation, time in, and time out for each entry. A copy of the daily log shall be provided to the HMS, Inc. Project Manager daily or as otherwise requested.

Access to the work area shall be through a worker decontamination system. All other means of access (doors, windows, hallways, etc.) shall be blocked or locked so as to prevent entry to or exit from the work area. The only exceptions for this rule are the waste loadout air-lock, and emergency exits in case of fire or accident.

Emergency exits shall NOT be locked, however, they shall be sealed with polyethylene sheeting and tape until needed. These emergency exits shall be clearly designated. They shall also have a razor knife permanently in place to facilitate emergency exit.

Contractor should have control of site security during abatement operations, in order to protect work efforts and equipment. During off-hours access to the abatement area shall be restricted by a lockable entry.

Contractor will have Owner's assistance in the enforcement of restricted access by Owner's employees.

Storage of asbestos containing debris, hazardous or not, will be such that access to it is limited to the contractor. Lockable bins shall be utilized and they shall be locked at all times except when loading occurs. No soft covers will be allowed for any storage bins.

All Owner policies and procedures regarding site security and safety shall be strictly adhered to by the Contractor.

Keys and/or lock combinations to all lockable enclosures and waste bins must be provided to the HMS, Inc. Project Manager prior to the start of abatement.

SECTION 4. EMERGENCY PLANNING

Emergency planning and procedures shall be developed by the Contractor prior to abatement initiation and agreed to by Contractor and Owner.

Emergency procedures shall be established and presented to all employees and the HMS, Inc. Project Manager prior to the beginning of any work. A written emergency plan must be posted.

Emergency planning shall include written notification of police, fire, and emergency medical personnel of planned abatement activities, work schedule and layout of work area, particularly barriers that may affect response capabilities. Emergency planning shall include considerations of fire, explosion, toxic atmospheres, electrical hazards, slips, trips and falls, and heat related injury. A copy of the written Injury and Illness Prevention Program shall be on the work site.

Employees shall be trained in evacuation procedures in the event of workplace emergencies. Telephone numbers of all emergency response personnel shall be prominently posted in the clean change area and equipment room, along with the locations of the nearest telephone indicated on a map or diagram.

At least two fire extinguishers shall be present on site. At least one fire extinguisher shall be present outside of the containment and at least one fire extinguisher shall be present inside containment. Additional extinguishers shall be distributed according to Cal/OSHA requirements or as identified in the Scope of Work.

An emergency blast horn shall be placed inside of any containment comprising more than a single building space for emergency evacuation in the event of a fire or other emergency.

If required in the Scope of Work, a means of radio communication shall be established between inside and outside of containment whenever a containment has a section(s) not directly visible from a clear-sight view window. This requirement may be met through walkie talkies or by wired communication systems. HMS, Inc. project monitor is to be given a communication device tied into communication system used by the contractors crew.

The contractor shall clearly mark emergency egress routes in brightly colored spray paint, tape, or equivalent, within the containment area. When required by the specification, or deemed necessary by the HMS, Inc. Project Manager, the contractor shall station flashlights throughout the work area to be used in the advent of an electrical power outage. Tools that can be used to cut containment poly must be placed at each emergency egress location.

Emergency exit signs, and arrows painted, taped or otherwise marked shall be located approximately three feet from the floor level. This will make signs visible for standing workers as well as workers required to crawl to emergency egress location.

In the event of a power and/or water interruption all abatement work, other than cleanup of debris on the ground, is to stop. Work disturbing asbestos cannot continue until the power and/or water is restored or the Project Manager authorizes emergency procedures

During hot working conditions, such as in an attic space during summer, or in containments where live steam or hot water lines are exposed, special attention must be given to the possibility of heat stress and burns.

In the case of fire, or other life threatening situations, all decontamination requirements are null and void. Immediate preservation of life takes precedence over decontamination requirements.

If emergency personnel (fire, police, paramedics, etc.) are called to the project site, they must be informed of the fact that the project is an asbestos abatement project and whether containment has been established and/or breached.

SECTION 5. PRE-START MEETING (See also Section 2)

The successful Bidder, his on-site supervisory personnel, and Air Sampling Professional (if applicable), representatives of the Owner, Owner's Asbestos Project Manager, and other individuals as necessary shall be present at a pre-start meeting **TIME AND PLACE AS NOTED IN THE SCOPE OF WORK OR TO BE DETERMINED.**

Responsibility for notification of building occupants regarding impending activity shall be determined at this meeting.

At this meeting the Contractor shall provide all required submittals, as indicated in Section 2, Part 2.31a, b, and c.

The Contractor's supervisory personnel must be given a complete copy of the Scope of Work, and attached abatement specifications (including these Asbestos General Requirements), and must be familiar with them prior to the pre-start meeting. Delays caused by an onsite contractor foreman not

being familiar with the requirements of these specifications will not extend the Contractor's completion date.

In addition, contractor shall be prepared to provide detailed information on preparation of work area, personal protective equipment, employee experience, training and assigned responsibilities during the project. Contractor must also be prepared to discuss decontamination procedures for personnel, work area and equipment, abatement methods and procedures, required air monitoring program, procedures for handling and disposing of waste materials and procedures for final decontamination and cleanup. A sequence of work and performance schedule, procedures for dealing with heat stress and emergency procedures shall also be submitted.

If applicable, a detailed work-area-by-work-area schedule must be submitted at this time. The schedule shall have, at a minimum, the work area and the day/month for beginning and terminating work in each work area. During progress of work, it shall be the contractor's responsibility to keep the schedule current and up to date.

SECTION 6. MATERIALS AND EQUIPMENT

6.1 Contractor Equipment and Supplies

Deliver all consumable materials in the original packages, containers or bundles bearing the name of the manufacturer and brand name (where applicable). These must be approved by the Owner.

Polyethylene (Poly) sheeting, 4-mil thick for walls and 6-mil thick for floors and all other uses, shall be provided in widths selected to minimize the frequency of joints.

All poly shall be flame-retardant, fire-rated poly. This includes all poly used for decon setups whether or not they are erected inside of the building.

Polyethylene sheeting utilized for worker decontamination enclosure shall be opaque white or black in color and each layer shall be a minimum of 6-mil thick. At least two layers shall be required. Modesty barriers are to be erected whenever and wherever the HMS, Inc. Project Manager determines one is needed.

Disposal bags shall be of 6-mil polyethylene with labels required by OSHA, DOT, Department of Toxic Substance Control regulations.

Disposal drums shall be metal or fiber board with locking ring tops to be used only if required and/or allowed by selected dumpsite.

Stick-on labels as per DOHS and OSHA requirements for disposal drums shall be provided.

Warning signs as required by OSHA shall be provided and posted per regulations.

Surfactant (wetting agent) shall be a 50/50 mixture of polyoxyethylene ether and polyoxethylene ester or equivalent, mixed and used according to the manufacturer's directions.

A sufficient quantity of pressure differential units equipped with HEPA filtration and operated in accordance with ANSI Z9.2-79 and EPA guidance document EPA 560/5-83-002 Guidance for Controlling Friable Asbestos-Containing Materials in Buildings, Appendix F: Recommended Specifications and Operating Procedures for the Use of Negative Pressure Systems for Asbestos Abatement, shall be utilized so as to meet the requirements of Section 12 of this specification.

All HEPA filtration equipment must be tested with DOP or an equivalent testing agent (see Section 12).

The contractor will provide adequate number of respirators for the work force. These respirators will include, when specified:

- a. Full face piece supplied air respirators with HEPA-filtered disconnects operated in positive pressure or pressure demand mode.
- b. Full face piece, tight-fitting, powered air-purifying respirators with HEPA-filters,
- c. Half mask or full face respirators with HEPA filters.

All respirators shall be NIOSH-approved and be equipped with supplies for immediate replacement of defective parts.

Contractor shall provide full-body disposable protective clothing, including head, body, and foot coverings, such as Tyvek, or equivalent, to all workers and authorized visitors in sizes adequate to accommodate movement without tearing. No street clothes, unless excepted by Scope of Work or other portions of this specification are allowed to be worn under disposable protective clothing.

The Contractor shall provide additional safety equipment (e.g., hard hats, eye protection, safety shoes, disposable PVC gloves), as necessary to all workers and authorized visitors.

Non-skid footwear shall be provided to all abatement workers.

A sufficient supply of scaffolds, ladders, lifts and hand tools (e.g., scrapers, wire cutters, brushes, utility knives, wire saws, etc.) shall be provided as needed. Only fiberglass ladders shall be used within the work area. Wooden ladders and wooden handled tools shall not be allowed within the work area.

Rubber dustpans and rubber squeegees shall be provided for cleanup.

A sufficient supply of HEPA-filtered vacuum systems shall be available.

The HMS, Inc. Project Manager may require the use of additional equipment if he feels the number or amount of certain items or materials is not sufficient.

Vacuums and pressure differential units shall arrive on site sealed and free of debris. Pre-filters of all pressure differential units must be new and unused.

All product data sheets and all Material Safety Data sheets (MSDS) shall be submitted for all products and materials prior to their use on the job site.

All contractor equipment and supplies must arrive on site clean and dust free. Equipment must be inspected and accepted by HMS, Inc. Project Manager as it arrives onsite. Any equipment covered with dust (no matter the source of dust), plaster debris, multiple layers of encapsulant and/or spray glue, or any other debris will not be accepted. Chipped and/or rusted equipment will not be accepted even if it is to be used outside of containment. Delays caused by a lack of clean equipment will not extend Contractor's schedule.

Equipment rejected due to a lack of cleanliness must be removed from Owner's grounds in order to be cleaned. Dirty equipment wrapped in plastic will not be acceptable.

The decision of the Owner, HMS, Inc. Project Manager or the Owner's representative on all equipment and supplies shall be final.

6.2 Rental Equipment and Supplies

Any equipment rented and delivered to the site for the purpose of conducting asbestos abatement work must be accompanied with documentation verifying that the rental agency has been notified, and acknowledges receipt of notification that the equipment being rented will be used for asbestos abatement work. This documentation must be submitted to the HMS, Inc. Project Manager prior to the equipment being delivered to the job site. Rental equipment, including scaffolding, will be held to the same standard of cleanliness as all other equipment on this project.

All rented equipment must be inspected and accepted by HMS, Inc. Project Manager as it arrives onsite. Any equipment covered with dust (no matter the source of dust), plaster debris, multiple layers of encapsulant and/or spray glue, or any other debris will not be accepted. Delays caused by a lack of clean equipment will not extend Contractor's schedule. Equipment rejected due to a lack of cleanliness must be removed from Owner's grounds in order to be cleaned. Dirty equipment wrapped in plastic will not be acceptable.

The HMS, Inc. Project Manager must be informed 24 hours prior to the delivery of any rental equipment.

The decision of the Owner, HMS, Inc. Project Manager or the Owner's representative on all rental equipment and supplies shall be final.

SECTION 7. WORK SITE FACILITIES

The Owner shall provide sanitary facilities for abatement personnel outside of the enclosed work area. To use these facilities all workers shall wear normal street clothes including pants and shirts. No 21hing suits or disposable coveralls are allowed to be worn to use the sanitary facilities.

At no-time will workers be allowed to exit the containment area, once abatement has begun disturbing asbestos, without showering prior to entering the clean chamber of the decon. (Exception to this may be made, at HMS, Inc. project manager's discretion, for Project Manager and Contractor's supervisor for conducting a clearance visual during which the HMS, Inc. Project Manager may allow street clothes to be worn under disposable overalls).

At no time shall workers exit the clean room/changing area wearing anything other than street clothes, including pants and shirt.

The Owner shall provide water for construction purposes, unless stated otherwise in the Scope of Work. Contractor shall connect to existing Owner system.

The Owner shall provide the electrical source. Contractor is responsible for all connections and disconnection of electrical power. All electrical power supplied to the containment area must be ground fault interrupter protected. Loss of power due to contractor activities will require contractor to supply electrical power at his own expense.

The Owner or its representative shall specify the waste water discharge location and location of waste bins. The owner, when applicable, shall specify acceptable routes of travel.

The Contractor shall be required to place footing materials of sufficient thickness, strength, and size under the casters, footings, and/or runners of waste bin(s) to prevent damage of property surfaces.

The contractor is responsible for all damages to Owner's property caused by the delivery, placement, or removal of a waste bin. Damaged property shall be repaired to equal or better condition than was present prior to the activity causing the damage. This may be amended in scope of work for this project.

The Owner shall specify on-site parking areas, if available, and access to the site.

SECTION 8. RESPIRATORY PROTECTION

All respiratory protection shall be provided to workers in accordance with the submitted written respiratory protection program, which includes all items as required by OSHA. This program shall be posted in the clean room of the worker decontamination enclosure system or adjacent to the clean room..

The Contractor shall ensure that all workers entering the regulated area wear appropriate respiratory protection. Respiratory protection provided workers shall be in accordance with 8 CCR 1529, and 8 CCR 5144 and the respiratory protection program submitted by the Contractor. This program shall be available at the worksite.

The HMS, Inc. Project Manager, his or her onsite representative, or the Owner or their representative may deny access to the regulated area to anyone who, in the final judgement of the HMS, Inc. Project Manager, is not properly wearing adequate respiratory protection for the project conditions. This includes but is not limited to those wearing unidentified respirators, those with improperly sealed respirators, those wearing respirators in an improper manner such as over their protective suit hood, or in any other fashion judged by the HMS, Inc. Project Manner to be improper or inadequate to protect the individual from the airborne asbestos at the project site.

The Contractor shall provide each worker needing respiratory protection with his or her own, individually identified, NIOSH-approved respirator. At a minimum, these respirators will be equipped with a P-100 series HEPA filter. The Contractor shall provide additional filter types if that becomes necessary for specific hazards discovered on the job site or if required in the contract documents.

The Contractor shall ensure that all workers use the respirator in compliance with the manufacturer's instructions for proper use and care of that product.

Workers must perform positive and negative respirator seal checks each time a respirator is put on, provided the respirator design so permits.

The Contractor shall ensure that those workers wearing powered air purifying respirators test the air flow rate according to the frequency and methods specified by the manufacturer.

Workers shall be given, at least, a qualitative fit test in accordance with procedures detailed in the Cal/OSHA requirements for all respirators to be used on this abatement project. An appropriately administered quantitative fit test may be substituted for the qualitative fit test.

The Contractor shall ensure and provide written records to the HMS, Inc. Project Manager that all workers wearing tight-fitting respirators have been appropriately fit tested in accordance with the requirements of 8 CCR 5144.

The Contractor shall ensure that nothing interferes with the seal of the respirator to the face of the worker. This includes but is not limited to facial hair, clothing, protective clothing, equipment or anything else that comes between the respirator and the face of the worker.

Use of any respirator must be in compliance with the manufacturer's instructions for proper use and care of that product.

The Contractor shall ensure that workers wear respirators underneath protective clothing

Workers conducting any work that may create an airborne release of asbestos must wear appropriate respiratory protection. This includes, but is not limited to the pre-cleaning of asbestos contamination off of furniture, equipment and floors, and the set-up of contaminated work areas.

The judgement of the HMS, Inc. Project Manager shall be final if there is a disagreement between the Owner and the Contractor regarding the need for wearing or the type of personal protection required..

In no event will a negative exposure assessment be allowed to lower respiratory protection, from that listed in the Scope of Work or required by regulation in the absence of an NEA, prior to the start of a project. Air samples used for negative exposure assessments created after the project has started must be from work conducted under this contract.

Minimum Respiratory Protection for OSHA Class I Work

Unless specified differently in the contract documents, the Contractor's employees conducting Class I work will wear tight-fitting, full-face powered-air purifying respirators for all Class I work that will take more than one hour to complete. They must wear a minimum of a half-face negative air-purifying respirator for Class I work lasting less than one hour. Contract documents may require additional respiratory protection, such as the use of supplied air respirator systems if, in the opinion of the HMS, Inc. Project Manager, the airborne asbestos levels are expected to exceed one fiber per cubic centimeter of air (1 f/cc).

After work has begun, if the Contractor wishes to lower respiratory protection requirements, such as for glovebag or other work, he or she must demonstrate to the HMS, Inc. Project Manager that personal air sampling results from that project prove that airborne fibers levels are below the Cal/OSHA Permissible Exposure Limit. The Project Manager will normally require sampling results used for this purpose to include several days of sampling taken during the work expected to generate the highest airborne levels. The Project Manager will have final authority regarding whether or not the respiratory protection may be reduced below the need for powered-air purifying respirators.

Unless stated otherwise in the contract documents, for the purposes of respiratory protection, Class I work will include the removal of materials such as gypsum board surfaces that are covered with a texturing or skim coat material that contains over one percent asbestos.

Minimum Respiratory Protection for Class II and III Work Practices

Unless specified differently in the contract documents, the Contractor's employees conducting Class II or III work will wear a minimum of half-face, air-purifying respirators. Contract documents may require additional respiratory protection, such as the use of full face air-purifying respirators or powered-air-purifying respirators.

After work has begun, if a Contractor wishes to lower respiratory protection requirements, he or she must demonstrate to the HMS, Inc. Project Manager that personal air sampling results from that project prove that airborne fibers levels are below the limit of quantification for the phase contrast microscopy method. The Project Manager will normally require sampling results used for this purpose to include several days of sampling taken during the work expected to generate the highest expected airborne levels. The Project Manager will have final authority regarding whether or not the respiratory protection may be reduced or eliminated. For example, the HMS, Inc. Project Manager may require personal samples be analyzed by TEM before determining that asbestos does not pose an airborne health risk.

Respiratory Protection for All Work Classes and Unclassified Work

Respiratory protection will always be required if thermal system or surfacing materials are disturbed or if any asbestos-containing materials will not be removed substantially intact.

The HMS, Inc. Project Manager has full authority to raise the level of respiratory protection required for access to the regulated area if in his or her judgement additional respiratory protection is required. For example, if personal air sample results collected by either the Contractor or HMS, Inc. indicate higher than expected levels, the Project Manager is authorized to increase the level of required respiratory protection.

The HMS, Inc. Project Manager will determine if the increased respiratory protection is due to new, unexpected developments such as the discovery of new materials, or if the increase is due to the Contractor failing to follow good work practices. The judgement on this matter by the HMS, Inc. Project Manager will be final.

The Owner is not responsible for increased costs or delays resulting from the need to increase respiratory protection should the reason for the increased respiratory protection be due to the Contractor's failure to adequately utilize wet work methods and/or the prompt cleanup of debris.

The Contractor may only implement respiratory protection changes after receiving written approval for the change from the HMS, Inc. Project Manager.

Waste transport and disposal personnel must wear at least half-face, air-purifying respirators when handling intact sealed bags. Powered-air purifying respirators must be worn if waste containers spill, break, or in any other fashion require a Class I work cleanup be performed.

The contractor shall comply with the respiratory protection requirements listed in 8 CCR 1529 until that date that 8 CCR 5144 includes assigned protection factors for all respirators. The following list of respirators and their assigned "protection factors" shall be the criteria for the selection of respiratory protection.

RESPIRATOR SELECTION	PROTECTION FACTOR
Half-mask air purifying respirator equipped with high efficiency particulate air (HEPA) filter - P-100	10
Full-face air purifying respirator equipped with HEPA filter - P-100	10
Half or full-face, powered air purifying respirators equipped with HEPA filter - P-100	1,000
Type C continuous flow supplied air	1,000
Full facepiece, supplied air respirator operated in pressure demand mode	1,000
Full facepiece, supplied air respirator operated in pressure demand mode, equipped with an auxiliary positive pressure self-contained breathing apparatus	10,000

Workers shall be provided, as a minimum, with personally issued and marked respirators equipped with high efficiency particulate air (HEPA) filters approved by NIOSH to be worn in the designated work area and/or whenever a potential exposure to asbestos exists. Owner or its representative may refuse entry to the work area to a worker with an unidentified respirator.

Sufficient filters shall be provided for replacement as required by the workers or applicable regulations.

Disposable respirators shall not be used.

No worker shall be exposed to levels estimated to be greater than 0.01 f/cc inside their respirator as determined by the protection factor of the respirator worn and the work area fiber levels.

Whenever type C respirator protection is used, compressed air systems shall be designed to provide air volumes and pressures to accommodate respirator manufacturer specifications. The compressed air system shall have a reservoir of adequate capacity to allow the escape of all respirator wearers from contaminated areas in the event of compressor failure.

Compressors must meet the requirements of 29 CFR 1910.134(d).

Location of compressors must be approved by Owner for exhaust and noise considerations.

