Indian Valley Campus Building #17 Roof Replacement Project #15-0626

Marin Community College District

Mandatory Conference/Walk: 10:00 AM, Thursday, July 9, 2015

Proposal Due Date: 3:00 PM, Tuesday, July 21, 2015

Contractor Must Have a current & active California “B-General Contractor” and/or “C-39 Roofing” with at least one person in the firm being trained by a US EPA-accredited training provider and certified in renovation in order to abate asbestos containing material and lead based paint.
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1.1 NOTICE INVITING BIDS

1. Notice is hereby given that the Governing Board ("Board") of the Marin Community College District ("District"), of the County of Marin, State of California, will receive sealed bids for the **INDIAN VALLEY CAMPUS BUILDING #17 ROOF REPLACEMENT PROJECT #15-0626** ("Project") up to, but not later than, **3:00 p.m. Tuesday, July 21, 2015**, and will thereafter publicly open and read aloud the bids. All bids shall be received at the office of the **District Buyer, located at College of Marin, Indian Valley Campus, 1800 Ignacio Blvd., Building 8, in AS Room 130, in Novato, California, 94949.** Bid opening will occur on the date and time stated above at the College of Marin, Indian Valley Campus, 1800 Ignacio Blvd., Administrative Services Building 8, in Room 130, at Novato, California, 94949.

2. **Substantial Completion** of the work shall be achieved by **October 15, 2015** as set forth in the Notice to Proceed issued by the District. Failure to achieve Substantial Completion with the Contract time will result in the assessment of Liquidated Damages of **$1000/calendar day** as detailed in the General Conditions, Section 22.

A summary of this bid includes the proper removal of existing roofing material consisting of shake shingles and asbestos containing roofing felt, the installation of new roofing materials including asphalt shingles as well as necessary repairs and gutter installations on an approximate 9,600 square foot sloped roof on a 2 story wood structure.

3. Each bid shall be completed on the Bid Proposal Form included in the Contract Documents, and must conform and be fully responsive to this invitation, the plans and specifications and all other Contract Documents. The Contract Documents are available for review at the College of Marin, Indian Valley Campus, 1800 Ignacio Blvd., Administrative Services Building 8, Room 130, in Novato, California. **Note: It is the responsibility of the bidder to make sure that the bid is delivered to the address listed above. Please be informed that UPS does not deliver directly to this physical address.**

4. Each bid shall be accompanied by cash, a cashier's or certified check, or a bidder's bond executed by a surety licensed to do business in the State of California as a surety, made payable to the District, in an amount not less than ten percent (10%) of the maximum amount of the bid. The check or bid bond shall be given as a guarantee that the bidder to whom the contract is awarded shall execute the Contract Documents and will provide the required payment and performance bonds and insurance certificates within ten (10) days after the notification of the award of the Contract.

5. The successful bidder shall comply with the provisions SB 854 of the Labor Code pertaining to payment of the generally prevailing rate of wages and to apprenticeships or other training programs. The Department of Industrial Relations has made available the general prevailing rate of per diem wages in the locality in which the work is to be performed for each craft, classification or type of worker needed to execute the Contract, including employer payments for health and welfare, pension, vacation, apprenticeship and similar purposes. Copies of these prevailing rates are available to any interested party upon request and are online at [http://www.dir.ca.gov/DLSR](http://www.dir.ca.gov/DLSR). The Contractor and all Subcontractors shall pay not less than the specified rates to all workers employed by them in the execution of the Contract. It is the Contractor's responsibility to determine any rate change.

1.1 - NOTICE INVITING BIDS
6. The schedule of per diem wages is based upon a working day of eight hours. The rate for holiday and overtime work shall be at least time and one half.

7. The substitution of appropriate securities in lieu of retention amounts from progress payments in accordance with Public Contract Code §22300 is permitted.

8. Pursuant to Public Contract Code §4104, each bid shall include the name and location of the place of business of each subcontractor who shall perform work or service or fabricate or install work for the contractor in excess of one-half of one percent (1/2 of 1%) of the bid price. The bid shall describe the type of work to be performed by each listed subcontractor.

9. No bid may be withdrawn for a period of sixty (60) days after the date set for the opening for bids except as provided pursuant to Public Contract Code §§5100 et seq. The District reserves the right to reject any and all bids and to waive any informalities or irregularities in the bidding.

10. Minority, women, and disabled veteran contractors are encouraged to submit bids. This bid is not subject to Disabled Veteran Business Enterprise requirements.

11. Each bidder shall possess at the time the bid is awarded the following classification(s) of California State Contractor's license: "B-General Contractor" and or "C-39 Roofing" License.

12. Construction Estimate: $225,000

13. Each bidder and any subcontractors shall possess at the time the bid is awarded must registered with the California Department of Industrial Relations.

MARIN COMMUNITY COLLEGE DISTRICT
By: Greg Nelson, Vice President, Finance & College Operations

1.2 INSTRUCTIONS TO BIDDERS

1. Each bid submitted to the Marin Community College District ("District") for the INDIAN VALLEY CAMPUS BUILDING #17 ROOF REPLACEMENT PROJECT #15-0626, shall be in accordance with the following instructions and requirements, which are part of the Contract Documents for this Project.

2. Deadline for Receipt of Proposals. Each bid shall be sealed and submitted to the District Buyer no later than 3:00 p.m. Tuesday, July 21, 2015. The District suggests that bids be hand delivered in order to ensure their timely receipt. Any bids received after the time stated, regardless of the reason, shall be returned, unopened, to the bidder. The Buyer office is located at College of Marin, Indian Valley Campus, 1800 Ignacio Boulevard, Building 8, Room 130, in Novato, California, 94949.

3. Mandatory Bidders Conference/Walk. A mandatory bidder’s conference/walk will be held on Thursday, July 9, 2015 at 10:00 a.m. at Building #17, 1800 Ignacio Blvd, Novato, California 94949, for the purpose of acquainting all prospective bidders with the Contract Documents and the Project site. It is required that all prospective bidders attend this conference. The failure to attend the conference will result in the disqualification of the bid of the non-attending bidder. Bid Documents will be distributed at the mandatory bidder's conference. Parking permits for the day will also be issued.

4. Bid Proposal Forms. All bid proposals shall be made on the form provided by the District. All items on the form shall be filled out in ink. Numbers should be stated in figures, and the signatures of all individuals must be in long hand. The completed form shall be without interlineations, alterations, or erasures.

5. Execution of Forms. Each bid must give the full business address of the bidder and must be signed by the bidder or bidder’s authorized representative with his or her usual signature. Bids by partnerships must furnish the full names of all partners and must be signed in the partnership name by a general partner with authority to bind the partnership in such matters. Bids by corporations must be signed with the legal name of the corporation, followed by the signature and designation of the president, secretary, or other person authorized to bind the corporation in this matter. The name of each person signing shall also be typed or printed below the signature. When requested by the District, satisfactory evidence of the authority of the officer signing on behalf of the corporation or partnership shall be furnished. A bidder's failure to properly sign required forms may result in rejection of the bid. All bids must include the bidder's contractor license number(s) and expiration date(s).

6. Bid Security. Bid proposals shall be accompanied by a certified or cashier's check or bid bond for an amount not less than ten percent (10%) of the bid amount, payable to the District. A bid bond shall be secured from an admitted surety company, licensed in the State of California, and satisfactory to the District. The bid security shall be given as a guarantee that the bidder will enter into the Contract if awarded the work, and in the case of refusal or failure to enter into the Contract within ten (10) calendar days after notification of the award of the Contract or failure to provide the payment and performance bonds and proof of insurance as required by the Contract Documents, the District shall have the right to award the Contract to another bidder and declare the bid security forfeited. The District reserves the right to pursue all other remedies in law or equity relating to such a breach including, but not limited to, seeking recovery of damages for breach of contract. Failure to provide bid security, or bid security in the proper amount, will result in rejection of the bid.
7. **Pre-Bid Conference.** If a mandatory pre-bid conference and site visit ("Site Visit") is requested as referenced in the Notice to Bidders, then Bidders must sign-in at the pre-bid conference. District will transmit to all prospective Bidders of record such Addenda as District in its discretion considers necessary in response to questions arising at the Site Visit. Oral statements shall not be relied upon and will not be binding or legally effective. Addenda issued by the District as a result of the Site Visit, if any, shall constitute the sole and exclusive record and statement of the results of the Site Visit.

8. **Addenda or Bulletins.** The District reserves the right to issue addenda or bulletins prior to the receiving of the bids. Any addenda or bulletins issued prior to bid time shall be considered a part of the Contract Documents.

9. All questions about the meaning or intent of the Contract Documents are to be directed in writing to the District. Interpretations or clarifications considered necessary by the District in response to such questions will be issued in writing by Addenda and posted to the District website (Fiscal Services). Mandatory pre-bid conference attendees with receive Addenda by either email, fax, mail, or delivery depending on the size. Questions received less than **FIVE (5)** calendar days prior to the date for opening Bids may not be answered. Only questions answered by formal written Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.

10. Each Bidder must acknowledge each Addendum in its Bid Form and Proposal by number or its Bid shall be considered non-responsive. Each Addendum shall be part of the Contract Documents. A complete listing of Addenda may be secured from the District.

11. **Bonds.** The successful bidder shall be required to submit payment and performance bonds as specified in and using the bond forms included with the Contract Documents. All required bonds shall be based on the maximum total contract price as awarded, including additive alternates, if applicable.

12. **Withdrawal of Bid Proposals.** Bid proposals may be withdrawn by the bidders prior to the time fixed for the receiving of bids, but may not be withdrawn for a period of sixty (60) days after the receiving of bids proposals.

13. **Rejection of Bids and Award of Contract.** The District reserves the right to waive any irregularities in the bid and reserves the right to reject any and all bids. The Contract will be awarded, if at all, within sixty (60) calendar days after the bids are received and reviewed to the “Best Value” responsive bidder, subject to Governing Board approval. The time for awarding the Contract may be extended by the District with the consent of the Best Value bidder.

14. **Execution of Contract.** The successful bidder shall, within ten (10) calendar days of the Notice of Award of the Contract, sign and deliver to the District the executed Contract along with the bonds and certificates of insurance required by the Contract Documents. In the event the successful bidder fails or refuses to execute the Contract or fails to provide the bonds and certificates as required, the District may declare the bidder’s bid deposit or bond forfeited as liquidated damages, and may award the work to the next Best Value responsible, responsive bidder, or may reject all bids and, in its sole discretion, call for new bids. In all cases, the District reserves the right, without any liability, to cancel the award of Contract at any time prior to the full execution of the Contract.

15. **Drawings and Specifications.** All drawings, specifications and other documents prepared during the project shall be the exclusive property of the District.
15. **Evidence of Responsibility.** Upon the request of the District, a bidder shall submit promptly to the District satisfactory evidence showing the bidder's financial resources, the bidder's experience in the type of work being required by the District, the bidder's availability to perform the Contract and any other required evidence of the bidder's qualifications to perform the Contract and any other required evidence of the bidder's qualifications and responsibility to perform the Contract. The District may consider such evidence before making its decision to award the Contract. Failure to submit requested evidence may result in rejection of the bid.

16. **Taxes.** Applicable taxes shall be included in the bid prices.

17. **Bid Exceptions.** Bid exceptions are not allowed. If the bidder has a comment regarding the bid documents or the scope of work, the bidder shall submit those comments to the District for evaluation at least five working days prior to the receiving of the bids. No oral or telephonic modification of any bid submitted will be considered and a sealed written modification may be considered only if received prior to receiving of bids. E-mailed or faxed bids or modifications will not be accepted.

18. **Discounts.** Any discounts which the bidder desires to provide the District must be stated clearly on the bid form itself so that the District can calculate the net cost of the bid proposal. Offers of discounts or additional services not delineated on the bid form will not be considered by the District in the determination of the best value responsible responsive bidder.

19. **Quantities.** The quantities shown on the plans and specifications are approximate. The District reserves the right to increase or decrease quantities as desired.

20. **Prices.** Bidders must quote prices Freight on Board (F.O.B.) unless otherwise noted. Prices should be stated in the units specified and bidders should quote each item separately.

21. **Samples.** On request, samples of the products being bid shall be furnished to the District.

22. **Special Brand Names/Substitutions.** In describing any item, the use of a manufacturer or special brand does not restrict bidding to that manufacturer or special brand, but is intended only to indicate quality and type of item desired, except as provided in §3400 of the Public Contract Code. Substitute products will be considered either prior to or after the award of the Contract in accordance with §3400 and as set forth in either the Supplemental Conditions or the Specifications. All data substantiating the proposed substitute as an "equal" item shall be submitted with the written request for substitution. The District reserves the right to make all final decisions on product and vendor selection.

23. **Container Costs and Delivery.** All costs for containers shall be borne by the bidder. All products shall conform to the provisions set forth in the federal, county, state and city laws for their production, handling, processing and labeling. Packages shall be so constructed to ensure safe transportation to point of delivery.

24. **Bid Negotiations.** A bid response to any specific item of this bid using terms such as “negotiable,” “will negotiate,” or similar, will be considered non-responsive.

25. **Prevailing Law.** In the event of any conflict or ambiguity between these instructions and state or federal law or regulations, the latter shall prevail. All equipment to be supplied or services to be performed under the bid proposal shall conform to all applicable requirements of local, state and federal law, including, but not limited to, Labor Code §§1771, 1778 and 1779.

1.2 INSTRUCTIONS TO BIDDERS
26. **Allowances.** An “allowance” means an amount included in the bid proposal for work that may or may not be included in the Project, depending on conditions that will become known only after the Project is underway.

27. **Subcontractors.** Pursuant to the Subletting and Subcontracting Fair Practices Act, Public Contract Code §§4100-4114, every bidder shall, on the enclosed Subcontractor List Form, set forth:

   a. The name and location of the place of business of each Subcontractor who will perform work or labor or render service to the bidder in or about the work or fabricate and install work in an amount in excess of one-half (1/2) of one percent (1%) of the bidder's total bid.

   b. If the bidder fails to specify a Subcontractor for any portion of the work to be performed under the contract in excess of one-half (1/2) of one percent (1%) of the bidder's total bid, bidder agrees that bidder is fully qualified to and shall perform that portion of the work. The successful bidder shall not, without the written consent of the District or compliance with Public Contract Code §§ 4100 - 4114, either:

      1) Substitute any person as Subcontractor in place of the Subcontractor designated in the original bid;

      2) Permit any subcontract to be voluntarily assigned or transferred or allow the work to be performed by anyone other than the original Subcontractor listed in the bid; or

      3) Sublet or subcontract any portion of the work in excess of one-half (1/2) of one percent (1%) of the total bid as to which the bidder's original bid did not designate a Subcontractor.

28. **Examination of Contract Documents and Work Site.** Before submitting a bid proposal, all bidders shall carefully examine the Contract Documents, including specifications, shall visit the site of the proposed work, and shall fully inform themselves of all conditions in and about the work site, as well as applicable federal, state and local laws and regulations that may affect the work. No bidder shall visit the site without prior authorization of the District. Bidders shall contact the Director of Maintenance and Operations for coordination of site visits.

29. **Form and Approval of Contract.** The Contract Documents must be approved by the Governing Board of the District and its legal counsel. The bidder selected by the District shall execute the Contract provided by the District.

30. **Licenses and Permits.** Each bidder, and its Subcontractors, if any, shall at all times possess all appropriate and required licenses or other permits to perform the work as identified in the Contract Documents. Upon request, each bidder shall furnish the District with evidence demonstrating possession of the required licenses or permits.

31. **Denial of Right to Bid.** Contractors or Subcontractors who have violated state law governing public works shall be denied the right to bid on this public works contract pursuant to California Labor Code § 1777.7.

32. **Bidders Interested in More Than One Bid.** No person, firm, or corporation shall make, or file, or be interested in more than one bid. However, 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 thereby disqualified from submitting a sub-proposal or quoting prices to other bidders or from submitting a prime proposal.

1.2 INSTRUCTIONS TO BIDDERS
33. **Contractor's State License Board.** Contractors and Subcontractors are required by law to be licensed and regulated by the California Contractors’ Contractors' License Board.

34. **Bid Protest.** Any bid protest must be in writing and received by the District Office before 5:00 p.m. no later than three (3) working days following bid awarding and must comply with the following requirements:

a. The bid protest must contain a complete statement of the basis for the protest, and all supporting documentation.

b. The party filing the protest must have actually submitted a bid for the Project. A Subcontractor of a bidder submitting a bid for the Project may not submit a bid protest. A bidder may not rely on the bid protest submitted by another bidder, but must timely pursue its own protest.

c. The protest must refer to the specific portion or portions of the Contract Documents upon which the protest is based.

d. The protest must include the name, address and telephone number of the person representing the protesting bidder.

e. The bidder filing the protest must concurrently transmit a copy of the bid protest and all supporting documentation to all other bidders with a direct financial interest which may be affected by the outcome of the protest, including all other bidders who appear to have a reasonable prospect of receiving an award depending upon the outcome of the protest.

f. The bidder whose bid has been protested may submit a written response to the bid protest. Such response shall be submitted to the District before 5 p.m., no later than two (2) working days after the deadline for submission of the bid protest or other receipt of the bid protest, whichever is sooner, and shall include all supporting documentation. Such response shall also be transmitted concurrently to the protesting bidder and to all other bidders who appear to have a reasonable prospect of receiving an award depending upon the outcome of the protest.

g. The procedure and time limits set forth in this section are mandatory and are the bidder’s sole and exclusive remedy in the event of bid protest. The bidder’s failure to comply with these procedures shall constitute a waiver of any right to further pursue the bid protest, including filing a Government Code Claim or legal proceedings.

h. If the District determines that a protest is frivolous, the protesting bidder may be determined to be non-responsible and that bidder may be determined to be ineligible for future contract awards by the District.

i. A “working day” for purposes of this section means a weekday during which the District’s office is open and conducting business, regardless of whether or not school is in session.
Governing Board

Marin Community College District

Dear Members of the Governing Board:

The undersigned, doing business under the name of: ___________________________________________________________________________, having carefully examined the location of the proposed work, the local conditions of the place where the work is to be done, the Notice Inviting Bids, the General Conditions, the Instructions to Bidders, the Plans and Specifications, and all other Contract Documents for the proposed **INDIAN VALLEY CAMPUS BUILDING #17 ROOF REPLACEMENT PROJECT #15-0626**, ("Project"), and having accurately completed the Bidder's Questionnaire, proposes to perform all work and activities in accordance with the Contract Documents, including all of its component parts, and to furnish all required labor, materials, equipment, transportation and services required for the performance of the Project in strict conformity with the Contract Documents, including the Plans and Specifications as follows:

**BASE BID:**

For the sum of: ____________________________________________________________________________ Dollars

($ ________________________________ )

Inclusive of a $20,000 Allowance described below.

The undersigned has checked carefully all the above figures and understands that the District is not responsible for any errors or omissions on the part of the undersigned in making this bid.

**ALLOWANCE:** The Bidder's Base Bid shall include an Allowance of an additional **$20,000** for unforeseen items.

The Allowance shall only be allocated for unforeseen items relating to the Work. Contractor shall not bill for or be due any portion of this Allowance unless the District has identified specific work, Contractor has submitted a price for that work or the District has proposed a price for that work, the District has accepted the cost for that work, and the District has prepared a change order incorporating that work. Contractor hereby authorizes the District to execute a unilateral deductive change order at or near the end of the Project for all or any portion of the Allowance not allocated.

Enclosed find certified or cashier's check No._________ of the __________________________ Bank For ______________________________________________________________________ Dollars ($_________________________________) or Bidder's Bond of the ________________________________ surety company in an amount of not less than ten percent (10%) of the entire bid. The undersigned further agrees, on the acceptance of this proposal, to execute the Contract and provide the required bonds and insurance, and that in case of default in executing these documents within the time fixed by the Contract Documents, the
proceeds of the check or bond, accompanying this bid, shall be forfeited and shall become the property of the District.

Contractor agrees to commence the work within the time specified in the Notice to Proceed. It is understood that this bid is based upon completing the work within the number of calendar days specified in the Contract Documents.

**ADDENDA:**
Receipt of the following addenda is hereby acknowledged:

Addendum # _____ Dated: __________ Addendum # _____ Dated: __________
Addendum # _____ Dated: __________ Addendum # _____ Dated: __________
Addendum # _____ Dated: __________ Addendum # _____ Dated: __________
Addendum # _____ Dated: __________ Addendum # _____ Dated: __________

Respectfully Submitted,

Company: ______________________________________________
Address: ______________________________________________
____________________________________________

By:   ______________________________________________
(Please Print or Type)

Signature:  ______________________________________________
Title:   ______________________________________________
Date:  ______________________________________________
Phone:  ______________________________________________
Contractor’s License No: __________________ Expiration Date ________

**Required Attachments:**

- Subcontractor List Form
- Worker’s Compensation Certificate
- Non-Collusion Affidavit
- Bid Bond (or Cashier's or Certified Check)
- Bidder's Questionnaire
1.4 BID BOND

To be completed by bidder and submitted with bid.

We, the Contractor, _____________________________________________________ as principal (“Principal”), and
_____________________________________________, as surety (“Surety”) are firmly bound unto
the Marin Community College District (“District”), in the penal sum of ten percent (10%) of the total
amount of the bid of the Principal submitted to the District for the work described below for the
payment of which sum in lawful money of the United States, we bind ourselves, our heirs, executors,
administrators, successors and assigns, jointly and severally, firmly by this agreement.

Whereas, the Principal has submitted the accompanying bid (“Bid”) dated _____________________, for the following project (“Project”):
Indian Valley Campus Building #17 Roof Replacement Project #15-0626,

Now, therefore, if the Principal does not withdraw its Bid within the period specified, and if the Principal
is awarded the Contract and within the period specified fails to enter into a written contract with
District, in accordance with the Bid as accepted, or fails to provide the proof of required insurance,
performance bond and/or the payment bond by an admitted surety within the time required, or in the
event of unauthorized withdrawal of the Bid, if the Principal pays the District the difference between
the amount specified in the Bid and the amount for which District may procure the required work
and/or supplies, if the latter amount is in excess of the former, together with all related costs incurred
by District, then the above obligation shall be void and of no effect. Otherwise, the Principal and
Surety shall pay to the District the penal sum described above as liquidated damages.

Surety, for value received, hereby agrees that no change, extension of time, alteration or addition to
the term 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.

In witness whereof the above-bound parties have executed this instrument under their several seals
this ________________ day of ____________________, 2015, the name and corporate seal of each
Corporate Party being hereunder affixed and these presents duly signed by its undersigned
representative, pursuant to the authority of its governing body.

(Corporate Seal)

Principal/Contractor

By ________________________________

Title ________________________________
(Corporate Seal)  

Surety

___________________________________

Attach Attorney-In-Fact  By _________________________________________

Certificate
Title ________________________________

To be signed by Principal and Surety and Acknowledgment and Notary Seal to be attached.
This document to be completed and submitted with bid.
Each Bidder shall list below the name and location of place of business for each Subcontractor who will perform a portion of the Contract work in an amount in excess of 1/2 of 1 percent of the total contract price. The nature of the work to be subcontracted shall be described.

<table>
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<tr>
<th>DESCRIPTION OF WORK</th>
<th>SUBCONTRACTOR NAME</th>
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1.6 NONCOLLUSION AFFIDAVIT

To be executed by bidder and submitted with bid.

State of California
County of (________________________)

____________________________________________, being first duly sworn, deposes and says that he or she is _________________________ of ____________________________ the party making the foregoing bid, and affirms that the bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the bid is genuine and not collusive or sham; that the bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; that the bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of 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, or to secure any advantage against the public body awarding the contract of anyone interested in the proposed contract; that all statements contained in the bid are true and correct; and, further, that 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, or paid, and will not pay, any fee to any corporation, partnership, company association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid.

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

Date:  ____________________ ____________________________________________

Signature

State of ______________________, County of ____________________

On _______________ before me, ___________________________________, personally appeared

personally known to me or proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity (ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

_____________________________________________

Signature of Notary Public
1.7 WORKERS’ COMPENSATION CERTIFICATE

This document to be completed and submitted with bid

Labor Code §3700 in relevant part 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) Be securing from the Director of Industrial Relations a certificate of consent to self-insure, 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 employees."

I am aware of the provisions of §3700 of the Labor Code which require every employer to be insured against liability for workers’ compensation or to undertake self-insurance in accordance with the provisions of that Code, and I will comply with such provisions before commencing the performance of the work of this Contract and will require all Subcontractors to do the same.

________________________________________________________________________

Contractor

By: ______________________________________________________________________

In accordance with Article 5 (commencing at §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 this Contract.
1.8 PREVAILING WAGE AND RELATED LABOR REQUIREMENTS CERTIFICATION

PROJECT/CONTRACT NO.: __________________________________ between Marin Community College District ("District") and ________________________________ ("Contractor" or "Bidder") ("Contract" or "Project").

I hereby certify that I will conform to the State of California Public Works Contract requirements regarding prevailing wages, benefits, on-site audits with 48-hours notice, payroll records, and apprentice and trainee employment requirements, for all Work on the above Project including, without limitation, the labor compliance program, if this Project is subject to a labor compliance program.

[IF THIS PROJECT USES FEDERAL FUNDS, DISTRICT SHOULD INCLUDE THE FOLLOWING]

I hereby certify that I will also conform to the Federal Labor Standards Provisions regarding minimum wages, withholding, payrolls and basic records, apprentice and trainee employment requirements, equal employment opportunity requirements, Copeland Act requirements, Davis-Bacon and Related Act requirements, Contract Work Hours and Safety Standards Act requirements, and any and all other applicable requirements for federal funding for all Work on the above Project.

Date: __________________________________

Proper Name of Contractor: __________________________________

Signature: __________________________________

Print Name: __________________________________

Title: __________________________________

END OF DOCUMENT
1.9 DRUG-FREE WORKPLACE CERTIFICATION

PROJECT/CONTRACT NO.: ______________________ between Marin Community College District ("District") and ____________________________ ("Contractor" or "Bidder") ("Contract" or "Project").

This Drug-Free Workplace Certification form is required from the successful Bidder pursuant to Government Code section 8350 et seq., the Drug-Free Workplace Act of 1990. The Drug-Free Workplace Act of 1990 requires that every person or organization awarded a contract or grant for the procurement of any property or service 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 or grant awarded by a state agency may be subject to suspension of payments or termination of the contract or grant, and the contractor or grantee may be subject to debarment from future contracting, if the contracting agency determines that specified acts have occurred.

The District is not a “state agency” as defined in the applicable section(s) of the Government Code, but the District is a local agency and public school district under California law and requires all contractors on District projects to comply with the provisions and requirements of Government Code section 8350 et seq., the Drug-Free Workplace Act of 1990.

Contractor 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 the contract or grant be given a copy of the statement required above, and that, as a condition of employment on the contract or grant, 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 substance 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 District determines that I have either (a) made a false certification herein, or (b) violated this certification by failing to carry out the requirements of section 8355, that the Contract awarded herein is subject to termination, suspension of payments, 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 the aforementioned Act.

I acknowledge that I am aware of the provisions of Government Code section 8350 et seq. and hereby certify that I will adhere to the requirements of the Drug-Free Workplace Act of 1990.

Date: ________________________________

Proper Name of Contractor: ________________________________

Signature: ________________________________

Print Name: ________________________________

Title: ________________________________

END OF DOCUMENT
1.10 TOBACCO-FREE ENVIRONMENT CERTIFICATION

PROJECT/CONTRACT NO.: ______________________ between Marin Community College District ("District") and ________________________________ ("Contractor" or "Bidder") ("Contract" or "Project").

This Tobacco-Free Environment Certification form is required from the successful Bidder.

Pursuant to, without limitation, 20 U.S.C section 6083, Labor Code section 6400 et seq., Health & Safety Code section 104350 et seq. and District Board Policies, all District sites, including the Project site, are tobacco-free environments. Smoking and the use of tobacco products by all persons is prohibited on or in District property. District property includes school buildings, school grounds, school owned vehicles and vehicles owned by others while on District property.

I acknowledge that I am aware of the District’s policy regarding tobacco-free environments at District sites, including the Project site and hereby certify that I will adhere to the requirements of that policy and not permit any of my firm’s employees, agents, subcontractors, or my firm’s subcontractors’ employees or agents to use tobacco and/or smoke on the Project site.

Date: ______________________________

Proper Name of Contractor: ______________________________

Signature: __________________________________________________________________

Print Name: ______________________________

Title: __________________________________________________________________

END OF DOCUMENT
1.11 HAZARDOUS MATERIALS CERTIFICATION

PROJECT/CONTRACT NO.: __________________________ between Marin Community College District ("District") and __________________________ ("Contractor" or "Bidder") ("Contract" or "Project").

1. Contractor hereby certifies that no Asbestos, or Asbestos-Containing Materials, polychlorinated biphenyl (PCB), or any material listed by the federal or state Environmental Protection Agency or federal or state health agencies as a hazardous material, or any other material defined as being hazardous under federal or state laws, rules, or regulations ("New Hazardous Material"), shall be furnished, installed, or incorporated in any way into the Project or in any tools, devices, clothing, or equipment used to affect any portion of Contractor's work on the Project for District.

2. Contractor further certifies that it has instructed its employees with respect to the above-mentioned standards, hazards, risks, and liabilities.

3. Asbestos and/or asbestos-containing material shall be defined as all items containing but not limited to chrysotile, crocidolite, amosite, anthophyllite, tremolite, and actinolite. Any or all material containing greater than one-tenth of one percent (0.1%) asbestos shall be defined as asbestos-containing material.

4. Any disputes involving the question of whether or not material is New Hazardous Material shall be settled by electron microscopy or other appropriate and recognized testing procedure, at the District's determination. The costs of any such tests shall be paid by Contractor if the material is found to be New Hazardous Material.

5. All Work or materials found to be New Hazardous Material or Work or material installed with equipment containing "New Hazardous Material" will be immediately rejected and this Work will be removed at Contractor's expense at no additional cost to the District.

6. Contractor has read and understood the document Hazardous Materials Procedures & Requirements, and shall comply with all the provisions outlined therein.

Date: __________________________

Proper Name of Contractor: __________________________

Signature: __________________________

Print Name: __________________________

Title: __________________________

END OF DOCUMENT
1.12 LEAD-BASED MATERIALS CERTIFICATION

PROJECT/CONTRACT NO: ______________________ between Marin Community College District ("District") and ____________________________ ("Contractor" or "Bidder") ("Contract" or "Project").

This certification provides notice to the Contractor that:

1. Contractor's work may disturb lead-containing building materials.
2. Contractor shall notify the District if any work may result in the disturbance of lead-containing building materials.
3. Contractor shall comply with the Renovation, Repair and Painting Rule, if lead-based paint is disturbed in a six-square-foot or greater area indoors or a 20-square-foot or greater area outdoors.

1. Lead as a Health Hazard

Lead poisoning is recognized as a serious environmental health hazard facing children today. Even at low levels of exposure, much lower than previously believed, lead can impair the development of a child’s central nervous system, causing learning disabilities, and leading to serious behavioral problems. Lead enters the environment as tiny lead particles and lead dust disperses when paint chips, chalks, peels, wears away over time, or is otherwise disturbed. Ingestion of lead dust is the most common pathway of childhood poisoning; lead dust gets on a child’s hands and toys and then into a child’s mouth through common hand-to-mouth activity. Exposures may result from construction or remodeling activities that disturb lead paint, from ordinary wear and tear of windows and doors, or from friction on other surfaces.

Ordinary construction and renovation or repainting activities carried out without lead-safe work practices can disturb lead-based paint and create significant hazards. Improper removal practices, such as dry scraping, sanding, or water blasting painted surfaces, are likely to generate high volumes of lead dust.

Because the Contractor and its employees will be providing services for the District, and because the Contractor's work may disturb lead-containing building materials, CONTRACTOR IS HEREBY NOTIFIED of the potential presence of lead-containing materials located within certain buildings utilized by the District. All school buildings built prior to 1978 are presumed to contain some lead-based paint until sampling proves otherwise.

2. Overview of California Law

Education Code section 32240 et seq. is known as the Lead-Safe Schools Protection Act. Under this act, the Department of Health Services is to conduct a sample survey of schools in the State of California for the purpose of developing risk factors to predict lead contamination in public schools. (Ed. Code, § 32241.)

Any school that undertakes any action to abate existing risk factors for lead is required to utilize trained and state-certified contractors, inspectors, and workers. (Ed. Code, § 32243, subd. (b).) Moreover, 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. (Ed. Code, § 32244.)
Both the Federal Occupational Safety and Health Administration ("Fed/OSHA") and the California Division of Occupational Safety and Health ("Cal/OSHA") have implemented safety orders applicable to all construction work where a contractor's employee may be occupationally exposed to lead.

The OSHA Regulations apply to all construction work where a contractor's employee may be occupationally exposed to lead. The OSHA Regulations contain specific and detailed requirements imposed on contractors subject to that regulation. The OSHA Regulations define construction work as work for construction, alteration, and/or repair, including painting and decorating. It includes, but is not limited to, the following:

a. Demolition or salvage of structures where lead or materials containing lead are present;

b. Removal or encapsulation of materials containing lead;

c. New construction, alteration, repair, or renovation of structures, substrates, or portions thereof, that contain lead, or materials containing lead;

d. Installation of products containing lead;

e. Lead contamination/emergency cleanup;

f. Transportation, disposal, storage, or containment of lead or materials containing lead on the site or location at which construction activities are performed; and

g. Maintenance operations associated with the construction activities described in the subsection.

Because it is assumed by the District that all painted surfaces (interior as well as exterior) within the District contain some level of lead, it is imperative that the Contractor, its workers and subcontractors fully and adequately comply with all applicable laws, rules and regulations governing lead-based materials (including title 8, California Code of Regulations, section 1532.1).

END OF DOCUMENT
Part I
Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on the "Name" line to avoid backup withholding. For individuals, this is your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the Part I instructions on page 3. For other entities, it is your employer identification number (EIN). If you do not have a number, see How to get a TIN on page 2.

Note. If the account is in more than one name, see the chart on page 4 for guidelines on whose number to enter.

Social security number

Employer identification number

Part II
Certification

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me), and

2. I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding, and

3. I am a U.S. citizen or other U.S. person (defined below), and

4. The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions on page 3.

Signature of U.S. person

Date

General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Future developments. The IRS has created a page on IRS.gov for information about Form W-9, at www.irs.gov. Information about any future developments affecting Form W-9 (such as legislation enacted after this release date) will be posted on that page.

Purpose of Form

A person who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN). To report, for example, income paid to you, payments made to you in settlement of payment card and third party network transactions, real estate transactions, mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, or contributions made to an IRA.

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN to the person requesting it (the requester) and, when applicable, to:

1. Certify that the TIN you are giving is correct (or you are waiting for a number to be issued);

2. Certify that you are not subject to backup withholding; and

3. Claim exemption from backup withholding if you are a U.S. exempt payee. If applicable, you are also certifying that as a U.S. person, your allocable share of any partnership income from a U.S. trade or business is not subject to the withholding tax on foreign partners’ share of effectively connected income, and

4. Certify that FATCA code(s) entered on this form (if any) indicating that you are exempt from the FATCA reporting is correct.

Note. If you are a U.S. person and a requester gives you a form other than Form W-9 to request your TIN, you must see the requester’s form if it is substantially similar to Form W-9.

Definition of a U.S. person. For federal tax purposes, you are considered a U.S. person if you are:

• An individual who is a U.S. citizen or U.S. resident alien,

• A partnership, corporation, company, or association created or organized in the United States or under the laws of the United States,

• An estate (other than a foreign estate), or

• A domestic trust (as defined in Regulations section 1.7301-7).

Special rules for partnerships. Partnerships that conduct a trade or business in the United States are generally required to pay a withholding tax under section 1446 on any foreign partners’ share of effectively connected taxable income from such business. Further, in certain cases where a Form W-9 has not been received, the rules under section 1446 require a partnership to presume that a partner is a foreign person, and pay the section 1446 withholding tax. Therefore, if you are a U.S. person that is a partner in a partnership conducting a trade or business in the United States, provide Form W-9 to the partnership to establish your U.S. status and avoid section 1446 withholding on your share of partnership income.
PROJECT/CONTRACT NO.: ___________________________ between Marin Community College District ("District") and ___________________________ ("Contractor" or "Bidder") ("Contract" or "Project").

This form shall be executed by all contractors, materials manufacturers, or vendors involved in a bid or proposal for the repair or replacement of a roof of a community college building where the project is either for repair of more than 25% of the roof or that has a total cost more than $21,000 ("roofing project") and shall be submitted to the District after the award is made.

Certification of:  □ Contractor  □ Materials Manufacturer
 □ Vendor  □ Other ___________________________

I, __________ [Name], __________________________ [Name of Firm], 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 roofing 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, __________ [Name], __________________________ [Name of Firm], 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, __________ [Name], __________________________ [Name of Firm], have the following financial relationships with an architect, engineer, roofing consultant, materials manufacturer, distributor, or vendor, or other person in connection with the following roofing project contract (provide Name and Address of Building, and Contract Date and Number):

____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________

____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________

____________________________________________________________________________________
____________________________________________________________________________________

1.14 – ROOFING PROJECT CERTIFICATION
By my signature below, I hereby certify that, to the best of my knowledge, the contents of this disclosure are true, or are believed to be true. I further certify on behalf of the Firm that I am aware of section 3000 et seq. of the California Public Contract Code, and the sections referenced therein regarding the penalties for providing false information or failing to disclose a financial relationship in this disclosure. I further certify that I am authorized to make this certification on behalf of the Firm.

Date: 

Proper Name of Firm: 

Signature: 

Print Name: 

Title: 

END OF DOCUMENT
1.15 BIDDER’S QUESTIONNAIRE

To be completed by bidder and submitted with bid.

Indian Valley Campus Building #17 Roof Replacement Project #15-0626

TO THE BIDDER:

In making its award the Governing Board will take into consideration Bidder's experience, financial responsibility and capability. The following questionnaire is a part of the bid. Any bid received without this completed questionnaire may be rejected as nonresponsive. The Board will use, but will not be limited to, the information provided herein for evaluating the qualifications and responsibility of the bidder and the bidder’s organization to carry out satisfactorily the terms of the Contract Document. The questionnaire must be filled out accurately and completely and submitted with the bid. Any errors, omissions or misrepresentation of information may be considered as a basis for the rejection of the bid and may be grounds for the termination of any subsequent contract executed as a result of the bid.

A. Description of Bidder’s Organization

1. Firm Name __________________________________________________________

2. Address _____________________________________________________________

3. Telephone Number ___________________________________________________

4. Type of Organization
   a. Corporation?   Yes ____   No ____
      If yes, list officers and positions, and the State in which incorporated.
      _________________________________________________________________
      _________________________________________________________________
      _________________________________________________________________

      If the Bidder corporation is a subsidiary, give name and address of parent corporation:

   b. Partnership?   Yes ____   No ____
      If yes, list partner’s names and addresses
      General Partners:
      _________________________________________________________________
      _________________________________________________________________
      _________________________________________________________________

      Limited Partners:
c. Individual Proprietorship?  Yes ____  No ____
If yes, list name and address of proprietor:
________________________________________________________________________
________________________________________________________________________

B. Nature of Operations

1. How long have you been engaged in the contracting business under your present business name?  __________________________________________________________

2. How many years of experience does your business have in roof replacement services work similar to that called for under this bid?  __________________________

3. Do you currently have contracts, or have you ever contracted, to provide roof replacement services for any school district, community college district or county office of education in the State of California?  Yes ____  No ____

   a. If “yes,” on a separate attached sheet, provide the following information for all roof replacement projects you have had with school districts, community college districts, or county offices of education during the last four (4) years:

      1. Year contract awarded
      2. Type of work
      3. Contract completion time called for/actual completion time
      4. Contract price
      5. For whom performed, including person to call for reference and telephone number
      6. Location of work
      7. Number of stop notices filed
      8. For each contract, list any lawsuits filed relating to that contract in which you were a defendant or plaintiff
      9. Amount of liquidated damages assessed

   b. On a separate attached sheet, provide the following information for all roof replacement services contracts of a similar nature as called for in this bid that you have had with entities other than school districts, community college districts and county offices of education during the last four (4) years:

      1. Year contract awarded
      2. Type of work
      3. Contract completion time called for/actual completion time
      4. Contract price
5. For whom performed, including person to call for reference and telephone number
6. Location of work
7. Number of stop notices filed
8. For each contract list any lawsuits filed relating to that contract in which you were a defendant or plaintiff
9. Amount of liquidated damages assessed

c. For each roof replacement services contract that you have failed to complete within the contract time in the last four (4) years, please state the reasons for the untimely performance.

C. Financial and Credit Data

1. If your bid is considered for award, and if requested by the District, will you supply the following data? Yes _____ No _____
   a. Names and addresses of any banks where you regularly do business.
   b. The names and addresses of any banks, finance companies, dealers, suppliers, or others where you have notes or loans.
   c. Give credit references, including at least three trade or industry suppliers with whom you regularly deal.

2. Will you submit on request a balance sheet for the past three (3) years? Yes _____ No _____

3. Where have you engaged in the exterior painting services business or any other type of business in the last five (5) years?

<table>
<thead>
<tr>
<th>Name of Business</th>
<th>Location</th>
<th>Type of Business</th>
<th>Years in Business</th>
</tr>
</thead>
<tbody>
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</tr>
</tbody>
</table>

If any of the business endeavors referred to above are no longer operating, or you are no longer associated with them, please give brief details:

__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________

1.15 - BIDDER’S QUESTIONNAIRE
4. The following surety companies may be contacted as references as to the financial responsibility and general reliability of the bidder:

<table>
<thead>
<tr>
<th>Surety Name</th>
<th>Contact Person</th>
<th>Phone Number</th>
</tr>
</thead>
<tbody>
<tr>
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</tbody>
</table>

I certify under penalty of perjury that the foregoing is true and correct. Executed at ________________________________, California, on __________________, 20___.

Signature of Bidder

Name (print)
1.16 NOTICE OF AWARD

NOTICE OF AWARD

Date: ____________________

To: __________________________
   __________________________
   __________________________

Project: INDIAN VALLEY CAMPUS BUILDING #17 #15-0626

On _______________ the District Board of Trustees accepted your bid for the referenced project in the amount of ______________________, ($__________________).

You are required by the General Conditions to execute the following:

- 2 copies of the Agreement (The District will insert date when fully executed)
- Performance Bond
- Payment Bond (if Contract Price is $25,000 or more),
- Certificates of Insurance with endorsements
- W-9
- Prevailing Wage and Related Labor Requirements Certification
- Drug-Free Workplace Certification
- Tobacco-Free Environment Certification
- Hazardous Materials Certification
- Lead-Based Paint Certification. (if applicable)
- Proof of Contractor and all tier subcontractor DIR vendor registration

within ten (10) days from the date of receipt of this Notice.

If you fail to execute the Agreement and furnish the items listed above within ten (10) days from the date of receipt of this Notice, District will be entitled to consider all your rights arising out of its acceptance of your bid as abandoned and as a forfeiture of your Bid Bond. The District will be entitled to such other rights as may be granted by law.

By __________________________
   __________________________, VP of Finance & College Operations

END OF DOCUMENT
1.17 AGREEMENT

THIS AGREEMENT IS MADE AND ENTERED INTO THIS _______ DAY OF ____________, 20____, by and between the Marin Community College District (“District”) and __________
________________________________________ (“Contractor”) (“Agreement”).