Compressors must have an in-line carbon monoxide monitor and periodic inspection of carbon monoxide monitors must be documented. Documentation of adequacy of compressed air systems/respiratory protection systems must be retained on site. This documentation will include a list of compatible components with the maximum number and type of respirators that may be used with the system. Periodic testing of compressed air shall insure that systems provide air of sufficient quality (Grade D breathing air). Documentation of this testing, including a description of the process used to perform the test and results of each test must be submitted to the HMS, Inc. Project Manager weekly.

Whenever powered air-purifying respirator protection is used, a sufficient supply of replacement batteries and HEPA filter cartridges shall be provided to the workers. At least one spare fully charged battery must be available on-site for each PAPR in use. The flow rate delivered to the face piece shall be checked and recorded by the Contractor on the sheet provided by the HMS, Inc. Project Manager each time a worker dons the respirator. Written respiratory protection program must detail how this testing is to be performed by each employee or the onsite supervisor. The Contractor shall ensure that the flow rate for PAPRs meets the requirements listed in 8 CCR 1544 regarding tight and loose fitting respirators as appropriate. The Contractors shall also ensure that PAPRs are worn, checked and maintained according to the directions of the manufacturer.

During encapsulation operations or usage of other organic base aerosols (e.g. spray glue, expanding foam, etc.) workers shall be provided with combination organic vapor/HEPA filter respirator cartridges.

SECTION 9. PERSONNEL PROTECTION REQUIREMENT AND TRAINING

Prior to commencement of abatement activities all personnel who will be required to enter the work area or handle containerized asbestos containing materials must have received adequate training in accordance with the OSHA, EPA AHERA and NESHAP regulations.

Special on-site training on equipment and procedures unique to this job site shall be performed by the Contractor as required by law or recommended by the equipment manufacturer.

The Contractor shall provide training in emergency response and evacuation procedures.

See Section 8 for respiratory protection requirements.

Disposable clothing, including head, foot and full body protection, shall be provided in sufficient quantities and adequate sizes for all workers and authorized visitors. Damaged coveralls shall be immediately repaired or replaced.

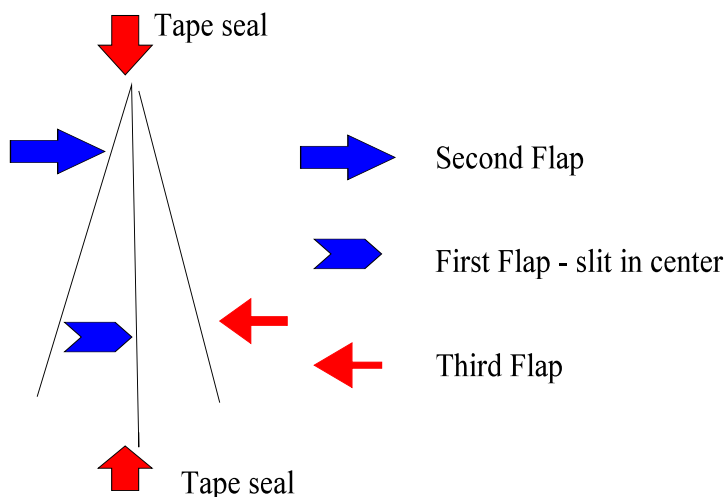
Hard hats, protective eye-wear, proper protective gloves, rubber boots and/or other footwear shall be provided by the Contractor as required for workers and authorized visitors. Safety shoes may be required for some activities.

Contractor personnel shall not wear street clothes or clothes of any type underneath the protective disposable clothing. Upon exiting the work area, no items worn in the work area, such as clothing, personal protective gear, footwear, or hair coverings will be allowed to be worn past the shower of the decontamination unit. Contractor worker(s) have the option of wearing disposable undergarments underneath protective clothing, or they may be nude underneath the protective disposable clothing.

Each time the worker(s) enter the work area they will don new disposable clothing and undergarments. Street clothes (including underwear and shoes) shall not be allowed inside the work area, except during visual clearance activities.

The HMS, Inc. Project Manager may use personal judgement to allow authorized personal to wear street clothes under protective clothing during the construction of final visual or other short-duration visits into the regulated area during times which asbestos is not being disturbed and gross debris is not present. In these situations, approved by the HMS, Inc. Project Manager, the authorized person shall deposit the protective clothing on the dirty side of the decontamination system and may proceed through the shower and clean room wearing the clothes they wore under their protective clothing.

SECTION 10. WORKER DECONTAMINATION ENCLOSURE SYSTEMS (WASTE TRANSFER DECON)



Worker decontamination enclosure systems shall be provided at all locations where workers will enter or exit the work area. One system at a single location for each contained work area is preferred. Enclosure systems may be constructed out of metal, wood or plastic support as appropriate. Plans for construction, including materials and layout, shall be submitted as shop drawings and approved, in writing, by the Owner or its representative prior to work initiation. Detailed descriptions of portable, prefabricated units, if used, must be submitted for the Owner's approval. The worker decontamination enclosure system shall consist of at least a clean room, a shower room, and an equipment room. . All decontamination units shall have, at least, two layers of 6-mil polyethylene sheeting.

Unless stated otherwise in the Scope of Work, all decontamination units, pressure differential units, and other portions of containment outside the building shall be covered with a 2"x 4" wood studs and 1/2" plywood enclosure for security. Pressure differential units shall be secured as necessary to the building or ground. Exhaust openings shall have metal grates to prevent objects from being put into the exhaust openings. Pressure differential exhaust shall be exhausted to an area acceptable to HMS, Inc. Project Manager and mounted through a solid surface, such as plywood. Entry and exit from all airlocks and decontamination enclosure system chambers shall be through doorways designed to restrict air movement between chambers when not in use.

Each decontamination chamber shall have, at least, a four inch lip of poly from the floor up the wall to prevent possible transfer of water and debris between chambers. Excess plastic at the corners of this floor is to be fitted to the sides of the chamber by folding plastic and taping, as opposed to cutting away excess poly and taping seams. In addition to this four inch lip of poly the shower chamber shall have an overflow pan, in which the shower unit sits, that is capable of holding two inches of water. The filter system and any hose connections transferring contaminated water shall be located in a secondary containment, such as a metal pan. Any leakage shall be double-bagged or re-filtered. The dirty side shall have an extra layer of 6-mil polyethylene sheeting on the floor as a "drop cloth" and it shall be replaced at least daily.

The clean room shall be sized and equipped to adequately accommodate the work crew and personal protection equipment. Minimum size of clean and dirty chambers shall be three feet by three feet, minimum size may be increased by requirements in the Scope of Work. Lighting, heat and electricity shall be provided as necessary for comfort. This space shall not be used for storage of tools, equipment or materials (except as specifically designated), nor as office space.

Shower room shall contain one or more operable showers as necessary to adequately accommodate workers, minimum of one shower for every ten (or portion there of) workers. The shower enclosure shall be constructed to ensure against leakage of any kind. In addition, the shower shall be a separate unit from the decon walls. The shower unit cannot be made from poly. Metal or hard plastic is acceptable. An adequate supply of soap, shampoo and towels shall be supplied by the Contractor and available at all times. Shower water shall be drained, collected and filtered through a system with at least 1.0 micron particle size collection capability.

The shower pan in the shower chamber shall be, at least, 3' x 3' in size. The shower chamber shall be constructed so that no water from the shower can spray out of the chamber, nor any water run down the sides of the poly and miss the pan. The shower chamber dimensions shall be determined by the size of the shower pan but are not to be smaller than 3' wide by 3' long by 7' tall.

Abatement work will be stopped if decon is not kept in acceptable condition.

Storage or consumption of food and/or beverages shall not be permitted inside the containment or within any of the decontamination chambers. Food or drink consumption within containment will result in the abatement worker(s) dismissal from the site for the duration of the project.

SECTION 11. WORKPLACE ENTRY AND EXIT PROCEDURES

All workers and authorized personnel shall enter the work area through the worker decontamination enclosure system.

All personnel who enter the work area must sign the entry log, located in the clean room.

All personnel, before entering the work area, shall read and be familiar with all posted regulations, personal protection requirements (including workplace entry and exit procedures) and emergency procedures. A sign-off sheet shall be used to acknowledge that these have been reviewed and understood by all personnel prior to entry.

All personnel shall proceed first to the clean room (or area), remove all clothes and don appropriate

respiratory protection and disposable coveralls, head covering and foot covering. Hard hats, eye protection and gloves shall also be worn, as appropriate. Clean respirators and protective clothing shall be provided and utilized by each person for each separate entry into the work area.

Personnel wearing designated personal protective equipment shall proceed from the clean room through the shower room and equipment room to the main work area.

Before leaving the work area all personnel shall remove gross contamination from the outside of respirators and protective clothing by brushing and/or wet-wiping procedures. (Small HEPA vacuums with brush attachments may be utilized for this purpose.) Each person shall clean bottoms of protective footwear in the walk-off pan just prior to entering the equipment room.

Personnel shall proceed to equipment room where they remove all protective equipment except respirators. Deposit disposable clothing into appropriately labeled containers for disposal. All clothing items, including underwear or hair coverings must be removed and disposed of prior to entering the shower.

Reusable, contaminated footwear shall be stored in the equipment room when not in use in the work area. This footwear shall be cleaned prior to being removed from the work area. Placing footwear in two 6 mil poly bags is sufficient for moving from one containment to another, but not for moving from one site to another. Contaminated footwear shall remain within the equipment room for the duration of the project. Cleaned footwear may be removed from containment, but must be approved by HMS, Inc. Project Manager.

Still wearing respirators, personnel shall proceed to the shower area, clean the outside of the respirators and the exposed face area under running water prior to removal of respirator, then shower and shampoo to remove residual asbestos contamination. Various types of respirators will require slight modification of these procedures.

After showering and drying off, proceed to the clean room and don clean disposable clothing if there will be later re-entry into the work area, or street clothes if it is the end of the work shift.

These procedures shall be posted in the clean room and equipment room.

SECTION 12. DIFFERENTIAL AIR PRESSURE SYSTEMS (See also Section 13)

12.1 Negative Pressure Requirements

Negative pressure shall be maintained at -0.04" water differential at all times during abatement activities, including entry/exit and bag out procedures. Contractor shall assign crew members to determine cause of loss of pressure any time containment's negative pressure drops below -0.04" water differential. All work will be stopped in any containment for which the negative pressure drops below -0.025" water differential, until problem is resolved and pressure returns to -0.04" water differential or better.

In the event that containment cannot be brought up to -0.04" water differential, abatement contractor must increase number of negative pressure differential units until 10 air changes per hour is taking place. If this fails to raise negative pressure to acceptable levels, contractor may request in writing a reduction in negative pressure requirements. If HMS, Inc. project manager agrees that contractor has tried all possible remedies, HMS, Inc. project manager may grant reduction in negative pressure requirement. HMS, Inc. project manager is under no obligation to grant this request.

All negative pressure units installed, but not operating, must be sealed at both the exhaust location and the intake of the machine. This will prevent back draft which could allow asbestos fiber contamination from the HEPA filter.

12.2 Challenge Testing (DOP or equivalent)

Contractor shall provide differential air pressure systems for each work area in accordance with Appendix J

of EPA "Guidance for Controlling Asbestos-Containing Materials in Buildings," EPA 560/5-85-024.

All HEPA filtered systems used on this project shall be tested and certified by an independent company, approved in advance by HMS, Inc., on-site and prior to use. All vacuums and pressure differential units shall meet A NSI Z9.2, using an appropriate testing agent. Documentation of these tests shall be provided to the HMS, Inc. Project Manager prior to the use of any HEPA system.

DOP, or equivalent, testing must be conducted on-site, unless stated otherwise in the Scope of Work. All HEPA filtered units, including but not limited to, vacuums, air pressure differential units, and make-up air filters must be tested onsite. Testing of air pressure differential units must include testing of the wheel attachments, control panel, and seam and rivets of the housing, as well as the HEPA filter itself. A unit which passes DOP testing across the filter, but which fails testing for any component of the housing may be certified as an "Exterior of Containment HEPA Filtered Unit" only.

All HEPA equipped equipment to be used on the project must be delivered to the site empty of all debris, clean and free of dust, and in full operating condition. Covering dirty units with poly, other than the HEPA filter surface, will not be acceptable.

DOP or equivalent testing must be conducted by an independent testing company approved in advance by HMS, Inc. Contractors may not test their own equipment.

DOP or equivalent testing is required when any HEPA filters are changed.

All HEPA filtered machines, including but not limited to vacuums and negative pressure differential machines, shall be utilized in the manner in which they were DOP tested.

Any negative pressure unit turned upside down, or on its side, must be returned to an upright position and re-DOP tested. Negative pressure units shall not be used on this project while laid on their side or upside down.

In case of a power outage, contractor must seal exhaust ducts against back draft into containment.

All negative air units will have the filter sealed with poly and tape before being shutdown to prevent back draft.

12.3 Differential Pressure Recording Instruments

Differential air pressure shall be continuously monitored by Contractor using a recording instrument, Dwyer Instrument Co., "Photohelic Gauge" or equivalent, connected to an appropriate circular chart recorder or a comparable recorder that maintains a record of dates, times and pressure differentials. The location of the pressure measurement tap shall be approved in advance by the HMS, Inc. Project Manager. During the operation of the unit, circular charts shall be collected on a daily basis, dated, and signed by an OSHA Competent Person present on site. Pressure differential shall be checked a minimum of every hour during the work shift by a person familiar with the operation of the pressure-differential-filtration units, as well as the recording device. Each check shall be documented with a time and date notation on the circular chart and "Manometer Readings" form along with the initials of the person performing the check. A copy of the circular chart record shall be submitted to the HMS, Inc. Project Manager on a daily basis. The circular chart shall record time, date, pressure differential, coordinates, and location.

In the event the manometer recording mechanism fails, the Contractor shall be responsible for manually recording the pressure differential at fifteen (15) minute intervals. The log shall be kept until the recording device is operational. The log shall be provided to the HMS, Inc. Project Manager on a daily basis.

The "Manometer Readings" form shall be a record of dates and times of pressure readings and instrument stability.

Connect recording instrument to an audible alarm which will activate at pressure differential of 0.025 inches water gauge air pressure. Defective or non-operating instrumentation may require temporary stoppage of work until instrumentation is replaced.

For larger projects at least one manometer station shall be in place for each 25,000 square feet of containment space.

12.4 Differential Pressure System

Exhaust air shall be vented only to the exterior of the building at locations approved by the Owner unless otherwise noted or directed in the Scope of Work or by arrangement with the HMS, Inc. Project Manager. Such outlets shall not be near or adjacent to other building intake vents or louvers or at entrances to building. Openings made in the enclosure system to accommodate these units shall be made air-tight with tape and/or caulking as needed. They shall NOT be exhausted into occupied areas of the building. Twelve inch (12") extension ducting shall be used to reach from the work area to the outside when required. Careful installation by the contractor, air monitoring by HMS, Inc. and daily inspections by the contractor shall be done to ensure that the ducting does not release fibers into uncontaminated building areas.

The work area shall have a differential air pressure of -0.04 inches water differential whenever the work is being performed including removal, gross clean-up, encapsulation of surfaces, bag-out operations and worker entry and exit procedures. If pressure differential ever drops below -0.025 inches water differential, all work, other than cleanup of waste on the floor of containment, must be halted until reason for pressure differential drop has been determined and corrected.

Only unused pre-manufactured, reinforced flex ducting shall be used within the containment area for exhausting of filtered air. Contractor may not construct ducting using poly or other materials.

All interior of containment air pressure differential units and flex ducting must be wrapped in poly during all abatement activities. This poly wrap is to be removed after "finish detail" work has been completed, but prior to clearance visual.

Flex ducting must be supported by solid surface at point of exit from containment. This may require contractor to install plywood, or similar, structure for exhaust point.

SECTION 13. EXECUTION

13.1 Execution

Contractor and Owner shall investigate the work area and agree (in writing, if necessary) on the pre-abatement condition of the work area.

Contractor shall post danger signs meeting the OSHA specifications at locations and approaches to locations where airborne concentrations of asbestos may exceed ambient background levels.

When electrical supply within area of abatement poses a hazard, contractor, in conjunction with the Owner, shall shut down and lock out electric power to all work areas. Contractor shall provide temporary power and lighting sources, ensure safe installation (including ground faulting) of temporary power sources and equipment by complying with all applicable electrical code requirements and OSHA requirements for temporary electrical systems. Contractor shall have a licensed electrician shut down and lock out electric power, and setup temporary power and lighting sources. All cost of electricity shall be paid for by the Owner unless specified differently in the Scope of Work. Cost for set-up of temporary power is the responsibility of the abatement contractor unless specified differently in the Scope of Work.

When plumbing is required to be altered or becomes damaged, contractor shall have a licensed plumber disconnect and cap all water as necessary within the work area. Water shall be provided by the Owner from a location near the work area, but not necessarily within the work area.

Shut down and lock out all heating, ventilating and air-conditioning-system (HVAC) components that are in, supply, or pass through the work area. Seal all intake and exhaust vents in the work area with tape and 6-mil polyethylene within the work area (interior) and on the exterior of the building. Also seal any seams in system components that pass through the work area.

Pre-clean all fixed objects in all work areas using HEPA-filtered vacuums and/or wet-cleaning techniques as appropriate or deemed necessary by the HMS, Inc. Project Manager. Careful attention must be paid to machinery behind grills or gratings where access may be difficult but contamination significant. After pre-cleaning, enclose fixed objects in 6-mil polyethylene sheeting and seal securely in place with tape.

Pre-clean all surfaces in all work areas using HEPA filtered vacuums and/or wet cleaning methods as appropriate. Do not disturb asbestos-containing materials during the pre-cleaning phase.

Unless otherwise stated in the Scope of Work or by agreement with the HMS, Inc. Project Manager all non-asbestos-containing materials left in the work area shall be covered by two layers of 6-mil polyethylene sheeting. If any non-asbestos containing materials become contaminated with asbestos during removal activities these materials shall be disposed of as asbestos-containing materials by the Contractor. The HMS, Inc. Project Manager shall determine the friability of these materials prior to disposal. These materials shall be manifested appropriately.

Contractor shall seal all windows, doorways, elevator openings, corridor entrances, drains, ducts, grills, grates, diffusers, skylights and other openings between the work area and uncontaminated areas outside of the work area. These openings must be sealed with 6-mil polyethylene sheeting and tape. These protective layers shall be in addition to the two polyethylene layers on floors, ceilings and walls. These openings are referred to as critical barriers. Seal all cracks in critical barrier areas with tape, caulk, or foam prior to sealing critical barriers.

A critical barrier only, negative pressure check shall be required prior to the set-up of interior containment. Prior to the Contractor covering critical barriers with additional layers of wall, floor, or ceiling poly, the installation and integrity of critical barrier seals must be approved by the HMS, Inc. Project Manager. Wall, floor and ceiling poly installed prior to the critical barrier negative pressure check shall be removed by the Contractor if deemed required by the HMS, Inc. Project Manager in order to properly test critical barriers.

All items attached to asbestos-containing materials and items which cannot be removed without disturbing asbestos-containing materials shall be removed by the Contractor after establishment of containment and negative pressure. If these items are to be "saved and returned" or "reused" by the Owner, the Contractor must remove and clean them without damage. These items must be cataloged using the attached "Return Item Inventory Sheet" provided by HMS, Inc.

Contractor shall cover floors in the work area with polyethylene sheeting. Floor shall be covered with a minimum of two layers of 6-mil polyethylene sheeting. Plastic shall be sized to minimize seams. A distance of at least six (6) feet between seams is sufficient. DO NOT locate any seams at wall/floor joints. Floor sheeting shall extend at least twelve inches (12") up the sidewalls of the work area. Sheeting shall be installed in a fashion so as to prevent slippage between successive layers of material. A layer of 10-mil polyethylene sheeting and/or plywood may be required by the HMS, Inc. Project Manager to protect certain flooring materials -- carpets, hardwood floors, tiles, etc. At no time will wall or ceiling materials be permitted to be dropped onto unprotected floors. This includes areas where the floor surfaces contain asbestos.

Contractor shall cover walls in the work area with polyethylene sheeting. Walls shall be covered with a minimum of two layers of 4-mil polyethylene sheeting. Plastic shall be sized to minimize seams. Seams shall be staggered and separated by a distance of at least six feet (6'). DO NOT locate any seams at wall/floor joints. Wall sheeting shall overlap floor sheeting by at least twelve inches (12") beyond the wall/floor joint to provide a better seal against water damage and for pressure differential maintenance. Wall sheeting shall be secured adequately to prevent it from falling away from the walls. This may require additional support/attachment when pressure differential systems are utilized.