WITNESSETH: That the parties hereto have mutually covenanted and agreed, and by these presents do covenant and agree with each other, as follows:

1. The Work: Contractor agrees to furnish all tools, equipment, apparatus, facilities, labor, and material necessary to perform and complete in a good and workmanlike manner, the work of the following project:

PROJECT: __________________________________________

(“Project” or “Contract” or “Work”)

It is understood and agreed that the Work shall be performed and completed as required in the Contract Documents including, without limitation, the Drawings and Specifications and submission of all documents required to secure funding or by the Division of the State Architect for close-out of the Project, under the direction and supervision of, and subject to the approval of, the District or its authorized representative.

2. The Contract Documents: The complete Contract consists of all Contract Documents as defined in the General Conditions and incorporated herein by this reference. Any and all obligations of the District and Contractor are fully set forth and described in the Contract Documents. All Contract Documents are intended to cooperate so that any Work called for in one and not mentioned in the other or vice versa is to be executed the same as if mentioned in all Contract Documents.

3. Interpretation of Contract Documents: Should any question arise concerning the intent or meaning of Contract Documents, including the Drawings or Specifications, the question shall be submitted to the District for interpretation. If a conflict exists in the Contract Documents, modifications, beginning with the most recent, shall control over this Agreement (if any), which shall control over the Special Conditions, which shall control over any Supplemental Conditions, which shall control over the General Conditions, which shall control over the remaining Division 0 documents, which shall control over Division 1 Documents which shall control over Division 2 through Division 18 documents, which shall control over figured dimensions, which shall control over large-scale drawings, which shall control over small-scale drawings. In no case shall a document calling for lower quality and/or quantity material or workmanship control. The decision of the District in the matter shall be final.

4. Time for Completion: It is hereby understood and agreed that the work under this contract shall be completed within________________________________________ DAYS

(_______________) consecutive calendar days (“Contract Time”) from the date specified in the District's Notice to Proceed.

5. Completion-Extension of Time: Should the Contractor fail to complete this Contract, and the Work provided herein, within the time fixed for completion, due allowance being made for the contingencies provided for herein, the Contractor shall become liable to the District for all loss and damage that the District may suffer on account thereof. The Contractor shall
coordinate its work with the Work of all other contractors. The District shall not be liable for delays resulting from Contractor's failure to coordinate its Work with other contractors in a manner that will allow timely completion of Contractor's Work. Contractor shall be liable for delays to other contractors caused by Contractor's failure to coordinate its Work with the work of other contractors.

6. **Liquidated Damages**: Time is of the essence for all work under this Agreement. It is hereby understood and agreed that it is and will be difficult and/or impossible to ascertain and determine the actual damage that the District will sustain in the event of and by reason of Contractor's delay; therefore, Contractor agrees that it shall pay to the District the sum of ________________ dollars ($________________) per day as liquidated damages for each and every day's delay beyond the time herein prescribed in finishing the Work.

   It is hereby understood and agreed that this amount is not a penalty.

   In the event any portion of the liquidated damages are not paid to the District, the District may deduct that amount from any money due or that may become due the Contractor under this Agreement. The District's right to assess liquidated damages is as indicated herein and in the General Conditions.

   The time during which the Contract is delayed for cause as hereinafter specified may extend the time of completion for a reasonable time as the District may grant. This provision does not exclude the recovery of damages for delay by either party under other provisions in the Contract Documents.

7. **Loss Or Damage**: The District and its authorized representatives shall not in any way or manner be answerable or suffer loss, damage, expense, or liability for any loss or damage that may happen to the Work, or any part thereof, or in or about the same during its construction and before acceptance, and the Contractor shall assume all liabilities of every kind or nature arising from the Work, either by accident, negligence, theft, vandalism, or any cause whatever; and shall hold the District and its authorized representatives harmless from all liability of every kind and nature arising from accident, negligence, or any cause whatever.

8. **Insurance and Bonds**: Before commencing the Work, Contractor shall provide all required certificates of insurance, and payment and performance bonds as evidence thereof.

9. **Prosecution of Work**: If the Contractor should neglect to prosecute the Work properly or fail to perform any provisions of this contract, the District, may, pursuant to the General Conditions and without prejudice to any other remedy it may have, make good such deficiencies and may deduct the cost thereof from the payment then or thereafter due the Contractor.

10. **Authority of District, Architect, Project Inspector, and DSA**: Contractor hereby acknowledges that the District, Architect(s), the Project Inspector(s), and the Division of the State Architect have authority to approve and/or stop Work if the Contractor's Work does not comply with the requirements of the Contract Documents, Title 24 of the California Code of Regulations, and all applicable laws. The Contractor shall be liable for any delay caused by its non-compliant Work.

11. **Assignment of Contract**: Neither the Contract, nor any part thereof, nor any moneys due or to become due thereunder, may be assigned by the Contractor without the written
approval of the District, nor without the written consent of the Surety on the Contractor's Performance Bond (the “Surety”), unless the Surety has waived in writing its right to notice of assignment.

12. **Classification of Contractor’s License:** Contractor hereby acknowledges that it currently holds valid Type __________ Contractor's license(s) issued by the State of California, Contractor’s State Licensing Board, in accordance with division 3, chapter 9, of the Business and Professions Code and in the classification called for in the Contract Documents.

13. **Payment of Prevailing Wages:** The Contractor and all Subcontractors under the Contractor shall pay all workers on all Work performed pursuant to this Contract not less than the general prevailing rate of per diem wages and the general prevailing rate for holiday and overtime work as determined by the Director of the Department of Industrial Relations, State of California, for the type of work performed and the locality in which the work is to be performed within the boundaries of the District, pursuant to sections 1770 et seq. of the California Labor Code. **[If Project is funded in whole or in part with federal funds, the Contractor and all Subcontractors under the Contractor shall comply with the Davis Bacon Act, applicable reporting requirements, and any other applicable requirements for federal funding. If a conflict exists, the more stringent provision shall control over this Agreement.]**

14. **Labor Compliance:** If the District has adopted a labor compliance program which is applicable to the Project or if the Project is subject to State labor compliance monitored and enforced by the Compliance Monitoring Unit of the Department of Industrial Relations, Contractor specifically acknowledges and understands that it shall perform the Work of this Agreement while complying with all the applicable provisions of the District’s labor compliance program or State labor compliance, if applicable, including, without limitation, the requirement that the Contractor and all of its Subcontractors shall timely submit complete and accurate certified payroll records as required by the Contract Documents, or the District cannot issue payment.

15. **Contract Price:** In consideration of the foregoing covenants, promises, and agreements on the part of the Contractor, and the strict and literal fulfillment of each and every covenant, promise, and agreement, and as compensation agreed upon for the Work and construction, erection, and completion as aforesaid, the District covenants, promises, and agrees that it will well and truly pay and cause to be paid to the Contractor in full, and as the full Contract Price and compensation for construction, erection, and completion of the Work hereinabove agreed to be performed by the Contractor, the following price:

\[
\text{Dollars} \quad ($ \quad \text{____________________}),
\]

in lawful money of the United States, which sum is to be paid according to the schedule provided by the Contractor and accepted by the District and subject to additions and deductions as provided in the Contract. This amount supersedes any previously stated and/or agreed to amount(s).

16. **Severability:** If any term, covenant, condition, or provision in any of the Contract Documents is held by a court of competent jurisdiction to be invalid, void or unenforceable, the remainder of the provisions in the Contract Documents shall remain in full force and effect and shall in no way be affected, impaired, or invalidated thereby.
IN WITNESS WHEREOF, accepted and agreed on the date indicated above:

**CONTRACTOR**

____________________________

By: _________________________

Title: _______________________

**DISTRICT**

MARIN COMMUNITY COLLEGE DISTRICT

By: _________________________

Title: _______________________

NOTE: If the party executing this Contract is a corporation, a certified copy of the by-laws, or of the resolution of the Board of Directors, authorizing the officers of said corporation to execute the Contract and the bonds required thereby must be attached hereto.

END OF DOCUMENT
1.18  NOTICE TO PROCEED

Dated: ____________________________, 20___

TO: ________________________________

(“Contractor”)

ADDRESS: ______________________________________

____________________________________________

PROJECT: _______________________________________

PROJECT/contract NO.: ________________ between the Marin Community College District and Contractor (“Contract”).

You are notified that the Contract Time under the above Contract will commence to run on ________________, 20___. By that date, you are to start performing your obligations under the Contract Documents. In accordance with the Agreement executed by Contractor, the date of completion is ________________, 20___.

You must submit the following documents by 5:00 p.m. of the (TENTH (10th) calendar day following the date of this Notice to Proceed:

a. Contractor’s preliminary schedule of construction.

b. Contractor’s preliminary schedule of values for all of the Work.

c. Contractor’s preliminary schedule of submittals, including Shop Drawings, Product Data, and Samples submittals

d. Contractor’s Safety Plan specifically adapted for the Project.

e. A complete subcontractors list, including the name, address, telephone number, facsimile number, California State Contractors License number, classification, and monetary value of all Subcontracts.

Thank you. We look forward to a very successful Project.

MARIN COMMUNITY COLLEGE DISTRICT

BY: ________________________________

NAME: ________________________________

TITLE: ________________________________

END OF DOCUMENT
1.19 PERFORMANCE BOND & PAYMENT (LABOR AND MATERIAL) BOND

KNOW ALL BY THESE PRESENTS:

THAT WHEREAS, the Marin Community College District ("District") by action of the District's Board of Trustees on __________, 20__ awarded a contract for a work of improvement known as:

Marin Community College District Project No. ______

[ ]

to: ____________________________________________________________________________

hereinafter designated as the “Principal.”

WHEREAS, said Principal is required under the terms of said contract to furnish: (1) a bond for the faithful performance of said contract; and (2) a separate bond for the payment of any materials, provisions, 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;

NOW, THEREFORE, we the Principal and

______________________________

as Surety, are firmly bound unto the Marin Community College District in the penal sum of

(PERFORMANCE BOND) (PAYMENT BOND)

__________________________________ and ______________________

lawful money of the United States 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 for a performance bond and an equal and separate penal sum for a separate payment bond, each of which shall be in a penal sum not less than 100% of the consideration to be paid by the District to the Principal for its performance under the contract referenced herein. The condition of this obligation is such that if the said principal does well and faithfully performs all the terms, conditions and covenants of said contract, according to the true intent and meaning thereof, upon its part to be kept and performed, then the above obligation is to be null and void, otherwise to remain in full force and effect.

(PERFORMANCE BOND)

THE CONDITION OF THIS OBLIGATION IS SUCH, that if the above bounden Principal, its heirs, executors, administrators, successors or assigns, shall in all things stand to and abide by, and well and truly keep and perform the covenants, conditions and agreements in the said contract, including the provisions for liquidated damages in the said contract, any changes, additions or alterations thereof made as therein provided, on its part, to be kept and performed at the time and in the manner therein specified, and in all respects according to their true intent and meaning, and shall indemnify, defend, and save harmless the Marin Community College District, its officers and agents, as therein stipulated, then this obligation shall become null and void; otherwise it shall be and remain in full force and effect.

(PAYMENT BOND)
THE CONDITION OF THIS OBLIGATION IS SUCH, that if said Principal, its heirs, executors, administrators, successors or assigns, or its subcontractor or subcontractors, shall fail to pay (i) any of the persons named in California Civil Code Section 9100 for any materials, provisions, or other supplies, used in, upon, for or about the performance of the work contracted to be done, or for any work or labor performed under the contract; or (ii) amounts due the California Unemployment Insurance Code with respect to such work or labor performed under the contract; or (iii) any amounts required to be deducted, withheld, and paid over to the state of California Employment Development Department from the wages of employees of Principal and subcontractors pursuant to Section 13020 of the California Unemployment Insurance Code with respect to such work or labor, then the Surety of this bond will pay for the same in an amount not exceeding the sum specified in this bond, otherwise the above obligation shall become and be null and void. In the event that suit is brought upon this payment bond, the parties not prevailing in such suit shall pay reasonable attorney's fees and costs incurred by the prevailing parties in such suit.

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

PERFORMANCE BOND AND PAYMENT BOND

And the said Surety, for value received, hereby stipulates and agrees that no change, extension of time, modification, alteration or addition to the terms of the contract or to the work to be performed thereunder or the specifications accompanying the same and no inadvertent overpayment of progress payments shall in any way affect its obligations on this performance bond or payment bond, and it does hereby waive notice of any such change, extension of time, modification, alteration or addition to the terms of the contract or to the work or to the specifications or of any inadvertent overpayment of progress payments.

IN WITNESS WHEREOF, the above-bounden parties have executed this instrument under their seal this ____day of ____________, 20____, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

Principal

By:

Surety

By:

IMPORTANT: THIS IS A REQUIRED FORM.
Surety companies executing bonds must possess a certificate of authority from the California Insurance Commissioner authorizing them to write surety insurance defined in California Insurance Code Section 105, and if the work or project is financed, in whole or in part, with Federal, grant or loan funds, Surety's name must also appear on the Treasury Department's most current list (Circular 570 as amended).

Any claims under this bond may be addressed to:

(Name and Address of Surety) (Name and Address of agent or representative for service for service of process in California)

Telephone: __________________________ Telephone: __________________________

STATE OF CALIFORNIA )
COUNTY OF ___________ ) ss.

On this ____________ day of __________, in the year __________, before me, ________________________________, a Notary Public in and for said State, personally appeared ________________________________, known to me to be the person whose name is subscribed within the instrument as the Attorney-in-Fact of the (Surety) and acknowledged to me that he subscribed the name of the (Surety) thereto and his own name as Attorney-in-Fact.

_____________________________ (SEAL)
Notary Public in and for said State

Commission expires: __________________

NOTE: A copy of the power-of attorney to local representatives of the Surety must be attached hereto.
PERFORMANCE BOND & PAYMENT (LABOR AND MATERIAL) BOND RIDER FORM

RIDER

Attached to and forming part of the Payment and Performance Bonds Number ________________

Effective Date: ______________________

On behalf: ___________________________

In favor of: Marin Community College District Project No. ________________

And in the amount of: $________________________________________________________

It is understood and agreed that effective _______________________________ the Bond amount for each bond as it appears on the original bond is being changed:

From: $____________________________________________________________

To: $______________________________________________________________

All other conditions and terms remain as originally written.

Signed, Sealed, and Dated: ______________________________

PRINCIPAL

Ry’: ______________________________

SURETY

By: ______________________________

The above endorsement is hereby agreed to and accepted:

MARIN COMMUNITY COLLEGE DISTRICT

By: ______________________________
1.20 AGREEMENT AND RELEASE OF ANY AND ALL CLAIMS

THIS AGREEMENT AND RELEASE OF CLAIMS ("Agreement and Release") IS MADE AND ENTERED INTO THIS ___________ DAY OF ___________________, 20___ by and between the MARIN COMMUNITY COLLEGE DISTRICT ("District") and ___________________________ ("Contractor"), whose place of business is ________________________________.

RECITALS:

1. District and Contractor entered into PROJECT/CONTRACT NO.: _______ ("Contract" or "Project") in the County of _____________________________, California.

2. The Work under the Contract has been completed.

NOW, THEREFORE, it is mutually agreed between District and Contractor as follows:

AGREEMENT

3. Contractor will only be assessed liquidated damages as detailed below:

<table>
<thead>
<tr>
<th>Original Contract Sum</th>
<th>$______________</th>
</tr>
</thead>
<tbody>
<tr>
<td>Modified Contract Sum</td>
<td>$______________</td>
</tr>
<tr>
<td>Payment to Date</td>
<td>$______________</td>
</tr>
<tr>
<td>Liquidated Damages</td>
<td>$______________</td>
</tr>
<tr>
<td>Payment Due Contractor</td>
<td>$______________</td>
</tr>
</tbody>
</table>

4. Subject to the provisions hereof, District shall forthwith pay to Contractor the undisputed sum of ____________________ Dollars ($ ________) under the Contract, less any amounts represented by any notice to withhold funds on file with District as of the date of such payment.

5. Contractor acknowledges and hereby agrees that there are no unresolved or outstanding claims in dispute against District arising from the performance of work under the Contract, except for the claims described in Paragraph 6 and continuing obligations described in Paragraph 8. It is the intention of the parties in executing this Agreement and Release that this Agreement and Release shall be effective as a full, final and general release of all claims, demands, actions, causes of action, obligations, costs, expenses, damages, losses and liabilities of Contractor against District, all its respective agents, employees, inspectors, assigns and transferees except for the Disputed Claim is set forth in Paragraph 6 and continuing obligations described in Paragraph 8 hereof.

6. The following claims are disputed (hereinafter, the "Disputed Claims") and are specifically excluded from the operation of this Agreement and Release:

<table>
<thead>
<tr>
<th>Claim No.</th>
<th>Description of Claim</th>
<th>Amount of Claim</th>
<th>Date Claim Submitted</th>
</tr>
</thead>
<tbody>
<tr>
<td>_________</td>
<td>________________</td>
<td>$___________</td>
<td>__________</td>
</tr>
<tr>
<td>_________</td>
<td>________________</td>
<td>$___________</td>
<td>__________</td>
</tr>
</tbody>
</table>
7. Consistent with California Public Contract Code section 7100, Contractor hereby agrees that, in consideration of the payment set forth in Paragraph 4 hereof, Contractor hereby releases and forever discharges District, all its agents, employees, inspectors, assignees, and transferees from any and all liability, claims, demands, actions, or causes of action of whatever kind or nature arising out of or in any way concerned with the Work under the Contract.

8. Guarantees and warranties for the Work, and any other continuing obligation of Contractor, shall remain in full force and effect as specified in the Contract Documents.

9. To the furthest extent permitted by California law, Contractor shall defend, indemnify, and hold harmless the District, its agents, representatives, officers, consultants, employees, trustees, and volunteers (the "indemnified parties") from any and all losses, liabilities, claims, suits, and actions of any kind, nature, and description, including, but not limited to, attorneys' fees and costs, directly or indirectly arising out of, connected with, or resulting from the performance of the Contract unless caused wholly by the sole negligence or willful misconduct of the indemnified parties.

10. Contractor hereby waives the provisions of California Civil Code section 1542 which provides as follows:

A GENERAL RELEASE DOES NOT EXTEND TO CLAIMS WHICH THE CREDITOR DOES NOT KNOW OR SUSPECT TO EXIST IN HIS OR HER FAVOR AT THE TIME OF EXECUTING THE RELEASE, WHICH IF KNOWN BY HIM OR HER MUST HAVE MATERIALLY AFFECTED HIS OR HER SETTLEMENT WITH THE DEBTOR.

11. The provisions of this Agreement and Release are contractual in nature and not mere recitals and shall be considered independent and severable. If any such provision or any part thereof shall be at any time held invalid in whole or in part under any federal, state, county, municipal, or other law, ruling, or regulations, then such provision, or part thereof, shall remain in force and effect to the extent permitted by law, and the remaining provisions of this Agreement and Release shall also remain in full force and effect, and shall be enforceable.

12. All rights of District shall survive completion of the Work or termination of Contract, and execution of this Release.

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

MARIN COMMUNITY COLLEGE DISTRICT

SIGNATURE: __________________________

PRINT NAME: _________________________

TITLE: ________________________________

CONTRACTOR: _________________________

SIGNATURE: _________________________

PRINT NAME: _________________________

TITLE: ________________________________

END OF DOCUMENT

1.20 – AGREEMENT AND RELEASE OF ANY AND ALL CLAIMS
1.20 GUARANTEE FORM

______________________________________________ ("Contractor") hereby agrees that the
("Work" of Contractor) which Contractor has installed for the Marin Community College
District ("District") for the following project:

PROJECT: __________________________________________

("Project" or "Contract") has been performed in accordance with the requirements of
the Contract Documents and that the Work as installed will fulfill the requirements of
the Contract Documents.

The undersigned agrees to repair or replace any or all of such Work that may prove to
be defective in workmanship or material together with any other adjacent Work that
may be displaced in connection with such replacement within a period of ________
year(s) from the date of completion as defined in Public Contract Code section
7107, subdivision (c), ordinary wear and tear and unusual abuse or neglect excepted.
The date of completion is _________________, 20__.

In the event of the undersigned’s failure to comply with the above-mentioned
conditions within a reasonable period of time, as determined by the District, but not
later than seven (7) days after being notified in writing by the District, the undersigned
authorizes the District to proceed to have said defects repaired and made good at the
expense of the undersigned. The undersigned shall pay the costs and charges therefor
upon demand.

Date: __________________________________________

Proper Name of Contractor: __________________________

Signature: ________________________________________

Print Name: ______________________________________

Title: ____________________________________________

Representatives to be contacted for service subject to terms of Contract:

NAME: __________________________________________

ADDRESS: ______________________________________

PHONE NO.: _____________________________________

END OF DOCUMENT
# 1.22 - GENERAL CONDITIONS

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1.22 – GENERAL CONDITIONS
1. DEFINITIONS

Addendum: A written change or revision to the Contract Documents issued to the prospective bidders prior to the time of receiving bids.

Alternate: The sum to be added to or deducted from the base Bid if the change in scope of work as described in Alternates is accepted by the District.

Approved: Approved by the District or the District’s authorized representative unless otherwise indicated in the Contract Documents.

As Directed: As directed by the District, unless otherwise indicated in the Contract Documents.

As Selected: As selected by the District, unless otherwise indicated in the Contract Documents.

Bid: The properly completed and signed proposal to perform the performance/execution of work for the Project as described in the Contract Documents.

Project Manager: The individual or entity named as such by the District. If no Project Manager is designated for the project, all references to the Project Manager in these Contract Documents shall mean the District and/or its designee or designees.

Contract: The legally binding agreement between the District and the Contractor wherein the Contractor agrees to furnish the labor, materials, equipment, plant and appurtenances required to perform the work described in the Contract Documents and the District agrees to pay the Contractor for such work.

Contract Documents: The Contract Documents are described in the Contract for this Project.

Contractor/Project Manager: The person or entity holding a valid license in the State of California required for performing this Project and who has contracted with the District to perform the performance/execution of work described in the Contract Documents. The term Contractor shall be construed to mean all of the officers, employees, Subcontractors, suppliers, or other persons engaged by the Contractor upon the work of this Project.

District: The District, its Governing Board, authorized officers and employees, and authorized representatives.

1.22 – GENERAL CONDITIONS
**DIR:** California Department of Industrial Relations which enforces prevailing wage and apprenticeship questions and problems.

**DSA:** The State of California Division of the State Architect which has the authority to review, approve and inspect the design, alteration and construction of school buildings.

**Final Completion:** Final Completion is achieved when the Contractor has fully completed all Contract Document requirements, including, but not limited to, all final punch list items, to the District’s satisfaction.

**Furnish:** Purchase and deliver to site of installation.

**Governing Board:** The Governing Board of the District.

**Indicated or As Shown:** Shown on drawings and/or as specified.

**Inspector:** The person engaged by the District to conduct the inspections required by the Education Code and Title 24.

**Install:** Fix in place, for materials; and fix in place and connect, for equipment.

**Modification:** An authorized change to the Contract Documents, which may or may not include a change in contract price and/or time.

**Project:** The total performance/execution of Project Work and activities described in these Contract Documents.

**Secure:** Obtain.

**Subcontractor:** A person, firm, or corporation, duly licensed by the State of California, who has a contract with the Contractor to furnish labor, materials and equipment, and/or to install materials and equipment for work in this Contract.

**Substantial Completion:** Stage or designated portion of a construction project that is sufficiently complete in accordance with a contract for the owner to occupy and/or utilize it for its intended use, without undue interference.

2. **PROVISIONS REQUIRED BY LAW DEEMED INSERTED**

Every provision of law and clause required by law to be inserted in this Contract shall be deemed to be inserted, and this Contract shall be read and enforced as though it were included, and if through mistake or otherwise any provision is not inserted or is not correctly inserted, upon application of either party the Contract 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 this Contract.

1.22 – GENERAL CONDITIONS
3. CONTRACT DOCUMENTS

a. Contents and Precedence

The Contract Documents consist of the executed Contract and all Addenda, all approved change orders, the completed Bid Form, the required Bonds and the Insurance forms, the Notice Inviting Bids, the Instructions to Bidders, the Notice of Award, the Notice to Proceed, the General Conditions, any supplemental Conditions, the Technical Specifications, the Drawings and the completed Bidder’s Questionnaire. The Contract Documents are complimentary, and anything required by one shall be as binding as if required by all. In case of conflicts within the Contract Documents, the order of precedence of interpretation shall be as listed above, with the executed Contract and any change order thereto having priority, and subsequent Addenda having priority over prior Addenda only to the extent modified by the subsequent Addenda. In case of conflict within the drawings, larger scale drawings shall govern smaller scale drawings, and written dimensions shall govern over scaled dimensions.

b. Ambiguities, Errors, and Inconsistencies

If, in the opinion of the Contractor, the Project Work details indicated in the specifications or otherwise specified are in conflict with accepted industry standards for quality Project Work and therefore might interfere with its full guarantee of the work involved, the Contractor shall promptly bring this information to the attention of the District for appropriate action before submittal of the bid. Contractor’s failure to request clarification or interpretation of an apparent ambiguity, error or inconsistency waives that Contractor’s right to thereafter claim any entitlement to additional compensation based upon an ambiguity, inconsistency, or error, which should have been discovered by a reasonably prudent Contractor, subject to the limitations of Public Contract Code §1104. During the Project, should any discrepancy appear or any misunderstanding arise as to the import of anything contained in the Contract Documents, the matter shall be promptly referred to the District, who will issue instructions or corrections.

c. Lines and Planes

All lines and planes appearing on Contractor’s drawings to be horizontal or vertical and not explicitly indicated otherwise shall be constructed true and plumb. All lines and planes appearing on Contractor’s drawings to intersect at right angles and not explicitly indicated otherwise shall be constructed at true right angles. Where details are indicated covering specific conditions, such details also apply to all similar conditions not specifically indicated.

d. Standards

The specification standards of the various sections of the Specifications shall be the procedural, performance, and material standards of the applicable association publications identified and shall be the required level of installation, materials, workmanship, and performance for the applicable work. Except where a specific date of issue is mentioned, hereinafter, references to specification
standards shall mean the edition, including amendments and supplements in effect on the date of the Notice Inviting Bids. Where no standard is identified and a manufacturer is specified, the manufacturer's Specifications are the standards. All standards shall be subordinate to the requirements of the applicable codes and regulations.

e. **Reference to the Singular**

Wherever in the Specifications an article, device or piece of equipment is referred to in the singular number; such reference shall include as many such items as are shown on drawings or required to complete the installation.

4. **INTENT OF DRAWINGS AND SPECIFICATIONS**

a. Specifications and floor plans are to be read as an integrated document. The Contractor shall promptly report to the District any ambiguities, discrepancies, or errors which come to the Contractor's attention.

b. Figured dimensions shall be followed in preference to scaled dimensions, and the Contractor shall make all additional measurements necessary for the work and shall be responsible for their accuracy. Before ordering any material or doing any work, each Contractor shall verify all measurements at the Project site and shall be responsible for the correctness of same.

c. It is the intent of the drawings and Specifications to show and describe complete installations. Items shown but not specified, or specified but not shown, shall be included unless specifically omitted.

d. The Specifications and contractor’s plans shall be deemed to include and require everything necessary and reasonably incidental to the completion of all work described and indicated on the drawings, whether particularly mentioned or shown, or not.

5. **TRADE DIVISIONS**

Segregation of the Specifications into the designated trade divisions is only for the purpose of facilitating descriptions and shall not be considered as limiting the work of any subcontract or trade. Subject to other necessary provisions set forth in these Specifications, the terms and conditions of such limitations or inclusions shall lie solely between the Contractor and its Subcontractors. "Scope" as indicated in each section of the Specifications shall serve only as a general guide to what is included in that section. Neither the stated description nor the division of the plans and Specifications to various sections, which is done solely for convenience, shall be deemed to limit the work required, divide or indicate it by labor jurisdiction or trade practice, or set up any bidding barriers to the various sub-contractors or suppliers.

a. The Contractor shall be responsible for the proper execution of all work required by the Contract Documents and for allocating such portions as the Contractor sees fit to the various Subcontractors, subject to applicable law. The Contractor is cautioned that the various individual
sections may not contain all work that the Contractor may wish to allocate to a particular Subcontractor or everything bearing on the work of a particular trade, some of which may appear in other portions of the plans or Specifications.

b. If the Contractor elects to enter into any subcontract for any section of the work the Contractor assumes all responsibility for ascertaining that the Subcontractor for the work is competent, licensed, solvent, thoroughly acquainted with all conditions and legal requirements of the work, has included all materials and appurtenances in connection therewith in the subcontract, and has performed its work in strict compliance with the Contract Documents.

c. It shall be the responsibility of the Contractor to notify each prospective Subcontractor at the time of request for bids of all portions of the Contract Documents, including the General Conditions, Supplementary Conditions and any parts of other sections of Specifications or plans that the Contractor intends to include as part of the subcontract.

6. MASTER MANDATORY PROVISIONS

a. Any material, item, or piece of equipment mentioned, listed or indicated without definition of quality, shall be consistent with the quality of adjacent or related materials, items, or pieces of equipment on the Project and in accordance with best practices.

b. Any method of installation, finish, or workmanship of an operation called for, without definition of standard of workmanship, shall be followed or performed and finished in accordance with good practice and consistent with adjacent or related installations on the Project.

c. Any necessary material, item, piece of equipment or operation not called for but reasonably implied as necessary for proper completion of the work, shall be furnished, installed or performed and finished; and shall be consistent with adjacent or related materials, items, or pieces of equipment on the Project, and in accordance with best practices.

d. Names or numbered products are to be used according to the manufacturers' directions or recommendations unless otherwise specified.

7. CONTRACTOR

a. The Contractor shall perform all the work and activities required by the Contract Documents and furnish all labor, materials, equipment, tools and appurtenances necessary to perform the work and complete it to the District’s satisfaction within the time specified. The Contractor shall at all times perform the work of this Contract in a competent and workmanlike manner and, if not specifically stated, accomplish the work according to the best standards of carpentry and lead abatement practice. The Contractor in no way is relieved of any responsibility by the activities of the District, Inspector or DSA in the performance of such duties.

b. Contractor shall have a valid and proper State Contractor’s License “B-General Contractor” and or “C-39 Roofing” License.
c. Contractor and any/all subcontractors shall be registered with the California Department of Industrial Relations.

d. Contractor shall provide the District Representative with contact information including phone numbers for the both the Project manager and alternate.

e. The experience of the Contractor and any Subcontractors to call for the highest level of quality in carpentry and lead abatement services compatible with the standards, practices and modern techniques accepted by the industry. All carpentry and lead abatement services shall be performed by experienced and qualified person(s) who are directly employed and supervised by the Contractor/Subcontractor. Such Contractor/Subcontractor shall have at least (2) years of relevant experience in carpentry and lead abatement projects similar in size to those for which these Special Provisions apply.

f. The Contractor shall employ a full-time competent superintendent and necessary assistants who shall have complete authority to act for the Contractor on all matters pertaining to the work. The superintendent shall be satisfactory to the District and, if not satisfactory, shall be replaced by the Contractor with one that is acceptable. Also, the superintendent shall not be changed without the written consent of the District unless the superintendent ceases to be employed by the Contractor.

g. Contractor shall make the layout of lines and elevations and shall be responsible for the accuracy of both the Contractor’s and the Subcontractors’ work resulting therefrom. All dimensions affecting proper fabrication and installation of all Contract work must be verified by the Contractor prior to fabrication and installation by taking field measurements of the true conditions. The Contractor shall take, and assist Subcontractors in taking, all field dimensions required in performance of the work, and shall verify all dimensions and conditions on the site. If there are any discrepancies between dimensions in drawings and existing conditions which will affect the work, the Contractor shall promptly bring such discrepancies to the attention of the District for adjustment before proceeding with the work. Contractor shall be responsible for the proper fitting of all work and for the coordination of all trades, Subcontractors and persons engaged upon this Contract.

h. Contractor shall do all cutting, fitting, or patching of Contractor’s work that may be required to make its several parts come together properly and fit it to receive or be received by work of other contractors as shown, or reasonably implied by, the drawings and Specifications for the completed work. Any cost incurred by the District due to defective or ill -timed work shall be borne by the Contractor.

8. RESPONSIBILITY OF CONTRACTOR

a. Contractor shall be held strictly responsible for the proper performance of all work covered by the Contract Documents, including the work performed by Subcontractors. All work performed under this Contract shall comply in every respect to the rules and regulations of all agencies having jurisdiction over the Project or any part thereof.
b. Contractor shall submit Verified Reports as defined in 554-336 and 4-343 (c), Group 1, Chapter 4, Part I, Title 24, California Code of Regulations (“CCR”). The duties of the Contractor are as defined in 54-343, Group 1, Chapter 4, Part I, Title 24, of the CCR. Contractor shall keep and make available a copy of Title 24 of the CCR at the job site at all times.

c. Where, because of short supply, any items of fabricated materials and/or equipment, indicated on drawings or specified, are unobtainable and it becomes necessary, with the consent of the District, to substitute equivalent items differing in details or design, the Contractor shall submit complete drawings and details indicating the necessary modifications of the work. This provision shall be governed by the terms of the General Conditions regarding Submittals: Shop Drawings, Cuts and Samples.

d. With respect to work performed at and near a school site, Contractor shall at all times take all appropriate measures to ensure the security and safety of students and staff, including, but not limited to, ensuring that all of Contractor’s employees, Subcontractors, and suppliers entering school property strictly adhere to all applicable District policies and procedures, e.g., sign-in requirements, visitor badges, and access limitations.

9. SUBCONTRACTORS

a. Nothing contained in the Contract Documents shall create any contractual relationship between any Subcontractor and the District. The District shall be deemed to be the third party beneficiary of the contract between the Contractor and each Subcontractor. If the Contractor does not specify a Subcontractor for any portion of the work to be performed under this Contract, as required by law, Contractor shall perform that portion of the work with its own forces. The Contractor shall not substitute any other person or firm as a Subcontractor for those listed in the bid submitted by the Contractor, without the written approval of the District and in conformance with the requirements of the Public Contract Code. The District reserves the right of approval of all Subcontractors proposed for use on this Project, and to this end, may require financial, performance, and such additional information as is needed to secure this approval. If a Subcontractor is not approved, the Contractor shall promptly submit another firm of the same trade for approval.

b. The Contractor shall insert appropriate provisions in all subcontracts pertaining to work on this Project requiring the Subcontractors to be bound by all applicable terms of the Contract Documents. The Contractor shall be as fully responsible for the acts and omissions of the Subcontractors, and of persons either directly or indirectly employed by them, as the Contractor is for the acts and omissions of persons directly employed by the Contractor.
10. PERFORMANCE AND PAYMENT BONDS

a. As directed in the Notice of Award, the Contractor shall file with the District the following bonds, using the bond forms provided with these Contract Documents:

   1) A corporate surety bond, in a sum not less than 100 percent of the amount of the Contract, to guarantee the faithful performance of the Contract.

   2) A corporate surety bond, in a sum not less than 100 percent of the amount of the Contract, to guarantee the payment of wages for services engaged and of bills contracted for materials, supplies, and equipment used in the performance of the Contract.

b. Corporate sureties on these bonds and on bonds accompanying bids must be admitted sureties as defined by law, legally authorized to engage in the business of furnishing surety bonds in the State of California. All sureties and bond forms must be satisfactory to the District. Failure to submit the required bonds within the time specified by the Notice of Award, using the forms provided by the District, may result in cancellation of the award of Contract and forfeiture of the Bid Bond.

c. The amount of the Contract, as used to determine the amounts of the bonds, shall be the total amount fixed in the Contractor’s proposal for the performance of the required work.

d. During the period covered by the Contract, if any of the sureties upon the bonds shall become insolvent or unable, in the opinion of the District, to pay promptly the amount of such bonds to the extent to which surety might be liable, the Contractor, within thirty (30) days after notice given by the District to the Contractor, shall provide supplemental bonds or otherwise substitute another and sufficient surety approved by the District in place of the surety becoming insolvent or unable to pay. If the Contractor fails within such thirty (30) day period to substitute another and sufficient surety, the Contractor shall, if the District so elects, be deemed to be in default in the performance of its obligations hereunder and upon the bid bond, and the District, in addition to any and all other remedies, may terminate the Contract or bring any proper suit or other proceedings against the Contractor and the sureties or any of them, or may deduct from any monies then due or which thereafter may become due the Contractor under the Contract, the amount for which the surety, insolvent or unable to pay, shall have been liable on the bonds, and the monies so deducted shall be held by the District as collateral security for the performance of the conditions of the bonds.

11. INSURANCE

a. Contractor shall obtain the following insurance from a company or companies acceptable to District. All required insurance must be written by a company licensed to do business in the State of California at the time the policy is issued. All required insurance shall be equal to or exceed an A VIII rating as listed in Best’s Insurance Guides’ latest edition. On a case-by-case basis, District may accept insurance written on a company listed on the State of California Department of Insurance List of Approved Surplus Lines (“LASLI List”) with a rating of A VIII or above as listed in Best’s Insurance Guides’ latest edition. Required documentation of such insurance shall be furnished to
the District at the time stated in the Notice of Award. Contractor shall not commence work nor shall it allow its employees or Subcontractors or anyone to commence work until all insurance required hereunder has been submitted and approved and a notice to proceed has been issued.

b. Contractor shall take out and maintain at all times during the life of this Contract, up to the date of acceptance of the work by the District, the following policies of insurance:

1) **Public Liability Insurance:** Personal injury and replacement value property damage insurance for all activities of the Contractor and its Subcontractors arising out of or in connection with this Contract, written on a comprehensive general liability form including contractor’s protected coverage, blanket contractual, completed operations, vehicle coverage and employer's non-ownership liability coverage, in an amount no less than $2,000,000 combined single limit personal injury and property damage for each occurrence, and a general aggregate limit which applies either separately or specifically to this Contract and is twice the required occurrence limit., i.e., $4,000,000.

2) **Builders’ Risk Insurance:** Contractor shall procure and maintain builders’ risk insurance (all risk coverage) for an amount equal to one hundred percent (100%) of the Contract sum for the benefit of the District, and the Contractor and Subcontractors as their interest may appear. In projects involving no structural change or building construction, this requirement may be waived in writing at the District’s sole option.

These policies shall include the following coverage:

1) The inclusion of more than one insured shall not operate to impair the rights of one insured against another insured and the coverage’s afforded shall apply as though separate policies have been issued to each insured.

2) This policy does not exclude explosion, collapse, underground excavation hazard, or removal of lateral support.

c. **Endorsements:**

1) The Public Liability Policy specified above shall be endorsed with the following specific language:

“The Marin Community College District is named as additional insured for all liability arising out of the operations by or on behalf of the named insured, and this policy protects the additional insured, its officers, agents and employees against liability for bodily injuries, death or property damage or destruction arising in any respect directly or indirectly in the performance of the Contract.”

2) The certificates must state that the insurance is under an occurrence based, and not a claims-made, policy (policies). Both the Public Liability Policy and the Builders’ Risk Policy specified above shall be endorsed with the following specific language:
i. The insurance provided herein is primary and no insurance held or owned by the District shall be called upon to contribute to a loss.

ii. Coverage provided by this policy shall not be reduced or canceled without thirty (30) days written notice given to the District by certified mail.

d. Documentation:

Within ten (10) days following issuance of the Notice of Award of the Contract, the following documentation of insurance shall be submitted to District for approval prior to issuance of the Notice to Proceed: signed certificates of insurance showing the limits of insurance provided and copies of specific endorsements for each policy. Certified copies of all policies shall be provided to the District upon request. If Contractor fails to submit the required documentation for all coverage required by this Contract within ten (10) calendar days following the issuance of the Notice of Award, the District may acting in its sole discretion, rescind the Notice of Award and the Contract, and the Contractor shall forfeit its bid security.

e. If the Contractor fails to maintain such insurance, the District may take out such insurance to cover any damages for which the District might be held liable on account of the Contractor's failure to pay such damages, and deduct and retain the amount of the premiums from any sums due the Contractor under the Contract.

f. Workers' Compensation Insurance:

1) Within ten (10) days following issuance of the Notice of Award of the Contract, the Contractor shall furnish to the District satisfactory proof that the Contractor and all Subcontractors it intends to employ, have procured, for the period covered by the proposed Contract, full Workers' Compensation insurance and employer's liability with limits of at least $1,000,000 with an insurance carrier satisfactory to the District for all persons whom they may employ in carrying out the work contemplated under this Contract in accordance with the Workers' Compensation Insurance and Safety Act, approved May 26, 1913, and all acts amendatory or supplemental thereto (the “Act’). Such insurance shall be maintained in full force and effect during the period covered by the Contract. In the event the Contractor is self-insured, Contractor shall furnish a Certificate of Permission to Self-Insure, signed by the Department of Industrial Relations Administration of Self-Insurance, Sacramento, California.

2) If the Contractor fails to maintain such insurance, the District may take out compensation insurance to cover any compensation which the District might be liable to pay under the provisions of the Act, by reason of any employee of the Contractor being injured or killed, and deduct and retain the amount of the premiums for such insurance from any sums due the Contractor under the Contract, or otherwise recover that amount from the Contractor or the Surety.
3) If an injury occurs to any employee of the Contractor for which the employee, or the employee's dependents in the event of the employee’s death, is entitled to compensation from the District under the provisions of the Act, or for which compensation is claimed from the District, the District may retain from the sums due the Contractor under this Contract, an amount sufficient to cover such compensation, as fixed by the Act, until such compensation is paid, or until it is determined that no compensation is due, and if the District is compelled to pay such compensation, it will deduct and retain from such sums the amount so paid, or otherwise recover this sum from the Contractor or its Surety.

4) The policies represented by the certificates must contain the provision (and the certificates must so state) that the insurance cannot be canceled until thirty (30) days after written notice of intended cancellation has been given to the District by certified mail.

12. CODES AND REGULATIONS

a. The Contractor shall be knowledgeable regarding and shall comply with applicable portions of California Code of Regulations Title 24, the applicable Building Code, and all other codes, ordinances, regulations or orders of properly constituted authority having jurisdiction over the work of this Project. The Contractor shall examine the Contract Documents for compliance with these codes and regulations, and shall promptly notify the District of any discrepancies.

b. All work and materials shall be in full accordance with the latest rules and regulations of the Safety Orders of the Division of Industrial Safety, and the applicable State laws and/or regulations. Nothing in the Project plans or Specifications is to be construed to permit work not conforming to the applicable Codes. Buildings and/or all other services covered by this Contract shall meet all the regulations for access by the physically handicapped as administered by the Division of the State Architect, and as may be required by federal or state law.

c. If the work under this Contract is for the construction of a school building as defined by the Education Code, then the following provisions shall apply to the Contract:

1) All work shall be executed in accordance with the current requirements of the Education Code and California Code of Regulations: Title 24 and Title 19. No deviations from the Contractor’s approved plans and Specifications will be permitted except upon a Change Order or Addenda, signed and approved by the District.

13. PERMITS AND TAXES

a. The Contractor shall obtain and pay for all permits, fees and licenses that are required in order to perform the work under this Contract. The District shall pay connection charges and meter costs for new permanent utilities required by these Contract Documents. The Contractor shall notify District sufficiently in advance to submit requests for service to the appropriate utility companies so as to insure connections or installation of utility services in accordance with the Project schedule.
b. The Contractor shall pay for all taxes on materials and equipment. The District is exempt from Federal Excise Tax. Contractor shall not pay Federal Excise Tax on any item in this Contract.

14. PATENTS AND ROYALTIES

All fees or claims for patents, royalties or licenses on materials, equipment or processes used in the performance of work on this Project shall be included in the amount of the Bid. The Contractor shall indemnify, defend, and hold harmless the District, its Governing Board and their officers and employees, from all claims or liability, including costs and expenses, which may arise from the use on this Project of any patented or copyrighted materials, equipment, or processes.

15. SAFETY AND FIRE PREVENTION

a. Prior to commencement of the Work at the site, the Contractor shall prepare and submit to the Maintenance Director, for review, a written safety plan. The Contractor shall revise the safety plan as necessary to obtain the Maintenance Director’s acceptance of the plan for the plan for record purposes only. The Contractor shall be solely responsible for initiating, maintaining and supervising all safety programs required by applicable law, ordinance, regulation or governmental orders in connection with the performance of the Contract, or otherwise required by the type or nature of the Work. The Contractor’s safety program shall include all actions and programs necessary for compliance with California or federally statutorily mandated workplace safety programs, including without limitation, compliance with the California Drug Free Workplace Act of 1990 (California Government Code 8350 et seq.) Without limiting or relieving the Contractor of its obligations hereunder, the Contractor shall require that it’s Subcontractor similarly initiate and maintain all appropriate or required safety programs.

b. The Contractor shall be solely responsible for initiating and maintaining reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury or loss to: (i) employees on the Work and other persons who may be affected thereby; (ii) the Work and materials and equipment to control of the Contractor or the Contractor’s Subcontractors or Sub-subcontractors; and (iii) other property or items at the site of the Work, or adjacent thereto, such as buildings, trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of performance of the project.

c. Safety Signs, Barricades. The Contractor shall erect and maintain, as required by existing conditions and conditions resulting from performance of the Contract, reasonable safeguards for safety and protection of property and persons, including, without limitation, posting danger signs and other warnings against hazards, promulgating safety regulation and notifying owners and users of adjacent site and utilities.

d. Safety Notices. The Contractor shall erect and maintain, as required by existing conditions and conditions resulting from performance of the Contract, reasonable safeguards for safety and protection of property and persons, including, without limitation, posting danger signs and other warnings against hazards, promulgating safety regulations and notifying owners and users of adjacent sites and utilities.

1.22 – GENERAL CONDITIONS
e. **Safety Coordinator.** The Contractor shall designate a responsible member of the Contractor’s organization at the Site whose duty shall be the prevention of accidents and the implementation and maintenance safety precautions and programs. This person shall be the Contractor’s superintendent unless otherwise designated by the Contractor in writing to the District’s Representative.

f. **Emergencies.** In an emergency affecting safety of persons or property, the Contractor shall act, to prevent threatened damage, injury or loss.

g. The Contractor, Subcontractors and all of their agents and employees shall fully comply with all of the provisions and requirements of CAL/OSHA, Title 8, California Code of Regulations and all other safety codes applicable to the Project. The Contractor shall take thorough precautions at all times for the protection of persons and property, and shall be liable for all damages to persons or property, either on or off the site, which occur as a result of Contractor’s prosecution of the work. The Contractor shall obtain permits for, install and maintain in safe condition barricades, walkways, fences, railings, and whatever other safeguards that may be necessary to protect persons and property from damage as a result of the performance to completion under this Contract.

h. **Contractor is required to ensure Safety Data Sheets ("SDS") are available in a readily accessible place at the work site for any material requiring an SDS pursuant to the federal "Hazard Communication" standard or employee "right to know" laws.** Contractor is also required to ensure proper labeling on materials brought on the job site such that any person working with the material or within the general area of the material is informed of the hazards of the material and follows proper handling and protections procedures. Copies of the SDS’s shall also be submitted directly to the District.

i. **Contractor shall not endanger any work by cutting, excavating, or otherwise altering the work and shall not cut or alter the work of any other Contractor except with the written consent of the District, nor overload any new or existing structures by the placing or storage of materials, equipment, or other items thereon, and if necessary, shall provide calculations proving the safety in so doing.**

j. **If it is necessary to work at night, or where daylight is obscured, the Contractor shall provide and maintain lighting of adequate level to properly prosecute the work, to permit the thorough inspection of same, and to ensure the safety of workers and others.**

k. **Contractor shall take extraordinary care to prevent fires and keep all flammable materials and oily rags in tightly closed metal containers.** Contractor shall exercise particular care when welding or cutting, and with regard to the disposition of waste materials, the nature and quantity of which might create or increase a fire hazard.
16. **HAZARDOUS MATERIALS**

Unless otherwise specified, this Contract does not include the removal, handling, or disturbance of any hazardous substances or materials encountered in the work area. If such substances or materials are encountered, work shall cease in that area and the District shall be promptly notified to take appropriate action for removal or otherwise abating the condition in accordance with current regulations applicable to the District.

a. **General**

1) No asbestos, asbestos-containing products or other hazardous materials shall be used in this Project or in any tools, devices, clothing or equipment used to further this Project.

2) Asbestos and/or asbestos containing products shall be defined as all items containing but not limited to chrysotile, crocidolite, amosite, anthophyllite, tremo-lite or actinolite.

3) Any or all material containing greater than one tenth of one percent (>0.1%) asbestos shall be defined as asbestos-containing material.

4) Any disputes involving the question of whether or not material contains asbestos shall be settled by electron microscopy; the cost of any such tests shall be paid by the Contractor.

5) All work or materials found to contain asbestos or work or material installed with asbestos containing equipment will be immediately rejected and this work shall be removed by the Contractor at no additional cost to the District.

b. **Decontamination and Removal of hazardous material from prior work**

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 the Environmental Protection Agency ("EPA").

2) The asbestos removal contractor shall be an EPA-accredited contractor qualified in the removal of asbestos subject to the approval of the District.

3) The asbestos consultant shall be chosen and approved by the District, which 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. **Hold Harmless**

1) Interface of work under this Contract with work containing asbestos shall be executed by the 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 products. By execution of this Contract the Contractor acknowledges the above and agrees to hold harmless, as set forth in the indemnity provisions of this Contract, the District, its employees, agents and assigns for all asbestos liability which may be associated with this work and agrees to instruct Contractor’s employees with respect to the above mentioned standards, hazards, risks and liabilities.

2) The Contractor shall, prior to commencement of this work, provide a duly signed and notarized affidavit that Contractor has instructed Contractor’s employees and agents with respect to the above mentioned standards, hazards, risks and liabilities and the contents and requirements of this portion of the Contract Documents.

d. **Certification**

The Contractor agrees that materials containing asbestos or other hazardous materials as defined in Federal and State law shall not be used in this Project.

17. **TEMPORARY FACILITIES**

a. The Contractor shall obtain permits for, install and maintain in safe condition all scaffolds, hoisting equipment, barricades, walkways, or other temporary structures that may be required to accomplish the work. Such structures shall be adequate for the intended use and capable of safely accepting all loads that may be imposed upon them. They shall be installed and maintained in accordance with all applicable codes and regulations.

b. The Contractor shall provide and maintain temporary heat from an approved source whenever in the course of the work it may become necessary for curing, drying or warming spaces as may be required for the installation of materials or finishes. The Contractor shall provide and maintain any and all facilities that may be required for dewatering in order that work may proceed on the Project. If it is necessary for dewatering to occur continually, the Contractor shall have on hand whatever spare parts or equipment that may be required to avoid interruption of service or work.

c. The Contractor shall promptly remove all such temporary facilities when they are no longer needed for the work or on completion of the Project. The Contractor shall repair any damage to premises or property which resulted from the performance/execution of the Window Replacement Project, use, or removal of temporary facilities and shall restore said premises and property to their original condition.

d. See Supplementary General Conditions and/or specifications for requirements concerning temporary sanitary facilities and utilities.

1.22 – **GENERAL CONDITIONS**
18. **SIGNS**

No signs may be displayed on or about the District's property (except those which may be required by law) without the District's prior written approval of size, content and location. Any signs required by the District will be designated in the Supplementary General Conditions.

19. **TIME**

a. The Contractor shall commence the work on the date indicated in the Notice to Proceed. Time is of the essence regarding the Contract work, and the Contractor shall prosecute the work diligently and regularly at such a rate of progress to ensure completion of this Project within, or sooner than, the time specified.

b. The Contractors and Subcontractors shall investigate and become aware of the amount of time required for the delivery of all equipment and materials required to perform the work under this Contract, and no extension of time shall be granted due to failure to order the equipment and materials sufficiently before their incorporation into the work so as to avoid delay to the Project.

c. The Contractors and Subcontractors shall provide and maintain enough manpower, materials and equipment to ensure a rate of project progress that will complete the Project within or sooner than the time specified and according to the schedule of work. If, in the District’s opinion, the Contractor and/or Subcontractors are not prosecuting the work at a sufficient rate of progress to meet the Project schedule, the District may direct the Contractor to provide additional manpower, materials or equipment, or to work additional hours, holidays or weekends without additional cost to the District until the work is progressing in a manner satisfactory to the District. Failure to prosecute the work in a timely manner and according to the Project schedule is considered a breach of Contract shall be cause for termination of the Contract.

20. **PROJECT SCHEDULE**

a. Within fifteen (15) calendar days after the Award of Contract, the Contractor shall prepare and submit to the District an as-planned performance/execution schedule showing in detail how the performance and execution plans to prosecute the work within the time set for Final Completion. The schedule shall include the work of all trades necessary for performance and execution of the Project, and shall be sufficiently complete and comprehensive to enable progress to be monitored on a day-by-day basis. The information for each activity shall include at a minimum the activity description, duration, start date and completion date.

b. The Contractor shall take care in the preparation of the schedule to ensure that it represents an accurate and efficient plan for accomplishing the work. If the Project is more than one week behind schedule, it must be promptly revised showing how the Contractor plans to complete the work, but in no case shall it show a completion date later than that required by the Contract, unless a time extension has been granted. The current schedule shall be kept posted in the Contractor's project office on site.
c. The Contractor shall be responsible for the coordination of all work necessary and pertaining to the project accomplishment whether actually a part of this Contract or attendant thereto. The Contractor shall notify the District and various utility companies, as far as possible in advance of their required work, in order that work schedules may be developed for all concerned, which will permit the most effective accomplishment of the entire Project.

21. **DELAYS AND TIME EXTENSIONS**

a. The Contractor may be granted a time extension if the Contractor encounters an unavoidable delay of the work due to causes completely beyond the Contractor’s control and which the Contractor could not have avoided by the exercise of reasonable care, prudence, foresight and diligence. Causes for which a claim for extension of time may be made include: acts of the public enemy, acts of another contractor in the performance of another contract with the District, priority of a governmental agency for materials or equipment, fire, flood, violent wind storm, epidemic, quarantine restriction, strike, freight embargo, or weather of an unusually severe nature. The Contractor will not be granted time extensions for weather conditions which are normal for the location of the Project, according to the U. S. Weather Bureau Records.

b. A request for extension of time and compensation related thereto shall be made in writing to the District within ten (10) calendar days of the date the delay is encountered, or shall be deemed waived. The request shall include a detailed description of the reasons for the delay and corrective measures by the Contractor. The request shall be accompanied by evidence that the insurance policies required by the Contract shall be in effect during the requested additional time period. In order for the District to consider a request for time extension, the Contractor must prove that the reasons stated for a delay actually caused a delay in portions of the work which will result in completion beyond the date specified in the Contract. The Contractor may be granted a time extension for a significant change in the scope of work which request for extension of time shall be included in a Contract modification proposal.

c. No damages or compensation or any kind shall be paid to a Contractor because of delays in the progress of work, whether such delays be avoidable or unavoidable, that are not the responsibility of District. District’s liability to Contractor for delays for which District is responsible shall be limited to an extension of time unless such delays were unreasonable under the circumstances involved and were not within the contemplation of the parties when the Contract was awarded. The Contractor shall provide to the District the actual substantiated costs to Contractor for which the Contractor may claim damages from District. Such costs, if any, shall be directly related to the Project, and shall not include costs that would be borne by the Contractor in the regular course of business, including, but not limited to, office overhead and ongoing insurance costs. Delay damages shall not include Contractor or Subcontractor markup for overhead and profit, but only actual, documented, and direct actual costs. The District shall not be liable for any damages which the Contractor could have avoided by any reasonable means including, but not limited to, the judicious handling of forces or equipment.

1.22 – GENERAL CONDITIONS
d. The granting of an extension of time because of unavoidable delays shall in no way operate as a waiver on the part of the District of the right to collect liquidated damages for other delays or of any other rights to which the District is entitled.

22. LIQUIDATED DAMAGES

a. Should the Contractor fail to achieve Final Completion of this Contract within the time fixed for Final Completion, together with extensions granted by the District for unavoidable delays, Contractor shall become liable to the District in the amount specified in the Contract per calendar day for each day the Contract remains uncompleted beyond the time for Final Completion, as liquidated damages and not as a penalty. Contractor may also be assessed liquidated damages for failure to meet milestones specified in the Contract Documents, regardless of impact on overall Project completion. Contractor shall not be charged with liquidated damages when the delay in completion of the work beyond the time for Final Completion is due to acts of the District. It is expressly stipulated and agreed by Contractor and District that it would be impractical and extremely difficult to fix the actual amount of damages.

b. Any money due or to become due the Contractor may be retained to cover liquidated damages. Should such money not be sufficient to cover said liquidated damages, the District shall have the right to recover the balance from the Contractor or Contractor’s sureties.

c. Should the District authorize suspension of the work for any cause, the time work is suspended will be added to the time for completion. Suspension of the work by the District shall not be a waiver of the right to claim liquidated damages as set forth in this section.

d. The assessment of Liquidated Damages does not otherwise limit the right of the District to claim a loss or damages incurred by the District for reasons other than delay (e.g. damages due to defective work).

23. DISTRICT’S RIGHT TO STOP WORK; TERMINATION OF SUSPENSION OF THE CONTRACT

a. District's Right to Stop Work:

In addition to or as an alternative to any and all other remedies available to the District, if the Contractor fails to correct work which is not performed in accordance with the Contract Documents, or if the Contractor persistently fails to perform the work in accordance with the Contract Documents, the District may by written order direct the Contractor to stop the work, or any portion thereof, until the cause for such order has been eliminated to the satisfaction of the District. However, the right of the District to stop the work shall not give rise to a duty on the part of the District to exercise this right for the benefit of the Contractor or any other person or entity, and the failure of the District to do so shall not be raised as a defense to the Contractor's failure to perform the work in accordance with the Contract Documents.
b. **Termination for Cause:**

1) If the Contractor refuses or fails to furnish sufficient materials, work force, equipment, and appurtenances to properly prosecute the work in a timely manner, or if Contractor refuses or fails to comply with any provisions of the Contract Documents, or if Contractor should file a bankruptcy petition or make a general assignment for the benefit of Contractor’s creditors or if a receiver should be appointed on account of Contractor’s insolvency, then the District may give the Contractor and Contractor’s Surety written notice of intention to terminate the Contract. Unless within seven (7) calendar days after the serving of such notice upon the Contractor and Contractor’s Surety such violation shall cease and arrangements for correction of such conditions shall be made satisfactory to the District, the Contract shall cease and terminate. In the event of such termination, the District shall immediately serve written notice thereof upon the Contractor and Contractor’s Surety.

2) In the event of termination for cause, in addition to all remedies available to the District, the Contractor’s Surety shall have the right to take over and perform the Contract; provided, however, that if the Surety does not commence performance within five (5) calendar days from the date issuance of such notice of termination, the District may take over the work and prosecute the same to completion by letting another Contract, or by any other method that the District deems advisable. The Contractor and Contractor’s Surety shall be liable for any excess cost occasioned the District thereby, and in any such event the District may take possession of such materials, equipment, and other property belonging to the Contractor as may be on the site and use same in completing the work.

c. **Termination of Suspension for Convenience:**

The District reserves the right, in its sole discretion, to terminate or suspend all or part of the Contract for convenience, following three (3) days written notice to the Contractor. In the event of termination or suspension for convenience, Contractor shall have no claims against the District, except:

1) The actual cost of labor, materials and services provided pursuant to the Contract, and which have not yet been paid for, as documented by timesheets, invoices, receipts and the like; and

2) Five percent (5%) of the total cost of the work performed as of the date of notice of termination or five percent (5%) of the value of the work yet to be completed, whichever is less. The parties agree that this amount shall constitute full and fair compensation for all Contractor’s lost profits and other damages resulting from the termination of suspension for convenience.
24. ASSIGNMENT OF CONTRACT

The Contractor may not assign or delegate all or any portion of this Contract without the written consent of the District and no such consent shall be given which would relieve the Contractor or its Surety of their responsibilities under the Contract. The Contractor may assign, without liability to the District, monies due the Contractor under the Contract to banks, trust companies or other financial institutions provided written notice thereof is promptly delivered to the District. Assignment of monies earned by the Contractor shall be subject to the same retention as other payments made to Contractor, and shall also be subject to setoffs and back charges as provided by this Contract.

25. COORDINATION WITH OTHER CONTRACTS

a. The District reserves the right to do other work or award other contracts in connection with this Project. By entering into this Contract, Contractor acknowledges that there may be other contractors on or adjacent to the Project site whose work must be coordinated with that of its own. Contractor expressly warrants and agrees that it will cooperate with other contractors and will do nothing to delay, hinder, or interface with the work of other contractors, or that of the District. Contractor also expressly agrees that in the event its work is hindered, delayed, interfered with, or otherwise affected by a separate contractor, its sole remedy will be direct action against the separate contractor. To the extent allowed by law, the Contractor expressly waives any remedy against the District on account of delay, hindrance, interference or other such events caused by a separate contractor.

b. If any part of this Contractor’s work depends upon the work of a separate contractor, Contractor shall inspect such other work and promptly report in writing to the District any defects in such other work that render it unsuitable to receive the work of Contractor. Failure of the Contractor to so inspect and report shall constitute an acceptance of the other contractor’s work, except as to defects which the Contractor could not have detected through the reasonable inspection of the other contractor’s work prior to execution of Contractor’s work.

c. If Contractor is aware of a current or potential conflict between Contractor’s work and the work of another contractor on the site, and is unable to informally resolve the conflict directly with the contractor,Contract shall promptly provide written notice to the District and the other contractor, specifying the nature of the conflict, the date upon which the conflict arose, and the steps taken to attempt to resolve the conflict.

d. If, through Contractor’s negligence, any other contractor or subcontractor shall suffer loss or damage to the work, Contractor shall make reasonable effort to settle with such other contractor and subcontractor by agreement or arbitration. If such other contractor or subcontractor shall assert any claim against the District, on account of any damage alleged to have been so sustained, the District shall notify the Contractor, who shall defend such proceedings at Contractor’s own expense and save harmless and indemnify the District any such claim.
26. **SUBMITTALS:**

a. In addition to information furnished as common practice, submittals shall contain the Project name and location, Contractor's name and address, Subcontractor's or supplier's name and address, date of submittal and any revisions, and reference to appropriate specification section, and/or drawing and detail numbers. The Contractor and/or the Subcontractors shall verify in the field all dimensions and relationships to adjacent work necessary to ensure the proper fit of the items submitted. If necessary, the Contractor make any corrections required and resubmit with all due haste in the same number as initially required.

b. Review of submittals by the District shall not relieve the Contractor from complying with the requirements of the Contract Documents.

c. Any materials or equipment installed without approval shall be at the Contractor's own risk, and Contractor may be required to remove any such materials or equipment and install the specified items at Contractor's own cost, including repairs to adjacent work.

27. **PAYMENTS**

a. **Cost Breakdown:**

Prior to submitting Contractor’s first request for payment, the Contractor shall prepare and submit to the District a cost breakdown (schedule of values) showing the major work items for each trade or operation required in completion of the Project. The work items shall be sufficiently detailed to enable the District to accurately evaluate the completion percentages requested by the Contractor. The cost for each work item shall include overhead and profit. The total of all work item costs shall equal the amount of the Contract.

b. **Scope of Payment:**

Payment to the Contractor at the unit price or other price fixed in the Contract for performing the work required under any item or at the lump sum price fixed in the Contract for performing all the work required under the Contract, shall be full compensation for furnishing all labor, materials, equipment and tools necessary to the work, and for performing and completing, in accordance with the Specifications, all work required under the item or under the Contract, and for all expense incurred by the Contractor for any purpose in connection with the performance and completion of said work.

c. **Progress Payments:**

The Contractor will, on or about the last day of each month, make an estimate of the value of the work completed by Contractor in the performance of the Contract. These estimates shall be subject to the review and approval of the District. The first such estimate will be of the value of the work completed after the Contractor commenced the performance of the Contract, and every subsequent estimate, except the final estimate, will be of the value of the work completed since the
immediately preceding estimate. Such estimates will be based on labor, materials and equipment incorporated into the work, and items of materials and equipment delivered to the Project. The Contractor shall be responsible for the security and protection of such materials and equipment delivered to the Project and not incorporated in the work. Within thirty (30) calendar days after the approval of each estimate for progress payment, the District will pay to the Contractor an amount equal to ninety (90) percent of said approved estimate. Payments may at any time be withheld if in the judgment of the District the work is not proceeding in accordance with the Contract Documents, he Contractor is not complying with the requirements of the Contract, stop notices have been timely filed, the estimate contains an error, or the District has incurred costs or requests reasonable financial assurances regarding defective work by the Contractor.

d. **Final Payment:**

Within thirty (30) days after all required work is full completed in accordance with the Contract Documents, the Contractor shall submit a final invoice for the total value of the work completed in accordance with the Contract, which shall be subject to review and approval by the District. As required by law, District shall pay Contractor the unpaid balance of the Contract price of the work, or the whole Contract price of the work if no progress payment has been made, determined in accordance with the terms of the Contract, less such sums as may be lawfully retained under any provision of the Contract, including, but not limited to, amounts retained as liquidated damages, for stop notices, for third-party claims for which the Contractor is required to indemnify the District, for defective work and costs incurred by the District in connection therewith, or for other such claims and damages attributable to the Contractor (“Final Payment”). Prior progress estimates and payments are subject to correction in the Final Payment. Tender of the Final Payment shall constitute denial by the District of any unresolved claim. Contractor’s acceptance of the Final Payment shall operate as a full and final release to the District and its agents from any and all unasserted claims Contractor has, or may have, related to this contract.

e. **Payments Do Not Imply Acceptance of Work:**

The granting of any progress payment or payments by the District or the receipt thereof by the Contractor, shall not constitute acceptance of the work or of any portion thereof, and shall in no way lessen the liability of the Contractor to replace unsatisfactory work or material, whether or not the unsatisfactory character of such work or material was apparent or detected at the time such payment was made.

f. **Retention of Sums Charged Against Contractor:**

It is mutually understood and agreed that when under any provision of this Contract the District shall charge any sums of money against the Contractor, the amount of such charge shall be deducted and retained by the District from the amount of the next succeeding progress estimate, or from any other monies due or that may become due the Contractor on account of the Contract. If on completion or termination of the Contract such monies due the Contractor are found insufficient to cover the District’s charges against the Contractor, the District shall have the right to recover the balance from the Contractor or the Contractor’s Sureties.

1.22 – GENERAL CONDITIONS
g. **Release:**

The Contractor and each assignee under an assignment in effect at the time of Final Payment shall, if required by the District, execute and deliver at the time of Final Payment and as a condition precedent to Final Payment, a release in form and substance satisfactory to and containing such exemptions as may be found appropriate by the District, discharging the District, its officers, agents and employees of and from liabilities, obligations and claims arising under this Contract.

h. **Payment to Subcontractors and Suppliers:**

The Contractor shall pay each Subcontractor and supplier promptly on receipt of each progress payment from the District for the materials, labor and equipment delivered to the site or incorporated in the work by each Subcontractor during the period for which the progress payment is made, less any retention as provided above.

i. **Stop Notice Costs:**

District reserves the right to charge Contractor or Surety, or to withhold from release of retention all costs incurred by the District, including attorney fees, for processing and handling stop notice claims.

28. **MODIFICATIONS OF CONTRACT**

a. **Changes In The Work:**

1) The District, before the date of acceptance of the work, may, without notice to the Sureties, order changes in the work (“Modifications”), may order extra materials and extra work in connection with the performance of the Contract, and the Contractor shall promptly comply with such orders. All Modifications must be approved by DSA and the State Fire Marshall, if applicable, as required by law.

2) If changes ordered in design, workmanship or materials are of such a nature as to increase or decrease the cost of any part of the work, the price fixed in the Contract shall be increased or decreased by such amount as represents the reasonable and proper allowance for the increase or decrease in the cost of the work in accordance with the provisions of this Article, and any other applicable terms of the Contract, including, but not limited to, the Contractor’s schedule of values and the price for allowances, if any. Except as provided by law, the total cost of all Modifications shall not exceed ten (10) percent of the original Contract price.

3) In the case of a disputed work item, the District may direct the Contractor to perform the disputed work at no additional cost to the District on the grounds that the work is adequately indicated in the Contract Documents, and therefore already included in the Contract price. If the Contractor maintains that the disputed work represents a modification
to the Contract, Contractor may submit a claim in accordance with Article 50, Resolution of Performance Claims. Notwithstanding any dispute regarding the requirements of the Contract Documents, Contractor shall promptly and fully comply with the District’s directive. Contractor’s failure to do so shall be deemed a material breach of this Contract, and in addition to all other remedies, District may, it is sole discretion, hire another contractor and/or use its own forces to complete the disputed work at Contractor’s sole expense, and may deduct the cost of such work from the Contract price.

b. Cost Breakdown:

When the Modification is proposed, the Contractor shall furnish a complete breakdown of actual costs of both credits and extras, itemizing materials, labor, taxes, overhead and profit. Subcontract work shall be so indicated. All costs must be fully documented. The following limitations shall apply:

1) Limitations Where Contract Price Changes are Involved:

   (a) Overhead and Profit for the Contractor. The Contractor's overhead and profit on the cost of subcontracts shall be a sum not exceeding ten percent (10%) of such costs. The Contractor's overhead and profit on the costs of work performed by the Contractor shall be a sum not exceeding fifteen percent (15%) of such costs. Overhead and profit shall not be applied to the cost of taxes and insurance by Contractor or Subcontractors or to credits. No processing or similar fees may be charged by the Contractor in connection with the Modification.

   (b) Bond Premiums. The actual rate of bond premiums as paid on the total cost (including taxes, etc.) will be allowed, but with no markup for profit and overhead.

   (c) Taxes. State and city sales taxes should be indicated. Federal excise tax shall not be included. (District will issue exemption on request.)

2) Change Order Certification:

All change orders and requests for proposed change orders shall be deemed to include the following certification by the Contractor:

"The undersigned Contractor approves the foregoing as to the changes in work, if any, and as to the contract price specified for each item and as to the extension of time allowed, if any, for completion of the Project as stated herein, and agrees to furnish all labor, materials, and service and to perform all work necessary to complete any additional work specified for the consideration stated herein. Submission of claims which have no basis in fact or which Contractor knows are false are made at the sole risk of the Contractor and may be a violation of the False Claims Act, as set forth in Government Code §§ 12650 et seq. It is understood that the changes to the Contract Documents set forth herein shall only be effective upon approval by the Governing Board of the District."
"It is expressly understood that the value of the extra work or changes expressly includes any and all of the Contractor's costs and expenses, both direct and indirect, resulting from additional time required on the Project or resulting from delay to the Project. Any costs, expenses, damages, or time extensions not included herein are deemed waived."

c. **Unit Prices, Schedule of Values, or Allowances:**

Where Unit Prices, a Schedule of Values, and/or Allowances are required by the Contract Documents, that pricing shall govern in computing any additions to or deductions from the Contract price on account of any added or omitted work. Unit Prices listed in the original bid include all costs and no addition of any description will be allowed.

d. **Time and Materials:**

If it is impossible, because of the nature of the work, or for any other reason, to fix an increase in price definitely in advance, the Change Order may fix a maximum price which shall not under any circumstances be exceeded, and subject to such limitation, such alteration, modification or extra shall be paid for at the actual necessary cost as determined by the sum of the following items (1) to (5) inclusive:

1) Labor, including premium on compensation insurance and charge for Social Security taxes, and other taxes pertaining to labor.

2) Material, including sales taxes and other taxes pertaining to materials.

3) Plant and equipment rental, to be agreed upon in writing before the work is begun. No charge for the cost of repairs to plant or equipment will be allowed.

4) Overhead and profit computed at fifteen percent (15%) of the total of Items (1) to (3) inclusive.

5) The proportionate cost of premiums on bonds required by these Specifications, computed at one and one-half percent (1-1/2%) of the total of items (1) to (4) inclusive.

If the Time and Materials work is done by a Subcontractor, the amount shall be determined as set forth above under items (1) to (5) inclusive. The Contractor's overhead and profit on the costs of subcontracts (exclusive of taxes and insurance) shall not exceed ten percent (10%) of such costs.
The District reserves the right to furnish such materials as it may deem expedient and no allowance will be made for profit thereon. The above-described methods of determining the payment for work and materials shall not apply to the performance of any work or the furnishing of any material which, in the judgment of the District, may properly be classified under items for which prices are established in the Contract.

e. Oral Modifications:

No oral statements of any person whosoever shall in any manner or degree modify or otherwise affect the terms of the Contract.

29. INDEMNITY

Contractor shall defend with counsel acceptable to District, indemnify and hold harmless to the full extent permitted by law, the District and its Board of Trustees, officers, agents, project manager, employees and volunteers from and against any and all liability, loss, damage, claims, expenses, fines judgments and costs (including, without limitation, attorney’s fees and costs and fees of litigation) (collectively, "Liability") of every nature arising out of or in connection with Contractor's performance of the Project or its failure to comply with any of its obligations contained in these Contract Documents, except such Liability caused by the active negligence, sole negligence or willful misconduct of the District. Such indemnification shall extend to all claims, demands, or liabilities occurring after completion of the project as well as during the progress of the work. Pursuant to California Public Contract Code §9201, District shall timely notify Contractor of receipt of any third-party claim relating to this Project.

30. WARRANTY OF TITLE

Contractor warrants that title to all work, materials or equipment included in a request for payment shall pass and transfer to the District whether or not they are installed or incorporated in the Project, free from any claims, liens or encumbrances, when such payment is made to the Contractor. Contractor further warrants that no such work, materials or equipment have been purchased for work under the Contract subject to an agreement by which an interest therein or an encumbrance thereon is retained by the seller or supplier.

31. USE OF COMPLETED PARTS OF THE WORK BEFORE ACCEPTANCE

Whenever the work or any part thereof is in a condition suitable for use, and the best interest of the District requires such use, the District may take possession of, connect to, open for public use, or use the work or a part thereof. When so used, maintenance and repairs due to ordinary wear and tear or vandalism will be made at District’s expense. The use by the District of the work or part thereof as contemplated in this section shall in no case be construed as constituting acceptance of the work or any part thereof, including, but not limited to, the right to assess liquidated damages. Such use shall neither relieve the Contractor of any of Contractor’s responsibilities under the Contract nor act as a waiver by the District of any of the conditions thereof. Contractor shall
continue to maintain all insurance, including Builder's Risk insurance, on the entire Project, and diligently pursue full completion of the work.

32. GUARANTEE & WARRANTY

By signing this Contract, Contractor agrees to the following guarantee and warranty:

Guarantee & Warranty

Contractor hereby guarantees and warrants its work on the Project for a period of two (2) years from the date of the filing of Notice of Completion as follows.

Contractor shall promptly repair or replace to the satisfaction of the District any or all work that appears defective in workmanship, equipment and/or materials for whatever reason, ordinary wear and tear and unusual abuse or neglect excepted, together with any other work which may be damaged or displaced in so doing.

Contractor agrees to promptly correct and remedy any failure by the Contractor to conform its work, activities and services to the requirements of the Contract Documents.

In the event of the Contractor’s failure to comply with the above-mentioned obligations within ten (10) calendar days of notice, or sooner if required by an emergency, Contractor hereby authorizes the District to have the defects or deficiencies repaired, remedied, corrected and made good at Contractor’s expense, and Contractor shall pay the costs and charges therefore upon demand. The Surety agrees to be responsible for these costs and charges as well.

33. PROTECTION OF WORK AND PROPERTY

a. The Contractor shall be responsible for each operation and all work the Project, both permanent and temporary. The Contractor shall protect the work and materials from damage due to negligence, the action of the elements, the carelessness of third parties, vandalism, or any other cause whatever, until the final completion and acceptance of the Project. Should improper work by the Contractor be covered by another and damage or defects result, the whole work affected shall be made good by the Contractor to the satisfaction of the District without expense to the District. The Contractor shall take reasonable care to avoid damage to existing facilities or utilities, whether on the Project or adjacent to it, and Contractor shall be liable for any damage thereto or interruption of service due to Contractor’s operations. If the Contractor encounters any facilities or utilities not shown on the drawings or not reasonably inferable therefrom, Contractor shall promptly notify the District about them, and shall do no further work which may cause damage to same. If it is determined that some action needs to be taken regarding facilities not shown, the Contractor will be given directives on what action to take, and any additional cost to the Contractor incurred thereby will be handled by Change Order.

b. The property limits of the area of the Project are indicated on the drawings. Except for work specifically shown or noted, Contractor shall confine Contractor’s operations within the indicated property limits. The Contractor shall provide, install, and maintain all shoring, bracing and
underpinning necessary to support adjacent property, streets, buildings and structures that may be
affected by building operations for this work; shall serve or cause to be served all legal notices to
adjoining property Districts that may be necessary for their protection; and shall protect from
damage all adjacent buildings, fences, landscaping, and repair or replace any such property
damaged in the course of work under the Contract.

34. **USE OF ROADWAYS AND WALKWAYS**

The Contractor shall not unnecessarily interfere with use of any roadway; walkway or other facility
for vehicular or pedestrian traffic by any party entitled to use it. Wherever such interference
becomes necessary for the proper and convenient performance of the work and no satisfactory
detour route exists, the Contractor shall, before beginning the interference, provide a satisfactory
detour, temporary bridge, or other proper facility for traffic to pass around or over the interference
and shall maintain it in satisfactory condition as long as the interference continues, all without extra
payment unless otherwise expressly stipulated in the Contract Documents.

35. **MATERIALS**

a. Unless explicitly stated otherwise, all specified equipment and material comprising the work
of this Contract, as being provided or furnished or installed, shall imply the inclusion of all
components, hardware and accessories, required for complete installation and satisfactory
operation as intended by the manufacturer. Wherever the method of installation of any material is
not explicitly specified, the installation shall be as recommended by manufacturer.

b. Wherever in the Contract Documents it is provided that the Contractor shall furnish
materials or equipment for which no detailed specifications are set forth, such materials or
equipment shall be new and of the best grade for the purpose for which they will be used when
incorporated in the work. Materials specified by reference to a number or symbol of a specific
standard, such as A.S.M., Federal Specification, State Standard, Trade Association, or similar
standards, shall comply with requirements in the latest revision thereof and any amendment or
supplement in effect on the date of the notice inviting bids.

c. None of the materials to be provided furnished or installed on this Project shall contain
asbestos or any other "hazardous substance" as that term is defined by federal or state law.

36. **SUBSTITUTIONS**

a. Wherever in the drawings or Specifications a material or product is called for by trade or
brand names or manufacturer and model number, alternative items of equal quality and purpose
may be proposed for use by the Contractor. The burden of proof of equality is on the Contractor,
and Contractor shall furnish all information and supplies necessary for the District to make a
thorough evaluation of the proposed substitution. The District's decision about the equality of the
proposed substitution is final, and if the proposed substitution is not approved, the Contractor shall
install the item called for. Proposed substitutions and any changes in adjacent work caused by them
shall be made by the Contractor at no additional cost to the District.
b. Proposed substitutions shall be submitted sufficiently before actual need to allow time for thorough evaluation. Substitutions shall not be proposed for the reason that submittals were not made early enough to avoid delay. District’s review of substitutions shall not relieve the Contractor from complying with the requirements of the drawings and Specifications.

c. In the event Contractor makes substitutions in materials, equipment, or designs, with or without the District’s approval, other than those authorized herein, the Contractor shall then assume full responsibility for the effects of such substitutions on the entire Project, including the design, and shall reimburse the District for any charges resulting from such substitutions, including any charges for modifications in the work of other trades, and including any charges for additional design, plus reasonable and customary mark-ups.

37. TESTING

a. Materials, equipment, or other work requiring tests may be specified in the Contract Documents, and they shall be adequately identified and delivered to the site in ample time before intended use to allow for testing. If such materials, equipment or other work should be covered without required testing and approval, they shall be uncovered at the Contractor’s expense, including any repairs or replacement resulting therefrom. The Contractor shall notify the District when and where such materials, equipment or other work are ready for testing, and Contractor shall bear the cost of making them available for testing. The Contractor shall notify the District sufficiently before the need for testing so as to cause no delay in the work and, in any case, at least forty-eight (48) hours prior to the need for testing.

b. The cost of initial tests called for will be paid by the Contractor’s manufacturer and will be performed by independent testing consultants retained by the Contractor. All other tests and inspections specified or otherwise required to substantiate compliance with specified requirements for quality of material or performance of operation shall be paid for by the Contractor. If retesting or additional testing is necessary because of substandard initial test results, the costs thereof shall be paid by the Contractor, including any repairs or replacement resulting therefrom.

38. INSPECTION

a. All materials, equipment and workmanship used in the work of the Project shall be subject to inspection or testing at all times and locations during performance and/or manufacture. The District’s authorized representatives and representatives of other agencies having authority over the work shall have access to the work for the above purposes at all reasonable times and locations. Any material or work found to be unsatisfactory or not according to the Contract Documents shall be replaced with the correct material or work and the defective items promptly removed, all at the Contractor’s expense, when directed to do so by any of the above-named persons having authority over the work. The cost review time and analysis by the District consultants necessitated by incomplete or defective work shall be charged to the Contractor.
b. Inspection and testing by the District or manufacturer’s representatives shall not relieve the Contractor from complying with the requirements of the Contract Documents. The Contractor is responsible for its own quality control.

c. Whenever required by the District, the Contractor shall furnish all tools, labor and materials necessary to make an examination of work in place by uncovering the same. Should such work be found unsatisfactory, the cost of examination and reconstruction shall be paid by the Contractor. Should such work be found satisfactory, the cost of examination and reconstruction of the work shall be paid by Change Order unless the Contractor improperly covered the work before it could be inspected or tested. If the Contractor considers it necessary or desirable to work on Saturday, Sunday or a holiday, Contractor shall seek written approval from the District at least forty-eight (48) hours before the commencement of such work.

39. **CLEANUP**

a. The Contractor shall maintain the premises and area of the work in a neat and clean condition. No burning of rubbish on site shall be allowed. The Contractor shall control dust on the site by sprinkling at whatever intervals are necessary to keep it laid down and shall take measures to prevent dust and debris from being accidentally transported outside the area of the work.

b. Final cleaning, such as sweeping, dusting, vacuuming, dry and wet mopping, polishing, sealing, waxing and other finish operations normally required on newly installed work shall be taken to indicate the finished conditions of the various new and existing surfaces at the time of acceptance. Prior to the time of acceptance, all marks, stains, fingerprints, dust, dirt, splattered paint and blemishes resulting from the various operations shall be removed throughout the Project. Plumbing fixtures and light fixtures shall be washed clean. Hardware and other unpainted metals shall be cleaned and all building papers and other temporary protections shall be removed throughout the building, or portion of the building where Contractor was involved, all to the satisfaction of the District. The exterior of the buildings, playfields, exterior improvements, and planting spaces shall be similarly clean and in good order.

40. **CONSTRUCTION WASTE MANAGEMENT REQUIREMENTS**

a. District’s Zero-Waste Program Initiative

   1) The District is rigorously implementing sustainability initiatives that reduce, reuse, and recycle District materials.

   2) The relevance of this important initiative is for the District to employ environmentally responsible Zero-Waste recycling strategies for all discarded materials; and in this pursuit formulate relationships with vendors, contractors and refuse haulers to keep District recyclable commodities away from landfills.
b. **Contractor Scope**

1) This Article includes the requirements for the diversion by the Contractor of construction and demolition debris from landfills. The Contractor shall develop and implement a Waste Management Plan as specified herein. The Contractor shall take a pro-active, responsible role in the management of construction and demolition waste and require all subcontractors, vendors, and suppliers to participate in the effort.

2) The District has established that this Project shall generate the least amount of waste practicable and that processes shall be utilized that ensure the generation of as little waste as possible due to over-packaging, error, poor planning, breakage, mishandling, contamination or other factors.

3) As much of the waste materials as economically feasible shall be reused, salvaged or recycled. Waste disposal in landfills shall be minimized.

4) The Contractor is encouraged to use waste hauling companies that separate recyclable materials. The Contractor shall work with its waste haulers in providing other recycling methods as appropriate.

5) The Contractor is responsible for implementation of any special programs involving rebates or similar incentives related to the recycling of waste. Revenues or other savings obtained for salvage or recycling accrue to the Contractor.

c. **References**


d. **Definitions**

1) General: Construction and demolition waste includes products of demolition or removal, excess or unusable construction materials, packaging materials for construction products, and other materials generated during the construction process but not incorporated into the work.
2) “Divert” means to use material for any lawful purpose other than disposal in a landfill or transfer facility for disposal.

3) “Recycling Service” means an off-site service that provides processing of material and diversion from a landfill.

4) “Hauler” means the entity that transports construction and demolition debris to either a landfill or a recycling service.

e. **Compliance with regulatory requirements:**

1) The Contractor shall perform all handling, storage, transportation and disposal of construction debris in compliance with all applicable Federal, State, regional, and local statutes, laws, regulations, rules, ordinances, codes and standards.

2) Nothing stated on the drawings, in this Article 40 or in any other provision of the Contract Documents shall be construed as allowing work that is not in strict compliance with all applicable Federal, State, regional, and local statutes, laws, regulations, rules, ordinances, codes and standards.

f. **Performance Requirement**

1) While the Contractor is encouraged to divert zero percent (0%), they shall divert and document a minimum of fifty percent (50%) of the total Project construction and demolition waste from landfills.

g. **Quality Control**

1) General:
   
i) The Contractor shall not permit materials designated for diversion to become contaminated or to contaminate the site or surrounding areas.

2) Training and Coordination:
   
   ii) The Contractor shall designate an on-site party [or parties] who will be responsible for instructing workers and subcontractors, and overseeing and documenting results of the Waste Management Plan for the Project.

   iii) The Contractor shall furnish copies of the Waste Management Plan to all on-site supervisors, each subcontractor, and the District’s representative.

   iv) The Contractor shall include construction waste management as an item on the agenda of all progress meetings.
h. The Waste Management Plan:

1) The Contractor shall prepare a Waste Management Plan for diverting the specified percentage of construction debris from landfills, including written and graphic information indicating how the waste will be diverted.

2) Include in the plan both on-site recycling of construction and debris and off-site diversion from landfills.

3) Identify the means and methods for collecting and separating each type of debris deemed reusable or recyclable.

4) List the off-site recycling service and hauler of each designated debris item who has agreed to accept and divert that item from the landfill in the proposed quantities anticipated. List the service and hauler company name, address, telephone number and persons contacted.

5) List the name of the individuals on the Contractor’s staff responsible for waste prevention and management.

6) List the actions that will be taken to reduce solid waste generation, including coordination with subcontractors to ensure awareness and participation.

7) Describe the specific approaches to be used in recycling/reuse of the various materials generated, including the areas on site an equipment to be used for processing, sorting, and temporary storage of wastes.