Contractor shall cover ceilings in the work area with polyethylene sheeting. Ceilings shall be covered with a minimum of two layers of 4 mil polyethylene sheeting. Plastic shall be sized to minimize seams. Seams shall be staggered and separated by a distance of at least six feet (6'). DO NOT locate seams at wall/ceiling joints.

Ceiling sheeting shall overlap wall sheeting by at least twelve inches (12") beyond the ceiling/wall joint to provide a better seal against water damage and for pressure differential maintenance. Ceiling sheeting shall be secured adequately to prevent it from falling away from the walls. This may require additional support/attachment when pressure differential systems are utilized.

The contractor shall add clear sight windows in the containment walls at least 1' x 2' in size. The HMS, Inc. Project Manager will approve quantity and placement of these inspection windows. HMS, Inc. Project Manager has the right to require more clear sight windows or require placement of windows to be altered.

The equipment room shall be used for storage of equipment and tools at the end of a shift after they have been decontaminated using a HEPA-filtered vacuum and/or wet-cleaning techniques as appropriate. A walk-off pan shall be located in the work area just outside the equipment room. A six-mil. disposal bag or a drum lined with a labeled 6-mil polyethylene bag for collection of disposable clothing shall be located in this room.

Contractor shall obtain written containment visual clearance from HMS, Inc. Project Manager prior to the start of abatement in any and all containments.

Contractor is not responsible for normal tape damage due to tape requirements for containment set-up,

unless specifically mentioned in the Scope of Work. Contractor is responsible for excessive ~~tape damage~~ and damage from spray glue application, staples, nails, hooks, etc. installed to support containment.

Install and initiate operation of pressure differential equipment as needed to maintain differential-air pressure of -0.040 inches of water. There shall be a sufficient number of differential air pressure units to maintain a minimum of four air changer per hour. All pressure differential units shall have pre-filters at the intake of the system which must be changeable from inside the containment area. Openings made in the enclosure system to accommodate these units shall be made airtight with tape and/or caulking as needed. They shall NOT be exhausted into occupied areas of the building. Twelve inch (12") extension ducting shall be used to reach from the work area to the outside when required. Careful installation, air monitoring and daily inspections shall be done to ensure that the ducting does not release fibers into uncontaminated building areas.

All flex ducting, protected by poly during abatement or not, pre-filters and intermediate filters shall be manifested and discarded as friable, hazardous asbestos-containing materials. A flex tube may be used for multiple containments on the same job as long as it is moved from one containment to another in two 6 mil poly bags

Once the containment has been constructed and reinforced as necessary with pressure differential units in operation as required, the contractor shall test the enclosure for leakage utilizing smoke tubes. The containment shall be repaired or reconstructed as needed.

All HEPA systems used on this project shall be tested and certified onsite by an independent company prior to use. (See section 12)

Contractor shall submit logs documenting filter changes for each pressure differential unit.

Contractor shall clearly identify and maintain emergency and fire exits from the work area.

Work shall not begin each day until:

- a. Enclosure systems, or modifications thereof, have been designed and built by the contractor and each step approved by the APM. If design of containment is to be altered in any way, after it is approved by the HMS, Inc. Project Manager, a written explanation of how and why the containment is to be altered must be submitted to the HMS, Inc. Project Manager for approval.
- b. Pressure-differential systems are functioning according to an acceptable design.
- c. All pre-abatement submissions, notifications, postings and permits have been provided and are satisfactory to the Owner or its representative.
- d. All equipment for abatement, clean-up and disposal is on hand.
- e. All worker training (and AHERA certification) is completed and documented.
- f. The contractor has installed all required clear transparent view ports made of plastic or equivalent, in the polyethylene wall so that activities can be visually monitored by the project manager from outside the containment. This window shall measure approximately 1' wide by 2' high. It shall be installed at a location approved by the HMS, Inc. Project Manager. It is recognized that viewing ports are not possible in all locations.
- g. All pressure-differential units and vacuums have received and passed onsite DOP testing.
- h. Contractor has at least one competent person at each site in which work is taking place.
- i. All necessary documents and information have been posted or are on the work site.
See Section 2.

13.2 Power Outage Procedures

The following procedures shall be followed in the event of a power outage (no matter the source of the outage):

1. Immediately stop abatement activities.
2. Wet all debris and/or friable materials within the containment.
3. Depart containment area as soon as reasonable. Shower out or use Hudson sprayers to decontaminate worker if shower is inoperable due to power outage.
4. Seal containment area including:
 - A. Decon units
 - B. Makeup air ports
 - C. Bag out chambers
 - D. Negative pressure air exhausts or inlets (must be sealed in a fashion that will allow for exhaust of air to occur when power is restored)
 - E. Re-establish APD before starting abatement
5. Contractors will be given credit against liquidated damages for all actual down time plus two hours for shut down procedures, decontamination procedures and start up, (total of 6 hours) unless power outage is attributable to abatement contractor actions.

If a generator is required in the specifications, made necessary due to extended power outages, or chosen to be used by the abatement contractor the following issues must be addressed:

- Generator must not violate any local noise ordinances nor disturb adjacent building occupants.
- Generator exhaust must not be allowed to contaminate the makeup air being pulled into the containment. It must, also, not be allowed to mix with HVAC air supplied to adjacent occupied buildings.

13.3 Work Schedule

A detailed work area by work area schedule must be submitted at the pre-start meeting. The schedule shall have, at a minimum, the work area and the day/month for beginning and terminating work in each work area. During progress of work, it shall be the contractor's responsibility to keep the schedule current and up to date.

Contractor's request to change this schedule must be submitted to HMS, Inc. in writing at least 48 hours prior to the proposed addition, deletion or change in hours of a work shift. This would include working more than one shift per day, working extra days in the week, changing work hours or work days, etc. If 48 hours notice is not given, the proposed work shift may be canceled by HMS, Inc. Project Manager. The Owner and/or HMS, Inc. Project Manager reserves the right to deny any changes in the work schedule.

If the contractor wishes to work on a Federal or State holiday, more than five days a week, or more than 9 hours a day, Contractor becomes responsible for cost of project management fees to cover extended hours. If contractor fails to appear onsite without notifying HMS, Inc. Project Manager 24 hours in advance, the contractor becomes responsible for all HMS, Inc. Project Manager travel fees, onsite time fees, and other associated project management fees for that day.

SECTION 14. REMOVAL PROCEDURES

Contractor shall wet all asbestos-containing material with an amended water solution using equipment capable of providing a fine spray mist, in order to reduce airborne-fiber concentrations when the material is disturbed. Saturate the material to the substrate; however, do not allow excessive water to accumulate in the work area.

Keep all removed material wet enough to prevent fiber release until it can be containerized for disposal. Maintain high humidity in the work area by misting or spraying to assist in fiber settling and reduce airborne concentrations. Wetting procedures are not equally effective on all types of asbestos-containing materials but shall none-the-less be used in all cases.

Saturated asbestos-containing material shall be removed in manageable sections. Removed material should be containerized immediately (as soon as removed). Surrounding areas shall be periodically sprayed and maintained in a wet condition until visible material is cleaned up. Gross debris shall be cleaned up and bagged prior to any work stoppage, such as for breaks, lunch, end of each shift, or project shut down (voluntary or not).

Material removed from building structures or components shall not be dropped or thrown onto unprotected floors at any time. Floors shall be covered with poly regardless if they are being removed after ceiling or walls. Material should be removed as intact sections or components whenever possible and carefully lowered to the floor.

Containers (6-mil polyethylene bags or drums) shall be sealed when full. Double bagging of waste material is necessary. Bags shall not be overfilled. They should be securely sealed to prevent accidental opening and leakage by tying tops of bags in an overhand knot or by taping in gooseneck fashion. Do not seal bags with wire or cord.

Drums shall be used to dispose of asbestos-containing waste with sharp-edged components (e.g., nails, screws, metal lath, tin sheeting). Waste must be double bagged and goose-necked within drums.

After completion of all stripping work, surfaces from which asbestos-containing materials have been removed shall be wet-brushed and sponged or cleaned by some equivalent method to remove all visible residue.

After the work area has been rendered free of visible residues (and verified clean by the APM), a thin coat of a satisfactory encapsulating agent shall be applied to lock-down non-visible fibers on all surfaces, in the work area including structural members, building components and plastic sheeting on walls, floors and covering non-removable items, to seal in non-visible residue. Unprotected flooring surfaces shall not be encapsulated unless otherwise noted in the Scope of Work or indicated by the HMS, Inc. Project Manager.

After asbestos-containing materials have been removed from floor surfaces. These floor surfaces shall be washed with a TSP solution, or similar detergent acceptable to the Client, follow-up flooring contractor, and HMS, Inc, Project Manager, prior to clearance air tests.

SECTION 15. WASTE CONTAINER PASS-OUT PROCEDURES

Asbestos-contaminated waste that has been containerized shall be transported out of the work area through the waste transfer airlock or through an approved pass-out arrangement.

Waste pass-out procedures shall utilize two teams of workers, an "inside" team and an "outside" team. The inside team, wearing appropriate protective clothing and respirators for inside the work area, shall clean the outside, including bottoms, of properly labeled containers (bags, drums, or wrapped components) using HEPA vacuums and wet-wiping techniques and transport them into the waste container pass-out airlock. Provisions for spray cleaning exterior of bags, equipment, and removable items shall be present in the waste pass-out. Waste water from this operation shall be collected and filtered as required through a 1.0 micron filter. No worker from the inside team shall further exit the work area through this airlock.

The three-chamber system is utilized in the following manner. Workers inside the work area place the waste in the initial waste container, which is usually a bag. They then rinse the bag and seal it. They hand it to a worker in the dirty chamber room who inspects the bag and, if it is clean, places it in the secondary waste container. The secondary container is either another bag or a lined rigid-wall container such as a barrel or box. The worker then seals the secondary container and may attach the proper labeling. The worker places the container in the middle chamber. The worker in the clean chamber then reaches in and lifts the container into the clean chamber. The worker inspects it and if not already labeled, attaches the proper labels. The worker then passes the container to the outside worker who transports the container either to the waste transport vehicle or to a holding area. At no time shall z-flaps of transfer system chambers be taped, held or otherwise blocked open. The Contractor must not allow more than one poly airlock doorway to be open at any one time. This prevents a tunnel system and a breakdown in the isolation of the work area. Negative pressure must be maintained during all waste load-out activities.

The contract documents or the HMS, Inc. Project Manager may in allow a one or two chamber system to be used for some projects, as long as the liability to the client, in the judgment of the HMS, Inc. Project Manager is not increased. As with a three-chamber system, in a one or two chamber system, the Contractor may never allow more than one poly air flap doorway to be open at any one time. For example, a one chamber system would function in the following manner. Workers in the work area rinse and seal the initial waste container. They hand the initial container to a worker in the load-out chamber. That worker verifies that the container is clean and then places it into the secondary container which will be either another bag or lined ridged-wall container depending on the specifications. The load-out worker then seals the container and applies the appropriate labels. The sealed, labeled container is then passed to the outside workers who transport it to the waste transport container or holding area.

The exit from this airlock shall be secured to prevent unauthorized entry.

SECTION 16. CLEAN-UP PROCEDURE AND VISUAL CLEARANCE CRITERIA**16.1 Clean-up Procedure**

Remove and containerize all visible accumulations of asbestos-containing material and asbestos-contaminated debris utilizing rubber dust pans and rubber squeegees to move material around. DO NOT use metal shovels to pick up or move accumulated waste. Special care shall be taken to minimize damage to floor sheeting.

Wet-clean all surfaces in the work area using rags, mops and sponges as appropriate. (Note: Some HEPA vacuums might not be wet-dry vacuums.) To pick up excess water and gross wet debris, a wet-dry shop vacuum with HEPA filter may be used.

Airless sprayers and water hoses shall not be used in a "power washing" fashion on any surfaces.

Contractor shall remove each cleaned layer of polyethylene sheeting from walls and floors. Windows, doors, HVAC system vents and all other critical barriers shall remain sealed. The pressure differential units shall remain in continuous operation. Decontamination enclosure systems shall remain in place and be utilized.

Remove all containerized waste from the work area.

Decontaminate all tools and equipment and remove at the appropriate time in the cleaning sequence.

Contractor shall clean work area and conduct pre-clearance visual. Once pre-visual has been passed by contractor, contractor shall allow dust to settle within containment for 24 hours, then return and re-clean by HEPA-vacuuming and/or wet-cleaning all objects and surfaces in the work area again. At this point HMS, Inc. will conduct the final visual. If final visual fails, contractor must re-clean area until final visual passes. Once final visual is passed, contractor will be instructed to encapsulate the containment area, unless encapsulation of containment has been disallowed in the Scope of Work or material specific specification.

Contractor may request a reduction in the 24 hour waiting period, if personal samples collected during the abatement work and detail clean-up work have shown fiber levels below the PEL. Reduction of waiting period must be made in writing, accompanied by personal sample results from this project. Contractor must acknowledge that reduction in waiting period may result in failed clearance air samples and that retaking and re-analyzing these air samples will be at the contractor's expense. Reduction in waiting time will be at the discretion of the HMS, Inc. Project Manager and client.

16.2 Visual Clearance Criteria:

The **Contractor** shall perform a pre-final visual of the removal area and adjacent surfaces prior to requesting that the Owner's representative conduct a final visual inspection. The pre-final visual performed by the Contractor shall verify that all materials have been completely removed from the work area, and that the work area meets the requirements specified in Section 17.

Upon completion of the pre-final visual inspection by the Contractor a final visual of the containment area will be performed by the Owner's representative. The HMS, Inc. Project Manager will determine the clearance criteria for the project. At a minimum, no three dimensional debris shall be left within the work area; all poly shall be wet wiped so that no visible dust or debris is left; the decontamination chambers shall be clean of all debris; the waste transfer area shall be clean of all debris; all equipment and supplies shall be clean of all debris. The Contractor shall not be released to encapsulate the containment until receiving written acceptance by the Owner's representative stating the removal area and the containment have met the criteria of the Owner's representative for completeness of removal and cleanliness of the containment barriers and surfaces.

When required, clearance air sampling shall be performed following the requirements specified in Section 17 after encapsulation of the containment has taken place and a sufficient amount of time has passed to allow the encapsulant to dry. The Owner shall determine the method of analysis to be used based on the amount and type of material removed within a containment. If at a K through 12 school site and the quantity of Asbestos-Containing Material (ACM) exceeds 160 square feet or 260 linear feet, analysis of air samples must be by transmission electron microscopy (TEM) per US EPA AHERA regulations.

The HMS, Inc. Project Manager will conduct the final visual inspection of the work area for visible residue.

If any accumulation of residue is observed, it will be assumed to be asbestos and the 24 hour settling period/cleaning cycle will be repeated.

Additional cleaning cycles shall be provided by the contractor, as necessary, at no cost to the Owner until the specified clean criteria have been met.

HMS, Inc. Project Manager has final say on whether or not an area meets these requirements.

Following the satisfactory completion of clearance-air monitoring, remaining barriers may be removed and properly discarded as non-asbestos containing waste. If contamination exists behind these critical barriers, additional cleaning and air monitoring may be required.

Final visual will be conducted by at least one HMS, Inc. Project Manager. HMS, Inc. may supply additional personnel for inspection in order both to speed the inspection and to more thoroughly inspected the containment areas.

Owner, contractor and HMS, Inc. Project Manager shall jointly review the work area and make a damage assessment, after clearance air samples have passed and containment has been torn down.

SECTION 17. CLEARANCE AIR MONITORING

Following the completion of clean-up operations, the contractor shall notify the HMS, Inc. Project Manager in writing that work areas are ready for final visual inspection. This notification is to be made only after contractor foreman has made a visual inspection of his own.

After the HMS, Inc. Project Manager has given a final written approval of the clean-up operations, the contractor shall proceed to "lock-down" the containment area with an encapsulant. Exception to this is for containments that are not to be encapsulated prior to clearance air testing according to the Scope of Work (ie floor tile only projects).

Owner shall then arrange for an Air Monitoring Professional to sample the air in the work area for airborne fiber concentrations. Clearance-air monitoring shall proceed 24 hours after lock-down or when the area is dry, whichever is later.

Contractor may request a reduction in the 24 hour waiting period, if personal samples collected during the abatement work and detail clean-up work have shown fiber levels below the PEL. Reduction of waiting period must be made in writing, accompanied by personal sample results from this project. Contractor must acknowledge that reduction in waiting period may result in failed, or overloaded (with encapsulant) clearance air samples and that retaking and re-analyzing these air samples will be at the contractor's expense. Reduction in waiting time will be at the discretion of the HMS, Inc. Project Manager and the Owner.

Air samples will be taken using the "aggressive" air sampling techniques described in the AHERA regulations unless noted differently in the Scope of Work for non-AHERA sites. In the case aggressive samples cannot be collected (e.g. in a dirt floor area) this will be noted in the Project Manager's notes.

If PCM analysis is used for clearance air samples, all clearance samples at all locations shall indicate a fiber concentration of less than or equal to 0.01 f/cc for release of the work area.

If TEM analysis is to be used for clearance air samples, then the clearance criteria shall be the same as AHERA, unless otherwise specified in the Scope of Work.

Areas exceeding these levels shall be re-cleaned and, if appropriate, re-encapsulated at no additional cost to the owner. All areas where clearance air samples fail will be re-tested.

The contractor shall be responsible for all subsequent air sampling costs if air samples fail to meet clearance criteria levels. This cost includes four hours of time for HMS, Inc. personnel to collect the air samples and the cost of laboratory analysis.

Roof Removal: No clearance air monitoring required. Only a visual inspection of the roof for roofing debris will be provided.

Tar-like Pipe Wrap Removal: This non-friable material will only be removed by cutting the clean ends of the pipe it is insulating. No clearance air monitoring required.

TSI Removal: When removal is less than three linear feet within a single glovebag (or similar) containment, no clearance air monitoring will be required.

Regardless of the method used, when removal exceeds three linear feet within a single containment clearance air monitoring will be performed prior to the removal of the containment barriers.

Drywall Removal: Regardless of the asbestos content, when the quantity of drywall removed exceeds 3 square feet, clearance air monitoring will be performed prior to the removal of the containment barriers.

VFT & Mastic Removal: When the quantity removed exceeds 3 square feet, clearance air monitoring will be performed prior to the removal of the containment barriers.

SECTION 18. MONITORING

Owner reserves the right to perform air and performance (contractor work practices, house keeping, record keeping, etc.) monitoring at any time.

Contractor shall conduct personal air monitoring in accord with OSHA regulations. Results shall be made available to the HMS, Inc. Project Manager within 72 hours of collection. Hard copies of these results shall be supplied to HMS, Inc. Project Manager within 7 days of collection. Failure to supply these sample results in the specified time may cause work to be stopped until all delinquent results have been submitted. Loss of contractor work time because of non compliance of the provisions of this paragraph will not extend the date for work completion.

Owner may take air samples prior to, during, and after the project. Work shall not be considered complete until all air sampling has been completed and satisfactory levels have been obtained. "Satisfactory levels" shall be those established by AHERA, unless more stringent requirements have been identified in the Scope of Work, General Specifications, General Requirements, or other Project Specifications.

In areas where soil contamination may be present, soil samples must meet specified criteria in Scope of Work prior to clearance air samples collection.

Owner, or HMS, Inc. Project Manager, shall be authorized to issue a STOP WORK order whenever Contractor's work or protective measures are not in accord with published regulations or contract specifications.

SECTION 19. DISPOSAL PROCEDURES**19.1 Disposal Procedures**

Waste transport and disposal personnel must wear at least half mask HEPA-cartridge type respirators when handling intact sealed bags.

Disposal bags shall be of 6-mil polyethylene, pre-printed with labels as required by California Environmental Protection Agency, Department of Toxic Substances Control (DTSC) regulations.

Disposal drums shall be plastic, metal or fiber board with locking ring tops. If heavy duty card board boxes are allowed in the Scope of Work, they may replace the barrels. Cardboard boxes must be sturdy enough not to be deformed or compromised by the weight of the materials disposed within them.

All containers, including bags and barrels or boxes must be labels the same as the ACM waste disposal bags.

All waste shall be double bagged in 6-mil polyethylene bags and goose-necked. These bags will then be placed into disposal drums as described above.

Contractor shall provide stick-on labels for disposal containers that meet the Cal/OSHA, NESHAPS, and DTSC requirements for hazardous and non-hazardous waste container labeling.

All waste bags shall have visibly damp materials but shall not contain loose water. In the event loose water is discovered within a waste bag, it shall be absorbed with kitty litter, saw dust or similar product prior to the bag being sealed.

All asbestos waste, hazardous or not, shall be manifested. Non-hazardous waste shall be manifested on a non-hazardous waste manifest.

All waste containers (barrels or boxes) shall be sealed in a manner that allows them to be opened for inspection of sealed bags within by HMS Project Manager, Regulatory personnel and Dumpsite personnel.

Waste placed into boxes or barrels at the project site must be disposed of within the same boxes and barrels at the dumpsite. Removal of waste from these boxes and barrels is not allowed. As the work progresses, to prevent exceeding available storage capacity onsite, sealed and labeled containers of asbestos-containing waste shall be removed and transported to the prearranged disposal location.

Disposal must occur at an authorized site in accordance with regulatory requirements of NESHAPS and applicable State and Local guidelines and regulations, including the California State Environmental Protection Agency, Toxic Substances Control Division regulations.

Transport vehicles shall be marked with the sign prescribed by NESHAPS regulations during loading and unloading to warn people of the presence of asbestos.

All dump receipts, trip tickets, waste manifests, NESHAP Waste Shipment Record (WSR) and other documentation of disposal shall be delivered to the Owner, for the Owner's records. The WSR is not required if the cubic yards of asbestos-containing waste is indicated on the Waste Manifest. The manifest should be signed by the Owner, the hauler, and the Disposal Site Operator as the responsibility for the material changes hands. If a second hauler is employed, his name, address, telephone number and signature should also appear on the form. The WSR, if used, shall be signed by the Owner or its agent and the disposal site operator.

All manifests shall have asbestos waste identified as: "RQ, Asbestos, 9, NA2212, III". This requirement may be changed as new regulations are issued. See "Waste Disposal" requirements at end of "General Requirements".

All manifests shall be accompanied by a "Notice and Certification". A signed copy of this must be provided to the Owner or Owner's agent.

19.2 Transportation to the Landfill

Once drums, bags and wrapped components have been removed from the work area, they shall be loaded into an enclosed (solid walls, ceiling and floor) truck or dumpster, which has been lined with 6-mil polyethylene (walls and floor).

When moving containers, utilize hand trucks, carts and proper lifting techniques to avoid back injuries. Trucks with lift gates are helpful for raising drums during truck loading.

Personnel loading asbestos-containing waste shall be protected by disposable clothing including head, body and foot protection and, at a minimum, half-facepiece, air-purifying, dual cartridge respirators equipped with high-efficiency filters. Any debris or residue observed on containers or surfaces outside of the work area resulting from clean-up or disposal activities shall be immediately cleaned up using HEPA filtered vacuum equipment and/or wet methods as appropriate.

No waste containers shall be onsite which contain other hazardous waste, or hazardous waste from another owner. Waste from multiple sites of the same owner within the same waste container is acceptable; however, it must be manifested separately.

If contractor is storing waste from various sites of one owner, all transportation vehicles shall be covered by the same regulations as the dumpster or truck being used to haul the waste to the dump. If equipment or supplies are to be left in vehicles during hauling of waste to dumpster or truck, waste and equipment/supplies must be separated by a solid (wood or metal) barrier which has been sealed as a critical barrier. A poly wall barrier is not sufficient.

Dumpster truck or storage bin must be locked at all times except when being filled.

It is the contractor's responsibility to see that all dumpsters, trucks, and storage bins arrive onsite completely free from debris.

The contractor shall provide a weight receipt that identifies the net weight of the material being discarded.

19.3 Disposal at the Landfill

Upon reaching the landfill, trucks are to approach the dump location as closely as possible for unloading of the asbestos-containing waste.

Bags, drums, barrels and components shall be inspected as they are off-loaded at the disposal site. Material in damaged containers shall be re-packed in empty drums or bags as necessary. (Local requirements may not allow the disposal of asbestos waste in drums. Check with appropriate agency and institute appropriate alternative procedures.)

Waste containers shall be placed on the ground at the disposal site, not pushed or thrown out of the trucks (weight of wet material could rupture containers).

Personnel off-loading containers at the disposal site shall wear protective equipment consisting of disposable head, body and foot protection and, at a minimum, half-facepiece, air-purifying, dual cartridge respirators equipped with high-efficiency filters.

Following the removal of all containerized waste, the truck cargo area shall be decontaminated using HEPA vacuums and/or wet methods to meet the no visible residue criteria. Polyethylene sheeting shall be removed and discarded, along with contaminated cleaning materials and protective clothing, in bags or drums at the disposal site.

SECTION 20. SPECIFIC PROCEDURES AND REQUIREMENTS

NOTE: All Specific Procedures and Requirements listed in Section 20 shall be reviewed by the contractor along with the Scope of Work issued for the project. If any perceived conflicts are present between the Scope of Work and these specifications or within the General Requirements specification itself, the contractor shall ask for a written interpretation from the HMS, Inc. Project Manager prior to submission of his bid. If conflicts in the "Scope of Work" and this specification or with the General Requirements specification itself are discovered after the start of abatement, the more stringent specification and/or requirements will be enforced. The HMS, Inc. Project Manager shall make the determination as to what which requirements and/or specifications are more stringent.

20.1 General Repair of Damaged Thermal System Insulation (TSI) Procedures

Where TSI has been damaged, and it is feasible to repair the small nicks, cuts, and exposed ends, the following procedures shall be performed:

1. Contractor shall establish a regulated area according to the requirements of 8 CCR1529 and as enhanced by this specification and the Scope of Work, including but not limited to the posting of the area and allowing on authorized personnel into the work area.
2. Piece of 4-6 mil poly sheeting shall be placed directly under the area to be worked to collect any fallen debris or repair compound.
3. Half-masks and disposable suits (at a minimum) shall be used during this work.
4. The area shall be restricted to those personnel involved in the work, so posting of the accesses is required. In some cases, poly shall be used to cover the access points.
5. A HEPA-vacuum must be in the immediate area to pre-clean any debris observed surrounding the damaged section, or in the event of a mishap.
6. If work is performed indoors, the ventilation system shall be off in the areas worked in to prevent fiber distribution. Ventilation supply and exhaust ducts shall be covered with poly sheeting.
7. It will be necessary to remove small sections of other insulation material, such as fiberglass, if debris from the damaged pipewrap has contaminated it.
8. If appropriate, contractor shall HEPA-vacuuming the damaged section will collect all loose, hanging, friable insulation material prior to any further repair work.
9. Very small cracks, holes, nicks, and cuts can be repaired with only joint compound or with a single layer of wettable cloth and appropriate bridging encapsulant. Larger sections of damaged pipewrap, particularly where pipe hangers or metal channel have damaged the insulation, will require at least two layers of wettable cloth.
10. Where the pipewrap cannot be removed completely from penetrations in the walls, floors, or

ceilings, the pipewrap shall be removed at least one inch into the opening and sealed with a bridging encapsulant to grade. The Contractor may choose to fill large gaps with fiberglass insulation, prior to sealing with the encapsulant.

11. All of the Contractor's materials, including poly sheeting, tape, joint compound, etc. shall be removed at the completion of the work performed.

20.2 Glovebag Technique Requirements

Where the glovebag technique is specified for removal of Thermal System Insulation (TSI), or in those areas where the Contractor opts to use glovebags, all of the following conditions must be met:

1. The Contractor shall develop a regulated area that meets the requirements of 8 CCR 1529 regarding posting and limited access.
2. The Contractor shall follow the procedures recommended by the manufacturer of the glovebags, and the specifications required by Federal OSHA and Cal/OSHA regulations
3. All critical openings within the regulated area shall be sealed prior to set up of the containment.
4. At least one layer of 6 mil poly must be used to contain the abatement area.
5. Stationary objects in the immediate area of the room which cannot be removed from the work area must be covered with at least one layer of 4 mil poly sheeting after being pre-cleaned.
6. A minimum three stage decontamination unit with a shower shall be contiguous with the containment for areas requiring removal of more than 6 linear feet of TSI, or 10 square feet of surfacing material.
7. Negative pressure shall be established and a circular graph recording manometer shall be attached to the containment per Section 13.
8. A HEPA-filtered vacuum shall be in the immediate area for use in conjunction with the bags or in case of a spill.
9. Glovebags may not be used on surfaces where temperatures exceed 150 degrees Fahrenheit.
10. Glovebags may be used only once, and may not be moved or slid for removal of a second section of TSI.
11. At least two persons shall perform Class I glovebag removal as defined by Federal and Cal/OSHA.
12. Before beginning the operation, loose and friable material adjacent to the glovebag operation shall be wrapped and sealed in two layers of 6 mil poly sheeting or otherwise rendered intact.
13. Where the system uses an attached waste bag, such bag shall be connected to a collection bag using a hose or other materials which shall withstand pressure of ACM waste and water without losing its integrity.
14. The Contractor shall apply a sufficient volume of amended water to all pipewrap scheduled for removal while it is enclosed in the glovebag.
15. A sliding valve or other device shall separate the waste bag from the hose to ensure no exposure when the waste bag is disconnected.
16. Prior to placement in the disposal bag, glovebags shall be collapsed by removing air within them using a HEPA-vacuum.

17. Upon detachment, the glovebag must be immediately placed into at least two 6 mil thick disposal bags. The disposal bags must be sealed using the "gooseneck" sealing technique.
18. Where pipes enter walls, floors, or ceilings which are not within the scope of the project, the pipewrap shall be removed at least 1" into the structure and the pipewrap end must be sealed with bridging encapsulant and/or wettable cloth.
19. If the Contractor chooses to use a Negative Pressure Glove Bag System, Negative Pressure Glove Box System, or Water Spray Process System in lieu of the traditional Glovebag System, the Contractor shall submit to Owner's agent/site representative detailed written procedures on those systems which will be used. In addition, air sampling data, generated by the Contractor, must be provided to Owner's agent/site representative. Owner's agent/site representative must provide prior approval to alternate techniques and approaches to those specifications detailed here.
20. The Contractor is responsible for salvage and decontamination of all pipe system supports, hangers, brackets, saddles, etc. These items shall be inventoried by the Contractor, and verified by the Owner's agent/site representative before and after abatement. The Contractor will be responsible for replacement of any items lost or damaged.
21. The Contractor shall be responsible for ensuring the piping system remains adequately supported at all times. This may be achieved by readjusting existing hanger brackets as insulation is removed, or by other approved methods, such as inserting wood blocks to replace the thickness of the removed insulation.

20.3 Mini-Cube Enclosure Requirements

1. For the purposes of these specifications, "mini-cube enclosure", "mini-enclosure", and "mini-cube" are all used interchangeably and mean the same. The mini-cube enclosure is required to be constructed whenever small sections of walls, ceilings, or pipe insulation are to be removed for electrical, plumbing, mechanical, etc., work. The purpose is to create an enclosed and controlled work environment while removing asbestos or accessing an attic space which is contaminated.
2. Enclosure walls and floors must be constructed of at least two layers of fire-rated 6 mil poly sheeting. No visible holes, cracks, penetrations, etc. shall be within this enclosure. The upright frame shall be adjustable in order to butt the top of the enclosure to the wall or ceiling area. A single drop layer of 6 mil poly sheeting shall be put down and removed daily at the end of the work shift. For work involving removal of TSI by glovebag technique, only one layer of 6 mil poly sheeting is required for construction of the mini-enclosure. All mini-enclosures, mini-cubes, etc. must have a view port that allows the HMS, Inc. Project Manager to view the activities going on inside the regulated area. The placement, number, and size of the view port(s) must be acceptable to the HMS, Inc. Project Manager.
3. At least two chambers shall be present, separated by flapped poly sheeting doors. The first chamber upon entrance will be called the "clean" chamber, while the second chamber will be called the "dirty" chamber.
4. Since the top of the enclosure must be open in the chamber where ceiling access will take place, special care must be taken prior to moving the enclosure. If the mini-enclosure is designed to be portable, the enclosure must be sealed at the top prior to being moved to the next location. This may be achieved by temporarily sealing the top of the chamber with poly and tape from the inside.
5. Dirty chamber must be sealed around work area in a fashion that creates an air-tight seal without causing damage to floor, walls, ceilings or other materials. This may be achieved by use of a pliable material, such as non-porous foam rubber, or other methods approved by the HMS, Inc. project

manager. A tight seal must be maintained without damage to the remaining materials (this may be difficult if tape is used).

6. For access to an attic space, position the enclosure at the location to be worked. The enclosure must be butted up to the ceiling surface to form a semi-seal between the top of the enclosure and the ceiling. The enclosure can then be completely sealed to the ceiling, using tape. After a seal has been established, access into the ceiling can then proceed.
7. A HEPA vacuum shall be used to establish "negative pressure" or airflow into the enclosure. This shall be verified by using ventilation smoke tubes.
8. The following equipment and materials, at a minimum, must be present inside the mini-enclosure "dirty" chamber:
 - 6 mil poly bag with clean rags for cleaning.
 - Amended water in a Hudson-like sprayer for the rags.
 - Empty bag for disposal of items.
 - Flashlights or drop light as appropriate.
 - Personal Protective Equipment including extra suits incase of multiple entry/exits
 - Amended water in a properly labeled Hudson Sprayer
 - Daily change of 6 mil poly sheeting drop layer.
 - Other tools needed to perform task.
9. The following equipment and materials, at a minimum, must be present inside of the mini-enclosure "clean" chamber:
 - Clean potable water in a Hudson-like sprayer which is labeled "Clean Potable Water Only". A new container must be designed for potable water only. No container used previously to hold liquids will be allowed. No open containers will be allowed.
 - Clean disposable shower or hand towels for drying hands, arms, and face.
 - 6 mil poly bag for disposal of towels and other items.
 - Any other tools the Contractor requires, such as tape, screwdrivers, etc.
10. The work area must be delineated with the proper barrier tape and the outside of the poly-flapped entry to the mini-cube must be posted with OSHA required warning signs for a regulated area.
11. Clean disposable coveralls must be worn entering the mini-enclosure, and must be removed prior to leaving the mini-enclosure. Depending upon the work being performed, the Contractor may choose to "double suit" in disposable coveralls. All workers shall use the Clean Room and its supplies for personal hygiene prior to exiting the enclosure.
12. For work involving removal of more than 6 linear feet of TSI, or greater than 10 square feet of surfacing material (regardless of method to be used), a shower must be attached to the mini-cube enclosure and be contiguous with the work environment, and comply with all other decontamination

- requirements in related sections of this specification.
13. If there is removal of greater than 3 linear feet of TSI, or greater than 3 square feet of surfacing material (regardless of the method used), the enclosure must remain in place until a final visual is passed, and clearance air samples are collected by Owner's agent/site representative. Where work involves less than these quantities, only a visual inspection by Owner's agent/site representative will be required prior to removal of the mini-enclosure. Mini-enclosure shall be constructed in a fashion that will stay in place, remain intact and under negative pressure for numerous days while awaiting clearance air sample results.

20.4 Roofing Abatement Requirements

General Requirements

1. Except as amended here and in the Scope of Work, all other Sections of this Exhibit shall be followed.
2. The work shall be coordinated and scheduled when there are favorable weather conditions, such as, performing the abatement work when the forecast is for "clear skies" and no rain for three or more consecutive days. The Contractor shall remove only that amount of roofing material which can be reroofed or covered, and secured from the weather.

Work may be halted at the discretion of the Owner's agent/site representative if wind conditions occur which can or does cause removed roofing materials to be blown off the roof area, or beyond the designated removal area perimeter. All roofing work shall be coordinated to allow other trades to work at the same time as long as their work is located in areas where contamination cannot occur. No cutting, sanding, grinding, or removal of any type will take place until all preparations for removal have been completed and inspected by the onsite project manager. This section may be amended in other sections of this specification for this project.

The words "clear skies" are used as a means of indicating favorable weather conditions. These two words do not mean, nor are they intended to require skies be clear and free of clouds, fog, or other meteorological conditions which are not expected or forecast to produce measurable rain. The follow up requirement of no rain for three or more consecutive days is to help clarify the favorable weather condition requirement. The last sentence concerning the amount of roofing to be removed is to further instruct and direct the Contractor not to be over optimistic and create more open roof areas than can be reroofed, secured, or properly protected from weather in case the forecast changes unexpectedly or without warning.

3. All work hours at the site shall be determined by the Owner or as defined in other sections of this Exhibit. Unless otherwise stated, the buildings will be reoccupied each morning Monday through Friday.
4. All work shall be coordinated with the other trades involved on this project, with central coordination being primary between the abatement contractor and the General Contractor for the project. However, Owner's agent/site representative must be notified of projects in advance as stated in other sections of this Exhibit.
5. The Contractor shall provide all necessary equipment, tools, materials, lighting, labor, etc. to perform the work. Sufficient lighting shall be provided to illuminate the entire removal and transit areas for removal of roofing material, and for the final visual inspection by the Owner's agent/site representative if the work is to be performed at night.
6. All HEPA equipment to be used on the project must be delivered to the site empty of all debris, clean, free of dust, and in full operating condition. HEPA equipment to be used inside any building must have been DOP tested within the last 90 days. This DOP certification must be verified by Owner's

agent/site representative prior to its use.

7. The Contractor shall provide worker safety according to all OSHA regulations (Title 8), including use of tie-offs, harnesses, and lanyards. Particular attention shall be given to the placement and securing of accesses (ladders, etc.) to the roof and for fall protection for those working near the perimeter of the roof.
8. All ladders used shall conform to Cal/OSHA requirements. The ladders shall extend at least three feet above the roof line, and shall be tied off to the building to prevent them from sliding.

Contractor Responsibilities

9. The Contractor shall be responsible for securing all exposed roof surfaces, including any roof penetrations against weather after roofing materials have been removed. Protection of the roof must be made with an impermeable barrier to prevent water from entering the building structure.
10. The Contractor will be responsible for all clean-up and costs associated with the decontamination of occupied spaces in the event of contamination of an occupied space.
11. The Contractor is responsible for any contamination of the attic space above the existing ceilings inside the buildings caused by their work, except as noted specifically in the Scope of Work.
12. The Contractor is responsible for damage to the roofing substrate, and will be responsible for repair or replacement if damaged.
13. The Contractor is responsible for removal of all roofing layers and associated materials such as roofing nails, insulation, fiberboard, etc. down to the wood or metal substrate regardless of asbestos content, unless otherwise noted in the Scope of Work. Where it is unknown how many layers of roofing materials exist, it must be assumed that there are multiple roofing layers present. The Contractor may, upon request and approval by the Owner, collect core samples of any roof to be removed for the purpose of determining its depth and structure. If coring is conducted, it is the responsibility of the Contractor to repair the areas affected to industry standards using non-asbestos materials.
14. The Contractor is responsible for removing all roofing nails, and driving in all nails used for securing the roofing substrate after roof material has been removed. The Contractor will not be required to remove silver paint or tar coating on conduit, roof jacks, heating, ventilation, and air conditioning (HVAC) equipment, flashings, etc. which will be reused by the Owner. Where flashing is to be reused, the Contractor shall carefully remove and save the flashing in an undamaged condition, unless otherwise required by the Owner. This section may be amended in the Scope of Work for this project.
15. The Contractor is responsible for removal and replacement of wood block or metal supports which may be present under conduit, gas lines, piping, HVAC units, ducting, etc. in order to perform the work. The Contractor is also responsible for temporarily installing wood blocks for any existing roof structures during the roofing removal, when it is necessary to remove existing support members to accomplish the work.
16. The Contractor is responsible for damage to all equipment and existing cables which are present on the roof. The Contractor is responsible for damage to electrical wiring, telephone lines, antenna wires, and other conduits which are present. An inspection for pre-existing conditions is the responsibility of the Contractor, but may also be conducted by the Owner's representative.
17. The Contractor is responsible for obtaining all necessary permits to perform this work, including any local permits for work in the evening/night hours.

18. Standards of cleanliness for fluted metal decks located underneath asbestos-containing roofing materials. It is possible for the abatement crew to remove the asbestos-containing roofing materials without breaking through or removing the light grey insulation material beneath it. If removal of asbestos roofing materials is performed as described above, and the insulation material remains intact, District's agent/site representative can conduct a final visual for asbestos-containing debris. Once this inspection has been completed, and the requirement for no remaining asbestos-containing debris on the roof is met, the insulation layer is removed.