8) Characterize the waste to be generated, including estimated types and quantities. Name the landfills and/or incinerator to be used.

9) List the specific waste materials that will be salvaged for resale, salvaged and reused on the Project, salvaged and stored for reuse on a future project, or recycled. Recycling facilities that will be used shall be identified by name, location and phone number.

The Contractor shall submit the Plan to the District within ten (10) calendar days after receipt of the Notice to Proceed, or prior to any waste removal, whichever occurs first. The Contractor shall promptly revise and resubmit the Plan as required by the District. Review of the Contractor’s Waste Management Plan will not relieve the Contractor of responsibility for compliance with applicable environmental regulations or meeting Project diversion requirements.

i. Plan Implementation

1) The Contractor shall implement the approved Waste Management Plan.
2) The Contractor shall maintain a log of each load and of each category of waste that is diverted from the landfill. The Contractor shall separately log the debris sent to a Class III landfill and materials sent to a recycling facility.

3) The Contractor shall include in the log the type of load, load weight, name of the hauling service, recycling service or landfill, and the date accepted by the recycling service or by the landfill.

4) The Contractor shall retain and make available all weight tickets and copies of receipts and invoices relating to the implementation of the Plan.

5) The District reserves the right to audit the log at any time.

j. **Material Handling**

1) Designate a specific area or areas on site to facilitate the separation of materials for potential reuse, salvage, recycling, and return. Clearly mark bins for each category of waste.

2) Keep waste bins and pile areas neat and clean. Do not contaminate non-recyclable waste with materials designated for reuse or recycling.

k. **Contractor’s Responsibilities**

1) Provide on-site instruction of the appropriate separation, handling, recycling, salvage, reuse, and return methods to be used by all parties at the appropriate stages of the Project.

2) Separate, store, protect, and handle at the site identified recyclable and salvageable waste products in a manner that maximizes recyclability and salvage-ability of identified materials. Provide the necessary containers, bins and storage areas to facilitate effective waste management. Provide barriers and enclosures around recyclable material storage areas which are non-hazardous and recyclable or reusable and which shall be located away from construction traffic. Provide adequate space for pick-up and delivery. Use cleaning materials that are non-hazardous and biodegradable.

41. **INSTRUCTIONS AND MANUALS**

The maintenance instructions application/installation instructions and service manuals called for in the Specifications shall be part of the Submittal/Contract Closeout process.

42. **DRAWINGS**

The Contractor and all their Subcontractors will maintain on the work site a separate complete set of contract drawings, which will be used solely for the purpose of recording changes made in any...
portion of the work during the course of the project, regardless of the reason for the change. As changes occur, there will be included or marked on this record set on a daily basis if necessary to keep them up to date at all times. Actual locations to scale shall be identified on the drawings for all runs of mechanical and electrical work, including all site utilities installed underground, in walls, floors, and furred spaces, or otherwise concealed. Deviations from the drawings shall be shown in detail. All main runs, whether piping, conduit, ductwork, drain lines, etc., shall be located in addition by dimension and elevation. Progress payments may be delayed or withheld until such time as the record set is brought up to date to the satisfaction of the District. The Contractor shall verify that all changes in the work are included in the "AS-BUILT" drawings and deliver the complete set thereof to the District for review and approval within thirty (30)-calendar days after District's Notice of Completion. District's acceptance and approval of the "AS-BUILT" drawings are a necessary condition precedent to the release of the final retention.

43. **NO DISCRIMINATION**

It is the policy of the District that, in connection with all work performed under this public works contracts, there shall be no discrimination against any prospective or active employee or any other person engaged in the work because of actual or perceived race, color, ancestry, national origin, ethnic group identification, religion, sex, gender, sexual orientation, age, physical or mental disability, or marital status. The Contractor agrees to comply with applicable Federal and California laws including, but not limited to, the California Fair Employment Practice Act, beginning with Government Code §12900, Government Code §11135, and Labor Code §§1735, 1777.5, 1777.6 and 3077.5. In addition, the Contractor agrees to require like compliance by any Subcontractors employed on the work.

44. **LABOR STANDARDS**

a. **Work Hours:**

   In accordance with California Labor Code §1810, eight (8) hours of labor shall constitute a legal day's work under this Contract. Contractor and any Subcontractor shall pay workers overtime pay as required by California Labor Code §1815. The Contractor shall pay each worker, laborer, mechanic or persons performing work under this Contract at a rate not less than the prevailing wage for each craft or classification covering the work actually performed.

b. **Penalty:**

   Contractor shall forfeit to District as a penalty the sum of twenty-five dollars ($25.00) for each worker employed in the execution of this Contract by Contractor or any Subcontractor for each calendar day during which said worker is required or permitted to work more than eight (8) hours in any one (1) calendar day or more than forty (40) hours per calendar week in violation of Article 3, Division 2, Part 7, Chapter 1 of the California Labor Code.

c. **Employment of Apprentices:**

1.22 – GENERAL CONDITIONS
Contractor agrees to comply with Labor Code §§1773.3, 1777.5 and 1777.6, and 3077 et seq., each of which is incorporated by reference into this Contract. These sections require that Contractors and Subcontractors employ apprentices in apprenticeable occupations in a ratio of not less than one (1) hour of apprentice work for every five (5) hours of labor performed by a journeyman, unless an exception is granted and that Contractors and Subcontractors shall not discriminate against otherwise qualified employees as apprentices on any public works solely on the ground of actual or perceived race, religion, color, national origin, ethnic group identification, sex, gender, sexual orientation, age, or physical or mental disability. Only apprentices who are in training underwritten apprenticeship occupations shall be employed. The responsibility for compliance with these provisions for all apprenticeable occupations rests with Contractor.

d. The Contractor shall be knowledgeable of and comply with California Labor Code §§1727, 1773.5, 1775, 1777, 1777.5, 1810, 1813, 1860, including all amendments thereto; each of these sections is incorporated by reference into this Contract.

45. GENERAL RATE OF PER DIEM WAGES

a. On File:

As required by Labor Code §1773.2, the District has available copies of the general prevailing rate of per diem wages for workers employed on public work as determined by the Director of the Department of Industrial Relations, which shall be available to any interested party on request. Contractor shall post a copy of the document at each job site.

b. Prevailing Wage Rate:

The Contractor and each Subcontractor shall pay each worker performing work under this Contract at a rate not less than the prevailing wage as defined in Labor Code §§1771 and 1774 and §16000(a) of Title 8, California Code of Regulations.

c. Penalty:

In accordance with §1775 of the Labor Code, the Contractor shall forfeit to the District as penalty, the sum of fifty dollars ($50) for each calendar day, or portion thereof, for each worker paid less than the prevailing wage rates, as determined by the Director of the California Department of Industrial Relations, for any work done under this Contract by Contractor or by any Subcontractor. Contractor shall also pay each worker the difference between the stipulated prevailing wages rates and the amount actually paid to such worker.

46. RECORD KEEPING

a. The Contractor agrees to comply with the provisions of §§1776 and 1812 of the Labor Code. The Contractor and each Subcontractor shall keep or cause to be kept an accurate record
showing the names, addresses, social security numbers, work classifications, straight time and overtime hours worked each day and week of all workers employed by Contractor in connection with the execution of this Contract or any subcontract thereunder and showing the actual per diem wages paid to each of such workers. These records shall be certified and shall be reviewable at all reasonable hours to the inspection of the District awarding the Contract, its officers and agents, and to the Chief of the Division of Labor Statistics and Law Enforcement of the State Department of Industrial Law Enforcement of the State Department of Industrial Relations, and his or her other deputies and agents.

b. In addition, copies of the above records shall be available as follows:

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 payroll records shall be made available for inspection or furnished upon request to the District, the Division of Labor Standards Enforcement, and the Division of Apprenticeship Standards of the Department of Industrial Relations;

3) A certified copy of all payroll records shall be made available upon request by the public for inspection or copies thereof made; provided, however, that a request by the public shall be made through either the District, the Division of Apprenticeship Standards, or the Division of Labor Standards Enforcement. If the requested payroll records have not been previously provided, the requesting party shall, prior to being provided the records, reimburse the costs of the Contractor, Subcontractors, and the entity through which the request was made. The public shall not be given access to the records at the principal office of the Contractor.

c. The Contractor shall file a certified copy of the records with the entity requesting the records within ten days after receipt of a written request. Any copy of records made available for inspection as copies and furnished upon request to the public or any public agency by the District, shall be marked or obliterated in such a manner as to prevent disclosure of an individual's name, address, and social security number. The name and address of the Contractor awarded the Contract or performing the Contract shall not be marked or obliterated.

d. The Contractor shall inform the District of the location of the records, including the street address, city and county, and shall, within five (5) working days, provide a notice of a change of location and address.

e. In the event of noncompliance with the requirements of this section, the Contractor shall have ten days in which to comply subsequent to receipt of written notice specifying in what respects the Contractor must comply with this section. Should noncompliance still be evident after the ten (10) day period, the Contractor shall, as a penalty to the District, forfeit twenty-five dollars ($25) for each calendar day, or portion thereof, for each worker, until strict compliance is effectuated. Upon the request of the Division of Apprenticeship
Standards or the Division of Labor Standards Enforcement, these penalties shall be withheld from progress payments then due.

f. Responsibility for compliance with this provision shall be with the Contractor.

47. PROJECT COMPLETION

a. When the work to be performed under this Contract has been fully completed, the Contractor shall notify the District, in writing, setting a date for inspection. The Contractor and Subcontractor representatives shall attend the inspection. As a result of this inspection, the District will prepare a list of items ("punch list") that are incomplete or not installed according to Contract Documents. Failure to include items of this list does not relieve the Contractor from fulfilling all requirements of the Contract Documents.

b. The District will promptly deliver the punch list to the Contractor and it will include a period of time by which the Contractor shall complete all items listed thereon. On completion of all items on the punch list, verified by a final inspection, and all other Contract requirements, so that Final Completion has been achieved to the District’s satisfaction, the District will file a Notice of Completion with the County Recorder. Payment of retention from the Contract, less any sums withheld pursuant to the terms of this Contract or applicable law, shall not be made sooner than thirty-five (35) calendar days after the date of filing of Notice of Completion.

48. RESOLUTION OF PROJECT PERFORMANCE CLAIMS

a. Public work claims of $375,000 or less between Contractor and District are subject to the provisions of Article 1.5 (commencing with §20104) of Chapter 1 of Part 2 of the Public Contract Code ("Article 1.5 claim"). For purposes of this section and Article 1.5, "public work" has the same meaning as set forth in §§3100 and 3106 of the Civil Code; "claims" means a separate demand by Contractor for a time extension or payment of money or damages arising from work done by or on behalf of Contractor pursuant to the Contract and payment of which is not otherwise expressly provided for or the claimant is not otherwise entitled to or the amount of the payment which is disputed by the District.

b. All Article 1.5 claims shall be submitted on or before the date of the Final Payment and shall include all documents necessary to substantiate the claim. District shall respond in writing within forty-five (45) days of receipt of claim if the claim is less than or equal to $50,000 ("$50,000 claim") or within sixty (60) days if the claim is over $50,000 but less than or equal to $375,000 ("50,000 - $375,000 claim"). In either case, District may request in writing within thirty (30) days of receipt of claim any additional documentation supporting the claim or relating to any defenses to the claim, which the District may have against the Contractor. Any additional information shall be requested and provided upon mutual agreement of the District and the Contractor. District's written response to the claim shall be submitted to Contractor within fifteen (15) days after receipt of the further documentation for $50,000 claims or within thirty (30) days after receipt of the further documentation for $50,000 -
$375,000 claims or within a period of time no greater than that taken by the Contractor in producing the additional information, whichever is greater.

c. Within fifteen (15) days of receipt of the District's response, if Contractor disputes the District's written response, or within fifteen (15) days of the District's failure to respond within the time prescribed, the Contractor shall provide written notification to District demanding an informal conference to meet and confer ("conference") to be scheduled by District within thirty (30) days. Following the conference, if any claim or portion remains in dispute, the Contractor may file a claim as provided in Chapter 1 (commencing with §900) and Chapter 2 (commencing with §910) of Part 3 of Division 3.6 of Title 1 of the Government Code. For purposes of those provisions, the period of time within which a claim must be filed is tolled from the time the claimant submits a written claim pursuant to this section until the time that claim is denied as a result of the conference process, including any period of time utilized by the meet and confer process.

d. Pursuant to Public Contract Code §20104.2(f), this section does not apply to tort claims and does not change the period for filing tort claims or actions specified by Chapter 1 (commencing with §900) and Chapter 2 (commencing with §910) of Part 3 of Division 3.6 of Title 1 of the Government Code.

e. If a civil action is filed, within sixty (60) days, but no earlier than thirty (30) days, following the filing of responsive pleadings, the court shall submit the matter to nonbinding mediation unless waived by mutual stipulation of both parties. The mediation process shall provide that both parties select a disinterested third person mediator within fifteen (15) days, shall be commenced within thirty (30) days of the submittal, and shall be concluded within fifteen (15) days of the commencement of the mediation unless time is extended upon a good cause showing to the court or by stipulation of the parties. If the parties fail to select a mediator within the fifteen (15) day period, any party may petition the court to appoint the mediator.

f. If the matter remains in dispute, the case shall be submitted to judicial arbitration as set forth in Public Contract Code §20104.4 (b)(1) through (b)(3).

g. For any claim in excess of $375,000, the Contractor and the District shall follow the same process as for an Article 1.5 claim. The District will forward a response within sixty (60) days of submittal of any such claim. Judicial arbitration is not required for claims in excess of $375,000.

h. In addition, for all unresolved claims that the Contractor wishes to pursue, the Contractor shall file a timely claim pursuant to the Government Claims Act and shall otherwise comply with the procedures set forth in that Act prior to commencing any litigation against the District. The accrual date for any such claim is the date the dispute or controversy first arose regarding the issued raised in the claim.

i. "The date of Final Payment," as used in this Article 50, means the date the public entity is required to release retention proceeds in accordance with Public Contract Code §7107
regardless of whether any payment is made to the Contractor at that time.

j. The claims required by this Article are jurisdictional and conditions precedent to the commencement of any further legal proceedings. Strict compliance with all filing deadlines is mandatory.

49. GENERAL PROVISIONS

a. Assignment and Successors:
Neither party may transfer or assign its rights or obligations under the Contract Documents, in part or in whole, without the other party’s prior written consent. The Contract Documents are binding on the heirs, successors, and permitted assigns of the parties hereto.

b. Third Party Beneficiaries:
There are no intended third party beneficiaries to the Contract.

c. Choice of Law and Venue
The Contract Documents shall be governed by California law, and venue shall be in the Superior Court of the county in which the Project is located, and no other place.

d. Severability
If any provision of the Contract Documents are determined to be illegal, invalid, or unenforceable, in part or in whole, the remaining provisions, or portions of the Contract Documents shall remain in full force and effect.

e. Entire Agreement
The Contract Documents constitute the final, complete, and exclusive statement of the terms of the agreement between the parties regarding the subject matter of the Contract Documents and supersedes all prior written or oral understandings or agreements of the parties.

f. Waiver
No waiver of a breach, failure of any condition, or any right or remedy contained in or granted by the provisions of the Contract Documents shall be effective unless it is in writing and signed by the party waiving the breach, failure, right, or remedy. No waiver of any breach, failure, right, or remedy shall be deemed a waiver of any other breach, failure, right, or remedy, whether or not similar, nor shall any waiver constitute a continuing waiver unless the writing so specifies.

g. Headings
The headings in the Contract Documents are included for convenience only and shall neither affect the performance or interpretation of any provision in the Contract Documents nor affect any of the rights or obligations of the parties to the Contract.
PART 1 - GENERAL

1.01 RELATED DOCUMENTS AND PROVISIONS:

All Contract Documents should be reviewed for applicable provisions related to the provisions in this document, including without limitation:

A. General Conditions, including, without limitation, Site Access Conditions and Requirements;

B. Special Conditions.

1.02 SUMMARY OF WORK COVERED BY CONTRACT DOCUMENTS

A. The Work of this Contract consists of the following:

Proper removal of existing roofing material consisting of shake shingles and asbestos containing roofing felt, the installation of new roofing materials including asphalt shingles as well as necessary repairs and gutter installations on an approximate 9,600 square foot sloped roof on a 2 story wood structure.

1.03 CONTRACTS

A. Perform the Work under a single, fixed-price Contract.

1.04 WORK BY OTHERS

A. Work on the Project that will be performed and completed prior to the start of the Work of this Contract:

   None Known

B. Work on the Project that will be performed by others concurrent with the Work of this Contract:

   None Known

1.05 CODES, REGULATIONS, AND STANDARDS

A. The codes, regulations, and standards adopted by the state and federal agencies having jurisdiction shall govern minimum requirements for this project. Where codes, regulations, and standards conflict with the Contract Documents, these conflicts shall be brought to the immediate attention of the District and the Architect.

B. Codes, regulations, and standards shall be as published effective as of date of bid opening, unless otherwise specified or indicated.
1.06 PROJECT RECORD DOCUMENTS:

   A.  Contractor shall maintain on Site one set of the following record documents; Contractor shall record actual revisions to the Work:
       (1) Contract Drawings.
       (2) Specifications.
       (3) Addenda.
       (4) Change Orders and other modifications to the Contract.
       (5) Reviewed shop drawings, product data, and samples.
       (6) Manufacturer's certificates.

   B.  Contractor shall store Record Documents separate from documents used for construction.

   C.  Contractor shall record information concurrent with construction progress.

   D.  Specifications: Contractor shall legibly mark and record at each product section of the Specifications the description of the actual product(s) installed, including the following:
       (1) Manufacturer's name and product model and number.
       (2) Product substitutions or alternates utilized.
       (3) Changes made by Addenda and Change Orders and written directives.

1.07 EXAMINATION OF EXISTING CONDITIONS

   A.  Contractor shall be held to have examined the Project Site and acquainted itself with the conditions of the Site or of the streets or roads approaching the Site.

   B.  Prior to commencement of Work, Contractor shall survey the Site and existing buildings and improvements to observe existing damage and defects such as cracks, sags, broken, missing or damaged glazing, other building elements and Site improvements, and other damage.

   C.  Should Contractor observe cracks, sags, and other damage to and defects of the Site and adjacent buildings, paving, and other items not indicated in the Contract Documents, Contractor shall immediately report same to the District and the Architect.

1.08 CONTRACTOR'S USE OF PREMISES

   A.  If unoccupied and only with District’s prior written approval, Contractor may use the building(s) at the Project Site without limitation for its operations, storage, and office facilities for the performance of the Work. If the District chooses to beneficially occupy any building(s), Contractor must obtain the
District's written approval for Contractor's use of spaces and types of operations to be performed within the building(s) while so occupied. Contractor's access to the building(s) shall be limited to the areas indicated.

B. If the space at the Project Site is not sufficient for Contractor's operations, storage, office facilities and/or parking, Contractor shall arrange and pay for any additional facilities needed by Contractor.

C. Contractor shall not interfere with use of or access to occupied portions of the building(s) or adjacent property.

D. Contractor shall maintain corridors, stairs, halls, and other exit-ways of building clear and free of debris and obstructions at all times.

E. No one other than those directly involved in the demolition and construction, or specifically designated by the District shall be permitted in the areas of work during demolition and construction activities.

1.09 PROTECTION OF EXISTING STRUCTURES, UTILITIES AND LANDSCAPING

A. The Drawings show above-grade and below-grade structures, utility lines, and other installations that are known or believed to exist in the area of the Work. Contractor shall locate these existing installations before proceeding with excavation and other operations that could damage same; maintain them in service, where appropriate; and repair damage to them caused by the performance of the Work. Should damage occur to these existing installations, the costs of repair shall be at the Contractor's expense and made to the District's satisfaction.

B. Contractor shall be alert to the possibility of the existence of additional structures and utilities. If Contractor encounters additional structures and utilities, Contractor will immediately report to the District for disposition of same as indicated in the General Conditions.

C. Contractor shall minimize damage to existing groundcover, shrubbery and trees. Protect as required.

1.10 UTILITY SHUTDOWNS AND INTERRUPTIONS

A. Contractor shall give the District a minimum of three (3) days written notice in advance of any need to shut off existing utility services or to effect equipment interruptions. The District will set exact time and duration for shutdown, and will assist Contractor with shutdown. Work required to re-establish utility services shall be performed by the Contractor.

B. Contractor shall obtain District's written approval as indicated in the General Conditions in advance of deliveries of material or equipment or other activities that may conflict with District's use of the building(s) or adjacent facilities.
1.11 STRUCTURAL INTEGRITY

A. Contractor shall be responsible for and supervise each operation and work that could affect structural integrity of various building elements, both permanent and temporary.

B. Contractor shall include structural connections and fastenings as indicated or required for complete performance of the Work.

PART 2 – PRODUCTS Not Used.

PART 3 – EXECUTION Not Used.

END OF DOCUMENT
2.2 PRODUCT OPTIONS AND SUBSTITUTIONS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS AND PROVISIONS

All Contract Documents should be reviewed for applicable provisions related to the provisions in this document, including without limitation:

A. Instructions to Bidders;

B. General Conditions, including, without limitation, Substitutions For Specified Items;

C. Special Conditions.

1.02 SUBSTITUTIONS OF MATERIALS AND EQUIPMENT:

A. Catalog numbers and specific brands or trade names followed by the designation "or equal" are used in conjunction with material and equipment required by the Specifications to establish the standards of quality, utility, and appearance required. Substitutions which are equal in quality, utility, and appearance to those specified may be reviewed subject to the provisions of the General Conditions.

B. Wherever more than one manufacturer's product is specified, the first-named product is the basis for the design used in the work and the use of alternative-named manufacturers' products or substitutes may require modifications in that design. If such alternatives are proposed by Contractor and are approved by the District, Contractor shall assume all costs required to make necessary revisions and modifications of the design resulting from the substitutions requested by the Contractor.

C. When materials and equipment are specified by first manufacturer's name and product number, second manufacturer's name and "or approved equal," supporting data for the second product, if proposed by Contractor, shall be submitted in accordance with the requirements for substitutions.

D. If the District, in reviewing proposed substitute materials and equipment, require revisions or corrections to be made to previously accepted Shop Drawings and supplemental supporting data to be resubmitted, Contractor shall promptly do so. If any proposed substitution is judged by the District to be unacceptable, the specified material or equipment shall be provided.

E. Samples may be required. Tests required by the District for the determination of quality and utility shall be made at the expense of Contractor, with acceptance of the test procedure first given by the District.

F. In reviewing the supporting data submitted for substitutions, the District will use for purposes of comparison all the characteristics of the specified material or equipment as they appear in the manufacturer's published data even though...
all the characteristics may not have been particularly mentioned in the Contract Documents. If more than two (2) submissions of supporting data are required, the cost of reviewing the additional supporting data shall be borne by Contractor, and the District will deduct the costs from the Contract Price.

**PART 2 – PRODUCTS** Not Used.

**PART 3 – EXECUTION** Not Used.

END OF DOCUMENT
2.3 CHANGES IN THE WORK

CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE PROVISIONS IN THE GENERAL CONDITIONS RELATED TO CHANGES AND/OR REQUESTS FOR CHANGES.

END OF DOCUMENT
2.4 SUBMITTALS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS AND PROVISIONS:

All Contract Documents should be reviewed for applicable provisions related to the provisions in this document, including without limitation:

A. General Conditions, including, without limitation, Contractor’s Submittals and Schedules, Drawings and Specifications;

B. Special Conditions.

1.02 SECTION INCLUDES:

A. Definitions:

(1) Shop Drawings and Product Data are as indicated in the General Conditions and include, but are not limited to, fabrication, erection, layout and setting drawings, formwork and falsework drawings, manufacturers' standard drawings, descriptive literature, catalogues, brochures, performance and test data, wiring and control diagrams. In addition, there are other drawings and descriptive data pertaining to materials, equipment, piping, duct and conduit systems, and methods of construction as may be required to show that the materials, equipment or systems and all positions conform to the requirement of the Contract Documents, including, without limitation, the Drawings.

(2) Manufacturer's Instructions: Where any item of Work is required by the Contract Documents to be furnished, installed, or performed, at a minimum, in accordance with a specified product manufacturer's instructions, the Contractor shall procure and distribute copies of these to the District, the Architect, and all other concerned parties and shall furnish, install, or perform the work, at a minimum, in accordance with those instructions.

B. Samples, Shop Drawings, Product Data, and other items as specified, in accordance with the following requirements:

(1) Contractor shall submit all Shop Drawings, Product Data, and Samples to the District.

(2) Contractor shall comply with all time frames herein and in the General Conditions and, in any case, shall submit required information in sufficient time to permit proper consideration and action before ordering any materials or items represented by such Shop Drawings, Product Data, and/or Samples.

(3) Contractor shall comply with all time frames herein and in the General Conditions and, in any case, shall allow sufficient time so that no delay occurs due to required lead time in ordering or delivery of any item to
the Site. Contractor shall be responsible for any delay in progress of Work due to its failure to observe these requirements.

(4) Time for completion of Work shall not be extended on account of Contractor's failure to promptly submit Shop Drawings, Product Data, and/or Samples.

(5) Unless specified otherwise, sampling, preparation of samples, and tests shall be in accordance with the latest standard of the American Society for Testing and Materials.

(6) Upon demand by the District, Contractor shall submit samples of materials and/or articles for tests or examinations and consideration before Contractor incorporates same in Work. Contractor shall be solely responsible for delays due to sample(s) 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 that are of value after testing will remain the property of Contractor.

C. Submittal Schedule:

(1) Contractor shall prepare its proposed submittal schedule that is coordinated with its proposed construction schedule and submit both to the District within ten (10) days after the date of the Notice to Proceed. Contractor's proposed schedules shall become the Project Construction Schedule and the Project Submittal Schedule after each is approved by the District.

(2) Contractor is responsible for all lost time should the initial submittal be rejected, marked "revised and resubmit", etc.

(3) All Submittals shall be forwarded to the District by the date indicated on the approved Submittal Schedule, unless an earlier date is necessary to maintain the Construction Schedule, in which case those Submittals shall be forwarded to the District so as not to delay the Construction Schedule.

1.04 PRODUCT DATA OR NON REPRODUCIBLE SUBMITTALS:

A. Contractor shall submit manufacturer's printed literature in original form. Any fading type of reproduction will not be accepted. Contract must submit a minimum of two (2) each, to the District. District shall return one (1) to the Contractor, who shall reproduce whatever additional copies it requires for distribution.

1.05 SAMPLES:

A. Contractor shall submit for approval Samples as required and within the time frame in the Contract Documents.

B. Contractor shall submit two (2) samples except where greater or lesser number is specifically required by Contract Documents including, without limitation, the Specifications.
1.06 REVIEW AND RESUBMISSION REQUIREMENTS:

A. The District will arrange for review of Sample(s), Shop Drawing(s), Product Data, and other submittal(s) by appropriate reviewer and return to Contractor as provided below within three (3) days after receipt.

B. One (1) copy of product or materials data will be returned to Contractor with the review status.

C. Samples to be incorporated into the Work will be returned to Contractor, together with a written notice designating the Sample with the appropriate review status and indicating errors discovered on review, if any. Other Samples
will not be returned, but the same notice will be given with respect thereto, and that notice shall be considered a return of the Sample.

D. Contractor shall revise and resubmit any Sample(s), Shop Drawing(s), Product Data, and other submittal(s) as required by the reviewer. Such resubmittals will be reviewed and returned in the same manner as original Sample(s), Shop Drawing(s), Product Data, and other submittal(s), within three (3) days after receipt.

E. Contractor may proceed with any of the Work covered by Sample(s), Shop Drawing(s), Product Data, and other submittal(s) upon its return if designated as no exception taken, or revise as noted, provided the Contractor proceeds in accordance with the District and/or the Architect’s notes and comments.

F. Contractor shall not begin any of the work covered by a Sample(s), Shop Drawing(s), Product Data, and other submittal(s), designated as revise and resubmit or rejected, until a revision or correction thereof has been reviewed and returned to Contractor.

G. Sample(s), Shop Drawing(s), Product Data, and other submittal(s) designated as revise and resubmit or rejected and requiring resubmittal, shall be revised or corrected and resubmitted to the District no later than fourteen (14) days or a shorter period as required to comply with the approved Construction Schedule, after its return to Contractor.

H. Neither the review nor the lack of review of any Sample(s), Shop Drawing(s), Product Data, and other submittal(s) shall waive any of the requirements of the Contract Documents, or relieve Contractor of any obligation thereunder.

PART 2 – PRODUCTS Not Used.

PART 3 - EXECUTION Not Used.

END OF DOCUMENT
2.5  CUTTING AND PATCHING

PART 1 – GENERAL

1.01 RELATED DOCUMENTS AND PROVISIONS:

All Contract Documents should be reviewed for applicable provisions related to the provisions in this document, including without limitation:

A. General Conditions, including, without limitation, Inspector, Inspections, and Tests, Integration of Work, Nonconforming Work, and Correction of Work, and Uncovering Work;

B. Special Conditions;

C. Hazardous Materials Procedures and Requirements;

D. Hazardous Materials Certification;

E. Lead-Based Paint Certification;

1.02 CUTTING AND PATCHING:

A. Contractor shall be responsible for all cutting, fitting, and patching, including associated excavation and backfill, required to complete the Work or to:

(1) Make several parts fit together properly.

(2) Uncover portions of Work to provide for installation of ill-timed Work.

(3) Remove and replace defective Work.

(4) Remove and replace Work not conforming to requirements of Contract Documents.

(5) Remove Samples of installed Work as specified for testing.

(6) Provide routine penetrations of non-structural surfaces for installation of piping and electrical conduit.

(7) Attaching new materials to existing remodeling areas – including painting (or other finishes) to match existing conditions.

B. In addition to Contract requirements, upon written instructions from the District, Contractor shall uncover Work to provide for observations of covered Work in accordance with the Contract Documents; remove samples of installed materials for testing as directed by District; and remove Work to provide for alteration of existing Work.
C. Contractor shall not cut or alter Work, or any part of it, in such a way that endangers or compromises the integrity of the Work, the Project, or work of others.

1.03 SUBMITTALS:

A. Prior to any cutting or alterations that may affect the structural safety of Project, or work of others, and well in advance of executing such cutting or alterations, Contractor shall submit written notice to District pursuant to the applicable notice provisions of the Contract Documents, requesting consent to proceed with the cutting or alteration, including the following:

(1) The work of the District or other trades.
(2) Structural value or integrity of any element of Project.
(3) Integrity or effectiveness of weather-exposed or weather-resistant elements or systems.
(4) Visual qualities of sight-exposed elements.

B. Contractor's Request shall also include:

(1) Identification of Project.
(2) Description of affected Work.
(3) Necessity for cutting, alteration, or excavations.
(4) Affects of Work on District, other trades, or structural or weatherproof integrity of Project.
(5) Description of proposed Work:
   (a) Scope of cutting, patching, alteration, or excavation.
   (b) Trades that will execute Work.
   (c) Products proposed to be used.
   (d) Extent of refinishing to be done.
(6) Alternates to cutting and patching.
(7) Cost proposal, when applicable.
(8) The scheduled date the Contractor intends to perform the Work and the duration of time to complete the Work.
(9) Written permission of other trades whose Work will be affected.
1.04 QUALITY ASSURANCE:

A. Contractor shall ensure that cutting, fitting, and patching shall achieve security, strength, weather protection, appearance for aesthetic match, efficiency, operational life, maintenance, safety of operational elements, and the continuity of existing fire ratings.

B. Contractor shall ensure that cutting, fitting, and patching shall successfully duplicate undisturbed adjacent profiles, materials, textures, finishes, colors, and that materials shall match existing construction. Where there is dispute as to whether duplication is successful or has been achieved to a reasonable degree, the District's decision shall be final.

1.05 PAYMENT FOR COSTS:

A. Cost caused by ill-timed or defective Work or Work not conforming to Contract Documents, including costs for additional services of the District, its consultants, including but not limited to the third party air monitoring agent, will be paid by Contractor and/or deducted from the Contract by the District.

B. District shall only pay for cost of Work if it is part of the original Contract Price or if a change has been made to the contract in compliance with the provisions of the General Conditions. Cost of Work performed upon instructions from the District, other than defective or nonconforming Work, will be paid by District on approval of written Change Order. Contractor shall provide written cost proposals prior to proceeding with cutting and patching.

PART 2 - PRODUCTS

2.01 MATERIALS:

A. Contractor shall provide for replacement and restoration of Work removed. Contractor shall comply with the Contract Documents and with the Industry Standard(s), for the type of Work, and the Specification requirements for each specific product involved. If not specified, Contractor shall first recommend a product of a manufacturer or appropriate trade association for approval by the District.

B. Materials to be cut and patched include those damaged by the performance of the Work.

PART 3 – EXECUTION

3.01 INSPECTION:

A. Contractor shall inspect existing conditions of the Site and the Work, including elements subject to movement or damage during cutting and patching, excavating and backfilling. After uncovering Work, Contractor shall inspect conditions affecting installation of new products.
B. Contractor shall report unsatisfactory or questionable conditions in writing to District as indicated in the General Conditions and shall proceed with Work as indicated in the General Conditions by District.

3.02 PREPARATION:

A. Contractor shall provide shoring, bracing and supports as required to maintain structural integrity for all portions of the Project, including all requirements of the Project.

B. Contractor shall provide devices and methods to protect other portions of Project from damage.

C. Contractor shall, provide all necessary protection from weather and extremes of temperature and humidity for the Project, including without limitation, any work that may be exposed by cutting and patching Work. Contractor shall keep excavations free from water.

3.03 ERECTION, INSTALLATION AND APPLICATION:

A. With respect to performance, Contractor shall:

(1) Execute fitting and adjustment of products to provide finished installation to comply with and match specified tolerances and finishes.

(2) Execute cutting and demolition by methods that will prevent damage to other Work, and provide proper surfaces to receive installation of repairs and new Work.

(3) Execute cutting, demolition excavating, and backfilling by methods that will prevent damage to other Work and damage from settlement.

B. Contractor shall employ original installer or fabricator to perform cutting and patching for:

(1) Weather-exposed surfaces and moisture-resistant elements such as roofing, sheet metal, sealants, waterproofing, and other trades.

(2) Sight-exposed finished surfaces.

C. Contractor shall execute fitting and adjustment of products to provide a finished installation to comply with specified products, functions, tolerances, and finishes as shown or specified in the Contract Documents including, without limitation, the Drawings and Specifications.

D. Contractor shall fit Work airtight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces. Contractor shall conform to all Code requirements for penetrations or the Drawings and Specifications, whichever calls for a higher quality or more thorough requirement. Contractor shall maintain integrity of both rated and non-rated fire walls, ceilings, floors, etc.

E. Contractor shall restore Work which has been cut or removed. Contractor shall install new products to provide completed Work in accordance with
requirements of the Contract Documents and as required to match surrounding areas and surfaces.

F. Contractor shall refinish all continuous surfaces to nearest intersection as necessary to match the existing finish to any new finish.

END OF DOCUMENT
2.6 CONTRACT CLOSEOUT AND FINAL CLEANING

PART 1 - GENERAL

1.01 RELATED DOCUMENTS AND PROVISIONS

All Contract Documents should be reviewed for applicable provisions related to the provisions in this document, including without limitation:

A. General Conditions, including, without limitation, Completion of Work;
B. Special Conditions;
C. Temporary Facilities and Controls.

1.02 CLOSEOUT PROCEDURES

Contractor shall comply with all closeout provisions as indicated in the General Conditions.

1.03 FINAL CLEANING

A. Contractor shall execute final cleaning prior to final inspection.
B. Contractor shall clean any restrooms used to a sanitary condition.
C. Contractor shall clean debris from roofs, gutters, down spouts, and drainage systems.
D. Contractor shall clean Site, sweep paved areas, and rake clean landscaped surfaces.
E. Contractor shall remove waste and surplus materials, rubbish, and construction facilities from the Site.

1.04 RECORD DOCUMENTS AND SHOP DRAWINGS

A. Contractor shall legibly mark each item to record actual construction, including:
   (1) Field changes of dimension and detail.
   (2) Details not on original Contract Drawings
   (3) Changes made by modification(s).
   (4) References to related Shop Drawings and modifications.
B. Contractor will provide one set of Record Drawings to District.
C. Contractor shall submit all required documents to District and/or Architect prior to or with its final Application for Payment.
1.05 SPARE PARTS AND MAINTENANCE MATERIALS

A. Contractor shall provide products, spare parts, maintenance, and extra materials in quantities specified in the Specifications and in Manufacturer's recommendations.

B. Contractor shall provide District all required Operation and Maintenance Data.

PART 2 – PRODUCTS Not used.

PART 3 – EXECUTION Not used.

END OF DOCUMENT
3.1 GENERAL NOTES

1. All work shall conform to the Requirements of Title 24 of the California Administrative Code, the Uniform Building Code, Cal-OSHA and State requirements, and the governing Building Authority. All Codes, Standards and Specifications shall be as amended to date, any violation will result in STOPPING of all work until the violation is corrected.

2. The drawings and Specifications describe in General the quality and character of the materials, shape and configuration of improvements and the design intent of the completed work. Miscellaneous items of work, material, equipment, etc., necessary to complete the work shall be provided by the contractor whether or not mentioned in the Specifications or shown on the drawings. Specific notes and details shall take precedence over general notes and typical details.

3. Protect existing facilities from damage. Any damage caused by the contractor shall be repaired or replaced at no additional cost to the District.

4. Barricades, sign lights, etc., required for the protection of public personnel, property and material shall be provided by the Contractor for and maintained during performance/execution by the Contractor, and shall conform to all governing codes, ordinances and regulations. The contractor shall employ all means necessary to control dust at and near the site of work and along approach routes to the work site.

5. Provide all tools, transportation, utilities, temporary facilities, storage, debris removal, supplies and other services as necessary for proper execution of the work, and shall assume full responsibility for protection and safekeeping of the elements during performance/execution. The Contractor shall contract the District’s representative for designation of the material storage area at the job site.

6. Maintain “Good Housekeeping” practices at the job site. Remove debris promptly from the job site and dispose of at the Contractor’s approved dumpsite and removal from the District’s site. Leave the job site “Broom Clean” at the end of each workday. Before acceptance by the District’s representative, the completed performance/execution shall be cleared, and all other touchup work completed.

7. Field investigate, verify and be responsible for all conditions, elevations and dimensions of the project, as shown on or referenced in the drawings and specifications, and notify the District’s representative about any condition requiring modification or change prior to bidding. Examine the drawings and specifications and clear understanding the existing conditions under which the work is to be performed prior to bidding. Entering into an agreement with the District indicates that the Contractor has visited the Site, familiarized themselves with existing conditions and reviewed same with requirements of contract document. No allowances of any kind will be made for any extra cost due to the Contractor’s failure to inform the District’s representative of discrepancies in time to issue corrective addenda prior to bidding. The contract documents illustrate the intent of the work to be performed.
8. Contractor agrees that in accordance with generally accepted minor demolition and painting practices, contractor shall assume sole and complete responsibility for job site conditions during the course of performance/execution of the project, including safety of all persons and property; that this requirements shall be made to apply continuously and not be limited to normal working hours.

9. Underground utilities if indicated are for information only. It is the contractor’s responsibility to verify the location and depth of all utilities including telephone, water, gas, TV, traffic signal street lighting, etc., with the appropriate agency. Neither the District nor their consultant assumes responsibility that the underground utilities indicated would be those encountered. Contractor shall notify underground service alert (U.S.A. 800-642-2444) 48 hours minimum prior to any excavation.

10. Contractor is responsible for coordinating the work to avoid conflicts between sewer laterals, storm drains and water mains, if applicable.

11. It shall be the contractor’s responsibility to notify the District’s representative of any differences in locations of existing utilities from that shown, or any conflicts with the design before continuing work in that area.

12. Utility connections and disconnections necessary to complete the work shall be performed in such manner in order to minimize utility service interruptions to facility operations in the vicinity of performance/execution site. Coordinate all “Down Time” with the District and with the appropriate agency.

13. Provide adequate cover for the protection of all existing utilities during the performance/execution of this project.

14. Any permanent monuments or points damaged or destroyed shall be replaced by a licensed engineer or land surveyor at the Contractor’s expense.

15. Contractor shall coordinate their work with the work under contracts that may be underway concurrently with this project.

16. Traffic Control: Prior to beginning any work on existing streets, parking lots, or driveways, advance-warning signs shall be installed. Traffic Control shall be provided in accordance with Caltrans “Manual of Traffic Controls for performance/execution sites and maintenance work Zones” current edition and any additional county requirements. Failure to comply may result in immediate stoppage of work until the proper traffic control is in order.

17. Provide barricades to protect the general public and prevent uncontrolled access to the site at all times.

18. Provide for Egress and ingress to on-site facilities that are to remain operational during all phases of the work.

3.1 – GENERAL NOTES
19. Contractor shall be responsible for matching existing streets, surrounding landscape, and other improvements with a smooth transition in grading to avoid any abrupt or apparent changes in grades or cross slope, low spots, or hazardous conditions.

20. Wastewater generated during the work shall not be discharged to the storm drain system. The Contractor shall make arrangements to eliminate discharge to the storm drain system and, if necessary, provide an area for onsite washing activities during performance/execution, materials that could contaminate storm runoff shall be stored in areas which are designed to prevent exposure to rainfall and not allow storm water to run onto the area.

21. Flushing of streets and parking lots to remove dirt and debris is prohibited unless proper sediment controls are used. Preferably, areas requiring cleaning should be swept.

22. Any revision or additional work required as a result of field conditions or local governing authorities shall be brought to the attention of the District’s representative before the work is responsibility of the contractor who shall bear all costs attributable thereto. Any and all revisions shall be in written change order form and approved and authorized by the District before beginning work.
SECTION 02 82 13- ASBESTOS ABATEMENT

PART 1 - GENERAL

1.1 Introduction

1.1.1 Perform all planning, administration, execution, and cleaning necessary to safely remove asbestos-containing or contaminated materials.

1.2 Description of the Abatement Work

1.2.1 The asbestos abatement shall also include, but not be limited to the following:

   (a) Notification to regulatory agencies
   (b) Regulatory permits, licenses and approvals
   (c) Worker health and safety program
   (d) Air monitoring
   (e) Construction of temporary containment barrier/decontamination enclosures
   (f) Preparation for abatement operations
   (g) Removal of existing asbestos-containing material
   (h) Transport and disposal of asbestos-containing material
   (i) Decontamination and cleaning
   (j) Application of lockdown encapsulants
   (k) Removal of temporary containment barrier/decontamination enclosures
   (l) Final job close-out

1.2.2 Summary Listing of Work Locations and Approximate Quantity: The Contractor shall review all contract documents and make a site visit to make their own determination about quantity values prior to applying for the required federal, state, or local permits from agencies having authority or jurisdiction.

1.2.3 Drawings and Other Information: Drawings of the project area(s) and the reference location(s) within the buildings will be provided to assist in the Contractor's planning of the abatement work effort for protection of workers, occupants, and contents.

1.2.4 Other Work Not Included: Concurrently with this contract, the District's representative reserves the right to collect and analyze samples or retain an independent testing laboratory to provide supplemental sampling services. These services will in no way relieve the Contractor from compliance liability nor from ASBESTOS ABATEMENT
providing the testing required by these specifications or any other requirements of other agencies with jurisdiction authority.

NOTE: The District has contracted independent air monitoring and testing services. The Contractor shall use a different firm for air monitoring and testing on this project (as applicable).

1.3 Definitions

1.3.1 Abatement: Procedures to control or eliminate fiber release from asbestos-containing building materials to include encapsulation, enclosure, and removal.

1.3.2 Abatement Work Area (regulated area): An area established by the employer to demarcate areas where Class I, II, III and IV asbestos work is conducted, and any adjoining area where debris and waste from such asbestos work accumulate; and a work area within which airborne concentrations of asbestos exceed, or there is a reasonable possibility they may exceed, the permissible exposure limit.

1.3.3 Airlock: Two curtained doorways spaced a minimum of one meter apart from an airlock in the abatement worker/equipment decontamination and waste load-out enclosures.

1.3.4 Air Filtration Units: A local exhaust unit, utilizing HEPA filtration and capable of maintaining a minimum negative pressure differential of 0.025 inches of water within the containment barrier with respect to that of the environment surrounding the containment barrier. The unit also cleans recirculated air or generates a constant air flow from adjacent areas into the abatement work area through the decontamination enclosure.

1.3.5 Air Monitoring: The process of measuring the fiber content of a specific volume of air during a stated period of time.

1.3.6 Air Pressure Monitoring: The process of measuring the air pressure differential between the containment barrier and the surrounding area using a micromanometer unit.

1.3.7 Amended Water: Water to which a surfactant (wetting agent) has been added to increase the ability of the liquid to penetrate ACM.

1.3.8 ANSI: American National Standards Institute.

1.3.9 ASTM: American Society for Testing and Materials.

1.3.10 Asbestos: Asbestiform varieties of chrysotile, amosite, crocidolite, tremolite, anthophyllite, and actinolite.

1.3.11 Asbestos-Containing Construction Material (ACCM): Any manufactured construction material which contains more than 0.1% asbestos but less than 1% asbestos by weight.

1.3.12 Asbestos-Containing Material (ACM): Any material containing more than 1% asbestos by volume of any type or mixture of types.
1.3.13 **Authorized Person:** Any person authorized by the District and required by work duties to be present in a regulated area.

1.3.14 **Caulking:** High-grade rubber base caulk for masonry and/or for other materials to be used or existing, as appropriate.

1.3.15 **Clean Room:** An uncontaminated area or room which is part of the abatement worker/equipment decontamination enclosure, with provisions for storage of workers’ or visitors’ street clothing, protective equipment and uncontaminated materials and equipment. It may be used for changing clothes.

1.3.16 **Competent Person:** In addition to the definition in 29 CFR 1926.32 (f), one who is capable of identifying existing asbestos hazards in the workplace and selecting the appropriate control strategy for asbestos exposure, who has the authority to take prompt corrective measures to eliminate them, as specified in 29 CFR 1926.32 (f). In addition, the competent person shall have successfully completed training for Class I, Class II, Class III, and Class IV projects meeting the criteria set forth in the EPA Model Accreditation Plan (40 CFR 763) for project designer or supervisor, and operations and maintenance training.

1.3.17 **Containment Barrier:** A temporary enclosure constructed with fire-retardant plastic sheeting, suitable framing, and duct tape and other adhesives within the abatement work area. This barrier serves to confine the asbestos abatement and decontamination work, and to contain the release of asbestos containing dust and debris through the action of pressure differential ventilation and air filtration systems. The only entrance is via the abatement worker/equipment decontamination enclosure.

1.3.18 **Contractor:** Approved abatement contractor conducting hazardous materials abatement related to the alterations/renovations of the College of Marin, Kentfield campus.

1.3.19 **Critical Barrier:** Those portions of the containment barrier which represent the minimum structural components necessary to maintain the asbestos removal area in airtight isolation from the surrounding areas. Critical barriers shall be placed at floors, windows, ventilation louvers and other openings as necessary to achieve abatement work area isolation before putting up the double-layer plastic sheeting containment enclosure within which abatement work is performed. If a temporary plastic sheeting/stud wall must be erected, it shall be treated as a critical barrier. The double-layer plastic sheeting containment enclosure shall then be erected on that wall. Wrappings on lights, control boxes, etc., do not constitute part of the critical barrier.

1.3.20 **Curtained Doorway:** A minimum 2-flap passageway to allow access or egress from one room to another while permitting minimal air movement between the rooms of the decontamination enclosure system. It is constructed by placing 2-3 overlapping sheets of plastic sheeting at least three feet wide over an existing or temporarily framed doorway. The sheets shall be weighted at the bottom so that they close quickly after being released.

1.3.21 **Decontamination Enclosure:** A series of connected rooms with curtained doorways between each room, for the decontamination of the abatement workers and equipment/materials. A decontamination enclosure contains a minimum of three (3) separate rooms (typically with airlocks located between the rooms) consisting of an equipment room, shower room, and clean room. The system is constructed of ASBESTOS ABATEMENT
an air-tight, impermeable, temporary barrier. Framing for enclosure shall be metal or fire retardant pressure impregnated wood.

1.3.22 **Disposal Bag**: A properly labeled minimum 0.15 mm thick, leak-tight plastic bag used for transporting asbestos waste from the abatement work area to an EPA-approved disposal site for ACM waste.

1.3.23 **Disturbance**: Contact which releases fibers from ACM or PACM or debris containing ACM or PACM. This term includes activities that disrupt the matrix of ACM or PACM, render ACM or PACM friable, or generate visible debris. Disturbance includes cutting away small amounts of ACM and PACM, no greater than the amount which can be contained in one standard sized glove bag or waste bag in order to access a building component. In no event shall the amount of ACM or PACM so disturbed exceed that which can be contained in one glove bag or waste bag which shall not exceed 1.52 m in length and width.

1.3.24 **Encapsulant**: A material applied after the removal of ACM or to the ACM-edges of partially abated substrates which surrounds or embeds residual asbestos fibers in an adhesive matrix to prevent their release into the atmosphere. Encapsulation for purpose of final lockdown is not to be accomplished until after the project has passed final air clearance tests and the District’s representative has authorized removal of the containment.

1.3.25 **Enclosure**: Procedures necessary to completely enclose material containing asbestos behind airtight, impermeable, permanent barriers.

1.3.26 **Equipment Room**: A contaminated area or room which is part of the decontamination enclosure, with provisions for storage of contaminated clothing and equipment and cleaning supplies for decontamination of equipment. Airlocks are required at all entrances to the equipment room.

1.3.27 **EPA**: United States Environmental Protection Agency.

1.3.28 **Fiber**: A particulate form of asbestos, 5 micrometers or longer, with a length-to-width ratio of at least 3 to 1.

1.3.29 **Fixed Object**: A unit of equipment or furniture in the abatement work area which cannot be removed from the abatement work area.

1.3.30 **Glove Bag**: A pouch, typically constructed of a minimum 0.15 mm thick, 1.5 m x 1.5 m (maximum), transparent polyethylene or polyvinylchloride plastic, with inward projecting sleeve gloves to abate ACM in a sealed micro-environment with designated inlets for amended water and sealant application, and a HEPA filtered vacuum unit attachment. The pouch has capacity for tool storage and to hold removed ACM.

1.3.31 **GFCI (Ground Fault Circuit Interrupter)**: A type of ground fault protection in areas where personnel are at high risk of receiving electrical shocks (for example, in damp locations); makes use of a device designed to trip at a ground current in the milliampere range, i.e., very much below currents that are normally harmful.

1.3.32 **HEPA Filter**: A High Efficiency Particulate Air (HEPA) filter capable of trapping and retaining 99.97% of all mono-dispersed particles 0.3 micrometer in diameter or larger.

1.3.33 **HEPA-Filtered Vacuum Cleaner**: HEPA-filtered vacuuming equipment with a filter system capable of collecting and retaining asbestos fibers.
1.3.34 **Holding Area**: A chamber between the washroom and uncontaminated area in the equipment decontamination enclosure system.

1.3.35 **Impermeable Waste-Disposition Containers**: Containers suitable to receive and retain any asbestos-containing or contaminated material until disposal at an approved site. The containers shall be labeled in accordance with OSHA Regulation 29 CFR 1910.1001 and 29 CFR 1926.1101. Containers must be both water-tight and air-tight.

1.3.36 **Lockdown**: The process of applying encapsulant as a finishing coat to abated surfaces after project has successfully passed final air clearance tests and the District’s representative has authorized removal of containment.

1.3.37 **Movable Object**: A unit of equipment or furniture in the abatement work area which can be removed from the abatement work area.

1.3.38 **MSHA**: Mine Safety and Health Administration.

1.3.39 **Negative Exposure Assessment**: A demonstration by the contractor, which complies with the criteria in OSHA 29 CFR 1926.1101(f)(2)(iii), that employee exposures during an operation are expected to be consistently below the PELs. Such assessment is to be used to justify level of respiratory protection to be used on the job.

1.3.40 **NESHAPS**: National Emissions Standard for Hazardous Air Pollutants.

1.3.41 **N.E.C.**: National Electrical Code.

1.3.42 **NIOSH**: National Institute for Occupational Safety and Health.

1.3.43 **OSHA**: Occupational Safety and Health Administration.

1.3.44 **PACM**: Presumed Asbestos-Containing Material, meaning thermal system insulation and surfacing material found in buildings constructed no later than 1980.

1.3.45 **PEL**: Permissible Exposure Limit.

1.3.46 **Personal Monitoring**: Sampling of asbestos fiber concentrations within the breathing zone of an employee. Breathing zone is defined as a radius of 150 mm to 250 mm around the employee’s head.

1.3.47 **Personal Protective Equipment**: Equipment which may consist of coveralls, shoes, gloves, helmet, goggles, respirator used for protection against asbestos exposure.

1.3.48 **Plastic Sheeting**: Fire retardant Polyethylene sheet material of specified thickness used for protection of walls, floors, etc., and critical barriers in the abatement work area.

1.3.49 **Protection Factor**: The ratio of the ambient concentration of an airborne substance to the concentration of the substance inside the respirator at the breathing zone of the wearer. The protection factor is a measure of the degree of protection provided by a respirator to the wearer.
1.3.50 **Respirator**: A device designed to protect the wearer from the inhalation of harmful atmospheres and approved by NIOSH or MSHA for a specific category of use.

1.3.51 **Surfactant**: A chemical wetting agent added to water to decrease surface tension and improve material penetration.

1.3.52 **Tape**: Glass fiber or other tape capable of sealing joints of adjacent sheets of plastic (0.15 mm polyethylene) and for attachment of plastic sheets to finished or unfinished surfaces of dissimilar materials under both dry and wet conditions, including use of amended water. Minimum tape width shall be 51 mm.

1.3.53 **Warning Labels and Signs**: As required by OSHA regulations 29 CFR 1910.1001 and 1926.58.

1.3.54 **Waste Water Filters**: Discharged liquids shall pass through a primary filter and the output shall be particles 20 microns or smaller. The secondary filter shall have output particles 5 microns or smaller.

1.3.55 **Wet Cleaning**: The process of eliminating asbestos contamination from building surfaces and objects by using cloths, mops, or other cleaning tools which have been dampened with amended water.

1.4 **Regulations and References**

1.4.1 **Regulations**: Contractor shall comply with the most current edition of all federal, state, county, and city codes and ordinances as applicable. Contractor shall make available for review at the site one copy of all applicable federal, state, county and city regulations governing the abatement work, including but not limited to:

1.4.1.1 **Occupational Safety and Health Administration (OSHA), U.S. Department of Labor**

(a) 29 CFR 1910 (General Industry) and 29 CFR 1926 (Construction) Occupational Safety and Health Standards

(b) 29 CFR 1910.1001 and 29 CFR 1926.1101 Asbestos

(c) 29 CFR 1910.134 Respiratory Protection

(d) 29 CFR 1910.1200 Hazard Communication

1.4.1.2 **U.S. Department of Transportation**

(a) 49 CFR 171 Subchapter C, Hazardous Materials Regulations

(b) 49 CFR 172 Subchapter C, Shipping Container Specifications

1.4.1.3 **U.S. Environmental Protection Agency**

(a) 40 CFR 763, Toxic Substances Control Act; particularly Subpart E, Asbestos Containing Materials in Schools

(b) 40 CFR 61, Sub-parts A and M, National Emission Standard for ASBESTOS ABATEMENT
Hazardous Air Pollutants (NESHAPS)

1.4.1.4 American National Standards Institute (ANSI), 1430 Broadway, New York, New York 10018. Telephone (212)354-3300

(a) ANSI Publication Z88.2 Practices for Respiratory Protection

1.4.1.5 American Society for Testing and Materials (ASTM), 1916 Race Street, Philadelphia, PA 19103. Telephone (215) 299-5400

(a) ASTM Standard P-189 Specification for Encapsulants for Friable Asbestos Containing Building Materials Proposal

1.5 Daily Reports

1.5.1 The Contractor shall correspond with the District representative for all matters related to this construction project, unless otherwise directed.

1.5.2 All correspondence with the District’s representative shall be in the English language, signed and dated by the Contractor.

1.5.3 Reference General Conditions (Construction Contract Clauses) and Specifications Division 1 for Supplementary Conditions for Construction.

1.5.4 The Contractor shall maintain daily logs and reports of job-site activities and personnel exposure monitoring at the site and shall provide copies to the District’s representative for inspection upon request.

1.5.5 The Contractor shall maintain daily reports. Reports shall be numbered consecutively and all sections shall be completed or noted as 'not applicable.' Each day’s report shall contain detailed remarks including but not limited to progress on the job, problems discovered, and discussions with District’s representative. Reports shall be submitted to the District’s representative each day for the previous work day. Copies shall be maintained at the job-site and made available to the District upon request.

1.5.6 Reporting Unusual Events: When an event of unusual and significant nature occurs at site (examples: failure of pressure differential system, rupture of temporary enclosures, equipment or power failure, high airborne fiber reading), prepare and submit a special report listing chain of events, persons participating, response by Contractor's personnel, evaluation of results or effects, and similar pertinent information.

1.5.7 Accident Reporting: Report all accidents to the District and/or District’s representative. Prepare reports of significant accidents, at site and anywhere else work is in progress. Record and document data and actions; comply with industry standards. For this purpose, a significant accident is defined to include events where personal injury is sustained, property loss of substance is sustained, or where the event posed a significant threat of loss or personal injury. Report shall be submitted to the District and/or District’s representative.

1.5.8 Waste Manifest-Asbestos: At completion of hauling and disposal of each load, submit a copy of waste manifest, chain of custody form, and landfill receipt to the District and/or District’s representative. Waste manifest to be submitted shall be ASBESTOS ABATEMENT
signed by the contractor, waste transporter, and the disposal facility. A copy of all manifests will be included in the post-job submittal.

1.5.9 Waste Manifest-Hazardous Waste: Any hazardous waste generated as a result of asbestos abatement activities will be disposed of by a Certified Hazardous Waste Disposal Contractor. A copy of the Hazardous Waste Manifest generated by this disposal is to be submitted to the District and/or District’s representative. A copy of all manifests will be included in the post-job submittal.

1.6 Product Handling

1.6.1 Deliver all materials in the original packages, containers, or bundles bearing the name of the manufacturer and the brand name.

1.6.2 Store all materials subject to damage off the ground, away from wet or damp surfaces, and under cover sufficient to prevent damage or contamination.

1.6.3 Remove from the premises all damaged or deteriorated materials. Dispose of materials that become contaminated with asbestos in accordance with applicable regulatory standards and these specifications.

PART 2 - PRODUCTS

2.1 Materials

2.1.1 Caulking: High-grade rubber base caulk for masonry and/or for other materials.

2.1.2 Encapsulant: Product shall be rated as acceptable for use intended when field tested in accordance with ASTM Proposed Specification P-189 "Specification for Encapsulants for Friable Asbestos Containing Building Materials". Use only materials that have a flame spread index of 25 or less when dry, when tested in accordance with ASTM E-84.

2.1.3 Glove-Bag: 0.15 mm thick, 1500 mm x 1500 mm, transparent polyethylene or polyvinylchloride plastic with long sleeve gloves, designated inlets for HEPA vacuum attachment, and storage pouch.

2.1.4 Impermeable Waste-Disposal Containers: Suitable to receive and retain any asbestos-containing or contaminated material until disposal at an approved site. The containers shall be labeled in accordance with OSHA Regulation 29 CFR 1910.1001 and 29 CFR 1926.1101. Containers must be both water-tight and air-tight.

2.1.5 Plastic Sheeting: Product Standard PS 17-69 and OSHA Regulation 29 CFR 1926.1101; Polyethylene plastic sheeting material 0.15 mm thickness for covering floors and walls, providing air locks, and sealing doors and windows; supply in appropriate widths to minimize seams. Must be flame-resistant material and must meet test criteria in NFPA 701. Reinforced sheeting is required for applications subject to wear and tear.

2.1.6 Surfactant (Wetting Agent): 50% polyoxyethylene ester and 50% polyoxyethylene ether, or approved equal, shall be mixed with water to provide a concentration of 2 ml surfactant to 1 liters of water, or manufacturer's recommended concentration.

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2.1.7 **Tape:** Glass fiber or other tape capable of sealing joints of adjacent sheets of plastic sheeting and for attachment of plastic sheets to finished or unfinished surfaces of dissimilar materials under both dry and wet conditions, including use of amended water. Minimum tape width shall be 50 mm.

2.1.8 **Warning Labels and Signs:** As required by OSHA regulations 29 CFR 1910.1001 and 1926.58.

2.1.9 **Waste Water Filters:** Discharged liquids shall pass through a primary filter and the output shall be particles 20 microns or smaller. The secondary filter shall have output particles 5 microns or smaller.

### 2.2 Equipment

2.2.1 **Air Filtration Units:** Shall be equipped with HEPA filters (final), pre-filters, instrumentation to monitor pressure differential, and safety and warning devices.

2.2.1.1 Provide units with electrical components approved by the National Electrical Manufacturers Association (NEMA) and Underwriter's Laboratories (UL).

2.2.1.2 Access to the units for replacement of all air filters shall be from intake end. Provide units with pre-filters and intermediate filters installed either on or in the intake grid of the unit and held in place with special housings or clamps. The filter media shall be completely sealed on all edges with a structurally rigid frame with a continuous rubber gasket.

2.2.1.3 **HEPA Filters:** Provide units equipped with HEPA filters. Filters shall be individually tested and certified by the manufacturer.

2.2.1.4 **Pre-filters:** Provide a two-stage pre-filtration to extend the life of the primary HEPA filter. The first-stage pre-filter is a low-efficiency type effective for particles 100 micrometers and larger. The second-stage (or intermediate) filter has a medium efficiency effective for particles down to 5 micrometers.

2.2.1.5 **Instrumentation:** Provide units equipped with a magnehelic gauge or manometer to measure the pressure drop across filters and to indicate when filters have become loaded and need to be changed. A table indicating the usable air-handling capacity for various static pressure readings on the magnehelic gauge shall be affixed near the gauge for reference, or the magnehelic reading indicating at what point the filters should be changed, noting cubic feet per minute (CFM) air delivery at that point. Provide an elapsed time meter to show the total accumulated hours of operation.

2.2.1.6 **Safety and Warning Devices:** Provide units with the following safety and warning devices:

(a) Warning lights to indicate normal operation, too high a pressure drop across the filters (i.e., filter overloading), and too low of a pressure drop (i.e., rupture in HEPA filter or obstructed discharge)

(b) GFCIs.
(c) Audible alarm if unit shuts down due to operation of safety systems.

(d) Electrical overload protection sized for the equipment. The motor, fan, fan housing, and cabinet are to be grounded.

2.2.2 Respirators and Respirator Systems

2.2.2.1 Product Data: Must possess NIOSH and MSHA approval for each component in an assembly and/or for entire assembly.

PART 3 - EXECUTION

3.1 Controlled Access to Site

3.1.1 Access to the abatement work area shall be restricted to contractor's workers and authorized visitors as defined in these specifications.

3.1.2 Authorized visitors shall have access to the work site at all times following notification to the District and/or District’s representative. Contractor shall supply protective clothing and equipment for visitors as necessary, except for respirators which are to be provided by the visitor in accordance with Section 3.4 of this document.

3.1.3 Contractor shall prominently post signs at all potential entry points to the abatement work area which clearly state: "Restricted Area Under Construction-Admittance by Special Permission Only - Protective Clothing Required Beyond This Point". Immediately inside entry point and outside critical barriers post a warning sign meeting specifications of OSHA 29 CFR 1910 and 1926. Suggested format is a sign of minimum size 508 mm by 356 mm displaying the following legend:

==============================================
DANGER
ASBESTOS
CANCER AND LUNG DISEASE HAZARD
AUTHORIZED PERSONNEL ONLY
RESPIRATORS AND PROTECTIVE CLOTHING ARE REQUIRED IN THIS AREA
==============================================

3.1.4 All workers and authorized visitors shall enter the abatement work area only through the abatement worker/equipment decontamination enclosure, in accordance with Section 3.3 of this document.

3.1.5 All workers and authorized visitors, before entering the abatement work area, shall read and be familiar with all posted regulations, personal protection requirements, and emergency procedures and exit routes.
3.1.6 Contractor shall maintain a daily job-site personnel log listing names and social security numbers of individuals who entered the abatement work area, and the times of entering and leaving the area.

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3.21 No eating, drinking, smoking, or chewing gum is permitted within the abatement work area. The District and/or District’s representative shall designate a "break area" where these activities, except for smoking, are permitted. Smoking is prohibited in all District facilities/buildings.

3.22 Workers and Visitors shall be fully protected with respirators and protective clothing during any work which may disturb asbestos-containing materials and result in fiber release. Full protection is not required during pre-abatement inspections of the containment, while abatement work is not being conducted.

3.23 Protective Clothing and Equipment: Provide workers and visitors with sufficient sets of protective full-body clothing, to include full body coveralls with hood, boots (for workers) and footwear coverings (for workers and visitors), and gloves. Provide eye protection and hard hats as required by applicable safety regulations. Contaminated non-disposal clothing and footwear shall be left in the equipment room until the end of the asbestos abatement work, at which time such items shall be disposed of as asbestos waste, or shall be thoroughly cleaned of all asbestos or asbestos-containing material. Contractor shall have at least six (6) sets of disposable protective full body clothing for District’s representative and authorized visitors for each work day. Provide storage facilities for visitors and workers for removed street clothing in the clean room.

3.23.1 Boots: Provide workers non-skid type work boots with protective shields as required by OSHA. Paint uppers of boots with red waterproof enamel paint as a permanent marking that the boots have been exposed to ACM abatement work areas. These boots are to be handled as asbestos-contaminated materials.

3.23.2 Hard Hats: Provide hard hats that meet ANSI Z89.1 for use where work is overhead, scaffolding is being used, or as otherwise required by OSHA. Label hats with same warning labels as required for ACM disposal bags.

3.23.3 Goggles: Provide goggles that meet ANSI Z87.1 as required by OSHA.

3.23.4 Gloves: Provide disposable work gloves for use in the abatement work area.

3.23.5 Coveralls with Hood: Provide disposable coveralls with hoods for use in the abatement work area.

3.23.6 Respirators: Provide workers with personally issued and marked respirator equipment approved by NIOSH/MSHA and, in accordance with these specifications, suitable for the asbestos exposure level in the abatement work area. Where respirators with disposable filters are employed, provide sufficient filters for replacement as necessary by the abatement worker, or as required by the applicable regulation. Authorized visitors must provide their own respirators, with fresh filters or cartridges as necessary, to enter the abatement work area. These are minimum requirements. Section 3.4 of this document is to be consulted for more detail.
3.3 **Abatement Work Area Entry and Exit Procedures**

3.3.1. Each time the abatement work area is entered workers/visitors will remove all street clothes in the clean room of the decontamination enclosure and put on new disposable coveralls, new head cover, and a clean respirator. Proceed through shower room to equipment room and put on work boots.

3.3.2 Each time the abatement work area is exited, the following procedures shall be followed:

- **3.3.2.1** Before leaving the regulated area, employees shall remove all gross contamination and debris from their protective clothing.

- **3.3.2.2** Employees shall remove their protective clothing in the equipment room and deposit the clothing in labeled impermeable bags or containers.

- **3.3.2.3** Employees shall not remove their respirators in the equipment room.

- **3.3.2.4** Employees shall shower prior to entering the clean room.

- **3.3.2.5** After showering, employees shall enter the clean room before changing into street clothes.

3.4 **Respiratory Protection**

3.4.1 Contractor is hereby advised that asbestos has been determined by the U.S. Government to be a CANCER-CAUSING AGENT. Provide workers with respirators [which, as a minimum, meet the requirements of OSHA 29 CFR 1926.1101] and protective clothing during all phases of the abatement work and until final air tests are accepted by District and/or District’s representative.

3.4.2 The Contractor shall select respirators from among those jointly approved as being acceptable for protection by the MSHA and the NIOSH under the provisions of 30 CFR Part 11.

3.4.3 The Contractor shall select and provide respirators (at no cost to the employee) and shall ensure that the employee uses the respirator provided.

3.4.4 Instruct and train each worker involved in asbestos abatement or maintenance and repair of asbestos-containing materials in proper respiratory use and require that each worker always wear in the abatement work area a respirator, properly fitted on the face. The respirator shall be worn from the start of any operation which may cause airborne asbestos fibers until the abatement work area is completely decontaminated.

3.4.5 Allow an individual to use only those respirators for which training and fit-testing has been provided. Require that each time an air-purifying respirator is put on it be checked for fit with a positive and negative pressure fit test in accordance with the manufacturer’s instructions or ANSI Z88.2.

3.4.6 For all jobs that involve the removal of thermal system insulation (TSI) or surfacing materials (OSHA definition of Class I work) the employer shall provide respirator protection in accordance with 29 CFR 1926.1101 (h) Table 1 - Respiratory Protection for Asbestos Fibers. This level of respiratory protection shall be maintained.
until the employer can produce a negative exposure assessment.

3.4.7 For all other abatement work, use respiratory protection appropriate for the fiber level encountered in the abatement work area or as required for other toxic or oxygen-deficient situations encountered. The level of respiratory protection which supplies an airborne fiber level inside the respirator, at the breathing zone of the wearer, at or below the permissible exposure limit (PEL) is the minimum level of protection allowed. (Table 1, Respiratory Protection for Asbestos Fibers, 29 CFR 1926.1101) Do not use single-use, disposable, or quarter-face respirators.

3.4.8 Authorized visitors are responsible for providing their own respirator and replacement filters and cartridges, with the exception of Type C which shall be provided by Contractor, and for having been previously and properly trained and fit-tested, for the respirator used.

3.4.9 For use with air-purifying respirators provide, at a minimum, HEPA-type filters certified by NIOSH and MSHA for protection against asbestos fibers. In addition, a chemical cartridge may be added, if required for protection against chemicals used on this job.

3.4.10 For use with powered air-purifying respirators, supply a sufficient quantity of HEPA filters approved for asbestos, so workers can change filters at any time when flow through the face piece might decrease to the level at which the manufacturer recommends filter replacement.

3.4.11 For supplied-air respirator systems, provide equipment capable of producing air used for breathing in Type "C" supplied air respiratory systems that meets or exceeds standards set for C.G.A. Type 1, Gaseous Air, Grade D. (See 1.5.2.15) System must be certified by NIOSH/MSHA as an approved Type "C" respirator assembly operating in pressure demand mode with a positive pressure face-piece including as a minimum the following:

- Auxiliary backup
- System Escape air
- Supply Backup air
- Supply Warning
- Alarm Device
- Compressor Shut Down
- Compressor Motor (electric)
- Compressor Location (outside building) Air Intake
- After-Cooler

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3.5  **Air Monitoring; Stop Action and Clearance Levels**

3.5.1  This section describes work being performed by the District’s representative. **The District’s representative will not be performing air monitoring to meet Contractor’s OSHA requirements for personal sampling or any other purpose. The Contractor is to conduct air monitoring required by OSHA for Contractor personnel.**

3.5.2  **Analytical Methods:** The following method will be used by the District’s representative in analyzing filters used to collect air samples. Minimum sample volumes will be 1200 liters for clearance samples.

3.5.2.1  **Phase Contrast Microscopy (PCM) -** will be performed using the OSHA Reference Method, Appendix A to 29 CFR 1926.1101, or NIOSH Method 7400 (non-aggressive methods).

3.5.3  **Daily:** From start of abatement work through project decontamination, the District’s representative may be taking samples on a daily basis inside and outside each abatement work area.

3.5.4  **Stop Action:** If any air sample taken outside of the abatement work area exceeds 0.01 f/cc, immediately and automatically stop all work except corrective action. The District’s representative and the abatement contractor will determine the source of the high reading.

3.5.5  **Abatement Work Area Final Clearance Levels:** The District’s representative standard for abatement work area final clearance for removing the containment and re-occupancy is less than 0.01 f/cc by PCM. All final air samples will meet these criteria.

3.6  **Initial Isolation of Abatement Work Area**

3.6.1  Contractor shall completely separate the abatement work area from other portions of the building, and the outside, by sealing all openings (windows, doorways, elevator openings, corridor entrances, drains, ducts, grill, diffusers, skylights, etc.) with barriers of 0.15 mm polyethylene sheeting and tape, or by sealing cracks leading out of the abatement work area. Contractor shall caulk the joints and seal holes in that portion of the walls, ceiling, and floor inside the abatement work area that could allow airborne asbestos fibers to be carried into adjoining spaces, or the exterior. Note in particular where pipes, conduit, and ductwork penetrate walls, ceilings and floor. Doorways and corridors which will not be used for passage during work must be sealed with 9.5 mm plywood, wood framing and plastic sheeting with tape.

3.6.2  All heating, ventilating, and air conditioning (HVAC) components that are in, supply, or pass through the abatement work area shall be shut down. During asbestos removal and until job completion, elevators, exhaust fans, and HVAC vents and intakes will be key-locked to not operate in the abatement work area.

Coordinate with the District’s representative which areas are to be shut down and for what duration. Seal all intake and exhaust vents, and seams in system components, with a double layer of 0.15 mm polyethylene sheeting.

3.6.3  If it becomes necessary to shut down electric power to the enclosed abatement work area, then the contractor shall provide temporary power and lighting and

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ensure safe installation of temporary power sources and equipment in accordance with NFPA 70 electric code requirements.

3.6.4 Arrange for the abatement work area to be locked during non-work hours. Install temporary doors with entrance type locksets that are key lockable from the outside and always unlocked and operable from the inside. Remove deadbolts and padlocks. Provide one key (to be held by District’s representative on site) to the District.

3.7 Preparation of Abatement Work Area and Temporary Enclosures

3.7.1 Methods for surface decontamination and/or disposal of unsalvageable objects shall be determined with the input from the District and/or District’s representative.

3.7.2 Clean all contaminated furniture, equipment, and supplies with a HEPA-filtered vacuum cleaner or by wet wiping, as directed by the District’s representative, prior to being moved or covered.

3.7.3 Before removal, clean by HEPA-filtered cleaner and/or by wet wiping, all electrical and mechanical items, (such as lighting fixtures, clocks, diffusers, registers, etc.) and general construction items (such as cabinets casework, door and window trim, moldings, etc.) which cover the surface of the abatement work as required to prevent interference with the abatement work. Re-install all such materials upon completion of the removal work with materials, finishes, and workmanship to match existing installations before start of work (as applicable).

3.7.4 Remove all removable furniture, equipment, and supplies that have been deemed by the District’s representative to be uncontaminated, or completely cover with 2 layers of polyethylene sheeting, at least 0.15 mm in thickness, securely taped in place with duct tape. Such furniture, equipment, and supplies shall be considered outside the abatement work area unless covering plastic or seal is breached.

3.7.5 Clean all surfaces in abatement work area with a HEPA-filtered vacuum cleaner or by wet methods prior to installation of primary barrier.

3.7.6 All critical barriers, including ventilation openings (supply and exhaust), lighting fixtures, clocks, doorways, windows, speakers, and other openings into the abatement work area shall be individually sealed with 2 layers of 0.15 mm plastic sheeting and tape. Elevator doors, extinguisher cabinets and all other penetrations in the floor, walls, or ceiling shall be sealed in the abatement work area. If a temporary polyethylene/stud wall must be erected, that wall shall be treated as a critical barrier. The double layer polyethylene containment enclosure shall then be erected on that wall. Critical barriers shall be sealed prior to installation of primary barriers.

3.7.7 Take care in sealing of lighting fixtures and control boxes to avoid melting or burning of sheeting. The inside of unsealed lighting fixtures, control boxes, and busslines are to be cleaned by asbestos workers specially certified to work on high voltage lines.

3.7.8 Cover floor of abatement work area with 2 layers of clear polyethylene, at least 0.15 mm in thickness, turned up at the walls at least 600 mm. Both spray-glue and duct tape all seams in floor covering. Size to minimize seams. Locate seams in top layer 2.0 meters from, or at right angles to, seams in bottom layer. Install sheeting so that top layer can be removed independently of bottom layer. Do
3.7.9 If carpeting is to remain, cover carpeting with three layers of polyethylene sheeting at least 0.15 mm in thickness. Place one layer of corrugated cardboard sheets between the top and middle layers of polyethylene.

3.7.10 Cover plastic sheeting in areas where scaffolding is to be used with a single layer of 12.7 mm fire retardant plywood. Wrap edges and corners of each sheet with duct tape.

3.7.11 Cover all walls in abatement work area including critical barrier sheet plastic with primary barrier of 2 layers of 0.15 mm polyethylene sheeting, mechanically supported and sealed with duct tape or spray-glue in the same manner as critical barrier sheet plastic. Size to minimize seams. Seams shall be staggered and separated by at least 600 mm. Wall sheeting shall overlap floor sheeting by at least 406 mm beyond wall/floor joint. Tape all joints including the joining with the floor covering with duct tape or as otherwise indicated by the District’s representative.

3.7.12 Cover interior surfaces of any existing elevator with 2 layers of 0.15 mm plastic sheeting (as needed). Arrange entry to abatement work area so that elevator door is in a positively pressurized space outside the clean room of the decon unit.

3.7.13 When installing the critical and primary barriers, automatic sprinkler heads and fire detectors shall not be covered or altered to prevent or delay operation. Smoke detectors should be protected (but not completely masked) to avoid nuisance alarms during paint or demolition operations. The covers on the smoke detectors shall be removed directly after such operations and at the end of the abatement workday.

3.7.14 A secondary barrier of plastic as a drop cloth shall be used to protect the primary layer from debris and shall be rolled and disposed as contaminated waste at the end of each workday.

3.7.15 Provide emergency exiting from the enclosure as required by NFPA 101, Life Safety Code. Arrange exit door(s) so that it is secure from outside the abatement work area but permits exiting from the abatement work area. Mark outline of door on barriers with luminescent paint at least 250 mm wide. Hang a razor knife on a string beside outline. Post a sign identifying "EMERGENCY EXIT", using letters at least 150 mm high, inside outline with luminescent paint. Arrows shall be taped on the polyethylene wall covering at eye level and at floor level to indicate location of exits. At entrance to decontamination chamber, post building floor plan and escape routes, plus locations of nearest exits and phone numbers of District. Emergency lighting shall be required, in accordance with the Life Safety Code.

3.7.16A 4.5 kg ABC type portable fire extinguisher shall be located by each exit and clean room.

3.7.17 Install inspection windows in the containment barrier enclosure system walls. Each window shall have a minimum 600 mm x 600 mm viewing area fabricated from 6.0 mm acrylic or polycarbonate sheeting. Install window with top at 2.0 m above floor height in a manner that provides unobstructed vision from outside to inside of the abatement work area. A sufficient number of windows are to be installed to provide observation of all portions of the abatement work area that can be made visible from adjacent areas. Provide also for viewing to be blocked from the inside with opaque plastic flap.
3.7.18 Where the abatement work area is immediately adjacent to or within view of occupied areas, provide a visual barrier of opaque polyethylene sheeting at least 0.15 mm in thickness so that the abatement work procedures are not visible to building occupants. Where this visual barrier would block natural light, substitute frosted or woven rip-stop sheet plastic in locations approved by the District’s representative.

3.7.19 Provide GFCI protection for all electrical equipment.

3.7.20 Provide temporary lighting inside the decontamination enclosure facility.

3.8 Construction of Worker/Equipment Decontamination and Waste Load-Out Enclosures

3.8.1 Worker/equipment decontamination enclosures shall be provided at each location where workers shall enter or exit the abatement work area.

3.8.2 The Contractor shall construct a worker/equipment decontamination enclosure consisting of at least a clean room, a shower room, and an equipment room, each separated by 900 mm air locks. Narrower air locks may be built if approved by the District’s representative.

3.8.2.1 All rooms shall be constructed of or fully lined with 0.15 mm thick polyethylene sheeting and suitable framing to make them as air-tight as possible. Where joining separate sheets of polyethylene is necessary, the two sheets of polyethylene shall be over-lapped at least 150 mm and adhered with an unbroken line of tape in such a manner to prohibit air movement. Stagger joints. Tape shall then be used to further seal the joint on the other side of the containment barrier so that both loose edges of the overlap are completely sealed.

3.8.2.2 Doorways will consist of three 3 sheets of 0.15 mm polyethylene from ceiling to floor. The width of these polyethylene sheets shall be sufficient to prevent air movement through the doorways when closed.

These doorways shall be the only source of make-up air for the HEPA negative air filtration units under normal circumstances, unless other sources are specifically approved by the District’s representative.

3.8.2.3 Provide GFCI protection for all electrical equipment.

3.8.2.4 Provide temporary lighting inside the decontamination enclosure facility.

3.8.3 The Clean Room shall have a curtained doorway leading to the outside of the abatement work area, and an airlock leading to the shower room. The clean room shall be of sufficient size to accommodate at least one worker, and a supply of clean disposable coveralls and storage facilities for street clothing, and uncontaminated equipment.

3.8.4 The Shower Room shall have two airlocks, one adjacent to the clean room and one adjacent to the equipment room. The shower room shall provide hot and cold running water and soap and towels. It should have adequate space for a shower stall. Waste water from the shower shall be discharged through a water filtration unit efficient to 5 microns, then to a sanitary sewer. Shower room shall have opaque walls.

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3.8.4.1 **Shower Stall**: Provide leak tight shower enclosure unit with integrated drain pan fabricated from fiberglass or other durable waterproof material. Equip with hose bibs for hot and cold water. Arrange water shut off and drain pump operation controls so that a single individual can shower without assistance from either inside or outside of the abatement work area. Provide splash proof entrances. Provide back flow prevention device and vacuum breaker, where required. Connect drain to a reservoir, pump water from reservoir through filters to a drain. Mount filters inside shower stall in manner that allows for access for filters to be changed from inside the shower. Change filters daily or more often if necessary. Locate filters inside shower unit so that water lost during filter changes is caught by shower pan. Provide temporary extensions of existing (if available and authorized for Contractor use by District’s representative) hot and cold water and drainage, as necessary for a complete and operable shower.

3.8.4.2 **Filtered Waste Water Drainage**: Provide cascaded disposable HEPA filter units on drain lines from showers or any other fluid source carrying ACM. Connect so that discharged water passes primary filter and output of primary (particles 20 microns and smaller) filter passes through secondary (particles 5 microns and smaller) filter.

3.8.4.3 **Sump Pump**: Provide totally submersible waterproof sump pump with integral float switch. Provide unit sized to pump 2 times the flow capacity of all showers or hoses supplying water to the sump, through the filters specified herein when they are loaded to the extent that replacement is required. Provide unit capable of pumping debris, sand, plaster or other materials washed off during decontamination procedures without damage to mechanism of pump. Adjust float switch so that a minimum of 75 mm remains between top of liquid and top of sump pan.

3.8.5 **The Equipment Room** shall have two airlocks, one adjacent to the abatement work area and one adjacent to the shower room. The room shall be of sufficient size so as to accommodate at least one worker to change clothes, and temporarily house any equipment which the contractor wishes to store when not in use. The area shall have facilities for decontaminating material and equipment, and a container lined with 0.15 mm polyethylene bag for collection of disposable coveralls and foot coverings.

3.8.6 **Waste Load-Out Enclosure**: Asbestos-contaminated waste that has been containerized shall be transported out of the abatement work area either through the personnel/equipment decontamination enclosure or through a separate waste load-out enclosure. If a separate enclosure is used, it shall be built with two airlocks, with curtained doorways: one to the abatement work area and one to an uncontaminated area outside the abatement work area.
3.9  **Air Circulation Inside Containment Barrier**

3.9.1  **Formula for Quantity of Air-Filtration Units:** The number of air filtration units needed to achieve the required air circulation rate shall be determined by the following formula:

\[
\text{CALCULATE Volume of abatement work area (CF)} \\
\text{MULTIPLY BY Number of air changes per hour, four to ten.} \\
\text{MULTIPLY BY 1/60 (hr/minutes)} \\
\text{DIVIDE BY Capacity of air filtration unit fully loaded with all filters (pressure differential activates warning light for loaded filters)} \\
\text{MULTIPLY BY 80% expected efficiency} \\
\text{ADD one additional unit as backup for machine failure or shutdown} \\
\text{EQUALS minimum number of units required}
\]

3.9.2  **Supplemental Makeup Air Inlets:** As necessary to achieve air flow throughout the abatement work area, locate auxiliary makeup air inlets as far away as possible from the air filtration units, preferably near the ceiling and away from barriers that separate the containment barriers and enclosures from surrounding areas. Cover inlet with plastic sheeting flaps to reseal automatically if the pressure differential system should shut down for any reason. Provide rigid framing around the opening. Spray the flap and around opening with spray adhesive so that if flap closes, the meeting surfaces are both covered with adhesive. Use adhesive that forms contact bond when dry. If used during clearance monitoring, tape or seal HEPA filters over inlets.

3.9.3  **Penetrations through masonry and/or fire walls, required for improving air circulation, shall be protected with a fire damper.**

3.9.4  **Accomplish the pressure differential by exhausting a sufficient volume of HEPA filtered air from the abatement work area. Efforts to achieve pressure isolation shall first address:**

- 3.9.4.1  Establishing required air circulation
- 3.9.4.2  Verifying seals are complete as practical
- 3.9.4.3  Establishing increased pressure in adjacent areas, if available
- 3.9.4.4  Exhausting sufficient volume of HEPA filtered air with additional air filtration units.
- 3.9.4.5  Decreasing the size of abatement work area to affect a smaller volume required for filtration

3.10  **Placement of Air Filtration System Units**

3.10.1  **Equipment shall be located so as to optimize air movement throughout the abatement work area by positioning air filtration units as far away as practical from**

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the access opening or other supplemental make-up air inlets.

3.10.2 The auxiliary air-filtration unit shall be located on site and available and ready to run at any time.

3.10.3 Air movement shall be established in such a way that airborne fibers will be carried away from workers' breathing zones.

3.10.4 Dead air pockets shall be minimized by proper ducting of make-up air if necessary, and by optimum location of the negative air filtration units.

3.10.5 The Contractor shall use smoke tubes to determine if dead air spots are present, and shall take corrective action as outlined above when they are found. Report such actions to the District’s representative immediately.

3.10.6 The air filtration units shall be placed so that access for changing the filters is inside the containment barrier. The unit is to run continuously during filter changing. A supply of filters shall be kept on site outside of containment area. If a unit must be turned off for servicing, an auxiliary unit must be in place and turned on.

3.10.7 Vent to the outside of the building, whenever practical, as determined by the District’s representative. Units may be vented inside the building only if outside venting is impractical. Units venting inside a building must be vented through an expansion chamber or diffuser system (self-contained water baffle) to reduce exhaust air velocity. A secondary HEPA unit may also be used after the expansion chamber/diffuser. Terminal exhaust ductwork must be placed as far away as possible from occupied areas. Special provisions for air monitoring shall be implemented by the District’s representative.