At this point, asbestos is no longer an issue, and District's agent/site representative will allow minor amounts of the non-asbestos debris to remain in the fluted areas of the deck. General cleaning of the flutes is conducted to a point where the amount of debris remaining is reduced to a minimal amount without having to completely clean or vacuum the flute channel.

The District is unaware of any potential hazard which could be caused by leaving some non-asbestos debris, and does not consider it necessary to have the flute channels detailed beyond generally clean conditions. However, if the fiberboard layer is extensively damaged during removal of the asbestos-containing materials, and asbestos-containing roofing debris cannot be distinguished from non-asbestos containing roofing materials, all flutes shall be vacuumed and cleaned as set forth in the project specifications.

Owner Responsibilities

19. The Owner is responsible for closing all windows in the building where the asbestos roofing material will be removed. This must be done prior to the asbestos abatement contractor arriving onsite for the work shift, in order to prevent delays.

The Owner shall also be responsible for cutting or trimming back all trees and limbs which may impact the removal of the existing roofing materials.

General Roof Removal Instructions and Requirements

20. Removal of non-friable asbestos-containing roofing is designated as Class II work. Half-masks and disposable coveralls shall be used at a minimum by all workers, at all times, when within the regulated area.
21. No personnel will be allowed into the regulated area during actual removal work without proper respiratory and personal protective equipment. Work boots with hard soles are required to be worn by all abatement personnel. No athletic, street, or dress shoes are to be worn during work activities.
22. All roofing material shall be removed in an intact state to the extent feasible.
23. All roofing is to be removed wet by an amended water solution or encapsulant as necessary.
24. The abated roof area shall be HEPA vacuumed after roofing materials have been removed. Particular attention shall be directed at the flute channels of metal decks.

Pre-Abatement Preparation Requirements

25. The Contractor shall seal all air intakes associated with the HVAC units which are on or near the roof under abatement, and at adjacent HVAC units, particularly downwind from roofing removal activity. In addition, all louvers, window mounted fan systems, attic openings, etc., shall be sealed as critical barriers. The Contractor is responsible for sealing all HVAC openings as critical barriers using one layer of 6 mil poly. These critical barriers shall be installed at the beginning of each shift, and removed at the end of each shift prior to reuse by the Owner. If the building will not be reoccupied daily, the barriers may stay in place.

The perimeter of the roof where removal is to be conducted, shall be posted with barrier tape at a distance of at least 20 feet from the edge of the removal area. This barrier tape will provide a buffer zone, and assist in the restriction of non-abatement personnel.

Poly sheeting shall be placed on the ground directly below the work area or on the adjacent roof surfaces and cover an area extending out at least 10 feet. The Contractor shall secure the poly to the ground using tape, weights, or other means to secure the poly from being picked up by wind or becoming a trip hazard. The Contractor shall secure the poly to the adjacent roof surfaces with tape, etc.

Waste Bins and Waste Bin Preparations

26. The Contractor is responsible for inspecting all waste bins delivered to the job site for load worthiness. The Owner's agent/site representative reserves the right to refuse any waste bin without any additional cost to the client, which upon examination, and in the opinion of the site representative, has a high probability of failure of doors, skids, walls, floors, or which contains other debris.
27. The Contractor shall be required to place footing materials of sufficient thickness, strength, and size under the casters, footings, and/or runners of waste bin(s) to prevent damage of property surfaces. The contractor is responsible for all damages to Owner's property caused by the delivery, placement, or removal of a waste bin. Damaged property shall be repaired to equal or better condition than was present prior to the activity causing the damage. This section may be amended in the Scope of Work for this project.
28. Unless the roofing material is carried or passed to the ground by hand, it shall be lowered to the ground via covered, dust-tight chute, crane, or hoist. All waste shall be sufficiently wetted with amended water to prevent fiber release. If fiber release cannot be prevented, then the chute and bin must be within a negative pressure enclosure. In no case shall roofing materials be dropped or thrown into trucks, bins or dumpsters from the roof without the protection of a dust tight chute or other means acceptable to the HMS, Inc. Project Manager.

Posting and Label Requirements for:**Regulated Area Entry Points and Waste Bin Perimeters**

29. Access to regulated areas shall be posted as outlined by Cal/OSHA Title 8, 1529 (k)(7)(B) 1 and 2 with warning signs. Perimeters of waste bin(s) shall also be posted as outlined by Cal/OSHA Title 8, 1529 (k)(7)(B) 1 and 2 with barrier tape bearing the following information:

**DANGER
ASBESTOS
CANCER AND LUNG DISEASE HAZARD
AUTHORIZED PERSONNEL ONLY
RESPIRATORS AND PROTECTIVE CLOTHING ARE
REQUIRED IN THIS AREA**

These postings are required to warn non-abatement personnel of the restricted access, and potential hazard which exists in the vicinity of the regulated areas and waste bin(s).

Building Perimeter at Ground Level

Building perimeters shall be posted with barrier tape bearing one of the following descriptions:

CAUTION in black letters on a solid yellow background.

DANGER in black letters on a solid red background.

DANGER ASBESTOS HAZARD in black letters on a solid red background.

Waste Material Containers

30. Waste material containers, including the "burrito wrapped" material, shall have warning labels affixed in accordance with Cal/OSHA Title 8, 1529 (k)(8)(A-D).

**DANGER
CONTAINS ASBESTOS FIBERS
AVOID CREATING DUST
CANCER AND LUNG DISEASE HAZARD**

General Requirements for Creating Roof Penetrations

31. All roofing penetration cuts (if any) shall be at the direction of the primary contractors' Job Foreman, and coordinated with Owner's agent/site representative as to the time of work. Any equipment to be used for the purposes of cutting, grinding, or sanding must meet or exceed all Cal/OSHA requirements regarding HEPA filtration and wetting/misting. Any equipment rented for the purpose of conducting asbestos work must be accompanied with documentation verifying that the rental agency has been notified, and acknowledges receipt of notification that the equipment being rented will be used for asbestos related work. This documentation will be submitted to Owner's agent/site representative prior to the equipment being used on the job site.

The penetration area shall be surrounded by a 10 foot wide section of at least 4 mil poly. This poly will help in the cleanup of small roofing material particles which may otherwise be mixed onto the surface of surrounding roof material. If the penetration is within 10 feet of the edge of the roof, poly shall be placed on the ground (or roof) directly below the work area. The Contractor shall secure the poly to the ground using tape, weights, or other means to secure the poly from wind and becoming a trip hazard.

Waste Disposal and Documentation Requirements

31. Roofing waste may be disposed as non-hazardous asbestos waste, in a landfill permitted to accept non-friable, non-hazardous asbestos roofing material. If the asbestos roofing material is currently friable, or becomes friable during its removal, it shall be disposed of in a landfill permitted to accept friable asbestos waste.

It is acceptable to dispose of bagged or sealed roofing waste into open topped dumpsters lined with a single layer of 6 mil poly sheeting. The Contractor shall completely enclose all roofing waste material commonly known as "burrito wrap" in the dumpster using 6 mil poly sheeting. Upon being lowered, unwrapped material shall be transferred to a closed receptacle in such a manner as to preclude the dispersion of dust. In addition to the 6 mil poly sheeting, the top of the dumpster shall be completely enclosed with a tarp which is secured to the vehicle for transport or storage onsite if left overnight. The type of material for the tarp shall meet all requirements for transport of hazardous materials.

32. The Contractor is required to provide to Owner's agent/site representative a copy of the "trip tickets" indicating the actual weight of waste material.

20.5 Vinyl Asbestos Floor Tile (VFT) Removal Requirements

Contractor shall conduct VFT and/or mastic removal within a regulated area as defined by 8 CCR 1529.

1. The doors, windows, and penetrations into the rooms shall be sealed with polyethylene. All ventilation systems shall be locked-out and sealed as critical barriers. An attached three stage decon with operational shower is required. The Scope of Work may require more chambers depending upon the project size.
2. Baseboards shall be removed if necessary to access all VFT. If baseboard mastic contains asbestos, baseboards are not to be disturbed prior to start of abatement.
3. Half-mask respirators, rubber boots, gloves, and disposable coveralls are to be used as a minimum for worker protection.
4. The VFT's must be double bagged in 6 mil poly bags. It is acceptable to place several bags of VFTs into a barrel lined with a second 6 mil poly bag.
5. All VFT's and mastic must be sufficiently wetted with amended water when being lifted off the floor.
6. The mastic layer may be removed either by solvent or wet buffing with a solvent. If a solvent is used, the negative air unit exhaust shall be directed down wind as much as possible, or a sufficient length of exhaust hose will be required to prevent re-entrainment of the vapors. Any solvents used for removing mastic shall be non-toxic low odor and non-flammable. A material safety data sheet for the solvent shall be provided and subject to approval by the project manager prior to use. MSDS must match solvent being used on the current jobsite.
7. During removal of the mastic with solvent or other organic based liquid, combination respiratory cartridges (organic vapor/HEPA) shall be worn to protect against asbestos and the solvent.
8. If floors are removed after walls and ceilings, full enclosure of the walls and ceiling with poly will be required, no matter what method of tile and mastic removal is used. If floors are removed prior to walls and ceilings which will eventually be removed as asbestos containing materials, then critical barriers and splash guards are all that will be required. All surfaces and materials not being removed as asbestos containing material must be covered with poly no matter which order floors walls and ceiling are abated.

9. Following removal of all floor tile and mastic, the contractor shall wash the floors thoroughly using a solution of trisodium phosphate (TSP) and water. Sufficient water shall be used for final rinsing of the floor for a clean finish.
10. If the removal of the floor mastic is on a wood substrate (or this technique is required in the scope of work), contractor is to use a mixture of the low odor mastic removal chemical and diatomaceous earth or (equivalent) to form a paste. Mix the paste to a consistency that will still be effective on the mastic and reduce the absorption of the chemical into the wood substrate, or seepage under casework and into concrete crevasses.
11. No bead blasting or shot blasting is allowed to be performed on these projects.

20.6 Drywall Removal Requirements

1. The doors, windows, and penetrations into the rooms shall be sealed as critical barriers with 6-mil polyethylene. An attached three stage decon with operable shower is required. The Scope of Work may require more chambers depending upon the project size.
- b) Powered air purifying HEPA respirators, rubber boots, gloves, and disposable coveralls are to be used as a minimum for worker protection.
- c) Shut down and lock out all heating, ventilating and air-conditioning-system (HVAC) components that are in, supply or pass through the work area. Seal all intake and exhaust vents in the work area with tape and two layers of 6-mil polyethylene within the work area (interior) and one layer of 6-mil poly on the exterior of the building. Also seal any seams in system components that pass through the work area. Remove all HVAC system filters and place in labeled 6-mil polyethylene bags for storing and eventual disposal as asbestos-contaminated waste.
4. The drywall must be double bagged and "goose-necked" in 6 mil poly bags. It is acceptable to place several "goose-necked" bags of drywall into a barrel lined with a second 6 mil poly bag that is "goose-necked".
5. All drywall must be sufficiently wetted with amended water when being removed.
6. Negative pressure shall be established, maintained and recorded. This shall be verified by using ventilation smoke tubes.
7. Contractor, in conjunction with the District/Owner, shall shut down and lock out electric power to all work areas. Contractor shall provide temporary power and lighting sources, ensure safe installation (including ground faulting) of temporary power sources and equipment by complying with all applicable electrical code requirements and OSHA requirements for temporary electrical systems. Contractor shall have a certified electrician shut down and lock out electric power, and setup temporary power and lighting sources. All cost for electric supply shall be paid for by the District/Owner.
8. Contractor shall have a certified plumber disconnect and cap all water and gas within the work area. Water shall be provided by the District from a location near the work area, but not within the work area.
9. All non-asbestos-containing materials left in the work area shall be covered by two layers of 6-mil polyethylene sheeting. If any non-asbestos containing materials become contaminated with asbestos during removal activities these materials shall be disposed of as asbestos-containing materials by the Contractor.

10. A critical barrier only, negative pressure check shall be required prior to the set-up of interior containment.
11. Cover floors in the work area with polyethylene sheeting. Floor shall be covered with a minimum of two layers of 6-mil polyethylene sheeting. Plastic shall be sized to minimize seams. A distance of at least six (6) feet between seams is sufficient. DO NOT locate any seams at wall/floor joints. Floor sheeting shall extend at least twelve inches (12") up the sidewalls of the work area. Sheeting shall be installed in a fashion so as to prevent slippage between successive layers of material. A layer of 10-mil polyethylene sheeting and/or plywood will be required to protect certain flooring materials -- carpets, hardwood floors, tiles, etc. At no time will wall or ceiling surfaces be permitted to be dropped onto unprotected floors. This includes areas where the floor surfaces contain asbestos.
12. Cover asbestos-containing walls in the work area with polyethylene sheeting if these walls are to remain or if these walls are non-asbestos containing and will remain. Walls shall be covered with a minimum of two layers of 4-mil polyethylene sheeting. Plastic shall be sized to minimize seams. Seams shall be staggered and separated by a distance of at least six feet (6'). DO NOT locate any seams at wall/floor joints. Wall sheeting shall overlap floor sheeting by at least twelve inches (12") beyond the wall/floor joint to provide a better seal against water damage and for pressure differential maintenance. Wall sheeting shall be secured adequately to prevent it from falling away from the walls. This may require additional support/attachment when pressure differential systems are utilized.
13. Cover asbestos -containing ceilings in the work area with polyethylene sheeting if they are to remain or if these ceilings are non-asbestos-containing and will remain. Ceilings shall be covered with a minimum of two layers of 4 mil polyethylene sheeting. Plastic shall be sized to minimize seams. Seams shall be staggered and separated by a distance of at least six feet (6'). DO NOT locate seams at wall/ceiling joints. Ceiling sheeting shall overlap wall sheeting by at least twelve inches (12") beyond the ceiling/wall joint to provide a better seal against water damage and for pressure differential maintenance. Ceiling sheeting shall be secured adequately to prevent it from falling away from the walls. This may require additional support/attachment when pressure differential systems are utilized.
14. If floor tile and drywall are to be removed within the same work area the floor tile and mastic shall be removed first, followed by the drywall removal. If the contractor wishes to submit a different removal work plan it shall be submitted prior to the beginning of the project. The HMS, Inc. Project Manager will review this work plan and respond in writing if it is accepted, or if it is accepted under condition of amendment.
15. Asbestos Abatement Contractor is required to remove nails, screws and/or other wall/ceiling material attachments.
16. Asbestos Abatement Contractor may remove studs with asbestos containing materials still attached, as long as they are to be removed, and are disposed of as asbestos-containing material.
17. Asbestos Abatement Contractor may not cut any sheer wall for any reason, without prior consent from the project Architect.
18. No damage will be permitted to studs that are to remain in place. Wall surfaces are to be peeled away, not pounded. The Contractor shall be financial responsible for any damage caused to studs.
19. Contractor is responsible for clean-up of all texturing and joint compound found on studs and rafter, as well as other surfaces behind, or inset into, the drywall materials.
20. Adhere to other requirements as stated in Sections 1-19, 21 and 22.

21. Following removal of all drywall, the contractor shall encapsulate the area with an encapsulate that is compatible with the reinstallation of wall and/or ceiling surfaces. The floors shall not be encapsulated unless otherwise noted in the Scope of Work, or stipulated by the HMS, Inc. Project Manager.

NOTE: All Specific Procedures and Requirements listed in Section 20 shall be reviewed by the contractor along with the Scope of Work issued for the project. If any perceived conflicts are present between the Scope of Work and these specifications or within the General Requirements specification itself, the contractor shall ask for a written interpretation from the HMS, Inc. Project Manager prior to submission of his bid. If conflicts in the "Scope of Work" and this specification, or with the General Requirements specification itself are discovered after the start of abatement, the more stringent specification and/or requirements will be enforced. The HMS, Inc. Project Manager shall make the determination as to which requirements and/or specifications are more stringent. If the materials to be removed during the course of project do not relate to any of the procedures in Section 20 or multiple materials exist within the work area, the contractor shall follow those procedures outlined in Sections 1-19, 21 and 22.

SECTION 21. PATENTS AND PREVAILING WAGES

21.1 Patents

Contractor shall pay all royalties and license fees required for the performance of the work. Contractor shall defend suits or claims resulting from contractor's or any subcontractor's infringement of patent rights and shall indemnify Owner and Owner's representative from losses on account thereof.

21.2 Prevailing Wage Requirements

The asbestos abatement contractor is fully and totally responsible at all times for compliance with payment of prevailing wage rates pursuant to provisions of the California Labor Code, for compliance with Division 2, Part 7, Chapter 1, California Labor Code, including but not limited to Section 1776; and for compliance with California Labor Code, Section 1777.5 for all apprenticeable occupations.

SECTION 22. PERMITS AND FEES

If any permits are required to be issued for any of the Work to be performed by Contractor, Subcontractor(s) or Sub-subcontractor(s) as part of the Project, it shall be the sole responsibility of the Contractor to expeditiously obtain all such permits and any costs incurred by the Contractor in obtaining such Permits shall be included within the Contract Price.

INSULATION

DIVISIONS 00 AND 01 ARE A PART OF THIS SECTION

PART 1 GENERAL

1.01 SCOPE OF WORK

The work of this Section shall include all labor, material, equipment, transportation and services necessary to completely furnish and install all insulation shown on the drawings and/or described herein, including all nails, clips, fasteners, tape and scaffolding necessary to complete the work specified and/or shown.

1.02 WORK INCLUDED

- a. Rigid insulation.

1.03 RELATED WORK

- a. Any and all insulation specified or shown on the drawings for the Heating, Ventilating and Air-conditioning or Plumbing Sections of the work.

1.04 WORK NOT INCLUDED

- a. No ceiling insulation in eaves and open corridors.

1.05 REFERENCES

- a. ASTM C-665, Type III, Class A . Category I
- b. Factory Mutual (FMRC Standard 4880) for rigid insulation

PART 2 PRODUCTS

2.01 MATERIALS

- a. Thermal and acoustical insulation located on or within floor-ceiling and roof-ceiling assemblies, crawl spaces, walls, partitions and insulation on pipes and tubing shall comply with this Section. Duct insulation and insulation in plenums shall conform to the requirements of the California Mechanical Code.

Exception: Roof insulation shall comply with C.B.C. Section 1504 for required testing materials only.

- b. All insulation materials including facings, such as vapor barriers or breather papers installed within floor-ceiling assemblies, roof-ceiling assemblies, walls, crawl spaces or attics, shall have a flame-spread rating of 25 or less and a smoke density not to exceed 450 when tested in accordance with U.B.C. Standard No. 8-1. All thermal insulation specified herein shall be as manufactured by Johns Manville Thermal FSK-25 Flame Resistant Fiber Glass Commercial insulation or approved equal in quality, utility and thermal properties. Batts shall be fiberglass with vapor seal backing on one side with projecting flanges for stapling. R-values shall be minimum resistance of R-30 for ceilings and R-19 for walls unless noted otherwise.
- c. Rigid insulation shall be "Flat Energy 3 " polyisocyanurate insulation boards or equal, with a thermal resistance of R-10 unless noted otherwise and a minimum compressive strength of 25 p.s.i. with factory applied facers on each side. All materials, including foil facings to have smoke development rating of 450 or less and a flame spread of 25 or less when tested in accordance with UBC Standard 8-1.
- d. Wire Staples: "Bostitch" or approved equal with 1/4" staple legs.

2.02 SUBSTITUTIONS

See Section 10, Article 19.

2.03 EQUALS

John Manville, U.S. Gypsum, DOW, Owens-Corning, Certainteed, GAF.

PART 3 EXECUTION

3.01 INSTALLATION

- a. Insulation shall be installed to form a complete barrier against the passage of heat and/or sound to the full extent of the thickness of the material and type of material specified. Holes, gaps, tears and other evidence of inferior installation will be cause for rejection.
- b. Roof insulation shall be placed up tight against roof deck and fixed in place with 18-gauge taut wire system or stapled per NFPA 13.

END OF SECTION
08/09/2023

ROOF BOARDS

DIVISIONS 00 AND 01 ARE A PART OF THIS SECTION

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes: Fiberglass-mat faced gypsum roof boards for application directly under roof membrane systems.