3.10.8 Mount units to exhaust directly or through disposable ductwork. Use ductwork and fittings of same diameter or larger than discharge connection on fan unit. Use spiral wire-reinforced flex duct in lengths not greater than 15 meters. If direction of discharge from fan unit is not aligned with duct use sheet metal elbow to change direction. Use six feet of spiral wire reinforced flex duct after direction change.

3.10.9 All HEPA units shall be tested in-place before removal begins. Test will be the responsibility of the Contractor.

3.11 Pressure Differential Isolation

3.11.1 The abatement work area and the decontamination enclosure system shall be maintained at a negative pressure relative to adjacent areas. The relative pressure differential when measured across any physical or critical barrier must continuously equal or exceed a static pressure of 0.025 inches (0.025") of water. Measurement shall be by manometer or magnahelic gauge.

3.11.2 Minimum 4 air changes per hour. Continuous HEPA filtered exhaust unit is to be in operation until job is completed.

3.11.3 Make-up air shall be obtained only through the decontamination enclosure facilities, or as provided in Section 3.9.2 of these specifications.

3.11.4 Where asbestos-containing material covers an opening or joint, provide negative air pressure sufficient to draw air from the adjoining space into the containment barrier when the opening or joint is exposed after asbestos removal.
Seal newly exposed openings and joints immediately to prevent contamination of adjoining spaces.

3.11.5 Supply sufficient pre-filters to allow frequent changes.

3.11.6 During and after the pre-abatement test, run the air filtration units continuously to maintain a constant pressure differential and air circulation until decontamination, cleaning, and encapsulation of the abatement work area is complete.

3.11.7 The HEPA-filtered units shall be left on continuously until after final clearance air measurement of 0.01 f/cc or the pre-removal background level, whichever is lower is achieved, and the District’s representative authorizes the shut-down of the units. Where feasible, the units shall be left on until the enclosure is completely removed.

3.11.8 HEPA units must be set up to cause an alarm-bell or buzzer to sound should the HEPA filter become clogged or the exhaust unit fails in operation after working hours. The alarm must be loud enough to alert the District’s representative of the equipment failure. The Contractor and/or District’s representative will phone a previously-designated contractor employee whose 24-hour number shall have been recorded at the beginning of the project. The notified contractor will immediately dispatch a repair crew to the job site. A spare HEPA unit shall always be available to immediately restore negative air pressure.

3.11.9 If the pressure differential between inside and outside the containment barrier drops to 0.025” of water, the Contractor will immediately inspect the containment for sources of pressure leaks and report actions taken to the District’s representative. The system warning alarm shall sound if pressure drops below 0.025” of water, and work shall stop.

3.12 Pre-Abatement Inspection, Testing, and Approval

3.12.1 Pre-Abatement Testing Requirements: Contractor must demonstrate with continuous data log that abatement work area can hold negative pressure of 0.025” of water for a minimum of 2 hours, prior to commencement of actual asbestos removal, unless the system is exhausted through an isolated ventilation system. In this case, the test period shall be long enough to ensure that the lock-out ventilation controls are not over-ridden and the HVAC system does not reactivate. As a minimum, the Contractor shall make all arrangements to demonstrate satisfactory equipment operation and set-up for compliance with these specifications.

3.12.1.1 Show proper condition of equipment seals including results of in-place HEPA-filter testing.

3.12.1.2 Show proper operation of safety and warning devices.

3.12.1.3 Show proper operation and calibration of instrumentation.

3.12.1.4 Show identification of equipment unit and fan capacity.

3.12.1.5 Use smoke tubes to demonstrate adequate air circulation, elimination of dead air pockets, positive air motion through the decontamination enclosure system into the abatement work area.

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3.12.1.6 Show the installation method for pre-filters and the HEPA primary filter in the air filtration unit. Show supply of filters available on site.

3.12.1.7 Demonstrate and record that a minimum 0.025” of water pressure differential has been achieved and can be maintained.

3.12.1.8 Demonstrate procedures for how workers will enter and exit the decontamination enclosure system.

3.12.1.9 Demonstrate procedures for handling emergencies and for the prevention of contamination of surrounding areas.

3.12.1.10 With District’s representative, identify disabled building ventilation systems and the positive means that will prevent accidental or premature re-starting. Confirm means to have unit re-started at the conclusion of the abatement work. With District’s representative, verify that all equipment affected is secured at the main breaker.

3.12.1.11 Demonstrate how contaminated shower water is filtered and drained.

3.12.1.12 Use a pressure differential meter or manometer to demonstrate the required pressure differential at every barrier separating the abatement work area from the balance of the building, equipment, ductwork or outside.

3.12.1.13 Demonstrate that each air filtration unit is serviced by a dedicated minimum 115V- 20A circuit with GFCI protection.

3.12.1.14 Demonstrate how asbestos will be removed and bagged for transport. Identify procedures for hauling through the building to the loading dock.

3.13 Maintenance of Containment Barrier and Enclosures

3.13.1 Ensure that the containment barrier, decontamination enclosure rooms, and other sealed doors, vents, etc., and plastic linings are effectively sealed and taped for the duration of the abatement work.

3.13.2 Repair damaged barriers and remedy defects immediately upon discovery. Visually inspect enclosure at the beginning of each work period.

3.13.3 Damaged or deteriorating materials shall not be used and shall be removed from the premises. Material that becomes exposed to (and contaminated with) asbestos shall be decontaminated or disposed of in accordance with the applicable regulations and special requirements.

3.13.4 Clean debris and residue from inside of the decontamination enclosure system on a daily basis. Damp wipe or hose down all surfaces after each shift change. Clean debris from shower pans on a daily basis.

3.13.5 Maintain floors in the clean room and airlocks as dry as possible to minimize slips and trips. Damp wipe all surfaces twice after each shift change with a disinfectant solution.

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3.14 **Removal of Asbestos-Containing Materials (ACM) - General**

3.14.1 The following work shall be done only after the decontamination facilities have been constructed, the area has been isolated and can be maintained under negative air pressure as specified in the previous section, pre-abatement background sampling has been conducted, and arrangements have been made for disposing waste at an acceptable site.

3.14.2 Start abatement work at a location farthest from the fan units and proceed toward them. If an electric power failure occurs, immediately stop all abatement work and do not resume until power is restored and negative air filtration units are operating again. Immediately notify District’s representative of occurrence. Any torn or unsealed plastic sheeting shall be immediately repaired. Floor sheeting shall be replaced if damaged.

3.14.3 **Wet Removal**: Prior to stripping and/or tooling, the asbestos material shall be sprayed using an airless pump and wetting agents (amended water or removal encapsulant) to enhance penetration and reduce fiber dispersal into the air.

3.14.3.1 A fine spray of amended water shall be applied to reduce fiber release preceding the removal of the asbestos material. The material shall be sufficiently saturated to prevent emission of excessive airborne fibers.

3.14.3.2 Spray material repeatedly during the abatement work process to maintain a continuously wet condition. If a removal encapsulant is used, apply in strict accordance with manufacturer’s instructions. Perforate outer covering of any insulation which has been painted and/or jacketed in order to allow penetration of water, amended water or removal encapsulant. Where necessary, carefully strip away while simultaneously wetting the insulation to minimize dispersal of asbestos fibers into the air.

3.14.3.3 Remove materials in manageable quantities and control the descent to the staging or floor below. If over 6 meters, use drop chutes to contain material during descent.

Gross removal of dust and debris from contaminated material, material containers, and equipment shall be accomplished in the containment barrier before removal to the equipment decontamination room for wet sponging before leaving the abatement work site.

3.15 **Requirements for Specific ACM and Methods - Vinyl Floor Tile (VFT) and Mastic**

The removal of the VFT and mastic shall be performed as a Class II work activity in accordance with the procedure outlined below. Dispose of as ACM.

3.15.1 Full containment barriers, with pressure differential ventilation units, shall be used.

3.15.2 Removal of asbestos-containing VFT and mastic shall be performed in accordance with the procedure outlined below.

(a) Prepare abatement work area as previously specified for the abatement work.

(b) All critical barriers, including ventilation openings (supply and exhaust),
lighting fixtures, clocks, doorways, windows, speakers, and other openings into the work area shall be individually sealed with 0.15 mm plastic sheeting and tape. Elevator doors, fire extinguisher cabinets and all other penetrations in the floor, walls, or ceiling shall be sealed in the abatement work area.

(c) Prepare a worker and/or equipment decontamination and waste load-out enclosure as previously specified.

(d) Cover all walls in the abatement work area with two layers of 0.15 mm polyethylene sheeting and seal with duct tape or spray-glue. The sheeting shall be applied to a height of 1.5 m above the floor. The seams shall be staggered and separated by at least 150 mm.

(e) Wet asbestos-containing materials with amended water to minimize fiber release during removal. Use amended water sparingly to eliminate standing water and to prevent water from traveling on the floor.

(f) Remove tiles individually and minimize breakage. Heat guns may be used to heat tile and soften the adhesive. Immediately place tiles in disposal bags.

(g) Non-toxic organic solvents may be used to remove mastic (as applicable).

(h) Wet clean all surfaces to remove residual material. Continue cleaning until abatement work area is free of visible material.

(i) Proceed to clearance testing following approval from District’s representative that abatement work area is visually free of asbestos-containing materials.

3.16 Requirements for Specific ACM and Methods – Roof Penetration Mastic and Silver Paint (as applicable)

The removal of all roof penetration mastic shall be performed as a Class II work activity in accordance with the procedure outlined below. Use the wet removal method for ACM to eliminate visible emissions in accordance with NESHAP regulations. Controls shall be used to prevent re-entrainment into building HVAC system. Dispose of as ACM.

(a) Spray large areas of asbestos-containing roof penetration mastic thoroughly with amended water using spray equipment recommended by surfactant manufacturer capable of providing a "mist" application to reduce the release of fibers. Spray the asbestos material repeatedly during the abatement work process to maintain wet conditions, but do not use excessive amounts of water that result in ponding or entry into building.

(b) Remove the asbestos-containing material in small sections. Do not allow material to dry out. As it is removed, place the material in sealable plastic bags of 0.15 mm minimum thickness. Place sealed asbestos debris in second 0.15 mm plastic bag, appropriately labeled, and remove from abatement work area.

(c) Carefully lower removed and bagged asbestos-containing material to the ground without dropping or throwing, or transport to the ground via dust-tight chutes or containers, in accordance with the procedures set forth in EPA 40 CFR 61.147 Code of Federal Regulations.

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(d) Clean area of all debris and notify District’s representative for visual inspection.

3.17 Requirements for Specific ACCM and Methods - Gypsum Wallboard/Taping Compound
The removal of gypsum wallboard and associated asbestos-containing taping compound shall be performed as a Class II work activity in accordance with the procedure outlined below. Dispose of as non-hazardous construction debris.

(a) All critical barriers, including ventilation openings (supply and exhaust), lighting fixtures, clocks, doorways, windows, speaker, and other openings into the abatement work area shall be individually sealed with 0.15 mm plastic sheeting and tape. Elevator doors, fire extinguisher cabinets and all other penetrations in the floor wall, or ceiling shall be sealed in the abatement work area.

(b) Prepare worker/equipment decontamination and waste load-out enclosure as previously specified.

(c) Isolate the abatement work area by constructing a temporary double layered 0.15 mm polyethylene/stud wall.

(d) Cover the floor of the abatement work area with 2 layers of 0.15 mm polyethylene sheeting turned up at walls at least 600 mm.

(e) Wet the asbestos-containing materials with amended water to minimize fiber and dust release during removal. Use amended water sparingly to eliminate standing water and to prevent water from traveling on the floor.

(f) Remove the gypsum wallboard and taping compound assemblies in small sections. Do not allow the material to dry out. As it is removed, place the material in sealable plastic bags of 0.15 mm minimum thickness. Place sealed debris in a second 0.15 mm plastic bag, and remove from the work area.

(g) Carefully lower the material to the floor without dropping or throwing.

(h) After removal of the material, HEPA vacuum and wet-clean all surfaces in the abatement work area to remove residual accumulated material. Continue cleaning until the surfaces are visibly free of material.

3.18 Requirements for Specific ACM and Methods – Transite Sheeting
The removal of the Transite sheeting shall be performed as a Class II work activity in accordance with the procedure outlined below. Dispose of as non-friable ACM.

3.18.1 Removal of asbestos-containing Transite sheeting (assumed) shall be performed in accordance with the procedure outlined below.

(a) Prepare abatement work area as previously specified for the abatement work.

(b) All critical barriers, including ventilation openings (supply and exhaust), lighting fixtures, clocks, doorways, windows, speakers, and other openings into the work area shall be individually sealed with 0.15 mm plastic sheeting and

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tape. Elevator doors, fire extinguisher cabinets and all other penetrations in the floor, walls, or ceiling shall be sealed in the abatement work area.

(c) Prepare a worker and/or equipment decontamination and waste load-out enclosure as previously specified.

(d) Cover all walls in the abatement work area with two layers of 0.15 mm polyethylene sheeting and seal with duct tape or spray-glue. The sheeting shall be applied to a height of 1.5 m above the floor. The seams shall be staggered and separated by at least 150 mm.

(e) Wet asbestos-containing materials with amended water to minimize fiber release during removal. Use amended water sparingly to eliminate standing water and to prevent water from traveling on the floor.

(f) Remove the Transite sheets individually and minimize breakage. Immediately place the Transite sheeting in disposal bags or plastic sheeting (as applicable).

(g) Wet clean all surfaces to remove residual material. Continue cleaning until abatement work area is free of visible material.

(h) Proceed to clearance testing (as applicable) following approval from District’s representative that abatement work area is visually free of assumed asbestos-containing materials (Transite sheeting).

3.19 Requirements for Specific ACCM and Methods - Leveling Compound
The removal of leveling compound from beneath carpet on the second floor hallway of Harlan Center shall be performed as a Class II work activity in accordance with the procedure outlined below. Dispose of as non-hazardous construction debris.

3.19.1 Removal of asbestos-containing leveling compound shall be performed in accordance with the procedure outlined below.

(a) Prepare abatement work area as previously specified for the abatement work.

(b) All critical barriers, including ventilation openings (supply and exhaust), lighting fixtures, clocks, doorways, windows, speakers, and other openings into the work area shall be individually sealed with 0.15 mm plastic sheeting and tape. Elevator doors, fire extinguisher cabinets and all other penetrations in the floor, walls, or ceiling shall be sealed in the abatement work area.

(c) Prepare a worker and/or equipment decontamination and waste load-out enclosure as previously specified.

(d) Cover all walls in the abatement work area with two layers of 0.15 mm polyethylene sheeting and seal with duct tape or spray-glue. The sheeting shall be applied to a height of 1.5 m above the floor. The seams shall be staggered and separated by at least 150 mm.

(e) Wet asbestos-containing materials with amended water to minimize fiber release during removal. Use amended water sparingly to eliminate standing water and to prevent water from traveling on the floor.
(f) Remove the leveling compound material and immediately place it in disposal bags.

(g) Wet clean all surfaces to remove residual material. Continue cleaning until abatement work area is free of visible material.

(h) Proceed to clearance testing (as applicable) following approval from District’s representative that abatement work area is visually free of assumed asbestos-containing materials (Transite sheeting).

3.20 Post Removal: Cleaning and Clearance

3.20.1 Provide general clean-up of abatement work area concurrent with the removal of all asbestos-containing materials. Do not permit accumulation of debris on workspace floor.

3.20.2 Do not perform dry dusting or dry sweeping.

3.20.3 Maintain the minimum required pressure differential of 0.025” of water inside the abatement work area enclosure at all times, and until the District’s representative authorizes the Contractor to remove the enclosure.

3.20.4 Initial Phase Cleanup Sequence

(a) Remove all visible accumulations of asbestos-containing material and debris.

(b) Wet clean and HEPA-vacuum all surfaces in the abatement work area.

(c) Clean all equipment (excluding that which will be needed for further cleaning phases) used in the abatement work area and remove from abatement work area via the Equipment Decontamination Enclosure.

(d) Remove the top layer (secondary barrier) of plastic sheeting, change all air filtration system pre-filters, and proceed with the second cleaning.

(e) Replace all HEPA-filters and pre-filters in air filtration air machines with clean filters. Clean all air filtration machines.

(f) Notify District’s representative for observation of cleaning to determine completeness. Plastic sheeting surfaces will be considered clean when free from dust, dirt, residue, film, or discoloration resultant from abatement operations or other activities subordinate to these operations.

3.20.5 Secondary Phase Cleanup Sequence

(a) Wet clean and HEPA-vacuum all surfaces in abatement work area at least one more time.

(b) Notify District’s representative for observation to determine completeness of cleaning.

(c) District’s representative will perform a visual observation of the ASBESTOS
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abatement work area in general accordance with ASTM 1368, Standard Practice for Visual Inspection of Asbestos Abatement Projects.

(d) If visual clearance is not attained, then subsequent re-cleaning will be required. This sequence will continue until visual clearance is attained.

(e) When visual clearance has been obtained, the plastic barriers down to the critical barriers may be removed.

3.20.6 Pre-Clearance: Application of Lockdown Encapsulant To Base Material

(a) Apply encapsulant only when environmental conditions in the abatement work area are as required by the manufacturer's instructions and the District’s representative.

(b) Prior to applying any encapsulant, ensure that its application will not cause the base material to fail and allow the encapsulated material to fall of its own weight or separate from the substrate.

(c) Apply encapsulant with an airless spray gun with air pressure and nozzle orifice or as otherwise recommended by the encapsulant manufacturer.

(d) A minimum period of two (2) hours will be established between the application of the lockdown encapsulant and the initiation of final air clearance testing.

3.20.7 Final Air Clearance Testing.

(a) District’s representative will test for the final air clearance levels when areas have passed the visual clearance phase and after a minimum of two (2) hours after the the application of the lockdown encapsulant.

(b) Analytical Methods: The following methods will be used by the District’s representative in analyzing filters used to collect air samples. Minimum sample volumes will be 1,200 liters for clearance samples.

   a. Phase Contrast Microscopy (PCM) - will be performed using the OSHA Reference Method, Appendix A to 29 CFR 1926.1101, or NIOSH Method 7400.

   b. Transmission Electron Microscopy (TEM) - will be performed (as needed) using the analysis method set forth in the AHERA regulation 40 CFR Part 763 Appendix A, or NIOSH Method 7402, whichever is deemed more appropriate by District’s representative in each case.

(c) Daily: From start of abatement work through project decontamination, the District’s representative may be taking samples on a daily basis inside and outside each abatement work area.

(d) Stop Action: If any air sample taken outside of the abatement work area exceeds 0.01 f/cc, immediately and automatically stop all work except corrective action. The District’s representative and the abatement contractor will determine the source of the high reading.
(e) **Abatement Work Area Final Clearance Levels:** The District’s representative standard for abatement work area final clearance for removing the containment and re-occupancy is: less than 0.01 f/cc by PCM. All final air samples will meet these criteria.

(f) Re-clean and continue to clean at Contractor’s expense, areas which do not comply with the specified final clearance level.

(g) After all areas pass final air clearance, dismantle the decontamination enclosure systems and thoroughly HEPA-vacuum and wet clean these areas and materials.

(h) Dispose of debris from removal operation, used cleaning materials, unsalvageable materials used for sturdy barriers, and any other remaining materials. Consider the materials to be contaminated, and dispose of accordingly.

3.20.8 Consider abatement work areas and all other decontaminated and cleaned areas clean when:

(a) All phases of cleanup have been completed and level of cleanliness is approved by the District’s representative.

(b) All final clearance air samples obtained by the District’s representative indicate that airborne fiber concentrations are less than 0.01 f/cc (via PCM analysis) of air or less after the final cleaning.

3.20.9 The "Certification of Visual Inspection and Final Air Sampling for Asbestos Abatement" form or equivalent shall be completed, signed by the Contractor and the District’s representative and included with the District’s project records.

3.21 **Containment Barrier Removal**

3.21.1 Following area final clearance, leave pressure differential units running as long as feasible during containment barrier removal.

3.21.2 Equipment, machinery, scaffolding, tools, etc., within the abatement work area shall not be removed without first being thoroughly cleaned with amended water or in the case of delicate items susceptible to rust, an acceptable substitute.

3.21.3 After the abatement work area is found to be in compliance, the remaining sealed areas and exits are unsealed and the plastic sheeting, tape, and any other trash and debris are disposed of in sealable plastic bags and treated as asbestos waste. The District’s representative will conduct a final walkthrough and document results for the District.

3.21.4 Before removal from the abatement work area, remove and properly dispose of pre-filter, decontaminate exterior of machine and seal intake to the machine with 0.15 mm polyethylene to prevent environmental contamination from the filters.

3.21.5 The contractor shall patch and paint and repair all damaged areas and restore them to their original, precontract condition.

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3.22 Waste Disposal

3.22.1 The District reserves the right to restrict when containerized ACM will be moved outside of the abatement work area and pass through the building. Times chosen to move containerized ACM in the building shall be during non-public hours and when limited staff is in attendance or under other appropriate conditions as determined by the District’s representative.

3.22.2 Asbestos-contaminated waste that has been containerized shall be transported out of the abatement work area either through the personnel/equipment decontamination enclosure or through a separate waste load-out enclosure. Waste load-out procedures shall be performed by two teams. The team inside the abatement work area shall clean the outside of properly labeled asbestos waste containers using HEPA vacuums and/or wet wiping, and place them into the waste load-out enclosure. No personnel from the inside team shall exit any further from the abatement work area. The team inside the waste load-out area (wearing protective clothing and respirators) shall retrieve the waste containers from the load-out enclosure, double-bag the waste and pass them to an uncontaminated area outside the enclosure. No unprotected personnel from the outside team shall enter this enclosure. As applicable, routes to the elevator, the elevator itself, and route to covered carts shall be lined with polyethylene sheeting.

3.22.3 For Amosite Fibers: If the material contains amosite fibers, evacuate air from disposal bags with a HEPA vacuum before sealing.

3.22.4 Water not disposed of with the asbestos-containing materials shall be filtered to remove asbestos fibers and debris before disposal into sanitary sewer.

3.22.5 Do not store containerized materials outside of the abatement work area. Take containers from the abatement work area directly to a sealed truck or dumpster.

3.22.6 Bulk and containerized asbestos waste shall be packed, labeled, and transported according to DOT Regulations 49 CFR 173.216 and 49 CFR 173.240. All removed ACM, plastic sheeting, tape, cleaning material, clothing, and all other disposable material or items used in the abatement work area shall be packed into double bagged sealable 0.15 mm plastic bags or double containerized with one bag and one drum. The bags shall be marked with the labels required by OSHA 29 CFR 1910.1001 and/or 1910.1200, and 1926.1101.

3.22.6.1 If the asbestos waste can reasonably be expected to damage double bagged 0.15 mm plastic bags, the following barrel decontamination procedures shall be followed.

(a) Line barrels with a 0.15 mm plastic liner to prevent leaking of contaminated material from the containers.

(b) As bags are moved out through the decontamination system, wet wipe bags to remove all contamination from them before they are moved into an uncontaminated space.

(c) Place bagged waste into appropriately labeled barrels for transport to landfill.

(d) After bagged contaminated waste is placed in barrels, seal lids on barrels.

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3.22.6.2 Minimum labeling required: First Label:

=========================================================================
DANGER
CONTAINS ASBESTOS FIBERS
AVOID CREATING DUST
CANCER AND LUNG DISEASE HAZARD
=========================================================================

Second Label:

=========================================================================
PROVIDE IN ACCORDANCE WITH U.S. DEPARTMENT OF TRANSPORTATION REGULATION ON HAZARDOUS WASTE Marking. 49 CFR PART 172,

SUBPART D: "RQ ASBESTOS NA 2212". PROVIDE A "CLASS 9" LABEL, PER 49 CFR PART 172, SUBPART E.

=========================================================================

3.22.6.3 Notify District prior to removing each trailer or other waste transport from the jobsite.

3.22.6.4 Notify District and/or District’s representative not less than 48 hours prior to the proposed time of delivery of contaminated waste to the landfill.

3.22.6.5 The Contractor shall transport the approved sealed drums to an approved waste disposal site.

3.22.6.6 Allow only sealed plastic bags or impermeable containers to be deposited in landfill. Leave damaged, broken, or leaking plastic bags in the impermeable container and deposit entire barrel in landfill.

3.22.6.7 Ensure that there are no visible emissions to the outside air from site where materials and waste are deposited.

3.22.7 Contractor shall submit a disposal certificate from the EPA approved landfill confirming final disposal in accordance with EPA standards and regulations before final payment. Retain receipts from landfill or processor for materials disposed of. At completion of hauling and disposal of each load, submit copy of waste manifest, chain of custody form, and landfill receipt to the District.

3.23 Job Close-Out

3.23.1 The Contractor shall submit to the District and/or District’s representative, Post Abatement Drawings to indicate location of the asbestos material removed. Post Abatement Drawing is not required if asbestos material removed is the same as that shown in the Project Drawing. If required, the Contractor may edit the Project Drawing

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to show the actual or additional abatement work completed.

3.23.2 The Contractor shall remove from the site all other debris and rubbish resulting from removal and disposal operations and the temporary construction of containment barriers and enclosures.

3.23.3 The Contractor shall use positive means to demonstrate to the District and/or District’s representative that any building utilities that were temporarily disabled are now in full service. Notify the District and/or District’s representative when disabled building ventilation, systems, electrical power, smoke detectors, building access/egress passages may safely be re-started or used.

** END OF SECTION 028213**
CERTIFICATION OF VISUAL INSPECTION AND FINAL AIR SAMPLING FOR ASBESTOS ABATEMENT

The District, Contractor, and District’s representative, hereby certify that the abatement work areas have been visually inspected (all surfaces including pipes, beams, ledges, walls, ceiling and floor, plastic sheeting, etc.) and there is no dust, debris, or residue. The District and/or District’s representative also certifies that final air sample results meet abatement work area clearance specifications.

ODC Project No SI Contract No. ___

Project Title/Location___

__________________________________________________________________________________

Date of Inspection___

Date and results of final air sample

ASBESTOS Firm ___ ABATEMENT Print Name _____ CONTRACTOR Print Title ___ Signature ___

SIFirm ____ INDUSTRIAL Print Name ____ HYGIENIST Print Title ___ Signature ___

SIFirm ____ DISTRICT Print Name ____ Print Title ___ Signature ___
SECTION 02 83 00

LEAD-IMPACTED CONSTRUCTION AND ABATEMENT

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. This section specifies requirements for lead-impacted construction and lead hazard abatement including but not limited to:

1. Submittals

2. Contractor's Monitoring Program

3. Products

4. Abatement Execution including:
   a. Work Area preparation
   b. Worker protection and decontamination
   c. Removal of Lead containing components
   d. Removal of Lead containing coatings by chemical stripping
   e. Removal of Lead containing coatings by mechanical removal
   f. Drilling and Anchoring of Lead containing surfaces
   g. LBP and Lead coating stabilization
   h. Cleaning and decontamination
   i. Clearance inspection testing
   j. Waste characterization and disposal

5. Stop work orders

6. Project closeout

1.02 REGULATIONS

A. The Contractor shall comply with the requirements of the current issue of the following regulations and guidelines governing lead abatement and disposal and other applicable Federal, State, and Local Government regulations. The regulations listed herein are incorporated by reference.

   a. 29 CFR 1926, Construction Standards
   b. 29 CFR 1926.62, Lead in Construction
   c. 40 CFR Part 50.12, Ambient Air Quality Standard for Lead
   d. 40 CFR Parts 261, 265 and 268, Hazardous Waste Management
   e. 40 CFR Part 745 Lead: Identification of Dangerous Levels of Lead
   f. 49 CFR Part 172, 173, 178, 179, Hazardous Material Transportation

2. California Code of Regulations:
   a. 8 CCR Division 1, Chapter 4, Subchapter 4, Construction Safety Orders
   b. 8 CCR 1532.1, Lead in Construction

1.03 RELATED DOCUMENTS

A. Contract Documents including hazardous material-related plans and specifications and all other project construction documents.

1.04 DEFINITIONS

A. In addition to the definitions found elsewhere in this manual the following definitions are specific to work of this section:

1. Abatement – Any set of measures designed to reduce or eliminate lead hazards or lead-based paint but does not include containment or cleaning.

2. Certified Lead Inspector / Assessor – An individual who has received a certificate or an interim certificate from the Department as a “Certified Lead Inspector / Assessor”.

3. Certified Lead Project Designer – An individual who has received a certificate from the Department as a “Certified Lead Project Designer”.

4. Certified Lead Project Monitor – An individual who has received a certificate or an interim certificate from the Department as a “Certified Lead Project Monitor”.

5. Certified Lead Sampling Technician – An individual who has received a certificate or an interim certificate from the Department as a “Certified Lead Sampling Technician”.

6. Certified Lead Supervisor – An individual who is responsible for implementing lead-related construction work and enforcing work practices that ensure worker safety in residential or public buildings and who has received a certificate or an interim certificate from the Department as a “Certified Lead Supervisor”.

7. Certified Lead Worker -- An individual who performs lead-related construction work in residential or public buildings under the direction of a certified lead supervisor and has received a certificate from the Department as a “Certified Lead Worker”.

8. Certificate – “Certificate” means the document issued by the Department to an individual who meets the requirements for certification as described in sections 35083, 35085, 35087, 35089, or 35091 of Title 17.

9. Certified Industrial Hygienist – An individual who has met the education, experience, and examination requirements of an industrial hygiene certification organization governed by the American Board of Industrial Hygiene.


11. Component – A structural element or fixture, including but not limited to a wall, floor, ceiling, door, window, molding, trim, trestle, tank, stair, railing, cabinet, gutter, or downspout.
12. Containment – A system, process, or barrier used to contain lead hazards inside a work area such as described in “Guidelines for the Evaluation and Control of Lead-based Paint Hazards in Housing,” U.S. Department of Housing and Urban Development, June 1995, Chapter 8, “Containment and Barrier Systems,” Table 8.1, Table 8.2 and Table 8.3, or “Guide for Containing Surface Preparation Debris Generated During Paint Removal Operations,” Society for Protective Coatings, Technology Guide 6, October 1, 2004.


14. Deteriorated Paint – Paint or surface coating that is cracking, chalking, flaking, chipping, peeling, non-intact, failed or otherwise separating from a component.

15. Encapsulation – All herein specified procedures necessary to coat or seal Lead containing coatings/surfaces with some durable coating which is applied as a liquid to the painted surface. Lead-free paint is not to be considered as an encapsulant. The encapsulating material shall be airtight, impermeable, and provide a semi-permanent barrier that can be expected to last 20 years. The encapsulant shall be approved for use by the District and Environmental Consultant.

16. Enclosure -- Accomplished by enclosing the Lead containing surface with a rigid and durable substance such as drywall, paneling, metal, vinyl or wood siding, or some other construction material. The enclosure must be dust-tight or sealed at all edges to provide a dust-tight enclosure. The construction materials used shall be approved for use by the District and Environmental Consultant.

17. Hazardous Waste – Lead debris shall be classified as hazardous due to the characteristic of toxicity, as determined by testing in accordance with the California Code of Regulations, Title 22, Division 4, Chapter 30, Article 11. Any substance(s) listed in Article 11 Section 66699 at concentrations greater than their listed Soluble Threshold Limit Concentration (STLC) or Total Threshold Limit Concentration (TTLC) may need to be further characterized by the Toxicity Characteristic Leaching Procedure (TCLP) in accordance with 40 CFR 261 and other tests prior to disposal as a hazardous waste. Note: whole painted components or architectural debris with intact LBP is not typically expected to exceed hazardous waste criteria and may be evaluated by a consideration of the ratio of all materials in the waste to the lead content of the associated paint.

18. Industrial Building – A structure that is used primarily for industrial activity, which is generally not open to the public, including but not limited to, warehouses, factories, and storage facilities. Industrial building does not include any structure which fits the definition of a public building or a residential building.

19. Intact LBP Components – LBP components removed substantially intact with LBP firmly adhering to the surface. Examples are door, door trim, baseboards, etc., with intact paint. Also referred to as architectural debris with intact paint.

20. Job Tasks – “Job Tasks” mean the specific activities performed in the context of work.

21. Lead Activities – “Lead Activities” means abatement, lead hazard evaluation, lead-related construction work, or any activity which disturbs lead-based paint, presumed lead-based paint, or creates a lead hazard.

22. Lead-Based Paint (LBP) – The concentration of lead in paint or other surface coatings that contain an amount of lead equal to, or in excess of 0.5% lead by weight when analyzed by AAS or ICP-AES or 1.0 milligrams of lead per square centimeter (mg/cm²) as determined by XRF testing or as identified by specification.

23. Lead-Based Paint Related Waste – Paint chips, vacuum dust, and debris, used cleaning articles, waste water, plastic sheets and other disposable items which were used during the Lead abatement process and as a result are considered lead contaminated waste or assumed hazardous waste pending further characterization.
24. **Lead-Containing Paint/Surface Coatings** – The concentration of lead in paint or other surface coating that contain an amount of lead less than 0.5% lead by weight when analyzed by AAS or ICP-AES or 1.0 mg/cm² as determined by XRF testing or as identified by specification.

25. **Lead-Contaminated Dust** – The amount of lead equal to, or in excess of 40 micrograms per square foot (µg/ft²) for interior floor surfaces, 250 µg/ft² for interior horizontal surfaces or 400 µg/ft² for exterior floor and exterior horizontal surfaces.

26. **Lead-Contaminated Soil** – Bare soil that contains an amount of lead equal to, or in excess of 400 parts per million (ppm) in children’s play areas and 1,000 ppm in all other areas.

27. **Lead Hazard** – Deteriorated lead-based paint or lead-containing surface/coating material, lead contaminated dust, lead contaminated soil, disturbing lead-based paint or lead-containing surfaces/coating materials or presumed lead-containing surfaces without containment, or any other nuisance which may result in persistent and quantifiable lead exposure and environmental lead contamination.

28. **Lead Hazard Abatement** – Special abatement activities undertaken with the specific intent to eliminate or reduce existing lead hazards as defined herein. Not to be confused with abatement controls on normal lead-related construction work in construction areas with restricted access to the general public. In this latter case, lead is present in or on construction materials and is impacted by the work but is not the focus of the work to be undertaken.

29. **Lead Hazard Evaluation** – The on-site investigation, for compensation, of lead-based paint or lead hazards for public and residential buildings, but does not include activities intended to determine adequacy of containment; air monitoring for lead as specified in Title 8, California Code of Regulations, Section 1532.1 and Title 17, California Code of Regulations, Sections 70100 and 70200; and testing components removed from a residential or public building for lead to determine the applicability of hazardous waste requirements specified in Title 22, California Code of Regulations, Division 4.5, Chapters 10, 11, 12, 13 and 18, and California Health and Safety Code, Section 25163, subdivision (c).


31. **Lead-Related Construction Work** – Any construction, alteration, painting, demolition, salvage, renovation, repair, or maintenance of any residential or public building, including preparation and cleanup that, by using or disturbing lead-containing materials, surfaces or soil, may result in significant exposure of adults or children to lead.

32. **Lead Safe Work Practices** – Any individual conducting lead activities, excluding lead hazard evaluation shall use containment; ensure that the work area has no visible dust or debris following the completion of a project; and demonstrate compliance of the above requirements to the Department or local enforcement agency, as defined in Section 105251 of the Health and Safety Code, upon request.

33. **Lead Stabilization** – Process of controlled surface preparation using containment and wet methods and/or HEPA vacuuming to prepare a deteriorated LBP surface for painting and followed by application of approved primer and finish coats of paint. Process may be incorporated in a normal painting process for environmental protection.
34. Presumed Lead-Based Paint – Any paint or surface coating affixed to a component in or on a structure, excluding paint or surface coating affixed to a component in or on a residential dwelling constructed on or after January 1, 1978 or a school constructed on or after January 1, 1993.

35. Public Building – A structure or part of a structure, and its land, which is generally accessible to the public, including but not limited to schools, daycare centers, museums, airports, hospitals, stores, convention centers, government facilities, office buildings and any other building which is not an industrial building or a residential building.

36. Qualified Person – The individual identified by the Contractor to be responsible for conducting air sampling, calibration of air sampling pumps, evaluating sampling results, and conducting respirator fit tests.

37. Removal – All herein specified procedures necessary to remove and clean-up all LBP and lead-containing surface coatings, lead-contaminated dust, and lead-contaminated soil from the designated areas and to dispose of these materials at an acceptable site in accordance with Federal, State and Local Regulations.

38. Residential Building – A structure or part of a structure, and its land, which is used or occupied, or intended to be used or occupied, in whole or in part, as the home or residence of one or more persons.

39. Visually Clean – Free of visible dust, paint chips, dirt, debris, or films removable by vacuuming or wet cleaning methods specified. For outside soil or ground cover areas, visually clean shall mean free of construction or paint debris, chips or dust distinguishable from the initial soil or ground conditions.

40. Work Area – An area where lead activities are conducted.

1.05 HAZARD COMMUNICATION

A. The Contractor shall refer to Specification Section 00 31 26 – Existing Hazardous Materials Conditions for a list of all known or assumed hazardous materials including lead, asbestos, PCBs and other materials. All lead-related work shall be conducted with full consideration of any other hazardous materials impacted and required protective measures and controls.

1.06 SUBMITTALS AND NOTICES

A. Refer to Section 01 33 00 Submittal procedures for submittal requirements applicable to this Section and unless otherwise noted.

1.07 ENVIRONMENTAL CONSULTANT

A. The Environmental Consultant is authorized to provide compliance observation and monitoring, testing, and technical oversight services for the lead-impacted construction and abatement work of this project without limitation.

1.08 CONTRACTOR'S COMPLIANCE AND QUALITY ASSURANCE

A. The Contractor shall have a Competent Person who is a Department Certified Lead Supervisor onsite at all times while lead-related work or Lead/LBP abatement is in progress. The Contractor's Competent Person shall communicate and coordinate with the Environmental Consultant with regard to work schedules, inspections, daily submittals, and compliance issues.

B. The Contractor's Competent Person shall:

1. Ensure the Contractor's compliance with the plans and specifications.

2. Conduct worker exposure monitoring using a Qualified Person and provide results to the Environmental
3. Pre-inspect Work Areas for compliance and completion prior to notifying the Environmental Consultant of the Work Area's readiness for inspection.

4. Accompany the Environmental Consultant during Work Area pre-start and clearance inspections.

5. Ensure all of the Contractor's workers have current and valid medical, blood-lead test, training, and respirator fit test records and provide copies of all new or updated records to the Environmental Consultant for approval before assigning the workers to any work within Work Areas.

6. Take timely and appropriate corrective actions to ensure compliance with the abatement plans and specifications and to eliminate unsafe, unhealthful, and environmentally unsound work practices regardless of whether or not they are brought to the Contractor's attention by the Environmental Consultant.

7. Adhere by the results for the characterization of waste for proper packaging, labeling, storage, transportation and disposal of waste.

8. Provide completed daily project documentation to the Environmental Consultant at the end of each work day. This includes daily rosters, entry/exit logs, foreman reports, and any other project information.

1.09 SPECIAL PROVISIONS

A. The Contractor shall hold the District, District's Representatives, Agents and Environmental Consultant harmless for claims, damages, losses, and expenses, including attorney's fees, arising out of or resulting from the Contractor's lead or other hazardous materials work, lead and hazardous materials spills on the site or enroute to the disposal site, or any other condition resulting from the Contractor's non-compliance with regulation or the Contract Documents.

PART 2 - PRODUCTS

2.01 PROTECTIVE COVERING

A. Polyethylene sheets, of 6 mil thickness in size (dimensions) to minimize the frequency of joints.

2.02 CLEANERS

A. For clean-up and decontamination a lead-specific wash solution shall be used. Alternative cleaning and decontamination agents shall be subject to approval by the Environmental Consultant and District.

2.03 TAPE

A. Duct tape (or approved equivalent) two (2) inches or wider, capable of sealing joints of adjacent sheets of polyethylene sheeting and for attachment of polyethylene sheeting to finished or unfinished surfaces of dissimilar materials and capable of adhering under both dry and wet conditions.

2.04 PRIMER/SEALER

A. The primer/sealer paint applied after Lead removal and/or stabilization shall be compatible with the painting systems to follow under this contract.
2.05 ENCAPSULANT

A. Design is based on the following manufacturers. Products with like attributes may be considered.

1. Lead coat by Certane.
2. Encapsulastic 7000 series by Encapsulation Technologies Corporation.
3. Heavy Duty Trim Coating by Fibertec Coating Corp.

B. If material cannot be tinted to desired color, two coats of approved latex enamel paint are to be applied over encapsulant.

C. Elastic acrylic coatings shall be warranted by the manufacturer to be heavy-bodied and compatible with the substrate they are applied to. Elastic acrylic coatings shall be long-lasting and resist cracking, peeling, algae, and fungus. Elastic formula should allow for some movement in walls without cracking. Coatings shall contain no hazardous ingredients by OSHA definition and be non-flammable.

2.06 SPRAY ADHESIVE

A. Provide spray adhesive in aerosol cans which is specifically formulated to stick to sheet polyethylene.

2.07 DISPOSAL CONTAINERS

A. Provide six (6) mil thick polyethylene sheeting, six (6) mil leak-tight polyethylene bags and other impervious containers as required by applicable regulations. All waste shall be labeled as hazardous or potentially hazardous waste unless proven otherwise by appropriate sampling and laboratory analysis.

B. All hazardous waste shipping containers shall meet applicable DOT requirements.

2.08 WARNING SIGNS AND LABELS

A. Caution Signs: To be minimum of 20 x 14 inches and includes phrase "Caution Lead Hazard, Keep Out Unless Authorized" in minimum 2-inch high letters. These shall be posted at each approach to each lead Work Area.

B. CAL/OSHA Lead Warning Posters: "Warning - Lead Work Area, Poison, No Smoking or Eating" shall be posted at the entrance to each Work Area.

C. Labels: Hazardous waste shall be labeled according to Federal, State and Local regulations including but not limited to the California Code of Regulations, Title 22, Chapter 30 and the U.S. Department of Transportation 49 CFR Parts 172, 173, 178 and 179.

2.09 PERSONAL PROTECTIVE EQUIPMENT

A. Personal protective equipment shall comply with the requirements of 8 CCR 1532.1 Lead.

B. Minimum protective clothing and equipment shall consist of fire-retardant, disposable, full-body coveralls, disposable boots, gloves, or equivalent in accordance with ANSI Z41. Sleeves at wrists and cuffs at ankles shall be secure.

C. Eye protection and hard hats shall be available and worn as required by applicable safety regulations and shall conform to ANSI 87.1 and ANSI 89.1. Eye protection shall be worn during demolition and paint removal work. Hard hats shall
be worn during all exterior demolition work.

D. The Contractor shall provide Authorized Visitors with suitable disposable protective clothing, headgear, respirators, and footwear whenever authorized visitors are required to enter the Work Area. Up to an average of ten sets per day of suitable personal protective equipment shall be made available for authorized visitors.

E. All disposable clothing worn during each work shift shall be removed prior to exiting the Work Area and shall be properly segregated and placed in containers for proper waste characterization. The Contractor shall bear full responsibility for additional costs associated with waste profiling and disposal if wastes are not properly segregated.