1.02 REFERENCES

- A. ASTM International (ASTM):
 1. ASTM C209 Standard Test Method for Cellulosic Fiber Insulating Board
 2. ASTM C472 Standard Test Methods for Physical Testing of Gypsum, Gypsum Plasters and Gypsum Concrete.
 3. ASTM C473 Standard Test Methods for Physical Testing of Gypsum Panel Products.
 4. ASTM C1177 Standard Specification for Glass Mat Gypsum Substrate for Use as Sheathing.
 5. ASTM D3273 Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber.
 6. ASTM E84 Standard Test Method for Surface Burning Characteristics of Building Materials
 7. ASTM E96 Standard Test Methods for Water Vapor Transmission of Materials.
 8. ASTM E108 Standard Test Methods for Fire Tests of Roof Coverings
 9. ASTM E136 Standard Test Method for Behavior of Materials in a Vertical Tube Furnace at 750 C.
 10. ASTM E661 Standard Test Method for Performance of Wood and Wood-Based Floor and Roof Sheathing Under Concentrated Static and Impact Loads.
- B. Underwriters Laboratories (UL): UL 790 Standard Test Methods for Fire Tests of Roof Coverings.
- C. [Florida Approvals: Roof boards shall have Florida Product Approval and Miami-Dade County Product Control Approval.]

1.03 SUBMITTALS

- A. Product Data and Installation Instructions: Submit manufacturer's product data including installation instructions and substrate preparation recommendations
- B. Sample warranty: Submit a sample warranty identifying the terms and conditions of the warranty as herein specified.

1.04 QUALITY ASSURANCE

- A. Inspection: Where applicable, allow for inspection and moisture testing and reporting prior to installation of roof boards.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. All components used in roofing systems, including DensDeck® Roof Boards, shall be protected from exposure to moisture before, during and after installation.
- B. Remove any plastic packaging from roof boards immediately upon receipt of delivery. Failure to remove plastic packaging may result in entrapment of condensation or moisture, which may cause application problems that are not the responsibility of manufacturer
- B. Any protective, plastic factory packaging that is used to wrap roof boards for shipment is intended to provide temporary protection from moisture exposure during transit only and is not intended to provide protection during storage after delivery.
- C. Roof boards stored outside shall be stored level and off the ground and protected by a waterproof covering. Provide means for air circulation around and under stored bundles of DensDeck® Roof Boards. Use adequate supports to keep the bundles flat, level and dry.
- D. Care should also be taken during installation to avoid the accumulation of moisture in the system. Roof boards shall be covered the same day as installed. Avoid application of roof boards during rain, heavy fog and any other conditions that may deposit moisture on the surface, and avoid the overuse of non-vented, direct-fired heaters during winter months.

1.06 FIELD CONDITIONS

- A. Application standards where applicable are in accordance with design assembly specifics, system manufacturer requirements and the DensDeck® Technical Guide.
- B. Do not install DensDeck® Roof Board that is moisture damaged. Indications that panels are moisture damaged include, but not limited to, discoloration, sagging, or irregular shape.
- C. Installed DensDeck® Roof Boards shall be dry, with free moisture content of less than 1% using a moisture meter that has been set to the gypsum scale, before applying adhesive, asphalt or membrane.
- D. All components used in roofing systems, including DensDeck® Roof Boards, shall be protected from exposure to moisture before, during and after installation.

PART 2 PRODUCTS

2.01 MANUFACTURERS:

- A. Georgia-Pacific Gypsum LLC products as specified herein.

2.02 FIBERGLASS-MAT FACED GYPSUM ROOF BOARDS:

- A. Fiberglass Mat Faced Gypsum Roof Board:
 1. Acceptable Product: GP Gypsum, DensDeck® Prime Roof Boards.
 2. Thickness: 1/2 inch.
 3. Width: 4 feet.
 4. Length: [8 feet].
 5. Weight: 2.0 lb/sq. ft.
 6. Surfacing: Fiberglass Mat.
 7. Flexural Strength, Parallel (ASTM C473): 80 lbf, minimum.
 8. Flute Span (ASTM E661): 5 inches.
 9. Permeance (ASTM E96): Greater than 35 perms.
 10. R-Value (ASTM C518): 0.56.
 11. Water Absorption (ASTM C473): Less than 10 percent of weight.
 12. Surface Water Absorption (ASTM C473): Nominal 2.5 grams.
 13. Compressive Strength (Applicable Sections of ASTM C472): Nominal 900 pounds per square inch.
 14. Flame Spread/ Smoke Development (ASTM E84): Not more than 0 Flame Spread, 0 Smoke Development
 15. Combustibility (ASTM E136): Noncombustible
 16. Fire resistance rating (UL 790 and ASTM E108): Class A
 17. Mold Resistance (ASTM D3273): Scored a 10

PART 3 EXECUTION

3.01 INSTALLATION

- A. Apply only as many roof boards as can be covered by a roof membrane system in the same day.
- B. Board edges and ends shall be butted tightly together; do not gap edges or ends.
- C. Hot-Mopped Installation over Thermal Insulation, under Modified Bitumen Roofing Systems:
 1. Stagger roof board end and edge joints minimum 12" over installed insulation layers.
 2. Stagger roof board end and edge joints minimum 6".
 3. Prior to hot-mopping the roof boards to the substrates, ensure that the roof boards are dry, with free moisture content less than 1% by weight using a moisture meter that has been set to the gypsum scale.
 4. Maximum asphalt application temperatures shall be 425°F (218°C) to 450°F

(232°C). Application temperatures above these recommended temperatures may adversely affect roof system performance. Consult and follow roofing system manufacturer's specifications for full mopping applications and temperature requirements.

5. Follow accepted roofing industry guidelines for full mopping applications such as EVT temperature guidelines, brooming and proper application rates of asphalt.
6. DensDeck® Prime Roof Boards may be flood mopped to a substrate followed by a flood mopped application of membrane using these guidelines:
 - a. Roof boards and substrate shall be dry.
 - b. Asphalt used to install roof boards should be allowed to cool prior to mopping base sheet to top of DensDeck® Prime Roof Boards.
 - c. Allow base ply to cool before mopping additional plies or cap sheet to limit the amount of direct heat that is applied to boards.

3.02 PROTECTION

- A. Protect roof board installations from damage and deterioration until the date of Substantial Completion.

END OF SECTION

08/12/2024

BUILT-UP ROOFING (CAP SHEET ON NAILABLE DECK)

DIVISIONS 00 AND 01 ARE A PART OF THIS SECTION

PART 1 GENERAL

1.01 SCOPE OF WORK

The work of this Section shall include all labor, materials and appliances required to complete all the built-up roofing work shown on the drawings and specified hereunder.

1.02 WORK INCLUDED

- a. Removal of existing roofing system to roof sheathing.
- b. Inspection of existing roof decking for signs of damage or deterioration of roof decking.
- c. Built-up bituminous roofing work and installation of flashing flanges in drains. All flashings, jacks, etc shall be lead free.
- d. Composition 4-ply built-up mineral surface glass fiber roof over existing nailable deck
- e. Provide and install all base and wall flashings. Provide and install cant strips.
- f. Supervision of installation of sheet metal work relative to roofing system.
- g. All cutting and patching of existing roofing as required for new construction.
- h. Roofing accessories and incidentals
- i. Disconnections and reconnections, rerouting, or alteration of all existing electrical, signal, H.V.A.C., plumbing work, etc., required to complete the specified work.
- j. Painting of new flashings and touch-up related to reroofing.
- k. Wood nailers, blocking, pipe stands, etc.
- l. Sheet metal flashing, counterflashing related to reroofing. All flashings, jacks, etc shall be lead free.
- m. Roof drain and vent flashing clean and repair as related to reroofing
- n. Guarantee related service of roof
- o. Clean up related to work performed under this section.

1.03 RELATED WORK

- a. Painting of coping/flashings is specified in Section 09 91 00.
- b. Sheet metal flashings, patented flashings, and manufactured flashings are specified in Section 07 60 00.

1.04 REFERENCES

- a. American Society for Testing and Materials (ASTM)
 1. D41 Specification for asphalt primer used in roofing, dampproofing, and waterproofing.
 2. D312 Type III: Specification for asphalt used in roofing
 3. D2822-88 Specification for asphalt roof cement
 4. E108 Fire tests of roof covering
 5. D4601 Type II: Specification for asphalt coated glass fiber base sheet used in roofing
 6. D2178 Type IV: Specification for asphalt glass felt used in roofing and waterproofing

7. D3909 Specification for asphalt roll roofing (glass felt) surfaced with mineral granules
8. C-208 Specifications for insulated board, structural and decorative (roof cants).
9. B-41 Specifications for asphalt primer used in roofing, dampproofing, and waterproofing
- b. Underwriter's Laboratories (U.L.):
 1. U.L. labeled products: Type G-1 BUR (ply sheets) or Type G-2 BUR (base sheets).
- c. Manufacturer's built-up roofing specifications catalog.
- d. Title 24, Section 1507.10, and Table No. 15E.

1.05 GUARANTEE

A written guarantee shall be presented to the Owner upon completion and acceptance of the building. The guarantee shall be signed by this Contractor and shall stipulate that he, the roofing Contractor, will maintain and repair the roof and replace any defective materials which would cause the roof to leak for a period of Five (5) years after date of Notice of Completion. The Contractor agrees to inspect and make necessary repairs to defects or leaks in the roof and flashings. Emergency leaks will be attended to within twenty-four (24) hours from receipt of notice from the Owner. As soon as weather permits, the Contractor will restore affected areas to standards of this contract without voiding the Manufacturer Guarantee and repair any damages from these leaks without cost to the Owner, except for leaks caused by abuse to roof by others or by abnormal weather conditions such as lightning, severe hail, or other unusual climactic phenomena. This Guarantee must be issued and given to the Owner in writing before final payment is released for the project.

1.06 ROOFING MANUFACTURER'S GUARANTEE

- a. The Owner shall have the right at any time prior to the start of the roofing installation to require a manufacturer's guarantee. If a guarantee is required, the owner shall pay the costs of this guarantee directly to the roofing manufacturer. The guarantee, if required will be as follows:
 1. Furnish to the Owner, a Manufacturer's Guarantee covering any and all repairs/replacements to keep the roof, including the flashings, watertight for a period of thirty (30) years beginning from the date of Notice of Completion. Cost of the Guarantee to be borne by the Owner.
 2. Guarantee shall be executed by Manufacturer to cover all costs for repairs necessary to stop leaks which occur resultant of, but not limited to, the following:
 - a) Deterioration of the roofing membrane or base or parapet wall flashing system resulting from ordinary wear and tear by the elements.
 - b) Workmanship on the part of the Roofing Contractor in application of the roofing membrane and base flashing system.
 - c) Splits or cracks in the built-up roofing membrane not caused by structural movement.
 - d) Slippage of the built-up roofing membrane or base flashing.
 3. If, 24 hours after notification of roof leakage, this Contractor has not responded the Owner shall have the right, without invalidating his guarantees and at the expense of this contractor, to make any emergency *temporary* repairs that are required in order to protect the building and its contents from damage due to roof leakage.

4. Should roof samples be required by Manufacturer, and if for any reason deficiencies are found within the samples, the Roofing Contractor will, at his expense, make repairs as necessary to correct deficiencies and satisfy Manufacturer requirements.

1.07 SUBSTITUTIONS

See Section 10, Article No. 19.

1.08 SUBMITTALS

Contractor shall provide product literature, layouts, details, etc. as required by these specifications sufficient for review by the Architect to verify conformance with product requirements.

1.09 INSPECTION OF SITE

- a. The contractor and each subcontractor shall visit the site and satisfy themselves as to the existing conditions and the conditions under which they will be obliged to operate or that will affect their work under the contract and shall verify the extent of the work required. The responsibility for proper installation of all components of the roofing system lies with the Roofing Contractor. The Contractor shall inform the Owner of any conditions detrimental to the quality of construction or long-term performance of the roofing system and shall not proceed with the work until the conditions are corrected.

1.10 QUALIFICATIONS

- a. Manufacturer: Company specializing in manufacturing the products specified in this section shall have a minimum of ten (12) years documented experience.
- b. Installer/Contractor: Company specializing in modified bituminous roofing installation shall have a minimum of five (5) years experience and shall be a certified and qualified installer by and of the manufacturers systems specified in this section.

PART 2 PRODUCTS

2.01 MATERIALS

Materials shall comply with applicable requirements of ASTM Specifications, listed in 1.04, standards noted herein, and shall bear the U.L. Label Class 'B'.

- a. Mineral Cap Built-Up Roofing:
 1. Approved Manufacturers:
 - i) Garland – Basis of design
 - ii) Johns Manville
 - iii) G.A.F.
 - iv) Approved equal
- b. Asphalt: Shall be manufactured by a major oil refinery regardless of private label; it shall have a softening point of 190 deg. F.
- c. Base Felt: Shall be 'HPR Glasbase', an asphalt coated fiberglass base felt with a minimum weight of 25 lbs. per 100 sq. ft.

- d. Finishing Felts: Shall be "HPR Glasfelt " an asphalt coated fiberglass ply felt surfaced with a parting agent.
- e. Cap Sheet: Shall be 'StressPly Plus FR Mineral P-80', a mineral surfaced, SBS, elastomeric, modified bitumen cap sheet with a minimum weight of 90 lbs. per 100 sq. ft. or approved equal
- f. Cant Strips: Shall be rigid fiberboard material, except where wood is specifically shown, not less than 4" in height and shall extend out not less than 4" on the roof surface.
- g. Mastic: Shall be GarlaFlex, a medium troweling consistency, cut-back asphalt mastic used for flashing setting and general-purpose maintenance in connection with built-up roofing, or approved equal.
- h. Primer: Shall be 'Garla-Prime ', a thin, brushing, cut-back asphalt especially prepared for priming porous surfaces to promote a bond between the bitumen and the surface, and priming metal flashings, or approved equal.
- i. Nails: Shall be galvanized, have a 7/8" long x 11 ga. annular or spiral shank, with 1" diameter head. Smaller head nails may be used provided 1" diameter tin caps are used in conjunction with them. Nails shall be "Squarehead Cap Nail" by Independent Nail Company; or Simplex Nail and Manufacturing Co. or approved equal.
- j. Galvanized Sheet Steel:
 1. Galvanized sheet steel shall be "Armco," "Zincgrip", "Paintgrip" lock form quality as manufactured by Armco Steel Corp. or approved equal, in quality and utility. All material 24 gauge unless otherwise shown on drawings or called for in the Specifications. All material shall be copper bearing and heavily galvanized. Sheet metal shall be 1.25 oz./sq. ft., hot dipped galvanized coating conforming to standards as set forth in ASTM A-525. Equals: Galvanized sheet steel conforming to ASTM A-525 with 1.25 oz./sq. ft. hot dipped galvanized coating.
 2. Solder shall be one-half (1/2) pure virgin lead and one-half pure tin.
 3. Nails shall be galvanized and selected for their intended use.
 4. Screws shall be cadmium plated oval head sheet metal screws.
 5. Washers shall be 4# brass washer 1" diameter.
 6. Rivets shall be soft annealed non-corrosion metal.
 7. Sheet Aluminum: Alcoa Aluminum sheets, 35 alloy alumilite satin finish. Gauge, unless otherwise shown on drawings or called for in the specifications, is .040.
 8. Patented Flashing: Fry Spring-Lock, Calloway, or approved equal.
- k. Roof Pipe stands: Shall be as manufactured by Dura-Block and shall be used for resetting of piping, conduit, etc. Model Nos. shall be as required for the applicable size pipe, conduit, etc.
- l. Delivery Storage and Handling
 1. Deliver and store products in manufacturer's unopened packaging with labels intact until ready for installation.
 2. Store all roofing materials in a dry place, on pallets or raised platforms, out of direct exposure to the elements until time of application. Store materials at least 4 inches above ground level and covered with "breathable" tarpaulins.
 3. Stored in accordance with the instructions of the manufacturer prior to their application or installation. Store roll goods on end on a clean flat surface

except store KEE-Stone FB 60 rolls flat on a clean flat surface. No wet or damaged materials will be used in the application.

4. Store at room temperature wherever possible, until immediately prior to installing the roll. During winter, store materials in a heated location with a 50 degree F (10 degree C) minimum temperature, removed only as needed for immediate use. Keep materials away from open flame or welding sparks.
5. Avoid stockpiling of materials on roofs without first obtaining acceptance from the Architect/Engineer.
6. Adhesive storage shall be between the range of above 50 degree F (10 degree C) and below 80 degree F (27 degree C). Area of storage shall be constructed for flammable storage.

2.02 GENERAL REQUIREMENTS

- a. All materials furnished under this section shall be first grade products of standard manufacturers and shall be delivered in the original packages. Each container or package of material shall be permanently labeled for instant identification and shall include manufacturer's name, brand name, manufacturer's product number and ASTM or federal specification or similar designation.
- b. To the maximum possible extent, materials shall be the product of a single manufacturer, except as otherwise specified. The contractor shall be required to use such materials, skill and thorough attention to detail as will provide a quality installation. Additional work beyond that shown, noted or specified, that is reasonably and manifestly necessary shall be provided to complete the roofing and flashing system.
- c. All other materials necessary and required to complete the roofing system as shown and specified shall be supplied and installed by the Contractor.
- d. All sheet metal that will come in contact with bituminous materials shall be primed with an asphaltic primer and allowed to dry before applying bitumen.
- e. All other flashings not specifically detailed herein will be applied in accordance with manufacturer recommendations.

PART 3 EXECUTION

3.01 GENERAL REQUIREMENTS

Whenever items or procedures specified herein are less stringent than the manufacturer's guarantee requirements, the manufacturer's requirements shall be followed.

- a. **Workmanship:** Only skilled workmen experienced in their respective trades and work shall be employed. All work shall be in a first class workmanlike manner and shall be subject to the approval of the Architect or the Inspector.
- b. **Approvals:** An approval for all brands of materials not mentioned herein shall be obtained in writing from the Architect one week prior to bidding.
- c. **Environmental Conditions:** Work shall be performed under temperature and climatic conditions recommended by the manufacturer of the materials.
- d. **Fire Resistive Requirements:** Roofing shall be fire retardant in accordance with requirements of Title 24, Chapter 15.
- e. **Coordination:** Coordinate start and execution of roofing application with all other related and adjacent work.

- f. Preparation of Surfaces: The entire roof area shall be swept clean. All reglets shall be in place and properly aligned at heights above roof to insure adequate lap of roofing sheets up the surface of the wall. Applicator shall check all surfaces and report any conditions that will affect roofing application or the final results required. Contractor shall then correct all deficiencies noted as per the manufacturer's recommendations prior to start of roofing work. Repair of existing surfaces shall be provided by the contractor without any additional compensation or extension of contract specified construction time.
- g. Cooperation: Roofers, sheet metal men, and other tradesmen shall cooperate to assure a completely watertight and perfect job. In the event of a dispute as to the responsibility for any defect, which might develop, the decision of the Architect shall be final and binding on all parties.
- h. Preparation: The Contractor shall assure that all decks are complete, metal fittings, vents and similar items affecting roofing are in place, all surfaces are free from rough spots and sharp projections, and that the deck is in proper condition to receive the roofing work. The roof deck shall be broom clean. All sheet metal work to be roofed over shall be primed. Prime all concrete decks and walls with one gallon primer per 100 sq. ft.
- i. Cant Strips: Shall be installed at all intersections of roof surface with vertical surfaces. All ends shall fit flush and all corners shall be mitered. Strips shall bear on the surface to which built-up roofing is to be applied, and shall fit flush to the walls. Cant strips shall be mechanically secured to the deck or vertical surface where possible, otherwise strips shall be applied in a heavy mopping of Type III bitumen.
- j. Temperature: Each kettle shall be provided with a properly operating temperature control device and a thermometer, which is in working order. Kettle temperature shall never equal or exceed 500 deg. F (flash point), and application temperature shall be between 375° to 475° F (+ 25°F of E.V.T.) at the mop.
- k. Cleaning Work: Upon completion of this work, the contractor shall clean all roofs and leave same in an acceptable condition.
- l. Cleaning Site: Clean the building and building site of all debris and rubbish caused by the work of this trade.
- m. Inspection: The Architect reserves the right to make an inspection cut and a sample of built-up roofing; the costs for making repairs shall be paid by the roofing contract.
- n. Samples: Each type of roofing material used in the project shall be submitted to the Architect for approval upon request. Each sample shall be labeled with manufacturer's name, product name, and applicable ASTM, federal or other specification designation. Test data necessary to substantiate the quality of products shall be submitted when requested by the Architect.
- o. A Conference shall be held at job site a minimum of 2 weeks prior to application of any roofing material and representatives of the following participants in the construction shall be present: Roofing Contractor; Roofing Material Manufacturer; Inspector and Architect. The roof decks shall be inspected and accepted by the roofer and roofing material manufacturer, and the roofing application specification reviewed with the inspector, before any roofing work is commenced.
- p. Temporary Roofing: Provide temporary roofing when adverse weather conditions prevent the specified roofing and associated work from being installed and when it is determined (by the Contractor) the job progress or protection of other work necessitates such procedure. Provide temporary roofing equivalent to one ply reinforced polyethylene (Griffolyn T-55 or equal). Remove temporary roofing before proceeding with the permanent roofing and associated work.

NOTE: Necessity for (and decision to provide) temporary roofing is this Contractor's responsibility, without additional compensation or extension of construction time.

3.02 SUMMARY OF WEIGHTS FOR 100 SQUARE FEET (Garland)

- a. Mineral Cap Built-Up Roofing on Wood Deck:
- | | |
|------------------------------------------------|-----------------|
| Sheathing paper (if required) | 5 lbs. |
| One layer of `HPR Glass Base' | 25lbs. |
| Two layers of `HPR Glass felt' | 20 lbs. |
| Three layers of asphalt | 69 lbs. |
| One layer `StressPly Plus FR Mineral P-80..... | <u>120 lbs.</u> |
| | 239 lbs. |

3.03 APPLICATION OF MINERAL SURFACED FIBERGLASS BUILT-UP ROOFING

- a. Over plywood deck, using `HPR GlasBase', start with a 12" wide felt. Following felts to be applied full width, lapping each felt 2" over the preceding one. Nail the laps at 9" centers and down the longitudinal center of each felt install two rows of nails spaced approximately 11" apart and staggered on approximately 18" centers.
- b. Over the `HPR Glasbase', using `HPR GlasFelt', starting at the low edge, apply one 18" wide felt, then over that a full 36" wide felt. Following felts are to be applied full width overlapping the preceding felt by 24-2/3" in such manner that at least 3 plies of felt cover the base felt at all locations. Install each felt so that it shall be firmly and uniformly set, without voids, into hot ($\pm 25^{\circ}$ F. of the EVT) asphalt applied just before the felt at a nominal uniform rate of 25 lbs. per square (25-30 lbs range) over entire surface.
- c. Prior to `cap' application, cut the cap sheet into handleable lengths (12' - 18') and allow to flatten. Over the `HPR Glasfelt', using pre-cut `Stressply Plus FR Mineral P-80, starting at the low edge, apply one layer of the cap sheet, being sure to maintain 2" side laps and 6" end laps over the preceding sheets. Prior to setting cap sheets, mop the full width to be covered, including the lap solidly with hot roofing asphalt. The cap sheet is then set immediately (flopped) into the full width mopping of asphalt applied at a nominal uniform rate of 27lbs. per square (25-30 range) over entire surface. The temperature of the asphalt when applied must be such that, when the cap sheet is set into it, its temperature is approximately 20 deg. F. above the EVT. This will assure proper flexing of the cap sheet coating and result in maximum bonding. The cap sheet must be firmly and uniformly set into the hot asphalt with all edges well sealed.

3.04 GENERAL WORKMANSHIP

- a. The contractor shall cooperate in the installation of all roof plumbing jacks, copper flashing at roof sumps, scuppers, edge metal, copings, duct flashings, curb flashings and other sheet metal work furnished by sheet metal, H.V.A.C. and plumbing trades to ensure a watertight installation.
- b. `Glasbase': Shall be secured to wood decks with nails as specified in Paragraph 3.03, with min (1) nail per 1-1/3 sq. ft., per Title 24, Table 15E.
- c. `Glasply Premier': Shall be rolled and broomed into hot-mopped asphalt directly behind the mop, per manufacturer's standards.
- d. M.B.R. Flashings: Shall be installed per the manufacturer's standard details.
- e. Any application details not specifically detailed herein shall be done in accordance with manufacturer's recommendations. All reference information contained in the manufacturer's Specification Manual for Built-Up Roofs, latest edition, shall be considered to be part of this specification.

- f. Gravel Stops: Shall be of primed metal furnished and installed by others, and set in flashing cement.
- g. Gravel Stops: Shall be nailed over B.U.R. at 3" o.c., then the deck flange overlapped with a ten inch (10") wide strip of StressPly Plus FR Mineral P-80 embedded in flashing cement or hot-mopped asphalt.
- h. Melting of Asphalt: Materials shall be broken up, placed in the kettle, melted and frequently stirred to prevent burning. Asphalt shall not be heated above flash point (500° F) it shall be applied between + 25° F of the E.V.T. following strictly the manufacturer's guidelines.
- i. Plumbing/Roof Vents: All vent/roof flanges shall be set in flashing cement or hot asphalt over B.U.R.. All plumbing/copper flashings shall lap roofing 6" min. All flanges shall be overlapped with a collar of ' Stressply Plus FR Mineral P-80', which laps roofing a min. of 8". Set ' StressPly Plus FR Mineral P-80' in hot asphalt or flashing cement.

3.05 GENERAL FLASHING SPECIFICATIONS

- a. M.B.R. flashings shall not be applied until built-up roofing has been laid. Provide temporary seal at ply terminations until installation of flashing.
- b. All sheet metal that will come in contact with bituminous materials shall be primed with an asphaltic primer and allowed to dry before applying bitumen.
- c. All other flashings not specifically detailed herein will be applied in accordance with manufacturer recommendations.

3.06 M.B.R. FLASHING

- a. Nail one ply of 'HPR Glasbase' over parapet wall or curb, extending up to reglet or coping. This ply shall cover the cant strip but shall not extend onto the roof surface. Nail ply at 4" o.c. at top and all laps. Secure ply to cant strip with hot mopped asphalt or flashing cement.
- b. Over the "HPR Glasbase", apply one ply of 'Flexbase 80' in a hot mopping of asphalt. This ply shall cover the wall and extend a minimum of 6" into the field of the roof.
- b. Over the 'Flexbase 80', apply one ply of ' StressPly Plus FR Mineral P-80 flashing membrane into a solid mopping of hot asphalt or flashing cement. The StressPly Plus FR Mineral P-80 ply shall extend onto the roof surface at least 9". Joints shall be lapped 4" min. Nail the top and edges of the StressPly Plus FR Mineral P-80 flashing at 4" o.c.
- c. Seal all inside and outside corners.
- d. Completely bond all flashings to the underlying surface without any looseness, bubbles, or voids. Remove and replace any loose flashing materials.
- e. At walls less than 24" high, extend flashing sheet over the top wall surface to the outside edge. For wall heights exceeding 24", apply separate wall covering as described below.

3.08 FLANGED SLEEVES AND ACCESSORIES

- a. All copper and metal pipe sleeves, scuppers, edge flashing, etc. shall be replaced with new using minimum 22 gauge metal and 16 oz. copper for vent pipes. Fabricate metal scupper flashing in two pieces and field solder where membrane occurs on both sides. Minimum 4' wide flanges shall be set into roof cement over the installed roof plies and fastened securely to the underlying deck (fastening is not required for copper flanges).

- b. All flanges shall be primed and flashed on the roof with at least two (2) plies of fiberglass felt embedded into asphalt. The first ply shall extend a minimum of four inches beyond the flange onto the roof. The second ply shall extend a minimum of four inches further onto the roof than the first ply.

3.09 EDGE FUSING

- a. Provide new 22- gauge metal edge flashing with minimum 4" flange and install along roof edges to replace existing in the following manner:
 1. Prior to edge flashing installation, install tapered fiberboard edge strip to create a smooth transition at the edge. Extend base plies over and down the outside edge of the wood nailer and nail to face of the nailer. Extend field cap plies to the outside edge of the wood nailer and cut even.
 2. Set flange into roof cement over the installed field plies.
 3. Fasten flanges to the underlying wood deck using appropriate nails placed at approximately four inches on center and staggered.
 4. Roof cement shall be installed between the edge flashing ends at all joints, six inches each side of joint. Each joint shall be nailed with a minimum of four nails, two on each side of the joint. All joints and miters shall be overlapped a minimum of four inches.
 5. Prime edge flashing flange with primer and allow to dry before application of stripping plies.

3.10 SHEET METAL PRACTICE

Procedures and methods recommended by "National Association of Sheet Metal Contractors" shall be followed insofar as they do not conflict with the requirements of the Uniform Building Code. Work shall be accurately formed to sizes, shapes and dimensions indicated and detailed; with all angles and lines in true alignment, straight sharp, erected plumb, level and in proper plane without bulges or waves. Pipe or flange intersections to accurately fit and solder together.

- a. Exposed edges shall be turned back and hemmed 1/2" wide.
- b. Expansion and Contraction: Provisions shall be made in all cases for expansion and contraction.
- c. All nails in connection with galvanized sheet metal shall be galvanized.
- d. Flashing and Counterflashing: 24 gauge galvanized iron in lengths in general of ten feet (10'-0") with no longitudinal joints. The joints in flashing and counterflashing generally shall not be soldered but shall be set in mastic so that expansion and contraction may occur without buckling. Wall type counterflashing over mopped or composition roofing at walls shall be removable counterflashing. Internal and external angle returns shall be one piece extending twelve inches (12") each way from the corner.
- f. Gravel Stop Joints: Where joints occur in flashing, the flashing shall be spaced one inch (1") apart and be set in mastic six inches (6") each side of joint. A piece of flashing twelve inches (12") long and the same shape, to be set in mastic over the joint and bottom edge to be crimped under drip lip.
- g. Gutters, Roof Leader Heads and Scuppers:
 1. Gutters and Leader Heads shall be constructed to match existing or as detailed and secured to supports as shown. Gutters to be 22 gauge galvanized steel and provided with supports every 3'-0" centers. At each

downspout, the gutter shall be fitted with steel wire removable mesh balloon strainer. Gutter connections to downspouts shall be made by the Contractor. Where roof drains copper into leader heads, connection thereto shall be made by the Contractor. Scuppers to be 22 gauge galvanized steel as detailed.

2. Submit a sample of gutter and leader head for the Architects approval before fabricating same. The sample shall indicate the general gutter construction, hangers, straps, expansion joints, typical joint and strainer.

3.11 MISCELLANEOUS

- a. Contractor shall be responsible for any disconnections, alterations, etc., required to accomplish all specified work items.
- b. Support all pipelines running along the roof surface, as well as any non-penetrating supports, using roof pipe stands set loosely over a spot-adhered section of protection material. The protection material shall extend at least 4" beyond the sleeper on all sides. Secure pipes to sleepers using galvanized metal clips secured on both sides of pipe. At pipe groupings, a greater length sleeper may be required. Existing multiple pipe spacer/supports may be reused and secured to new sleepers. If required, sleepers shall be stacked and secured together to accommodate elevated pipes. Sleeper supports shall be spaced no more than 6' apart.
- c. Any obsolete equipment no longer required on the roof shall be removed and disposed of or given to the Owner at its discretion. Selection and disposal of obsolete equipment shall be closely coordinated with school personnel.
- d. Existing roof-top equipment shall be temporarily raised as needed to accommodate proper installation of new roofing and flashing materials. Resecurement of units through horizontal metal flashing surfaces (enclosed sleepers and platforms) shall utilize 1/4" solid neoprene gaskets. Resecurement through vertical surfaces (curbed vent and fan units, etc.) shall utilize appropriate screws through steel/neoprene washers placed at max. 12" o.c. or minimum 2 per side.
- e. Thoroughly clean and reseal all exposed metal joints and penetrations to result in a watertight seal.
- f. Carefully remove existing counterflashing insert at walls to accommodate new base flashing application. Reinstall counterflashing into reglet and apply new sealant at transition. Replace hold-in clips as needed to insure a maximum 30" spacing.
- g. Large HVAC units resting on platforms are to be raised under this contract. Coordinate work so that new base flashing can be sealed to the existing top membrane while platform is raised. New 22 gauge metal flashing pan shall be installed over platform when seal is complete, before unit is lowered.

3.12 CLEAN UP

The contractor shall, at all times, keep the premises free from accumulation of waste materials or rubbish caused by his employees or work and shall remove all resultant work debris from the job site.

3.13 PROTECTION

The contractor shall protect all surfaces against damage by the roofing in completing the work of this section. Heavy concentrations of roofing materials on the roof deck are prohibited.

- 3.14 THE ROOF ASSEMBLY SHALL MEET UNDERWRITERS LABORATORIES, INC., OR ASTM REQUIREMENTS, FOR CLASS B FIRE RETARDANT ROOF COVERING AS DEFINED IN TITLE 24, CCR SECTION 1504.2, AND SHALL BE INSTALLED PER 1507.6 and Tables 15-E & 15-G, TITLE 24, CALIFORNIA ENERGY CODE REQUIREMENTS AND HAVE A COOL ROOF LABEL FROM THE COOL ROOF RATING COUNCIL.

END OF SECTION
08/15/2024

SHEET METAL

DIVISIONS 00 AND 01 ARE A PART OF THIS SECTION

PART 1 GENERAL

1.01 SCOPE OF WORK

The work of this section shall include all fabrication, labor, material, appliances and transportation required to complete the work indicated on the drawings and/or specified hereunder.

1.02 WORK INCLUDED

- a. All galvanized sheet metal work, such as flashing

1.03 SUBSTITUTIONS

See Div.00, Section 10, Article 19.

1.04 WORKMANSHIP

- a. Only skilled workmen experienced in their respective trades and work shall be employed. All work shall be performed in a first class workmanlike manner and shall be subject to the approval of the Architect or his representative. The contractor shall report to the Architect any improper or defective surfaces and shall not commence work until defective surfaces are corrected.

1.05 COOPERATION

Sheet metal men, and other trades, shall cooperate to obtain a completely watertight and perfect job. In the event of a dispute as to the responsibility of any defect, which might develop, the decision of the Architect shall be final and binding on all parties. The contractor shall consult the various tradesmen whose work adjoins his work, and he shall be responsible for the proper alignment and working of all the various details. The Sheet Metal Sub-contractor shall cooperate with contractor to ensure a watertight installation of all flashing and other sheet metal work furnished under this section to ensure issuance of manufacturer and contractor guarantees and warranties.

PART 2 PRODUCTS

2.01 GALVANIZED SHEET STEEL

Galvanized sheet steel shall be as manufactured by BMG Metals, Inc. Cal Strip Industries or approved equal, in quality and utility. All material shall be 24-gauge minimum or called for in the Specifications. All material shall be copper bearing and heavily galvanized. Sheet metal shall be 1.25 oz./sq. ft., hot dipped galvanized coating conforming to standards as set forth in ASTM A-653/653M Equals: Galvanized sheet steel conforming to ASTM A-653/653 M G90 or better hot dipped galvanized coating.

2.02 SOLDER

Solder shall be lead free.

2.03 NAILS

Nails shall be galvanized and selected for their intended use.

2.04 SCREWS

Screws shall be cadmium plated oval head sheet metal screws.

2.05 WASHERS

Washers shall be 4# lead washer 1" diameter.

2.06 RIVETS

Rivets shall be soft annealed non-corrosion metal.

2.07 MASTIC

No. 204 Henry's Plastic Roof Cement.

PART 3 EXECUTION

3.01 PRACTICE

Procedures and methods recommended by "National Association of Sheet Metal Contractors" shall be followed insofar as they do not conflict with the requirements of the Uniform Building Code Standards and Title 24, Part 2 C.B.C. 2022 edition. Work shall be accurately formed to sizes, shapes and dimensions indicated and detailed; with all angles and lines in true alignment, straight sharp, erected plumb, level and in proper plane without bulges or waves. Pipe or flange intersections to accurately fit and solder together.

3.02 MEASUREMENTS

The Contractor shall take measurements at the building site and verify the dimensions indicated on the drawings.

3.03 ACCURACY AND TOLERANCE

All sheet metal work shall be accurately worked to shape and sizes indicated on the drawings and/or as required by the Architect. The allowable tolerance on detailed sheet metal work shall not exceed 1/16" in ten feet (10'-0")

3.04 COMPLETENESS

The Contractor shall form, fabricate and erect all sheet metal work to perform satisfactorily and to be watertight and weather tight.

3.05 EXPOSED EDGES

All exposed edges shall be turned back and hemmed 1/2" wide.

3.06 EXPANSION AND CONTRACTION

Provisions shall be made in all cases for expansion and contraction.

3.07 NAILS

All nails in connection with galvanized sheet metal shall be galvanized.

3.08 FLASHING AND COUNTERFLASHING

24 gauge galvanized iron in lengths in general of ten feet (10'-0") with no longitudinal joints. The joints in flashing and counter flashing generally shall not be soldered but shall be set in mastic so that expansion and contraction may occur without buckling. Wall type counter flashing over mopped or composition roofing at walls shall be removable counter flashing except roof flashing specified under individual roofing section of the Specifications. Internal and external angle returns shall be one piece extending twelve inches (12") each way from the corner.

3.09 MISCELLANEOUS

The contractor is referred to plans and detail drawings for all miscellaneous sheet metal work not specifically called for in these specifications, but shown and detailed, and he shall furnish and install same. The contractor shall flash vent pipes and provide and install co-related vents and ductwork in cooperation with other trades as specified in other sections of these Specifications.

END OF SECTION
09/17/2024

CAULKINGS AND SEALANTS

DIVISIONS 00 AND 01 ARE A PART OF THIS SECTION

PART 1 GENERAL

1.01 SCOPE OF WORK

- a. The work of this Section includes caulking and sealing all joints where shown on the drawings and elsewhere as required to provide a positive barrier against passage of moisture.
- b. Related work described elsewhere: Adhere strictly to the caulking and sealant details shown on the drawings.

1.02 WORK INCLUDED (But not limited to the following):

- a. Caulking as specified hereafter except for those items specifically mentioned under another section.
- b. Caulking of all exterior cracks, and joints in, metal, flashing, to provide a watertight and weatherproof seal.
- c. Polyurethane sealants in conjunction with expansion joints.
- d. Joint filler material.
- e. Backing rod materials.
- f. Surface preparation and priming.
- g. Mixing.
- h. Application and curing.

1.03 RELATED WORK

- a. Flashing and Sheet Metal:

1.04 REFERENCES

- a. ASTM C-920: Recommended Practices for Use of Elastomeric Joint Sealants.
- b. ASTM C-804: Recommended Practice for Use of Solvent-Release Type Sealants.
- c. ASTM D-1056: Flexible Cellular Materials - Sponge or Expanded Rubber.
- d. ASTM D-1565: Flexible Cellular Materials - Vinyl Chloride Polymers and Copolymers (Open Cell Foam).
- e. FS TT-S-227: Sealing Compounds, Polyurethane Base, Multi Component, Chemically Curing.
- f. FS TT-S-230: Sealing compounds synthetic - rubber base, single component, chemically curing.

1.05 GUARANTEE

Contractor shall guarantee to maintain all caulking in a watertight condition for a period of two (2) years and remove and replace sealants, which fail due to a loss of adhesion or cohesion or incomplete cure, bubbling, etc.

1.06 SUBMITTALS

- a. **Manufacturer's Data:** Submit the following for review by the Architect, per Section 01301:
 - 1. A complete materials list showing all items proposed to be furnished and installed under this Section.
 - 2. Sufficient data to demonstrate that all such materials meet or exceed the specified requirements.
 - 3. Specifications, installation instructions, and general recommendations from the materials manufacturers showing procedures under which it is proposed that the materials will be installed.

1.07 PRODUCT HANDLING

- a. **Delivery and Storage:** Deliver all materials of this Section to the job site in the original unopened containers with all labels intact and legible at time of use. Store only under conditions recommended by the manufacturers. Do not retain on the job site any material, which has exceeded the shelf life recommended by its manufacturer.
- b. **Protection:** Use all means necessary to protect the materials of this section before, during, and after installation and to protect the work and materials of all other trades.
- c. **Replacements:** In the event of damage, immediately make all repairs and replacements necessary to the satisfaction of the Architect and at no additional cost to the Owner.