2.10 RESPIRATORS

A. Provide workers with personally-issued respiratory equipment approved by NIOSH and suitable for the lead exposure level in the Work Area. Where respirators with disposable filters are employed, provide sufficient filters for replacement as required by the worker or applicable regulation. HEPA Type P100 cartridges shall be used with respirators. Each respirator shall be washed whenever the worker wearing it showers or at least daily prior to storage. The following general conditions shall apply to respirator use:

1. All respirators used must be certified by NIOSH and a respirator program shall be established and implemented.

2. The minimum respiratory protection required for this project, unless otherwise specified in writing by the Environmental Consultant shall be a half-face negative pressure air purifying respirator. Otherwise, the respirators worn shall be selected based on measured or reasonably expected airborne concentrations of lead as follows:

   a. Half-face negative pressure air purifying respirator: up to 0.5 mg/m³
   b. Powered air purifying respirator: up to 2.5 mg/m³
   c. Type C supplied air respirator full face piece pressure demand mode: up to 100 mg/m³.

   Note: Disposable respirators are not acceptable at any time. It is always permissible to upgrade to a more protective type of respirator.

3. During all segments of lead removal and clean-up activities, respirator usage shall be required of all persons within the designated Work Areas at all times regardless of airborne lead concentrations.

B. The Contractor is responsible for determination of airborne lead concentration levels for the Contractor's personnel and for providing and enforcing use of appropriate personnel respirator protection based upon airborne lead concentrations and this specification.

C. Respirators shall not be removed inside the Work Area. Workers shall proceed to the designated washing area and clean the external surface of the respirator body before removing the respirator.

2.11 TOOLS AND EQUIPMENT

A. Provide suitable tools for the removal of Lead containing materials and contamination including required HEPA negative pressure units, HEPA vacuums, ground fault interrupters (GFIs), ladders, scaffold, garden sprayers and airless sprayers. All tools and equipment brought onsite shall be clean and free of lead and other hazardous material contaminants. HEPA vacuums shall be labeled with a lead warning label and dedicated to Lead-related construction work to prevent commingling of lead wastes with asbestos and other wastes.
B. Provide enough support equipment, including but not limited to, lumber, nails, hardware, shower stalls, hoses, plumbing, drain pans, sump pumps, and waste water storage drums to construct and operate the Decontamination Enclosure System(s) with showers. The number of showers shall be sufficient for the number of workmen scheduled on the job. The water hose used to connect the drain to the showers will not be used for any other purpose. The supply side water hose shall have a check valve to prevent backflow under any circumstance.

PART 3 - EXECUTION

3.01 GENERAL

A. All designated lead related work shall be conducted in accordance with this specification section, Section 01 11 00 and the project drawings. In addition, refer to Section 00 31 26 and coordinate lead-related work with requirement for other hazardous materials as applicable. The Contractor shall utilize the requirements as set forth for the method chosen and approved.

B. Public Warning and Safety Information to be Posted:

1. Post signs at all approaches to the Work Area entrance to read “Caution Lead Hazard - Keep Out Unless Authorized.” In addition, post the CAL-OSHA Lead Hazard Warning Poster at the immediate Work Area entrance.

2. A list of phone numbers for the local hospital and for emergency squad, the local fire department, a representative of the Contractor who may be reached 24 hours a day, the Contractor's main office, the District's Representative and Environmental Consultant and any other professional consultants directly involved in the project.

3.02 PREPARATION FOR INTERIOR REMOVAL/ABATEMENT WORK

A. Shut down electric power to the Work Area to the greatest extent possible. Consult with the District and District's Representative before shutting down power. Provide temporary power and lighting and ensure safe installation of temporary power sources and equipment per applicable electrical code requirements and provide ground-fault interrupter circuits as power source for electrical equipment.

B. Shut down and isolate heating, cooling, ventilation air systems to prevent contamination and dispersal to other areas of the structure. If shut down is not feasible, duct capping and sealing will be required according to an approved plan. During the Work, vents within the Work Area shall be sealed with tape and plastic sheeting and as indicated on plans (if available).

C. Move all non-fixed objects out of the Work Area(s). Such items shall be moved at least five (5) feet from Work Area(s).

D. Pre-clean entire floor area and all horizontal surfaces inside and within five (5) feet of the Work Area using HEPA vacuums and wet methods.

E. Cover all non-moveable objects within five (5) feet of the Work Area with six (6) mil polyethylene sheeting and seal with duct tape.

F. Cover all floors within the Work Area with two layers of six (6) mil polyethylene sheeting and seal with duct tape. All heater vents and registers shall be sealed with six (6) mil plastic sheeting and duct tape.

G. Install air lock flaps on all doorways into Work Area with plastic sheeting to form curtained doorways. Doors secured from the inside need not be sealed.

H. Provide, at minimum, 30 foot candle illumination lighting to the Work Area.
I. Install a Decontamination Enclosure System or equivalent prefabricated portable decontamination unit(s) as approved. This system will be the primary entrance and exit to the Work Area.

J. Install Differential Pressure Equipment where specified in accordance with the requirements herein.

K. Install lead caution signage at each approach to the Work Area and lead warning signage just outside each Work Area entry/exit point.

L. Complete any additional preparation work required by the specific component abatement/lead-related construction work requirements specified elsewhere in this section.

M. Establish and maintain emergency and fire exits from Work Areas at all times.

N. When Work Area preparation is complete, notify the Environmental Consultant and request an inspection. No abatement/lead-related construction work is to proceed in any Work Area until that Work Area preparation has been inspected and approved by the Environmental Consultant.

3.03 PREPARATION FOR EXTERIOR REMOVAL/ABATEMENT WORK

A. Cordon off the Work Area extending at a minimum of 10 feet horizontally beyond the area of work with barrier tape and warning signs as specified herein.

B. Pre-clean visible suspect lead-based paint dust and debris around and under areas where lead-based paint or LBP components will be removed. Use HEPA vacuums and wet methods to perform this cleaning which shall include, at minimum, the designated Work Area.

C. Cover ground and horizontal surfaces of Work Area (area within barrier tape) with a minimum of one layer of six (6) mil polyethylene sheeting. Secure the plastic on the building foundation as possible. Horizontal surfaces include scaffolding and/or other work platforms. Extend the plastic from the foundation to 10 feet beyond the Work Area. Seal all seams with tape and secure plastic to prevent undesired movement.

D. Where elevated Lead-containing components are likely to generate airborne dust or paint chips, devise a suitable containment to control such dust and prevent dispersal by wind. Exterior removal which generates Lead dust and debris shall not be attempted when winds or air currents (i.e., greater than 15 mph) prevent containment of such waste material within the designated Work Area. To conduct exterior removal under windy conditions, the Contractor shall implement special, safe and effective countermeasures to ensure containment of Lead dust and debris. These countermeasures include but are not limited to protective shrouds or mini-containments on work platforms.

E. Provide a designated entry/exit point to exterior Work Areas suitable for workers to properly decontaminate and exit from the Work Area as specified herein. Install lead caution and warning signage as specified above.

F. Complete any additional preparation work required for the specific abatement method to be used.

G. Notify the Environmental Consultant when the Work Area is ready for inspection. Abatement and lead-related work shall not proceed until the Environmental Consultant has checked and approved Work Area preparations.

3.04 WORKER PROTECTION AND DECONTAMINATION PROCEDURES

A. The Contractor shall use only workers medically qualified and trained for lead work and respirator usage.
1. Medically-qualified shall mean that the worker has had an occupational medical exam for lead exposure and respirator usage within 12 months of abatement start-up and at any time during abatement or lead-related construction work. The contents of the medical exam must be in conformance with 8 CCR 1532.1 and must include a blood-lead test within 30 days of starting work on the project. At no time shall the abatement worker exceed six months between each blood-lead testing.

2. Each lead abatement worker shall have successfully completed at least 24 hours of formal documented training in lead hazards and lead abatement methods and be a current Department Certified Lead Worker. Non-abatement workers performing lead related construction work shall have documented lead hazard communication training in accordance with 8 CCR 1532.1.

3. The Contractor’s Competent Person shall have received at least 40 hours of formal training in lead hazards and lead abatement.

4. The Contractor’s Supervisor(s) and workers shall be certified through the Department lead accreditation program for lead-related construction. Copies of each employee’s certification shall be provided.

5. The Contractor shall ensure that no worker is allowed onsite to perform lead-related work until the Environmental Consultant has received and approved all of that worker’s medical, training and fit testing certifications.

B. Each worker and Authorized Visitor shall, upon entering the job site, enter the designated clean change room and remove street clothes, put on an inner reusable or disposable coverall and work shoes and then put on an outer set of full body disposable coveralls, booties or shoe covers, respirator with HEPA filters, and gloves before entering the Work Area.

C. Each worker and Authorized Visitor shall HEPA vacuum contamination from protective clothing and then remove shoe covers before leaving one Work Area for another Work Area inside the same Work Area unless the Work Areas have been interconnected with a secured plastic sheet at least three feet wide.

D. When exiting an interior or exterior Work Area and leaving the specific building worked on, proceed to the designated area for unsuiting and remove outer protective clothing and equipment. Dispose of outer protective clothing as suspect Lead waste. Proceed to a designated shower area, remove and clean the respirator and store in a clean container. Wash hands and face and proceed to clean change area to re-suit for the next area.

E. At the end of the work day, all workers are to do the following in addition to those procedures described above: Place disposable outer garments and shoe covers in separate labeled waste containers dedicated to PPE for proper waste characterization; place reusable clothing for laundering in a closed container, clean protective gear including respirator, shower or wash hands and face at minimum, and put on clean street clothes in the clean room area.

F. All tools and equipment shall be decontaminated by HEPA vacuuming and wet wiping prior to being taken out of the Work Area. Tools and equipment with inaccessible internals shall be externally wet-wiped, bagged and sealed prior to being removed from the Work Area.

G. Workers shall not eat, drink, smoke, or chew gum or tobacco at the work site within 20 feet of any Work Area as specified by the Environmental Consultant.

H. Provide and post the decontamination and work procedures to be followed by workers in the equipment area and in the clean area.

I. Each worker shall have a final medical blood-lead laboratory test within one week of job completion and before engaging in other lead related work.
3.05 REMOVAL OF LEAD CONTAINING COMPONENTS

A. Remove any associated non-Lead containing hardware or construction interference (electrical and telephone utilities, conduit, piping, etc.) as required and store in construction area until final disposition is determined by the District's Representative.

B. Remove Lead containing components as specified herein and by the Contract Drawings. Scrape painted seam at edge of each component with utility knife or blade tool and remove any exposed accessible fasteners. Spray the affected surfaces of the Lead containing component being removed lightly with a fine mist of amended water.

C. Special precautionary controls shall be used as necessary to prevent Lead dust or debris from being carried or blown out of the controlled area by wind or air currents.

D. Using appropriate tools, begin to remove the Lead containing component by prying first behind nailing locations and/or removing accessible fasteners. Continue prying up the Lead containing component being careful not to break or create chipping until the Lead containing component is completely removed. Take necessary precautions to avoid damage to adjoining walls and/or associated surfaces.

E. Each component shall be carefully lowered to the ground, not dropped or thrown. Clean up dust and debris as removal proceeds.

F. Once removed, remove or flatten any remaining fasteners and wrap the Lead containing component in six (6) mil polyethylene sheeting, seal with duct tape, wet-wipe and transfer to secure waste storage for waste characterization.

G. HEPA vacuums and wet-wiping shall be used to ensure any resulting Lead dust, paint chips or debris have been cleaned up from horizontal surfaces and polyethylene sheeting prior to moving ladders, scaffolding, man-lifts or other working platforms to the next Work Area to be abated.

3.06 REMOVAL OF LEAD CONTAINING SURFACES BY CHEMICAL REMOVAL

A. Removal of Lead containing surfaces shall be by a Chemical Removal System approved for use by the Environmental Consultant.

B. The Contractor shall provide additional security measures as necessary to ensure non-abatement workers cannot gain access to chemicals and chemically-treated surfaces.

C. Material safety data sheets for each chemical substance and product used shall be onsite at all times and available for review by workers and Environmental Consultant.

D. The Competent Person shall review the contents of the material safety data sheets and the safe removal procedures with the workers prior to chemical removal.

E. Workers shall wear chemical goggles, face shields, impervious gloves, aprons, and booties over the standard protective clothing prior to starting chemical removal.

F. Stage or install a temporary emergency eyewash capable of providing a 15-minute flush within the immediate Work Area if corrosive organic or corrosive inorganic paint removal (stripping) products are used. In addition, a shower shall be available onsite within 50 feet of the removal operation.

G. Chemical stripping agents (and neutralizers) shall be applied in accordance with the recommendations of the manufacturer. Remove all paint and/or glazing compounds down to the bare substrate. Ensure that the chemicals used and the associated removal methods leave a clean and smooth surface capable of accepting a suitable primer/sealer coating after final cleaning.
H. Containerize all paint and chemical waste in impervious containers labeled as hazardous waste.

I. Package all contaminated rags and protective equipment, and disposable cleaning items and plastic sheets in labeled impervious containers and transfer waste containers to secure waste storage units. The Contractor shall assume all such waste to be hazardous unless proven otherwise by objective waste characterization data.

J. Clean and decontaminate the Work Area in accordance with the procedures outlined herein.

K. Decontaminate all tools and equipment before removing them from the Work Area. Seal or bag up such equipment for transfer to the next Work Area or operation.

3.07 REMOVAL OF LEAD CONTAINING SURFACES BY MECHANICAL REMOVAL

A. Removal of lead containing surfaces by mechanical removal shall be performed within negative pressure enclosures.

B. All mechanical removal equipment and systems shall be approved by the Environmental Consultant. Such equipment includes but is not limited to needle guns, abrasive wheels, and roto-peen equipment.

C. All power tools shall be designed and equipped with HEPA-filtered exhaust systems.

D. The Contractor shall submit a separate workplan for containment of fugitive dust and debris emissions.

E. Work Area preparation and Lead coating removal shall be in accordance with approved work plan.

3.08 DRILLING/ANCHORING/CUTTING/ABRADING LEAD CONTAINING SURFACES

A. Prepare the Work Area as specified herein for lead abatement.

B. Remove all interfering structures (security bars, etc.) and store for replacement when work is complete.

C. Where installation of materials requires drilling, cutting, anchoring or abrading the Lead containing surfaces, the Contractor shall take additional appropriate precautions including, but not limited to, use of protective drop cloths, clean-up and decontamination of Lead dust and debris as specified herein.

D. Place plastic drop sheet below area of impaction.

E. Lightly moisten lead containing surface to be impacted.

F. Conduct impaction operations (i.e. drilling, anchoring, abrading, etc.)

G. Continue misting lead containing surface during impaction to control airborne dust.

H. HEPA vacuum and wet-wipe frequently to prevent accumulation and spread of lead-containing dust and debris.

3.09 LBP AND LEAD GLAZING STABILIZATION

A. Prepare the Work Area as specified herein for lead abatement.

B. Remove all interfering structures (security bars, etc.), if any, and store for replacement when stabilization work is complete.
C. Surface Preparation - Remove all loose, flaking, peeling and/or deteriorated paint and/or glazing compounds using wet methods and prepare the surface within the work area as follows:

1. Lightly moisten exposed Lead containing surfaces to be prepared;
2. Wet-scrape and/or wet-sand surfaces as necessary to remove all loose and deteriorated paint or glazing compounds to obtain a like new surface with any remaining coating soundly bonded to the substrate;
3. Periodically re-moisten as necessary to control airborne dust;
4. HEPA vacuum and wet-wipe frequently to prevent accumulation and spread of lead-containing dust and debris;
5. Promptly dispose of all spent cleaning materials in labeled impervious containers;
6. Surface preparation is complete when the surface is sound, smooth, clean and can be painted to provide a like new surface.

D. Surface Preparation Clean-up

1. Upon completion of surface preparation, wet-scraping, and/or wet sanding, clean and decontaminate the entire Work Area using procedures outlined herein;
2. Decontaminate all tools and equipment before removing them from the Work Area. Seal or bag up such equipment for transfer to the next Work Area or operation;
3. Visually inspect prepared surfaces and the cleaned Work Area prior to applying any paints or coatings to ensure all loose paint, dust and debris has been cleaned up and the surface is properly prepared for painting.

E. Painting - Apply primer and finish coats of paint to obtain a like new surface in accordance with the manufacturer's specifications and requirements of the contract.

F. Conduct preliminary cleaning and decontamination of the entire Work Area and notify the Environmental Consultant to arrange for a preliminary visual clearance inspection. The Work Area containments shall not be removed until the Contractor has been notified by the Environmental Consultant of a satisfactory preliminary visual inspection result.

G. Remove containments and conduct final cleaning and decontamination of entire Work Area. Notify Consultant at least 24 hours in advance to arrange for final clearance inspection and testing. A mutually agreeable date and time shall be established by the Environmental Consultant, District and the Contractor for clearance inspections.

3.10 CLEANING AND DECONTAMINATION OF WORK AREAS

A. Daily Clean-up: Perform the following clean-up procedures daily.

1. Clean Work Areas until they are free of loose dust and debris to the satisfaction of the Environmental Consultant and/or District using HEPA and/or wet-wiping after pick-up of large debris.
2. Wet debris with a fine mist of water and collect material. All material to be properly segregated, bagged in 6-mil plastic bags, sealed, and moved to a designated, secure, waste storage area for waste characterization.
3. At the end of each work day the Environmental Consultant and/or District and the Contractor's Competent Person shall inspect work performed that day to ensure the work has been completed and no dust or residue remains on the areas removed and/or in the Work Area.
B. Final Clean-up and Decontamination: At completion of abatement perform cleaning as follows:

1. Remove all visible dust and debris as specified above.

2. Clean all Work Areas where abatement was performed by vacuuming all surfaces with a HEPA vacuum followed by wet-wiping with a high phosphate (tri-sodium phosphate) wash. The Contractor shall spray surfaces with a 5-10 percent tri-sodium phosphate (or approved equivalent) cleaning solution applied with a garden sprayer and wipe or mop surfaces with frequently changed clean towels, rags or mops.

3. Disassemble and remove containment barriers at each Work Area location after cleaning as specified above. Place polyethylene sheeting and tape into waste bags and remove to the temporary waste storage area.

4. Remove six (6) mil polyethylene sheeting on immovable objects and floors (where present) after misting with a high phosphate wash and wet-wiping. Place polyethylene sheeting and waste rags in segregated six (6) mil plastic bags, seal and store in a designated, secure, waste storage area for waste characterization.

5. Detergent solutions shall be replaced after each individual room is washed unless the spray application is used. If the wet vacuuming method is used, waste water shall be contained and disposed of properly after waste characterization testing.

6. The cleaning procedure used shall prevent spread of contamination and effectively clean surfaces while producing minimal waste.

7. All tools and equipment shall be sealed in six (6) mil plastic bags after being decontaminated using a high phosphate wash and wet-wiping prior exiting the Work Area.

8. Liquid cleaning wastes shall be filtered prior to containerizing for temporary storage pending hazardous waste characterization. Filter systems shall be able to remove particulate two microns and larger in diameter. Permits, if required, are the responsibility of the Contractor.

9. At least eight hours prior to completion and again upon completion of final clean-up and decontamination, notify the Environmental Consultant to obtain a final clearance inspection and testing.

3.11 FINAL CLEARANCE INSPECTION AND TESTING

A. Interior Clearance Inspection and Testing.

1. After the final clean-up, the Contractor shall perform a complete visual inspection of the Work Area under adequate lighting to ensure the Work Area is free from visible debris, dust, waste bags, containers, and unnecessary equipment. The Contractor shall ensure that additional cleaning is completed if the area is not acceptably clean. The Contractor’s request for inspection will be recognized upon receipt of a completed and signed copy of the Asbestos and Lead Inspection Form— Appendix G. No inspections will be conducted without a completed and signed copy of the Asbestos and Lead Inspection Form (Appendix G).

2. Upon receipt of the Asbestos and Lead Inspection Form (Appendix G), the Environmental Consultant will perform the final visual clearance inspection. The clearance inspection will at minimum consists of the requirements as described in Chapter 15: Clearance, Sections II-VI, “Guidelines for the Evaluation and Control of Lead-based Paint Hazards in Housing,” dated June 1995.

3. If the Work Area is not visibly clean, as determined by the Environmental Consultant, the Contractor shall re-clean and decontaminate as described herein at his own cost until the work area passes inspection.

4. A minimum of two hours is required between cessation of clean-up procedures and clearance dust wipe testing.
5. All clearance dust wipe samples will be taken using the HUD sampling protocol by the Environmental Consultant.

6. Dust wipe samples will be collected using commercial wipes moistened with a non-alcohol wetting agent. When possible, areas of approximately one square foot will be selected from horizontal surfaces below or adjacent to where LBP components were removed.

7. One dust wipe sample will be collected per abated area (doorway, utility room) and sent under proper chain of custody protocol to an accredited AIHA or EPA-CPL laboratory or equivalent as specified by the Environmental Consultant.

8. All dust wipe samples will be analyzed for lead using either AAS or ICP-AES for lead and results will be provided to the Contractor within two days of receipt of sample results.

9. The Contractor shall be released from each Work Area when all dust wipe samples from the area are below the following levels of lead:

   a. Interior Floor Surfaces: 40 micrograms per square foot (µg/ft²)
   b. Interior Horizontal Surfaces: 250 µg/ft²
   c. Exterior Floor and Horizontal Surfaces: 400 µg/ft²

10. A Work Area shall be considered completed and cleared only after all areas within the Work Area have met the above criteria.

11. If any of the dust wipe samples exceed the clearance criteria, the entire Work Area must be cleaned and retested until the clearance criteria are met. As the building may be occupied, the Contractor shall coordinate with the District and Environmental Consultant to gain access for cleaning and re-inspection and clearance testing by the Environmental Consultant at the earliest time possible.

12. If a Work Area fails the clearance criteria specified above, the Contractor shall clean the entire Work Area at no additional cost nor increase to the contract sum and shall be responsible for associated additional Environmental Consultant fees. The Contractor shall pay all laboratory and delivery charges for additional dust wipe samples taken in each Work Area upon clearance failure.

B. Exterior Clearance Inspection. After the final clean-up by the Contractor, the Environmental Consultant shall conduct a visual inspection to ensure that all visible dust and debris has been properly removed. The Contractor must provide the Environmental Consultant at least 8 hours notice prior to scheduling final inspections. If the results of the final visual inspection are satisfactory to the Environmental Consultant, clearance dust wipe samples may be collected from exterior floor and exterior horizontal surfaces. Upon obtaining acceptable clearance sample results, the exterior Work Area shall be released for unrestricted access. If the results of the inspection are unsatisfactory the contractor shall re-clean and decontaminate the Work Area prior to requesting another inspection by the Environmental Consultant.

C. Upon acceptance of the final results for clearance dust wipe sampling, the Environmental Consultant shall complete the Asbestos and Lead Inspection Form (Appendix G) and submit this information to the District and retain the original.

3.12 RE-INSTALLATION ON INTERFERENCE COMPONENTS

A. Upon completion of abatement and lead-related construction work, re-install fixtures, electrical utilities, telephone utilities and other components removed as construction interferences except for components scheduled for removal and disposal.

3.13 LEAD CONTAMINATION OF BUILDING OR ENVIRONMENT

A. In the event that removed paint dust or debris is not properly contained within the Work Area and thereby escapes,
bypasses or penetrates established barriers, the Contractor shall stop work immediately, notify the Environmental Consultant immediately, and commence clean-up and decontamination procedures as described herein or directed by the Environmental Consultant.

B. For soil contamination, the Contractor shall remove all visible signs of paint dust and debris and, at minimum, the upper one-half inch of soil in the area contaminated and at least five feet beyond in each direction. Successful completion of soil decontamination shall be subject to evaluation by sampling at the discretion of the District and Environmental Consultant. Soil sample(s) with lead concentrations below pre-abatement composite soil sample results or 400 ppm if background samples were not collected shall be the criteria for completion of soil clean-up and decontamination. The Contractor shall be responsible for all costs associated with disposal of any debris and contaminated soil, including waste characterization testing.

3.14 WASTE STORAGE, SEGREGATION, AND CHARACTERIZATION

A. The Contractor shall provide for secure onsite temporary storage of Lead related waste. Waste storage location, equipment, containers and methods are subject to prior approval by the District and Environmental Consultant.

B. Construction materials removed from lead abatement must be evaluated to determine waste characteristics prior to disposal. Except intact Lead containing components, all waste streams and waste categories shall be considered hazardous until proven otherwise. The Contractor shall be responsible for segregating waste into the following categories and conducting appropriate waste testing for lead:

1. **Paint (LBP & non-LBP) and glazing, chips, dust and debris, HEPA vacuum waste, and used cleaning materials.** The Contractor shall handle, store and dispose of these items as a hazardous lead waste without further characterization.

2. **Plastic sheeting and tape.** Except for plastic sheeting from chemical removal areas, these used items, if properly cleaned, should be non-hazardous. However, they shall be considered hazardous unless proven otherwise by lead waste testing.

3. **Disposable Protective Clothing and Equipment (PPE).** Disposable work clothes and other items potentially contaminated with LBP or lead, if properly cleaned, should be non-hazardous. However, they shall be considered hazardous unless proven otherwise by lead waste testing.

4. **Intact Lead containing components.** Architectural debris with intact Lead coatings will be considered a special non-hazardous construction debris as long as the coating remains intact unless otherwise noted.

5. **Plaster debris.** Plaster debris with lead-based paint shall be considered hazardous pending laboratory results.

6. **Ceramic tile debris.** Ceramic tile debris with lead levels greater than 1.0 mg/cm² shall be considered hazardous pending laboratory results.

7. **Chemically Removed Paint/Glazing.** shall be considered hazardous waste.

C. Each Lead-related waste produced shall be placed in properly segregated, labeled and sealed, impervious containers.

D. Removed intact Lead containing components shall be properly segregated, wrapped in six-mil polyethylene sheeting, labeled and securely sealed with duct tape.

E. All waste containers, bags, and packaged waste shall be stored in a designated, secure, locked waste storage area and be labeled "PENDING ANALYSIS" with the following information:

1. Waste Category
2. Date Accumulated

3. Name, address, District

4. Origin of waste

F. HEPA vacuum and wet-wipe the exterior of all waste containers prior to removing them from the Work Area to the designated storage area.

G. All Lead-related waste, except architectural components with intact Lead coatings, shall be considered hazardous until waste characterization has been performed under the California Code of Regulations, Title 22. Architectural debris with intact coatings is a special category which may not be subject to testing as determined by the Environmental Consultant.

H. Each category of waste, except components with intact paint or coatings, will be tested and characterized by the Contractor using one or more of the following testing protocols:

1. Cal-EPA testing protocol:
   a. Total Threshold Limit Concentration (TTLC): 1,000 ppm
   b. Soluble Threshold Limit Concentration (STLC): 5 ppm

2. Federal-EPA testing protocol:
   a. Toxicity Characteristic Leaching Procedure (TCLP): 5 ppm

I. All testing by the Contractor shall be subject to direct observation and review by the Environmental Consultant. At minimum, a TTLC shall be performed on each suspect waste stream. Based on the testing protocols, any waste greater than or equal to five (5) ppm lead using STLC or TCLP tests or any waste greater than or equal to 1,000 ppm lead using the TTLC test shall be considered a hazardous waste.

J. When the TTLC is less than 50 ppm lead, no further testing is required for that waste category sampled. It will be the responsibility of the Contractor to ensure representative samples are taken from each category of segregated waste.

K. The Contractor shall package, store, handle, transport and dispose of each category of waste generated based on the testing results obtained by the Contractor and reviewed by Environmental Consultant. Where landfills have more stringent requirements, the Contractor shall be responsible for all additional disposal costs. The proposed landfill shall be subject to approval by the Environmental Consultant.

L. Upon verbal request of the Environmental Consultant, the Contractor shall collect samples of Lead-related waste. The Contractor shall collect samples within full view and presence of the Environmental Consultant. Samples taken may entail cutting and removing sections of a component and clean-up of any resulting dust or debris.

M. The cost of all waste characterization or waste profiling required by the approved landfill will be the responsibility of the Contractor.

N. In the event that the Environmental Consultant has determined that waste is not properly segregated, additional waste testing may be conducted of the mixed waste stream. The Contractor shall be responsible for the costs associated with this additional testing.

O. The Contractor shall bear full responsibility for additional costs associated with waste disposal and characterization if waste is not properly segregated as required herein.
3.15 HAZARDOUS WASTE DISPOSAL:

A. Site Storage and Handling: The Contractor shall pay strict attention to the requirements of 40 CFR 262 and 265 and Title 22, Chapter 30 for the onsite handling of debris, with special attention given to the time of storage, amount of material stored at any one time, use of proper containers, and personnel training. All waste shall be stored in secure, locked, labeled, sealed impervious containers and not placed on the unprotected ground. All containers shall be shielded adequately to prevent dispersion of the debris by wind or rain and shall be labeled as hazardous waste. Any evidence of improper storage shall be cause for immediate shutdown of the project until a corrective action is taken.

B. Transportation and Disposal of Waste:

1. The Contractor shall arrange to have the Lead-related waste and debris transported from the site in accordance with the requirements of 40 CFR 263 and 264, and disposed of properly in accordance with 40 CFR 268, GISO 8 CCR Articles 40 and 41, 49 CFR Parts 172, 173, 178, and 179 and Title 22, Chapter 30, Articles 5, 6, 6.5 and 8.

2. The Contractor shall submit to the District and Environmental Consultant the Name, Class, and EPA I.D. Number of the waste disposal site(s) to be used for each waste category which has been determined by testing to exceed the hazardous waste thresholds provided in Article 3.14, Paragraph H and Paragraph I and any Intact LBP component waste.

3. Where Lead related construction debris is to be disposed of as a non-hazardous, a waste shipping is still required and a copy shall be provided to the District and Environmental Consultant.

4. The Contractor shall prepare waste shipping manifests for review by the District. Upon waste or material pickup by the selected waste transporter, manifests shall be signed by the District or District's Representative and copies retained to verify that all steps of the handling and disposal process have been completed properly.

5. Copies of the landfill weight tickets shall be provided to the District and Environmental Consultant to verify the amount of waste disposed of at that site. The Contractor shall be responsible for all costs associated with transportation and disposal of all wastes generated at the result of this work.

C. No waste characterized as hazardous waste shall be stored onsite for more than 90 days prior to being properly transported for disposal.

D. All equipment, materials, and waste generated on this project must be removed offsite to their proper locations by the Contractor within seven (7) calendar days from successful abatement completion and receipt of final clearance wipe testing results for lead related work.

E. Containers to be loaded for transportation from the storage area must be removed by workers who have entered from uncontaminated areas, dressed in clean coveralls.

3.16 STOP WORK ORDERS

A. The Environmental Consultant has the authority to stop work. Examples of such conditions that might result in a work stoppage include but are not limited to:

1. Uncontrolled visible emissions which escape the established Work Area or breach physical protective barriers within the Work Area; and/or,

2. Ambient airborne levels of lead measured outside the construction area at more than 4.5 micrograms per cubic meters of air (mg/m³) of lead averaged over an eight work period or the equivalent of 1.5 (mg/m³) for any 24 hour period.
3. Unsecured Waste Storage Area and/or improper containment of abatement waste or LBP contamination.

3.17 PROJECT CLOSEOUT

A. Prior to approval of final payment request, the Contractor must provide the following information:

1. Copies of hazardous waste manifests, profile sheets and weight tickets for all hazardous wastes and manifests and weight tickets for non-hazardous wastes or recyclables consisting of architectural debris with intact paint.

B. All surfaces damaged during this work must be restored to their original condition except those surfaces scheduled for demolition as part of the renovation project.

END OF SECTION
1.01 SUMMARY
A. This section specifies rough carpentry, including all framing, sheathing, and underlayment.

1.02 RELATED SECTIONS
A. NA

1.03 QUALITY ASSURANCE
A. Furnish materials complying with the following:
      a. Graded in accordance with the latest edition of "Standard Grading Rules No. 17," WCLIB, or "Western Grading Rules," WWPA. Lumber grades specified below are taken from "Standard Grading Rules, No. 17." Equal grades from "Western Grading Rules" are acceptable. Furnish lumber bearing a recognized grading bureau mark or a "Certificate of Grade" may be substituted. Where a grade for Douglas Fir (DF) species is indicated, other species, if approved by the COR, may be supplied on an equal stress grade basis.
   2. Pressure Treatment.
      a. Waterborne, conforming to AWPA C2, AWPA P5.
   3. Plywood.
      a. Graded in accordance with APA PS 1-95. Furnish panels identifiable by a grade trademark of a recognized grading association. Index numbers listed (i.e. 24/0) may be larger but not smaller than shown.
   4. All materials and construction techniques shall meet applicable Local codes or the requirements herein, whichever is stricter.

PART 2 - PRODUCTS

2.01 MATERIALS
A. Lumber.
1. Furnish S4S lumber, unless otherwise shown on drawings. Furnish lumber with a moisture content of 19 percent or less for material 3 inches and less in nominal thickness, unless otherwise specified.

B. Felt.
1. Install pressure treated wood in contact with concrete.

C. Framing Members.
1. Beams.
   a. 4 inches and less in width: No.2, DF, S-dry.
   b. 5 inches and wider: No. 1 DF.
2. Joists and Stair Stringers.
   a. No. 2, DF, S-dry.
3. Rafters.
   a. No. 2, DF, S-dry.
4. Studs & Plates (2 x 4 and smaller): Stud or standard grade, DF, Larch, Hemlock, S-dry.
5. Headers.
   b. Studs and Plates (2 x 6 and larger): No. 2, DF, Larch, Hemlock, S-dry.
   c. Blocking.
      1) Standard grade, DF, Larch, Hemlock, S-dry.
   a. No. 1, DF.

D. Subfloor.
1. 1/2 inch CDX plywood 32/16.
2. 2 x 6 T&G decking, Commercial Dex., DF, S-dry.

E. Exterior Sheathing.
1. Roof Sheathing.
a. (Wood shingles) 1 x 4 standard, DF; (exposed surfaces and soffits), 1 x 6, T&G, "B" finish, Kiln Dried (KD), Western Red Cedar (WRC).

b. (Concealed Surfaces) 5/8 inch CDX ext. plywood, 24/0; (Exposed surface) 1/2 inch C-C ext., plywood 24/0.

c. (Concealed Surfaces) 3/4 inch C-C ext. plywood, 30/12; (exposed surfaces and soffits) 1 x 6, T&G, "B" finish, KD, WRC.

d. 2 x 6, T&G, decking, Commercial Dex., DF, S-dry.

2. Wall Sheathing.

   a. 1/2 inch CDX, plywood 24/0.

F. Underlayment.

   1. Plywood.

      a. 1/2 inch underlayment C-C plugged exterior plywood.

PART 3 - EXECUTION

3.01 CONSTRUCTION

   A. Framing.

      1. Make joints in beam and girders over supports unless shown otherwise on the drawings.

      2. Nail built-up girders from both sides with 16d nails at 30 inches on center staggered in 2 rows. Provide 2 nails at each end of each piece and each splice.

      3. Set sills level and anchored on the foundation. Set in a full bed of Portland Cement mortar, if necessary to obtain full bearing. Provide flat washers on all anchor bolts.

      4. Set joist with crown side up. Install solid blocking over supports. Provide a minimum of 1-1/2 inch bearing for each joists. Nail with two 16d nails at each bearing. Double joists under parallel partitions and at all openings.

      5. Toenail rim joists to sill with 8d nails 16 on center.

      6. Lap joists over girders 4 inches minimum. Nail with three 16d nails from each side.

      7. Notching of joist will be allowed in the end 1/3 of the span only. Limit notching to 1/6 of the joist depth.

      8. Set rafters with crown edge up. Cut birds-mouths to provide full bearing. Nail rafters to top plate with two 8d nails and to ceiling joists with three 16d or five 10d nails.
9. Fabricate trusses as shown on the drawings. Nail to top plate with four 10d nails. Install framing anchors where shown on the drawings.

10. Provide continuous length studs. Nail studs to top plate with four 8d toenails or two 16d end nails.

11. Install full length cripples at all openings. Nail cripples to studs with 16d nails at 24 inch on center. Toenail cripple to header with two 8d nails.

12. Provide headers, over opening, of a size indicated below:

   - Maximum 3'-6" span 2-2x6's
   - Maximum 5'-0" span 2-2x8's
   - Maximum 6'-6" span 2-2x10's
   - Maximum 8'-0" span 2-2x12's

13. Space header material with plywood or surfaced lumber to equal the stud depth.

14. End nail studs to header with three 16d nails.

15. Do not splice columns. Cut ends square to provide full bearing. Nail columns top and bottom with four 16d toenails, or as shown on drawings.

B. Subfloor.

1. Lay plywood subfloor with face grain at right angles to supports.

2. Space panel ends and edges 1/32 inch. Stagger end joints. Nail with 8d nails 6 inch on center at edges, and 10 inch on center intermediate supports.

3. Install 2 inch T&G subfloor at right angles to the supports. Make joints over supports, unless end matched. Stagger end joints a minimum of 1 span. Nail with two 16d nails at each support, 1 blind nail and 1 face nail.

C. Exterior Sheathing.

1. Install roof sheathing at right angles to supports. Stagger end joints a minimum of 1 span. Nail with two 8d nails at each support.

2. Apply plywood roof sheathing with the face grain at right angles to supports. Stagger end joints. Nail with 8d nails 6 inch on center at edges and 12 inch on center at intermediate supports.
3. Apply 1x6 inch T&G roof sheathing at right angles to supports. Make all joints over supports. Stagger end joints. Nail with two 8d nails at each support.

4. Install 2 inch T&G roof sheathing at right angles to supports. Make joints over supports, unless end matched. Stagger end joints a minimum of 1 span. Nail with two 16d nails at each support, 1 blind nail and 1 face nail.

5. Apply plywood wall sheathing with the face grain vertical. Nail with 6d nails at 6 inch on center at edge and 12 inch on center at intermediate supports.

D. Underlayment.

1. Provide 1/16 inch between sheets. Nail with 3d ring shank. Nails 6 inch on center at edges and 8 inch on center in the field. Stagger joints with subfloor.

E. Treated Wood.

1. Field treat cuts and holes in pressure treated members with copper naphthenate.

F. Exposed Hardware.

1. Provide rough hardware for the proper installation of work. Install hot-dipped galvanized hardware, nails, bolts, etc. at locations exposed to the weather.

PART 4 - MEASUREMENT AND PAYMENT (NOT USED)

END OF SECTION
PART 2

SECTION 07220
ROOF DECK AND INSULATION

PART 1 — GENERAL

1.1 RELATED DOCUMENTS
A. Drawings and general provisions of the Contract, including the Conditions of the Contract and Division 01 Specification Sections apply to this section.

1.2 SUMMARY
A. Section includes roof insulation over the properly prepared deck substrate.
B. Related Sections:
   1. Section 07311 – Asphalt Shingle Roofing.

1.3 REFERENCES
A. American Society for Testing and Materials (ASTM):
   2. ASTM A653 Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvanized) by the Hot-Dip Process.
B. Cast Iron Soil Pipe Institute, Washington, D.C. (CISPI)
C. Factory Mutual Research (FM):
   1. Roof Assembly Classifications.
D. National Roofing Contractors Association (NRCA):
E. Underwriters Laboratories, Inc. (UL):
   1. Fire Hazard Classifications.
F. Warnock Hersey (WH):
   1. Fire Hazard Classifications.
G. Sheet Metal and Air Conditioning Contractors National Association (SMACNA)
H. Steel Deck Institute, St. Louis, Missouri (SDI)
I. Southern Pine Inspection Bureau, Pensacola, Florida (SPIB)
J. Insulation Board, Polyisocyanurate (FS HH-I-1972)
K. Insulation Board, Thermal (Fiberboard) (FS LLL-1-535B)

1.4 SUBMITTALS

A. Product Data: Provide manufacturer's specification data sheets for each product in accordance with Division 01 Section Submittal Procedures.01300.
B. Provide approval letters from insulation manufacturer for use of their insulation within this particular roofing system type.
C. Provide a sample of each insulation type.
D. Shop Drawings
   1. Submit manufacturer's shop drawings indicating complete installation details of tapered insulation system, including identification of each insulation block, sequence of installation, layout, drain locations, roof slopes, thicknesses, crickets and saddles.
   2. Shop drawing shall include: Outline of roof, location of drains, complete board layout of tapered insulation components, thickness and the average "R" value for the completed insulation system.
E. Wind uplift calculation: insulation supplier shall provide a wind uplift calculation for insulation attachment to deck. Uplift calculation shall be per ASCE 7-10 and stamped by insulation distributors's California licensed structural engineer.

F. Certification
   1. Submit roof manufacturer's certification that insulation fasteners furnished are acceptable to roof manufacturer.
   2. Submit roof manufacturer's certification that insulation furnished is acceptable to roofing manufacturer as a component of roofing system and is eligible for roof manufacturer's system warranty.

1.5 QUALITY ASSURANCE

A. Fire Classification, ASTM E-108.
B. Manufacturer's Certificate: Certify that roof system furnished is approved by Factory Mutual, Underwriters Laboratories, Warnock Hersey or approved third party testing facility in accordance with ASTM E108, Class A for external fire and meets local or nationally recognized building codes.
C. Manufacturer's Certificate: Certify that the roof system is adhered properly to meet or exceed the requirements of FM 1-90.
D. Pre-installation Meeting: Refer to Division 07 roofing specifications for pre-installation meeting requirements.

1.6 DELIVERY, STORAGE AND HANDLING

A. Deliver products to site with seals and labels intact, in manufacturer's original containers, dry and undamaged.

B. Store all insulation materials in a manner to protect them from the wind, sun and moisture damage prior to and during installation. Any insulation that has been exposed to any moisture shall be removed from the project site.

C. Keep materials enclosed in a watertight, ventilated enclosure (i.e. tarpaulins).

D. Store materials off the ground. Any warped, broken or wet insulation boards shall be removed from the site.

PART 2 — PRODUCTS

2.1 PRODUCTS, GENERAL

A. Refer to Division 01 Section "Common Product Requirements."

B. Basis of Design: Materials, manufacturer's product designations, and/or manufacturer's names specified herein shall be regarded as the minimum standard of quality required for work of this Section. Comply with all manufacturer and contractor/fabricator quality and performance criteria specified in Part 1.

C. Substitutions: Products proposed as equal to the products specified in this Section shall be submitted in accordance with Bidding Requirements and Division 01 provisions.

1. Proposals shall be accompanied by a copy of the manufacturer's standard specification section. That specification section shall be signed and sealed by a professional engineer licensed in the state in which the installation is to take place. Substitution requests containing specifications without licensed engineer certification shall be rejected for non-conformance.

2. Include a list of three (3) projects of similar type and extent, located within a one hundred mile radius from the location of the project. In addition, the three projects must be at least five (5) years old and be available for inspection by the Architect, Owner or Owner's Representative.

3. Equivalency of performance criteria, warranty terms, submittal procedures, and contractual terms will constitute the basis of acceptance.