PART 2 PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

- a. Sika Corporation
- b. Tremco Commercial Sealants
- c. BASF Corporation
- d. Georgia Pacific Company
- e. P.P.G. Industries
- f. Approved Equals

2.02 SEALANTS

- a. Provide the following materials manufactured by Products Research & Chemical Corporation, or equals approved by the Architect, where indicated and where otherwise required for a complete and proper installation:

	<u>Material</u>	<u>Location of Use</u>
1.	Sikaflex 150 Vulkem Dymonic 100 Masterseal NP 100	Throughout the Work, except where other sealant is specified, where anticipated joint movement will be 50% or less;
2.	Sikaflex 1a Vulkem 116 Masterseal NP 1	Throughout the Work, except where other sealant is specified, where anticipated joint movement will be 25% or less;
3.	Sikaflex 2cSL Sonneborne MP2 Vulkem 445 SSL Masterseal SL1/2	Horizontal joints exposed to pedestrian and vehicular traffic, and all joints subject to immersion

4. Sikaflex 150 Vertical and horizontal joints subject to extreme movement;
Masterseal NP100
Spectrem 800
5. Gyproc 90 Fire Halt Pipes and conduits penetrating fire separations;
PR-812 Firewall sealant
6. Polyethylene backer rod where required to prevent 3-point adhesion.
 - a. For other services, provide products especially formulated for the proposed use and approved by the Architect.
 - b. Colors:
 1. Colors for each sealant installation will be selected by the Architect from standard colors normally available from the specified manufacturer.
 2. Should such standard color not be available from the approved manufacturer except at additional charge, provide such colors at no additional cost to the Owner.
 3. In concealed installations, and in partially or fully exposed installations where so approved by the Architect, use standard gray or black sealant.

2.03 PRIMERS

Use only those primers, which have been tested for durability on the surfaces to be sealed and are specifically recommended for this installation by the manufacturer of the sealant used.

2.04 BACKUP MATERIALS

Use only those backup materials which are specifically recommended for this installation by the manufacturer of the sealant used, and which are nonabsorbent and nonstaining.

2.05 BOND PREVENTIVE MATERIALS

Use only one of the following as best suited for the application and as recommended by the manufacturer of the sealant used.

- a. Polyethylene tape, pressure sensitive adhesive, with the adhesive required only to hold tape to the construction materials as indicated.
- b. Aluminum foil conforming to MIL-SPEC-MIL-A-148E.
- c. Wax paper conforming to Fed. Spec. UU-P-270.

2.06 MASKING TAPE

For masking around joints, provide masking tape conforming to Fed. Spec. UU-T-106c.

2.07 OTHER MATERIALS

All other materials, not specifically described, but required for complete and proper caulking and installation of sealants, shall be first quality of their respective kinds, new, and as selected by the Contractor subject to the review by the Architect.

PART 3 EXECUTION**3.01 INSPECTION**

Examine the areas and conditions under which work of this section will be performed. Correct conditions detrimental to the proper and timely completion of the work. Do not proceed until unsatisfactory conditions have been corrected.

3.02 QUALITY ASSURANCE

- a. **Qualifications of Manufacturers:** Products used in the work of this section shall be produced by manufacturers regularly engaged in manufacture of similar items with a history of successful production acceptable to the Architect.
- b. **Qualifications of Installers:**
 - 1. Proper caulking and proper installation of sealants require that installers be thoroughly trained and experienced in the necessary skills and thoroughly familiar with the specified requirements.
 - 2. For caulking and installation of sealants throughout the work, use only personnel who have been specifically trained in such procedures and who are completely familiar with the joint details shown on the drawings and the installation requirements called for in this section.

3.03 PRODUCT HANDLING

- a. **Delivery and Storage:** Deliver all materials of this section to the job site in the original unopened containers with all labels intact and legible at time of use. Store only under conditions recommended by the manufacturers. Do not retain on the job site any material, which has exceeded the shelf life recommended by its manufacturer.
- b. **Protection:** Use all means necessary to protect the materials of this section before, during, and after installation and to protect the work and materials of all other trades.
- c. **Replacements:** In the event of damage, immediately make all repairs and replacements necessary to the satisfaction of the Architect and at no additional cost to the Owner.

3.04 PREPARATION

- a. All surfaces in contact with sealant shall be dry, sound, and well brushed and wiped free from dust.
- b. Use solvent to remove oil and grease, wiping the surfaces with clean rags.
- c. Where surfaces have been treated, remove the surface treatment by sandblasting or wire brushing
- d. Remove all laitance and mortar from joint cavities.
- e. Where joint filler is required, insert the approved backup material in the joint cavity to the depth required to provide required width/depth ratio.

3.05 INSTALLATION OF BACKUP MATERIAL

Use only joint filler material recommended by the manufacturer of the sealant and reviewed by the Architect for the particular installation, compressing the backup material

25% to 50% to secure a positive and secure fit. When using backup of tube or rod stock, avoid lengthwise stretching of the material. Do not twist or braid hose or rod backup stock. Use semi rigid filler material with minimum shore hardness of at least 80 for control joint filler, type.

3.06 PRIMING

Use only the primer recommended by the manufacturer of the sealant and reviewed by the Architect for the particular installation. Apply the primer in strict accordance with the manufacturer's recommendations as reviewed by the Architect.

3.07 BOND BREAKER INSTALLATION

Install a bond breaker where recommended by the manufacturer of the sealant and where directed by the Architect, adhering strictly to the installation recommendations as reviewed by the Architect.

3.08 INSTALLATION OF SEALANTS

- a. Prior to start of installation in each joint, verify the joint type and verify that the required proportion of width of joint to depth of joint has been secured.
- b. Equipment: Apply sealant under pressure with hand or power-actuated gun or other appropriate means. Guns shall have nozzle of proper size and shall provide sufficient pressure to completely fill joints as designed.
- c. Masking: Thoroughly and completely mask all joints where the appearance of sealant on adjacent surfaces would be objectionable.
- d. Installation of Sealant: Install the sealant in strict accordance with the manufacturer's recommendations as reviewed by the Architect, thoroughly filling all joints to the recommended depth, typically flush with surface.
- e. Tooling: Tool all joints to the profile shown or as directed by Architect.
- f. Cleaning Up:
 1. Remove masking tape immediately after joints have been tooled.
 2. Clean adjacent surfaces free from sealant as the installation progresses. Use solvent or cleaning agent as recommended by the sealant manufacturer.
- g. Provide temporary protection/cover for caulking/sealant as required to prevent debris from becoming fouled in material.

END OF SECTION
06/27/2012

PAINTING

DIVISIONS 00 AND 01 ARE A PART OF THIS SECTION

PART 1 GENERAL

1.01 SCOPE OF WORK

The work of this Section shall include all labor, material, scaffolding, equipment and appliances necessary to complete the work indicated on the drawings and/or specified hereunder.

1.02 WORK INCLUDED

- a. Preparation, sanding, scraping, putty work and cleaning of all woodwork and/or metal work to be painted.
- b. Painting, of all exterior woodwork and trim.
- c. Painting of all exterior exposed metal work (except aluminum).
- d. Backpriming of all eave fascias, etc.
- e. Washing, priming and back priming of all sheet metal work.
- f. Remodel Work:
 - All New Work - Three (3) coats as specified.
 - Existing Work - Fill holes and cracks and apply two (2) coats (final two (2) coats as specified).

1.03 RELATED WORK

- a. Painting of (E) Angle Iron frame for (E) split system units.

PART 2 PRODUCTS

2.01 MATERIALS

- a. Inspection and Samples: Painters' materials are to be delivered at the building in their original labeled, unbroken packages and not opened until inspected and marked by the Architect or his representative. This Contractor shall furnish 12" x 12" sample plywood and masonite boards and shall experiment with colors for all surfaces on the job to the full satisfaction of the Architect or his representative. These sample boards shall not be destroyed until all painting is done and final approval is given.
- b. Names, Brands, Makes and Numbers hereafter specified are used solely for the purpose of establishing a strict first quality grade of paint. Any change from these grades may be had only upon written consent of the Architect. All paint products used on this project shall be the products of one manufacturer unless specifically set forth otherwise herein, in which case the primer and undercoats shall be the products of the same manufacturer as the final coat.

- c.. Paint:
 1. Akzonobel Mfg of (-Edwards Paints)
 2. Benjamin Moore and Co. (Moore)
 3. Devoe High Performance Coatings, Glidden Professional Dunn
 4. Sherwin-Williams
 5. Or approved equal

- d. Semi-Transparent Stain:
 1. Akzonobel Mfg of (Devoe High Performance Coatings, Glidden Professional Paints, and Flood wood care products)
 2. Dunn-Edwards
 3. Sherwin-Williams
 4. Or approved equal

- e. Sealer:
 1. Rainguard International Mfg of (Micro seal, Blox-Loc) emulsion/siloxane solution sealer.
 2. Thompson's: Sealing of masonry walls

- f. Anti-graffiti coatings: Two component aliphatic urethane polyester based mixture.
 1. Dunn-Edwards Corporation.
 2. Rainguard International Mfg of Vandal Guard anti graffiti Coating.

2.02 SUBSTITUTIONS

See General Conditions, Section 33, Article 19

PART 3 EXECUTION

3.01 GENERAL REQUIREMENTS

- a. Workmanship: Only skilled workmen experienced in their respective trades and work shall be employed. All work shall be performed in a first class workmanlike manner and shall be subject to the approval of the Architect or his representative.
 - (1) All finishes shall meet the basic standards of practice, which are satisfactory to the Architect. Each coat shall be of the proper consistency and the mixing, thinning, preparation of surfaces and application in strict accordance with paint manufacturers specifications and/or instructions. Each coat of paint finish shall be well brushed out or flowed on, to obtain a uniform and even finish free of brush marks, runs, sags, crawls, dust, pimples, encrusted brush bristles, holidays and any variance in finish (color, shade, sheen or matt) or other blemishes to the finished surfaces.
 - (2) It is the responsibility of the Contractor for inspection of all surfaces, prior to application of any paint. If the manufacturer's representative or the Contractor consider any surface unsuitable for proper application and/or proper performance of the paint, the manufacturer's representative and the Contractor shall immediately notify the Architect in writing. Materials shall not be applied until such unsuitable surfaces or conditions have been made satisfactory. The manufacturer's representative or the Contractor shall furnish to the Architect a letter certifying that all surfaces were

inspected and approved as above specified and that all materials furnished were as specified. The contractor shall furnish to the Architect a letter certifying that all materials used were as specified.

- b. Approvals: An approval for all brands of materials not mentioned in the following list shall be obtained in writing from the Architect before incorporation into the work. Before any paint has been delivered to the site, the Contractor shall submit four (4) lists of materials, which the Contractor proposes to use to the Architect for his review and approval. No deviation from the approved list will be allowed without written permission. Approved List-Glidden Professional Paints, Fuller O'Brien, Benjamin Moore, Dunn-Edwards, Pittsburgh Paints or approved equal. Requests for substitutions shall be accompanied by test reports from a commercial testing laboratory showing equality in weathering, hardness, washability, gloss and color retention, flow, hiding, flexibility, non-yellowing and general original appearance. These tests shall be conducted according to procedures set forth in Federal Specification TTL-P-141 of American Society of Testing Materials Specification.
- c. Storage: All materials shall be stored and mixed only in such rooms as will be designated for that purpose, by the Architect or his representative and such space shall be kept clean. Floor shall be covered with "Sisal Kraft" paper with joints lapped at least six inches (6"). All necessary precautions shall be taken to prevent fire and all oily rags shall be hung out flat and singly in open air.
- d. Manufacturer's Recommendations: The specifications and instructions of the paint manufacturer shall be carefully followed, especially regarding mixing, thinning, application and preparation of surface.
- e. Preparation of Surfaces: The Painter, before proceeding with his work must see that the carpenter has set all nails in finish, removed all bruises, stains, etc., where same show through finish. Scrape and sandpaper entire woodwork and remove finish hardware and see that the entire woodwork is in good condition before painting. **THE PAINTING CONTRACTOR SHALL BE RESPONSIBLE FOR INSPECTING THE WORK OF OTHERS PRIOR TO THE APPLICATION OF ANY PAINT OR FINISHING MATERIAL. IF ANY SURFACE TO BE FINISHED CANNOT BE PUT IN PROPER CONDITION FOR FINISHING BY CUSTOMARY CLEANING, SANDING AND PUTTYING OPERATIONS, THE PAINTING CONTRACTOR SHALL NOTIFY THE GENERAL CONTRACTOR, ARCHITECT OR OWNER IN WRITING, OR ASSUME RESPONSIBILITY FOR RECTIFYING ANY UNSATISFACTORY FINISH RESULTING.** All interior woodwork shall be thoroughly hand sandpapered and dusted thoroughly with air and dry brush. All nail holes, cracks and defects shall be carefully puttied and in stained work shall match the color of the stain. In natural finish, it shall match the color of the wood.
- f. Knots and Pitch Pockets: Interior woodwork to receive shellac over all knots and sap pockets. Pitch pockets cut out by the carpenters and then spackled and shellacked.
- g. Condition of Surfaces: Paint, enamel, stain or varnish shall not be applied to wet, damp, dusty, greasy, fingermarked, rough, unfinished or defective surfaces. Application: Latex or vinyl paint shall only be applied when temperatures of surfaces to be painted and surrounding air temperatures are between 50 degrees F and 90 degrees F. Do not paint when temperature varies widely, which might result in condensation on freshly coated surfaces. Apply solvent thinned paints only when temperature of surfaces to be painted and surrounding air temperatures are

between 45 degrees F and 95 degrees F. All Plaster Walls shall have a maximum of 15% moisture content as measured on a standard moisture met. It is the painter's responsibility to verify the moisture content prior to applying paint.

- h. Sanding: All woodwork shall be sandpapered smoother after each and every coat of material, except last coat, and all surfaces shall be free from dust, dirt or other imperfections.
- i. Priming of Millwork: All millwork must be primed and back-primed on **all** sides immediately on arrival at the job.
- j. Removal and Storage of Hardware: Remove all finish hardware before starting work, carefully labeling same as to its proper location and store carefully during progress of painting work.
- k. Protection: Floors and plumbing fixtures to be kept clean and protected. The dumping of paints, stains, or washes in plumbing fixtures will not be allowed. Great care shall be taken not to injure or spatter paint on adjacent work, which shall be covered and fully protected, but should any paint be spattered for found where not called for, the defective surface shall be cleaned off and the original surface restored.
- l. Rough Plumbing: All exposed plumbing and plumbing fixtures where not enameled shall be painted as specified for metal work.
- m. Inspection by Architect: After each and every coat of paint, sizing, enameling or other application, including sanding and rubbing, the work shall be inspected, passed on, approved and marked by the Architect, his representative or the job inspector before application of the following coats. Notice must be given after all coats and work done without approval of each coat will be rejected and an additional coat applied.
- n. Sample Boards: Furnish sample boards and experiment with colors for the surface on the job to the full satisfaction of the Architect. These sample boards shall not be destroyed until painting is done and until the final approval of the work.
- o. Colors: The color of every coat of paint, enamel, stain, etc., shall be as selected by the Architect. Every coat of paint shall be a slightly different shade. Current color chip samples shall be furnished to the Architect for color selections.
- p. Turpentine shall be used for thinner and drier only. Thinner shall only be used if approved by the Architect and only if recommended by the manufacturer.
- q. Rejected Materials shall be removed from the site immediately upon notification from the Architect.
- r. Cleaning: From time to time, remove all dirt, debris, waste, rubbish, etc., from the building site. All woodwork, hardware, floors or other adjacent work shall be cleaned. The painter shall protect and keep clean all portions of the work that are not to be painted, stained or varnished and upon completion shall have a neat, clean and workmanlike job. Cleaning includes the removal of all paint spots on glass and brush drags where cut in on sash.

- s. Spraying will be permitted on certain types of work **when approved and directed by the Architect** subject to the following stipulations: "Spraying regulations covering work to be done on this project shall be permitted in areas and on surfaces as covered by the "Standard Agreement" recommended by the California State Contractors Association and agreed to by the International Brotherhood of Painters, Paper Hangers and Decorators of America. Copies of this Agreement are available to all contractors in all major cities of California. Any deviations or exceptions shall be referred to the Joint Committee and their ruling shall be final."
- t. Back Priming: All plaster and wood surfaces that will not be exposed to view shall be painted the same as the first coat of finish specified, except gypsum board.
- u. Multiple colors: Classrooms will have two colors selected for each room. Colors will be designated for entire wall. There will be no accent strips.
- v. Exterior Painting: Painter shall allow for three (3) color selections, plus the school colors for exterior painting and trim colors.

3.02 SPECIAL REQUIREMENTS

- a. All products listed are those of Dunn-Edwards Paints and are specified solely for the purpose of establishing a quality standard.
- b. EXTERIOR WORK:
 - (1) On Metal Work: (Metal trim Hollow Metal Doors and Frames)
 - 1st coat: ENDURAPRIME (ENPRO0)
 - 2nd coat: ENDURACOAT50 (ENCT50) Semi Gloss Finish
 - 3rd coat: ENDURACOAT50 (ENCT50) Semi Gloss
 - (2) On Metal Work: (Bonderized or Base Metal and Shop Primed) (Total of 3 coats)
 - 1st coat: ENDURAPRIME (ENPRO0)
 - 2nd coat: Spartashield (SSHL50) Semi-gloss (Tinted toward final color)
 - 3rd coat: Spartashield (SSHL50) Semi gloss enamel*
 - (3) On Metal Work: (Galvanized) (Total of 4 coats)
 - 1st coat: Krud Kutter Metal Clean & Etch
 - 2nd coat: Ultra-Grip Premium (UGPRO0) Primer
 - 3rd coat: Spartashield (SSHL50) Exterior 100% Acrylic Semi-Gloss Paint (Tinted toward final color)
 - 4th coat: Same as 3rd coat
 - (4) On Wood Work: (Total of 3 coats)
 - 1st coat: EZ Prime Premium (EZPRO0) Exterior 100% Acrylic Wood Primer
 - 2nd coat: Spartashield (SSHL50) SEMI-GLOSS Enamel (Tinted toward final color)
 - 3rd coat: Same as 2nd coat*

- (5) Back Priming: (Total of 1 coat)
- 1st coat: EZ Prime Premium (EZPR00) Exterior 100% Acrylic Wood Primer
- (6) Field Painting - Misc. Steel & Iron: (Total of 3 coats)
- (7) 1st coat: ENDURAPRIME (ENPR00) Rust Preventative Metal Primer (when "Shop Primed" omit first coat and only touch up primer)
- 2nd coat: Spartashield (SSHL50) Exterior Semi-gloss, 100% Acrylic
- 3rd coat: Same as 2nd coat
- (8) Mechanical Equipment (Duct Work and Miscellaneous Equipment)
- 1st coat: Ultra-Grip (UGPR00) 100% Acrylic Multi-Purpose Primer
- 2nd coat: Spartashield (SSHL50) 100% Acrylic Semi- Gloss Paint
- 3rd coat: Same as 2nd coat
- (9) Exterior Cement Plaster (over color coat or Existing paint)
- 1st coat Spartashield 10 (SSHL10)
- 2nd coat Spartashield 10 (SSHL10) Exterior 100% Acrylic Flat Finish

c. Painting of Mechanical and Electrical Equipment: All mechanical and electrical equipment, piping and machinery (not factory finished) of any kind where exposed to view shall be painted as specified and shall be included as a part of this work. Inside of ducts, where exposed to view through register and grilles, shall be painted two (2) coats of black paint of type specified for metal work. All structural framing supporting equipment shall be painted same as for equipment where exposed to view. All ducts, plenums, ventilators, fan housings, ventilating equipment, etc., shall be painted as specified for metal work. All piping equipment and machinery (not factory finished) in heater rooms and/or mechanical rooms, shall be painted the same color but a different shade, as the walls or ceilings adjacent. Piping and equipment covered up in attic space, furred ceilings and furred pipe spaces will not require paint finishes.

d. Miscellaneous Painting:

- (1) Underside and piping under all plumbing fixtures and enameled iron exposed to view shall be painted same as for adjacent wall surfaces.
- (2) All metal brackets, except chrome or nickel plated items, shall be painted as specified for metal work.

- e. **Cleaning and Touch Up:**
 - (1) Carefully remove all spattering and traces of paint materials from the work of others; from glass, plumbing fixtures and trim, hardware, tile surface., and make good all damages thereto that may be caused by such materials or cleaning. Likewise, make a detailed inspection of all painting work and touch up or refinish satisfactorily all abraded, stained or otherwise disfigured portions thereof, as required to produce a first-class job.
 - (2) Upon completion of the work herein before specified, remove all unused materials and implements of service, rubbish and debris resulting from the paint work and leave the entire building and premises, insofar as the work of this section is concerned, neat, clean and as approved by the Architect.
- f. **Guarantee:** All work executed under this Section of the Specifications will be free from defects of materials and workmanship for a period of one (1) year from date of final acceptance of this work.
- g. **Extra Stock -** Upon completion of the work of this Section, deliver to the Owner additional stock equaling 1 percent, but not less than a full unopened container of each color, type and gloss of paint used.

END OF SECTION
09/17/2024