4. The Owner's decision regarding substitutions will be considered final. Unauthorized substitutions will be rejected.

2.2 INSULATION MATERIALS


1. OSB/Rigid Polyisocyanurate Roof Insulation; ASTM C1289:

   a. Qualities: Rigid, closed cell polyisocyanurate foam core bonded to heavy duty glass fiber mat facers.
b. Panel thickness: 2”.

c. OSB thickness: 5/8”.

d. Compliances: UL, WH or FM listed under Roofing Systems


e. Acceptable Products:

1) Commercial Innovations

2) Approved Equivalent


1. Rigid Polyisocyanurate Roof Insulation; ASTM C1289:

a. Qualities: Rigid, closed cell polyisocyanurate foam core bonded to heavy duty glass fiber mat facers.

b. Thickness: 2”.

c. Compliances: UL, WH or FM listed under Roofing Systems


d. Acceptable Products:

1) Commercial Innovations

2) Approved Equivalent

C. Underlayment:


2. HPR Aquablock by The Garland Company or approved equal.

D. Fasteners: Corrosion resistant screw fastener as recommended by roof membrane manufacturer.

1. Factory Mutual Tested and Approved with three (3) inches coated disc for 1-90 rating, length required to penetrate metal deck one inch.

PART 3 — EXECUTION

3.1 EXECUTION, GENERAL

A. Comply with requirements of Division 01 Section “Common Execution Requirements.”
3.2 INSPECTION OF SURFACES

A. Roofing contractor shall be responsible for preparing an adequate substrate to receive insulation.

1. Verify that work which penetrates roof deck has been completed.

2. Verify that wood nailers are properly and securely installed.

3. Examine surfaces for defects, rough spots, ridges, depressions, foreign material, moisture, and unevenness.

4. Do not proceed until defects are corrected.

5. Do not apply insulation until substrate is sufficiently dry.

6. Broom clean substrate immediately prior to application.

7. Use additional insulation to fill depressions and low spots that would otherwise cause ponding water.

8. Verify that temporary roof has been completed.

3.3 INSTALLATION

A. Attachment with Mechanical Fasteners.

1. Approved insulation board layers shall be fully attached to the deck with an approved mechanical fastening system. As a minimum, the amount of fasteners shall be in accordance with manufacturer's wind uplift calculation. Otherwise, a minimum of one fastener per two square feet shall be installed.

2. Stagger and offset all insulation joints a minimum or 6”.

3. Filler pieces of insulation require at least two fasteners per piece if size of insulation is less than four square feet.

4. Spacing pattern of fasteners shall be as per manufacturer's recommendations to meet the FM requirements. Placement of any fastener from edge of insulation board shall be a minimum of three inches, and a maximum of six (6) inches.

5. Minimum penetration into deck shall be as recommended by the fastener manufacturer. There is a one (1) inch minimum for metal, wood and structural concrete decks where not specified by the manufacturer. For gypsum and cement-wood fiber decks, penetration shall be determined from pull-out test results with a minimum penetration of one and one-half (1 ½ ) inches.

3.4 CLEANING

A. Remove debris and cartons from roof deck. Leave insulation clean and dry, ready to receive roofing membrane.

3.5 CONSTRUCTION WASTE MANAGEMENT

A. Remove and properly dispose of waste products generated during installation. Comply with requirements of authorities having jurisdiction.

END OF SECTION
PART 3
SECTION 07311
ASPHALT SHINGLES ROOFING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS
   A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY
   A. This Section includes the following:
      1. Asphalt shingles.
      2. Self-adhering sheet underlayment.
   B. Related Sections include the following:
      1. Division 6 Section “Sheathing” for roof deck wood structural panels.
      2. Division 7 Section "Sheet Metal Flashing and Trim" for metal roof penetration flashings and counterflashings not part of this Section.

1.3 DEFINITIONS
   A. Roofing Terminology: Refer to ASTM D 1079 and glossary of NRCA's "The NRCA Roofing and Waterproofing Manual" for definitions of terms related to roofing work in this Section.

1.4 SUBMITTALS
   A. Product Data: For each type of product indicated.
   B. Samples for Initial Selection: For each type of asphalt shingle, ridge and hip cap shingles ridge vent and exposed valley lining indicated.
      1. Include similar Samples of trim and accessories involving color selection.
   C. Samples for Verification: For the following products, of sizes indicated, to verify color selected.
      2. Ridge and Hip Cap Shingles: Full-size ridge and hip cap asphalt shingle.
      3. Ridge Vent: 12-inch- (300-mm-) long Sample.
      4. Exposed Valley Lining: 12 inches (300 mm) square.
      5. Self-Adhering Underlayment: 12 inches (300 mm) square.
D. Qualification Data: For Installer, including certificate signed by asphalt shingle manufacturer stating that Installer is approved, authorized, or licensed to install roofing system indicated.

E. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency or by manufacturer and witnessed by a qualified testing agency, for asphalt shingles.

F. Maintenance Data: For asphalt shingles to include in maintenance manuals.

G. Warranties: Special warranties specified in this Section.

1.5 QUALITY ASSURANCE

A. Source Limitations: Obtain specified products as required from warranting manufacturer as outlined in the specifications.

B. Fire-Test-Response Characteristics: Provide asphalt shingle and related roofing materials with the fire-test-response characteristics indicated, as determined by testing identical products per test method below by UL or another testing and inspecting agency acceptable to authorities having jurisdiction. Identify materials with appropriate markings of applicable testing and inspecting agency.

1. Exterior Fire-Test Exposure: Class A; ASTM E 108 or UL 790, for application and roof slopes indicated.

C. Pre-installation Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Management and Coordination."

D. MANUFACTURER’S INSPECTIONS

A. When the project is in progress, the base sheet system manufacturer will provide the following:
   1. Keep the Owner informed as to the progress and quality of the work as observed.
   2. Provide daily job site inspections during installation of the shingle roof system. Provide daily emailed progress reports to the Owner outlining the day’s roof renovation progress.
   3. Report to the Owner in writing any failure or refusal of the Contractor to correct unacceptable practices called to the Contractor’s attention.
   4. Confirm after completion that manufacturer has observed no applications procedures in conflict with the specifications other than those that may have been previously reported and corrected.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Store roofing materials in a dry, well-ventilated, weathertight location according to asphalt shingle manufacturer’s written instructions. Store underlayment rolls on end on pallets or other raised surfaces. Do not double-stack rolls.

1. Handle, store, and place roofing materials in a manner to avoid significant or permanent damage to roof deck or structural supporting members.

B. Protect unused underlayment from weather, sunlight, and moisture when left overnight or when roofing work is not in progress.
1.7 PROJECT CONDITIONS
A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit asphalt shingle roofing to be performed according to manufacturer's written instructions and warranty requirements.
   1. Install self-adhering sheet under-layment within the range of ambient and substrate temperatures recommended by manufacturer.

1.8 WARRANTY
A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace asphalt shingles that fail in materials or workmanship within specified warranty period. Materials failures include manufacturing defects and failure of asphalt shingles to self-seal after a reasonable time.
   1. Material Warranty Period: 40 years from date of Substantial Completion, prorated, with first 5 years non-prorated.
   2. Wind-Speed Warranty Period: Asphalt shingles will resist blow-off or damage caused by wind speeds up to 85 mph for 10 years from date of Substantial Completion.
   3. Algae-Discoloration Warranty Period: Asphalt shingles will not discolor 10 years from date of Substantial Completion.
B. Special Project Warranty: Roofing Installer's warranty, on warranty form at end of this Section, signed by roofing Installer, covering Work of this Section, in which roofing Installer agrees to repair or replace components of asphalt shingle roofing that fail in materials or workmanship within the following warranty period:
   1. Warranty Period: two years from date of Substantial Completion.

1.9 EXTRA MATERIALS
A. Furnish extra materials described below that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
   1. Asphalt Shingles: 100 sq. ft of each type, in unbroken bundles.

PART 2 - PRODUCTS

2.1 MANUFACTURERS
A. In other Part 2 articles where titles below introduce lists, the following requirements apply to product selection:
   1. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, products specified.

2.2 GLASS-FIBER-REINFORCED ASPHALT SHINGLES

1. Available Products:
   a. GAF Materials Corporation - Timber-line
   b. Certainteed
   c. Owens Corning

2. Butt Edge: Straight cut.
3. Strip Size: Manufacturer's standard.
4. Algae Resistance: Granules treated to resist algae discoloration.
5. Color and Blends: From manufacturer's standard color samples.

B. Hip and Ridge Shingles: Manufacturer's standard units to match asphalt shingles.

2.3 UNDERLAYMENT MATERIALS


2. As recommended by:
   a. HPR Aquashield by The Garland Company or approved equal.

2.4 RIDGE VENTS

A. Flexible Ridge Vent: Manufacturer's standard compression-resisting, three-dimensional open-nylon or polyester-mat filter bonded to a nonwoven, nonwicking geotextile fabric cover.

1. Available Products:
   a. GAF Materials Corporation; Cobra.
   b. Certainteed
   c. Owens Corning

2. Minimum Net Free Area: 4” min.
3. Width: Length of ridge.
4. Thickness: 1-1/2” min. thickness.

2.5 ACCESSORIES

A. Asphalt Roofing Cement: ASTM D 4586, Type II, asbestos free.

B. Roofing Nails: ASTM F 1667; aluminum, stainless-steel, copper, or hot-dip galvanized steel wire shingle nails, minimum 0.120-inch- (3-mm-) diameter, barbed shank, sharp-pointed, with a minimum 3/8-inch- (9.5-mm-) diameter flat head and of sufficient length to penetrate 3/4 inch (19 mm) into solid wood decking or extend at least 1/8 inch (3 mm) through OSB or plywood sheathing.

1. Where nails are in contact with metal flashing, use nails made from same metal as flashing.
2.6 METAL FLASHING AND TRIM

A. Sheet Metal Flashing and Trim: Comply with requirements in Division 7 Section "Sheet Metal Flashing and Trim."

1. Sheet Metal: aluminum per Section 07600.

PART 3- EXECUTION

3.0 EXAMINATION

1. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of work.

1. Examine roof sheathing to verify that sheathing joints are supported by framing and blocking or metal clips and that installation is within flatness tolerances.

2. Verify that substrate is sound, dry, smooth, clean, sloped for drainage, and completely anchored; and that provision has been made for flashings and penetrations through asphalt shingles.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.1 UNDERLAYMENT INSTALLATION

1. Adhering Sheet Underlayment: Install self-adhering sheet underlayment, wrinkle free, on entire roof deck. Comply with low-temperature installation restrictions of underlayment manufacturer if applicable. Install at locations indicated on Drawings, lapped in direction to shed water. Lap sides not less than 3-1/2 inches (89 mm). Lap ends not less than 6 inches (150 mm) staggered 24 inches (600 mm) between courses. Roll laps with roller. Cover underlayment within seven days.

3.2 METAL FLASHING INSTALLATION

2. General: Install metal flashings and other sheet metal to comply with requirements in Division 7 Section "Sheet Metal Flashing and Trim."

C. Install metal flashings according to recommendations in ARMA’s "Residential Asphalt Roofing Manual" and asphalt shingle recommendations in NRCA’s "The NRCA Roofing and Waterproofing Manual."

D. Apron Flashings: Extend lower flange over and beyond each side of downslope asphalt shingles and up the vertical surface.

E. Step Flashings: Install with a headlap of 2 inches and extend over the underlying asphalt shingle and up the vertical surface. Fasten to roof deck only.

F. Cricket Flashings: Install against the roof-penetrating element extending concealed flange beneath upslope asphalt shingles and beyond each side.

G. Open Valley Flashings: Install centrally in valleys, lapping ends at least 8 inches in direction to shed water. Fasten upper end of each length to roof deck beneath overlap.
1. Secure hemmed flange edges into metal cleats spaced 2 inches apart and fastened to roof deck.

H. Rake Drip Edges: Install rake drip edge flashings over underlayment and fasten to roof deck.

I. Eave Drip Edges: Install eave drip edge flashings below underlayment and fasten to roof sheathing.

J. Pipe Flashings: Form flashing around pipe penetrations and asphalt shingles. Fasten and seal to asphalt shingles as recommended by manufacturer.

2.3 ASPHALT SHINGLE INSTALLATION


B. Install starter strip along lowest roof edge, consisting of an asphalt shingle strip with tabs removed with self-sealing strip face up at roof edge.
   1. Extend asphalt shingles 1/2 inch over fascia at eaves and rakes.
   2. Install starter strip along rake edge.

C. Install first and remaining courses of asphalt shingles stair-stepping diagonally across roof deck with manufacturer's recommended offset pattern at succeeding courses, maintaining uniform exposure.

D. Fasten asphalt shingle strips with a minimum of five roofing nails located according to manufacturer's written instructions.
   1. When ambient temperature during installation is below 50 deg F, seal asphalt shingles with asphalt roofing cement spots.

E. Ridge Vents: Install continuous ridge vents over asphalt shingles according to manufacturer's written instructions. Fasten with roofing nails of sufficient length to penetrate sheathing.

F. Ridge and Hip Cap Shingles: Maintain same exposure of cap shingles as roofing shingle exposure. Lap cap shingles at ridges to shed water away from direction of prevailing winds. Fasten with roofing nails of sufficient length to penetrate sheathing.
   1. Fasten ridge cap asphalt shingles to cover ridge vent without obstructing airflow.

END OF SECTION
PART 1 - GENERAL

1.1 SUMMARY:

A. Scope of Work:
   1. POMO 6.
      a. Remove all roofing and sheet metal to the structural deck.
      b. Science lab fume hood blowers:
         i. Disconnect fume hoods and move.
         ii. Roof area should be completely clear of equipment.
         iii. Raise all curbs and sheet metal connections 6”.
         iv. Frame in sump and install new roof drain and new roof drain overflow.
         v. Install new 4” cast iron pipe and hangers in ceiling space and daylight through north wall for both primary drain and overflow. Assume removal of drop ceiling in classroom and scaffolding inside classroom.
         vi. Roof walls.
         vii. Install new aluminum curb caps.
         viii. Reinstall units and seal all connections.
         ix. Install new
c. Mechanically attach ½” wood fiber to the deck.
   d. Install base plies.
   e. Install modified membrane.
   f. Install new edge metal.
   g. Coat all roofing.
   2. Walkways
      a. Powerwash covered walkways
      b. Seal all edges with aluminized mastic.
      c. Prime all metal with Rust-Go Primer.
      d. Apply 2 applications of coating.

B. Related Documents: The Conditions of the Contract and Division 1 apply to this section as fully as if repeated herein.

1.2 REFERENCES:

A. The editions of the American Society for Testing and Materials (ASTM) Standards referenced herein apply to the work only to the extent specified by the references thereto.

1.3 SUBMITTALS:

A. Product Data: Submit certificates of compliance, manufacturer’s specifications, installation instructions, and general recommendations for each roofing and insulation material required.

   1. Submit certificates of conformance, certified test reports, or other data indicating conformance of installation with the applicable reference standards.

B. Certificates: Applicator shall provide letter certifying that work has been installed in accordance with specifications and manufacturer’s written instructions.
C. Submittal procedures and quantities are specified in Section 01334.

D. Warranty: sample warranty of single source labor and material warranty for asphalt roofing for a period of 20 years.

E. Submit roof plans, details, specifications and wind uplift. Wind uplift shall be per ASCE 7-05.

F. The Contract is based on the standards of quality established in the Contract Documents. To give all bidders equal opportunity, use of any materials or methods other than those specified will require the proper submittal information and must be pre-approved in written addenda 10 days prior to bid due date. Substitution requests must be a full submittal package stamped by a professional California civil or structural engineer to show all wind uplift and fire rating requirements have been met. Request can only be made by prime contractors.

1.4 QUALITY ASSURANCE:

A. Manufacturer: Obtain primary roofing materials from a single manufacturer who specializes in this particular field of roofing and who has been so engaged, successfully, for a period of at least 10 years immediately prior to this contract. Provide secondary materials as recommended by manufacturer of primary materials.

B. Applicator: A firm with not less than 5 years of successful experience in installation of roofing systems similar to those required for this project and who is acceptable to or licensed by manufacturer of primary roofing materials.

C. UL Listing: Provide labeled materials which have been tested and listed by UL in "Building Materials Directory" for application indicated, with UL or Warnoch Hersey Class A fire rated system for roof slopes indicated.

D. Pre-installation Conference: Before installing roofing system, conduct conference at Project site to comply with requirements of Section 01312. Notify participants at least 5 working days before conference.

1. Meet with Owner; Architect; roofing installer, materials manufacturer, the sheet metal installer, the roofing accessories installer, the mechanical and electrical sub-contractors, Contractor, testing laboratory in attendance.

2. Review methods and procedures related to roofing installation, including manufacturers written instructions.

3. Examine deck substrate conditions and finishes for compliance with requirements, including flatness and fastening.

4. Review flashings, special roofing details, roof drainage, roof penetrations, equipment curbs, and condition of other construction that will affect roofing.

5. Review governing regulations and requirements for insurance, certificates, and inspection and testing.

6. Review temporary protection requirements for roofing system during and after installation.
7. Document proceedings, including corrective measures or actions required, and furnish copy of record to each participant.

1.5 DELIVERY, STORAGE AND HANDLING:

A. Deliver materials to the site in their original unbroken containers or packages bearing the manufacturers name, and brand designation. In addition, liquid materials shall bear the date of manufacture and manufacturers recommended shelf life.

B. Store materials at the site in a dry location, raised above the ground and protected from physical damage. Store materials, other than sheet roofing, at temperatures between 40 degrees F and 80 degrees F. Do not store materials past their shelf life.

C. If materials are stored on the roof, distribute the load so as not to exceed the designed live load limits of the roof construction.

1.6 PROJECT CONDITIONS:

A. Do not install the insulation and sheet roofing during high winds; wet, damp or foggy weather or when there is moisture or visible dampness on the substrate surface.

1.7 GUARANTEE:

A. Manufacturer’s warranty shall be a total system labor and material warranty including all built up bituminous roofing. This warranty shall provide the Owner with a single source of liability by guaranteeing the waterproofing system against leaks for a period of 20 years.

1.8 MANUFACTURER INSPECTIONS

A. Weekly inspection reports, including photos, by the roofing system manufacturer’s technical representative to the Owner and the Architect during installation.

PART 2 - PRODUCTS

2.1 MATERIALS:

A. Use basic products of one manufacturer throughout. Materials which are not available from the basic manufacturer shall be approved by him. In all cases, materials and application shall be in accordance with the requirements of this specification.

B. Product names for the modified bitumen built up roof system and waterproofing materials used in this section are based on performance requirements and characteristics of the Stressply Plus system from materials manufactured by the Garland Company and form the basis of the contract documents. When a particular trade name or performance standard is specified it shall be indicative of a standard required.

C. MODIFIED BITUMENOUS MATERIALS:

1. Base ply: 80 mil SBS (Styrene-Butadiene-Styrene) smooth surfaced rubber self adhesive modified roofing membrane reinforced with a fiberglass scrim

2. The modified membrane will be where mineral surfacing is required:
145 mil SBS (Styrene-Butadiene-Styrene) mineral surfaced self adhesive rubber modified roofing membrane reinforced with a fiberglass and polyester scrim with the performance characteristics listed below.

3. Modified Membrane performance criteria

   Properties: FINISHED MEMBRANES
   TENSILE STRENGTH (ASTM D-5147)
   2 in/min. @ 73.4 ± 3.6 °F   MD 200 lbf/in.  CMD 200 lbf/in.
   ELONGATION at MAXIMUM TENSILE (ASTM D-5147)
   2 in/min. @ 73.4 ± 3.6° F  MD 6.0%
   TEAR STRENGTH (ASTM D-5147)
   2 in/min. @ 73.4 ± 3.6° F  MD 300 lbf.       CMD 300 lbf.
   LOW TEMPERATURE FLEX. (ASTM D-5147) passes -30 °F
   Rubber content: 18% min.

4. All flashings will 80 mil SBS modified membrane base flashing ply covered by an additional layer of mineral surfaced modified bitumen membrane.

D. BITUMINOUS MATERIALS


2. Asphalt Roofing Mastic: V.O.C. compliant, ASTM D-2822, Type II.

3. Aluminunized mastic: Silverflash.

2.2 AUXILIARY MATERIALS:

A. Nails and Fasteners: Non-ferrous metal or galvanized steel, except that hard copper nails shall be used with copper; aluminum or stainless steel nails shall be used with aluminum; and stainless steel nails shall be used with stainless steel. Nails and fasteners shall be flush-driven through flat metal discs of not less than 1-inch diameter. Metal discs may be omitted when one piece composite nails or fasteners with heads not less than 1-inch diameter are used.

B. Cover board: ½” coated wood fiber, as approved by roofing system manufacturer.

C. Insulation fasteners: wood screws with 3” plastic plates, as approved by roofing system manufacturer.

D. Membrane primer: SA Primer by The Garland Company.

E. Title 24 approved coating: Pyramic.

F. Rust inhibitive primer: Rust-Go.

G. Soft metal flashing: 2lb lead.

PART 3 - INSTALLATION

3.1 GENERAL INSTALLATION REQUIREMENTS:
A. Cooperate with manufacturer, inspection and test agencies engaged or required to perform services in connection with installing modified bitumen roofing system.

B. Protect other work from spillage of modified bitumen roofing materials, and prevent liquid materials from entering or clogging drains and conductors. Replace or restore other work damaged by installations of modified bituminous roofing system work.

C. Coordinate installing roofing system components so that insulation and roofing plies are not exposed to precipitation or left exposed overnight. Provide cut offs at end of each day's work to cover exposed ply sheets with joints and edges sealed with roofing cement. Remove cut offs immediately before resuming work.

D. Substrate Joint Penetrations: Prevent bitumen from penetrating substrate joints, entering building, or damaging roofing system components or adjacent building construction.

E. Apply roofing materials as specified herein unless recommended otherwise by manufacturer's instructions. Keep roofing materials dry before and during application. Do not permit phased construction. Complete application of roofing plies, modified sheet and flashing in a continuous operation. Begin and apply only as much roofing in one day as can be completed that same day.

3.2 INSTALLATION

A. Mechanically attach insulation to wood deck using fastening pattern meeting UL1-90 wind uplift requirements.

B. Mechanically attach base ply to all walls.

C. Prime all surfaces with SA Primer prior to install of sheets.

3.3 MEMBRANE APPLICATION:

A. Base ply: Install (2) two self adhesive base ply sheets shingled uniformly to achieve two plies throughout over the prepared substrate. Shingle in proper direction to shed water on each area of roof.

B. Lap ply sheet ends eight inches. Stagger end laps twelve inches minimum.

C. Extend plies two inches beyond top edges of cants at wall and projection bases.

D. The modified membrane shall then be solidly bonded to the base layers with using a weighted roller.

E. Apply pressure to all seams to ensure that the laps are solidly bonded to substrate.

H. Subsequent rolls of modified shall be installed across the roof as above with a minimum of 4" side laps and 8" end laps. The end laps shall be staggered. The modified membrane shall be laid in the same direction as the underlayers, but the laps shall not coincide with the laps of the base layers.

I. Seal top of flashings at end of every day.

3.4 FLASHING MEMBRANE INSTALLATION (GENERAL)
A. All curb, wall and parapet flashings shall be sealed with an application of mastic and mesh on a daily basis. No condition should exist that will permit moisture entering behind, around, or under the roof or flashing membrane.

B. Prepare all walls, penetrations and expansion joints to be flashed and where shown on the drawings, with asphalt primer at the rate of one gallon per 100 square feet. Allow primer to dry tack free.

C. The modified membrane will be used as the flashing membrane and will be adhered to an underlying base flashing ply per manufacturer’s recommendations and nailed off 8” O.C. at all vertical surfaces.

D. The entire sheet of flashing membrane must be solidly adhered to the substrate.

E. Seal all vertical laps of flashing membrane with a three course application of Flashing Bond and fiberglass mesh.

F. Counter flashing, cap flashings, expansion joints, and similar work to be coordinated with modified bitumen roofing work are specified in other sections.

G. Roof accessories, miscellaneous sheet metal accessory items, including piping vents and other devices to be coordinated with modified bituminous roof system work are in other sections.

H. Seal edge of roof with aluminized mastic.

3.5 SURFACING

A. Coat all roofing at 1.5 gal. per sq. per coat. Apply 2 coats.

3.6 CLEAN UP

A. Clean up work soiled in the performance of work under this section. Restore or replace surfaces which have been damaged by work under this section.

END OF SECTION
PART 5
SECTION 07600
SHEET METAL FLASHING AND TRIM

PART 1  GENERAL

1.1 SECTION INCLUDES

A. Fabricated sheet metal items, including flashings, metal edges, gutters, scuppers, counterflashings, and other items indicated in schedule and as follows:

1. Metal edge with continuous cleats.
2. New reglet mounted counterflushing.
3. Skirt flashing at curbs.
4. Gutters, match existing dimensions.
5. Gutter screens and stainless steel wire bulb strainers.
6. Curb caps
7. Reseal around all acrylic windows with polyurethane sealant.

1.2 RELATED REQUIREMENTS

A. Section 07220 – ROOF INSULATION
B. Section 07310 – ASPHALT SHINGLE ROOFING
C. Section 07550 – MODIFIED BITUMEN.

1.3 REFERENCE STANDARDS

A. ASTM A 653/A 653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
B. ASTM A 666 - Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar.
C. ASTM A792 Steel Sheet, Aluminum-Zinc Alloy-Coated, by the Hot-Dip Process
E. ASTM B486 Paste Solder
J. FS QQ-L-201 Specification for Lead Sheet

1.4 SUBMITTALS

A. See Section 01300 - Submittals, for submittal procedures.
B. Shop Drawings: Indicate material profile, jointing pattern, jointing details, fastening methods, flashings, terminations, and installation details.
   1. For manufactured and shop fabricated gravel stops, fascia, scuppers, and all other sheet metal fabrications.
   2. Indicate type, gauge and finish of metal.

C. Product data: Provide manufacturer's specification data sheets for each product:
   1. Metal material characteristics and installation recommendations.
   2. Submit color chart prior to material ordering and/or fabrication so that equivalent colors to those specific can be approved.

D. Manufacturer's installation instructions for reglets.

E. Samples: Submit two samples 8x10 inch in size illustrating metal finish color.
   1. Submit two samples, 12 x 12 inch in size illustrating typical external corner, internal corner, and valley, junction to vertical dissimilar surface, material and finish.

F. Certification:
   1. Submit roof manufacturer's certifications that metal fasteners furnished are acceptable to roof manufacturer.
   2. Submit roof manufacturer's certification that metal furnished is acceptable to roofing manufacturer as a component of roofing system and is eligible for roof manufacturer's system warranty.
   3. Submit certification that metal and fastening system furnished is Tested and Approved by Factory Mutual for 1-90 Wind Up-Lift Requirements.

G. Provide approval letters from metal manufacturer for use of their metal within this particular roofing system type.

H. Proof of fabricator and installer qualifications.

1.5 QUALITY ASSURANCE

A. Perform work in accordance with SMACNA Architectural Sheet Metal Manual requirements, except as otherwise indicated.

B. Manufacturer's Warranty: Pre-finished metal material shall require a written 20-year non-prorated warranty covering fade, chalking and film integrity. The material shall not show a color change greater than 5 NBS color units per ASTM D-2244 or chalking excess of 8 units per ASTM D-659. If either occurs material shall be replaced per warranty, at no cost to the Owner.

C. Contractor's Warranty: The Contractor shall provide the Owner with a notarized written warranty assuring that all sheet metal work including caulking and fasteners to be water-tight and secure for a period of five years from the date of final acceptance of the building. Warranty shall include all materials and workmanship required to repair any leaks that develop, and make good any damage to other work or equipment caused by such leaks or the repairs thereof.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials in manufacturer's original, unopened containers or packages with labels intact and legible.

B. Stack material to prevent twisting, bending, and abrasion, and to provide ventilation. Slope metal sheets to ensure drainage.

C. Prevent contact with materials that could cause discoloration or staining.

PART 2 PRODUCTS
2.1 SHEET MATERIALS
   A. Sheet metal material: 0.050" thickness aluminum, 3105-H14 alloy, smooth as per ASTM B209-96 referenced standards for specific applications indicated by IMETCO or approved equal.

2.2 ACCESSORIES
   A. Fasteners:
      1. Corrosion resistant screw fastener as recommended by metal manufacturer.
      2. Fastening shall conform to Factory Mutual 1-90 requirements or as stated on section details, whichever is more stringent.
   B. Plastic Cement: ASTM D 4586, Type I.
   C. Rust inhibitive primer: Rust-Go Primer by The Garland Company or approved equal.
   D. Paint: Rust Go White.
   E. Nailers: Douglas fir.
   F. Gutter brackets: double thickness of gutter material.
   G. Sealant: Tuff Stuff by The Garland Company.
   H. Wire bulb strainers: stainless steel.
   I. Roof drain and overflow drain: cast iron from Zurn.
   J. Drain pipe: cast iron.
   K. Gutter screens: powder coated aluminum.
      1. www.greengutterscreens.com or approved equal.

2.3 FABRICATION - GENERAL
   A. Fabricate in accordance with referenced standards. Form sections true to shape, accurate in size, square, and free from distortion or defects. Form pieces as recommended by SMACNA standard for conditions required.
      1. Provide reinforcements and supports as required for secure anchorage.
      2. Make joints rigid. Seams mechanically strong and soldered or sealed to make watertight.
      3. Fabricate corners in one piece with legs extending 30-inches each way to field joint. Lap, rivet, and solder or seal corner seams watertight.
      4. Turn up “end dam” flanges at ends of opening sill flashing pieces, lap with wall flashing and membranes to shed water.
      5. Fabricate cleats of same material as sheet, minimum 3/4 inches wide, interlockable with sheet.
      6. Hem exposed edges on underside 1/2 inch; miter and seam corners.
      7. Solvent clean all sheet metal. Coat surfaces to be in contact with roofing or otherwise concealed with specified asphaltic paint; 0.015-inch minimum uniform thickness.
   B. Form pieces in longest possible lengths.
   C. Hem exposed edges on underside 1/2 inch; miter and seam corners.
   D. Form material with flat lock seams, except where otherwise indicated. At moving joints, use sealed lapped, bayonet-type or interlocking hooked seams.
   E. Fabricate corners from one piece with minimum 18 inch long legs; seam for rigidity, seal...
Section 07600 - SHEET METAL FLASHING AND TRIM - 4

F. Fabricate vertical faces with bottom edge formed outward 1/4 inch (6 mm) and hemmed to form drip.

G. Form gutters in minimum 20’ sections.

2.4 ROOFTOP EQUIPMENT

A. Sleepers: Portals Plus.

2.5 ROOF-RELATED SHEET METAL AND FLASHINGS

A. Roof-Related Sheet Metal and Flashings: As indicated, as specified in related sections, as required by roofing material manufacturers and referenced standards. Coordinate work of this section with related sections. Provide complete systems without conflict or omission.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify roof openings, curbs, pipes, sleeves, ducts, and vents through roof are solidly set, reglets in place, and nailing strips located.

B. Verify roofing termination and base flashings are in place, sealed, and secure.

C. Beginning of installation means acceptance of existing conditions.

D. Field measure site conditions prior to fabricating work.

3.2 PREPARATION

A. Install starter and edge strips, and cleats before starting installation.

B. Back paint concealed metal surfaces with protective backing paint to a minimum dry film thickness of 15 mil.

3.3 INSTALLATION

A. Install work watertight, without waves, warps, buckles, fastening stress, or distortion, allowing for expansion and contraction. Conform to referenced standards. Make metal joints watertight.

B. Fastening of metal to walls and wood blocking shall comply with SMACNA Architectural Sheet Metal Manual, Factory Mutual 1-90 wind uplift specifications and/or manufacturer's recommendations whichever is of the highest standard.

C. All accessories or other items essential to the completeness of sheet metal installation and water tight envelope of the building, whether specifically indicated or not, shall be provided.

D. Reglets: Install in accordance with manufacturer's installation instructions.

E. Metal fascia and copings shall be secured to wood nailers at the bottom edge with a continuous cleat. Cleats shall be at least one gauge heavier than the metal it secures.

F. Install Sheet Membrane Waterproofing at closure flanges, under metal copings, caps and platforms; fully adhered, free of voids, blisters and buckling; roll as soon as practical following layout. Minimize exposure time to that period recommended by the manufacturer.

G. Flashing: Joints at 10-foot maximum spacing and at 2-1/2-feet from corners. Butt joints with 3/16-inch space centered over matching 8-inch long backing plate with sealer tape in

with sealant.
laps.

H. Flanged flashings and roof accessories: Set on continuous sealer tape. Nail flanges through sealer tape and at 3-inch maximum spacing.

I. Isolate metal from dissimilar metal with 2 coats of specified asphaltic paint, sealer tape or other approved coating, specifically made to stop electrolytic action. Use only stainless steel fasteners to connect isolated dissimilar metals.

J. Joints, fastenings, reinforcements and supports: Sized and located as required to preclude distortion or displacement due to thermal expansion and contraction. Conceal fastenings wherever possible.

K. Secure flashings in place using concealed fasteners. Use exposed fasteners only where permitted.

L. Flexible Flashing Installation:
   1. Prime substrates as recommended by flexible flashing manufacturer, allow to dry.
   2. Install flexible flashings in maximum feasible lengths to minimize lap joints.
   3. Peel release paper from roll to expose rubberized asphalt and position flashing to center over joint location before applying. Move along opening or joint, being careful to put flashing as evenly as possible over the opening. Avoid fishmouths.
   4. Press flashing firmly into place with heavy hand pressure. Ensure continuous and intimate contact with substrate.
   5. If wrinkles develop, carefully cut out affected area and replace as outlined above.

M. Apply plastic cement compound between metal flashings and felt flashings.

N. Fit flashings tight in place. Make corners square, surfaces true and straight in planes, and lines accurate to profiles.

O. Seal prefinished metal joints watertight.

P. Solder other metal joints for full metal surface contact. After soldering, wash metal clean with neutralizing solution and rinse with water.

Q. Connect downspouts and rain water leaders to storm sewer system. Seal connection watertight.

R. Install gutter screens on all gutters.

3.4 FIELD QUALITY CONTROL

A. Inspection will involve surveillance of work during installation to ascertain compliance with specified requirements.

B. Tolerances
   1. Exposed surfaces: Free of dents, scratches, abrasions, or other visible defects; clean, ready for painting.
   2. Set flashings and sheet metal to straight, true lines with exposed faces aligned in plane as indicated.

3.5 SHOP FABRICATED SHEET METAL

A. Installing Contractor shall be responsible for determining if the sheet metal systems are in general conformance with roof manufacturer's recommendations.

B. Metal work shall be shop fabricated to configurations and forms in accordance with recognized sheet metal practices.

C. Hem exposed edges.
D. Angle bottom edges of exposed vertical surfaces to form drip.

E. All corners for sheet metal shall be lapped with adjoining pieces fastened and set in sealant.

F. Joints for gravel stop fascia system, cap flashing, and surface-mount counterflushing shall be formed with a 1/4" opening between sections. The opening shall be covered by a cover plate or backed by an internal drainage plate formed to the profile of fascia piece. The cover plate shall be embedded in mastic, fastened through the opening between the sections and loose locked to the drip edges.

G. Install sheet metal to comply with Architectural Sheet Metal manual, Sheet Metal and Air Conditioning Contractor’s National Associations, Inc.

END OF SECTION
### Table 1 - Asbestos Survey Results

<table>
<thead>
<tr>
<th>Sample No.</th>
<th>Bldg. No.</th>
<th>Material Location</th>
<th>Sample Description</th>
<th>Approximate Quantity</th>
<th>Irritable Y/N</th>
<th>Condition</th>
<th>Asbestos Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>MC-ASB-215414</td>
<td>13</td>
<td>Room 126</td>
<td>Wallpaper</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>ND</td>
</tr>
<tr>
<td>MC-ASB-215442</td>
<td>13</td>
<td>Room 236</td>
<td>Wallpaper</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>ND</td>
</tr>
<tr>
<td>MC-ASB-215899</td>
<td>13</td>
<td>Room 224</td>
<td>Wallpaper</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>ND</td>
</tr>
<tr>
<td>MC-ASB-215416</td>
<td>13</td>
<td>Room 220</td>
<td>Carpet mastic</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>ND</td>
</tr>
<tr>
<td>MC-ASB-215490</td>
<td>13</td>
<td>Room 237</td>
<td>Carpet mastic</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>ND</td>
</tr>
<tr>
<td>MC-ASB-215437</td>
<td>13</td>
<td>Room 238</td>
<td>Carpet mastic</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>ND</td>
</tr>
<tr>
<td>MC-ASB-215415</td>
<td>13</td>
<td>Room 236</td>
<td>2' x 4' ACT and Associated Mastic</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>ND</td>
</tr>
<tr>
<td>MC-ASB-215443</td>
<td>13</td>
<td>Room 236</td>
<td>2' x 4' ACT and Associated Mastic</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>ND</td>
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<tr>
<td>MC-ASB-215412</td>
<td>13</td>
<td>Room 236</td>
<td>2' x 4' ACT and Associated Mastic</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>ND</td>
</tr>
<tr>
<td>MC-ASB-215890</td>
<td>13</td>
<td>Roof Adjacent to Room 220</td>
<td>Roofing Felt/Vapor Barrier</td>
<td>4,000 SF</td>
<td>N</td>
<td>Good</td>
<td>20% CH</td>
</tr>
<tr>
<td>MC-ASB-216002</td>
<td>13</td>
<td>Room 106 Exterior</td>
<td>Beige Linoleum</td>
<td>500 SF</td>
<td>N</td>
<td>Good</td>
<td>20% CH</td>
</tr>
<tr>
<td>MC-ASB-216005</td>
<td>13</td>
<td>Room 106 Exterior</td>
<td>Beige Linoleum</td>
<td>See MC-ASB-216002</td>
<td>N</td>
<td>Good</td>
<td>Assumed (see MC-ASB-216002 results)</td>
</tr>
<tr>
<td>MC-ASB-216004</td>
<td>13</td>
<td>Room 106 Exterior</td>
<td>Beige Linoleum</td>
<td>See MC-ASB-216002</td>
<td>N</td>
<td>Good</td>
<td>Assumed (see MC-ASB-216002 results)</td>
</tr>
</tbody>
</table>

### Building 14 - Miwok Cluster

<table>
<thead>
<tr>
<th>Sample No.</th>
<th>Bldg. No.</th>
<th>Material Location</th>
<th>Sample Description</th>
<th>Approximate Quantity</th>
<th>Irritable Y/N</th>
<th>Condition</th>
<th>Wallboard - ND</th>
</tr>
</thead>
<tbody>
<tr>
<td>MC-ASB-215249</td>
<td>14</td>
<td>Room 154</td>
<td>Wallboard/Joint Compound</td>
<td>10,000 SF</td>
<td>Y</td>
<td>Good</td>
<td>Assumed (see MC-ASB-215249 results)</td>
</tr>
<tr>
<td>MC-ASB-215257</td>
<td>14</td>
<td>Room 152</td>
<td>Wallboard/Joint Compound</td>
<td>See MC-ASB-215429</td>
<td>Y</td>
<td>Good</td>
<td>Assumed (see MC-ASB-215249 results)</td>
</tr>
<tr>
<td>MC-ASB-215255</td>
<td>14</td>
<td>Room 146</td>
<td>Wallboard/Joint Compound</td>
<td>See MC-ASB-215429</td>
<td>Y</td>
<td>Good</td>
<td>Assumed (see MC-ASB-215249 results)</td>
</tr>
<tr>
<td>MC-ASB-215253</td>
<td>14</td>
<td>Room 154</td>
<td>2' x 4' ACT</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>ND</td>
</tr>
<tr>
<td>MC-ASB-215215</td>
<td>14</td>
<td>Room 146</td>
<td>2' x 4' ACT</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>ND</td>
</tr>
<tr>
<td>MC-ASB-215237</td>
<td>14</td>
<td>Room 152</td>
<td>2' x 4' ACT</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>ND</td>
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<tr>
<td>MC-ASB-215252</td>
<td>14</td>
<td>Room 154</td>
<td>4-inch Cove Base and Associated Mastic</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>ND</td>
</tr>
<tr>
<td>MC-ASB-215259</td>
<td>14</td>
<td>Room 152</td>
<td>4-inch Cove Base and Associated Mastic</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>ND</td>
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<tr>
<td>MC-ASB-215254</td>
<td>14</td>
<td>Room 146</td>
<td>4-inch Cove Base and Associated Mastic</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>ND</td>
</tr>
</tbody>
</table>

*ASSUME BLG. #17 IS SIMILAR 6-26-15*
### Table 2 - Lead-Based Paint Survey Results

<table>
<thead>
<tr>
<th>Sample ID</th>
<th>Bldg. No.</th>
<th>Sample Location</th>
<th>Lead-Containing Surface (LCS) (e.g., door, wall, frame)</th>
<th>Sample Description (Color / # of Layers / Substrate)</th>
<th>Condition</th>
<th>Estimate of Surface Area</th>
<th>Total Lead (mg/kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MC-LP-215491</td>
<td>13</td>
<td>Exterior of Building/Southwest</td>
<td>Wall</td>
<td>Brown/2/Wood</td>
<td>Intact</td>
<td>100 SF</td>
<td>&lt;39.9</td>
</tr>
<tr>
<td>MC-LP-215413</td>
<td>13</td>
<td>Room 128</td>
<td>Fire Box Top</td>
<td>White/2/Metal</td>
<td>Intact</td>
<td>100 SF</td>
<td>&lt;147</td>
</tr>
<tr>
<td>MC-LP-215260</td>
<td>14</td>
<td>Exterior of Building/Southwest</td>
<td>Wall</td>
<td>Brown/2/Metal</td>
<td>Intact</td>
<td>100 SF</td>
<td>&lt;96.5</td>
</tr>
<tr>
<td>MC-LP-215439</td>
<td>15</td>
<td>Room 189</td>
<td>Pipe</td>
<td>Red/2/Metal</td>
<td>Intact</td>
<td>100 SF</td>
<td>&lt;158</td>
</tr>
<tr>
<td>MC-LP-211629</td>
<td>15</td>
<td>Room 189</td>
<td>Wall</td>
<td>Yellow/2/Wallboard</td>
<td>Intact</td>
<td>100 SF</td>
<td>59</td>
</tr>
<tr>
<td>MC-LP-215706</td>
<td>16</td>
<td>Exterior Wall</td>
<td>Wall</td>
<td>Beige/2/Wood</td>
<td>Intact</td>
<td>100 SF</td>
<td>&lt;158</td>
</tr>
<tr>
<td>IL-LP-218615</td>
<td>17</td>
<td>Second Floor - South Classroom</td>
<td>Wall</td>
<td>Cream/2/Wallboard</td>
<td>Intact</td>
<td>100 SF</td>
<td>&lt;219</td>
</tr>
<tr>
<td>IL-LP-218613</td>
<td>17</td>
<td>Exterior Wall</td>
<td>Wall</td>
<td>Brown/2/Wood</td>
<td>Intact</td>
<td>100 SF</td>
<td>&lt;64.5</td>
</tr>
</tbody>
</table>

**Building 13 - Miwok Cluster**

**Building 14 - Miwok Cluster**

**Building 15 - Miwok Cluster**

**Building 16 - Miwok Cluster**

**Building 17 (Library) - Miwok Cluster**

**NOTES:**
- Total lead analyzed in accordance with EPA test method 6010
- mg/kg = Milligrams per kilogram
- SF = Square feet
- LF = Linear feet

Estimated quantities are not intended for use in bidding calculations.

The LCS presented in this table are materials that meet or exceed the criteria of Cal DHS. LCS in this table do not necessarily identify all material that could contain lead at concentrations less than 1.0 mg/cm2 or 5,000 ppm which could trigger the Cal OSHA lead in construction standard.
BUILDING 17 ROOF PLAN

NO SCALE

A-1
6/26/15