Kentfield Learning Resources Center
Boiler Replacement
Project #14-0127

Marin Community College District

Mandatory Conference/Walk: Friday, February 7, 2014, at 10:30 a.m.

Proposal Due Date: received by 3:00 p.m. Tuesday, February 18, 2014
TABLE OF CONTENTS

DIVISION 01 — PROCUREMENT AND CONTRACTING REQUIREMENTS

1.1. Notice Inviting Bids
1.2. Instructions to Bidders
1.3. Bid Proposal Form
1.4. Subcontractor List Form
1.5. Workers' Compensation Certificate
1.6. Non-collusion Affidavit
1.7. Bid Bond
1.8. W-9
1.9. Bidders' Questionnaire
1.1. Contract
1.2. General Conditions
1.3. Notice of Award
1.4. Notice to Proceed

2. DIVISION 02 — GENERAL REQUIREMENTS

2.1. Summary
2.2. Project Management and Coordination
2.3. Construction Progress Documentation
2.4. Quality Requirements
2.5. References
2.6. Temporary Facilities and Controls
2.7. Product Requirements
2.8. Execution Requirements
2.9. Cutting and Patching
2.10. Construction Waster Management
2.11. Project Record Documents
2.12. Operation and Maintenance Data

3. DIVISION 03 – PLUMBING

3.1. Valves-Plumbing
3.2. Portable Water Piping
3.3. General Mechanical Provisions
3.4. Fuel-Gas Piping

4. DIVISION 04 – ELECTRICAL

4.1. Electrical General Requirements and Interior Painting
4.2. Electrical Identification

END of TABLE OF CONTENTS
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 Proposals for the Kentfield Learning Resources Center Boiler Replacement Project #14-0127, (“Project”) up to, but not later than, 3:00 p.m. Tuesday, February 18, 2014, and will evaluate Proposals in the following week to select the “Best Value” to the District. 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 Room 130, 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.

2. 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 floor 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, Novato, California and will be given out at the mandatory walkthrough.

3. 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.

4. The successful bidder shall comply with the provisions 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. 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.

5. 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.

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

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 No bid may be withdrawn for a period of sixty (60) days after the date set for the receiving of bids except as provided pursuant to Public Contract Code §§5100 et seq.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

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

10. This contract is not subject to a labor compliance program, as described in the Labor Code.

11. Each bidder shall possess at the time the bid is awarded the following classification(s) of California State Contractor’s license: C4 with lower tier B or C4 (B with lower tier C4) and C10.

12. A mandatory bidders’ conference will be held on Friday, February 7, 2014 at 10:30 a.m. at the Kentfield Campus, Learning Resources Center (LC), Parking Lot #5, 835 College Avenue, Kentfield, California for the purpose of acquainting all prospective bidders with the Contract Documents and the Project site. Failure to attend the conference/walk will result in the disqualification of the bid of the non-attending bidder. Bid Documents will be distributed at the mandatory bidder’s conference.

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

DATED: January 27, 2014

1.2 INSTRUCTIONS TO BIDDERS

1. Each bid submitted to the Marin Community College District (“District”) for the Kentfield
Learning Resources Center Boiler Replacement Project #14-0127, 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, February 18, 2014. 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, Novato, California, 94949.

3. Mandatory Bidders Conference/Walk. A mandatory bidder’s conference/walk will be held on
Friday, February 7, 2014 at 10:30 a.m. at the Kentfield Campus, Learning Resources Center
(LC), Parking Lot #5, 835 College Avenue, Kentfield, California, 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.

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. **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.

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. **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.

10. **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.

11. **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.

12. **Drawings and Specifications.** All drawings, specifications and other documents prepared during the project shall be the exclusive property of the District. Bidders are responsible for preparing drawings based on the Bid Specifications and floor plans.

13. **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.

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

15. **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.

16. **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.

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

18. **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.

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

20. **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.

21. **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.

22. **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.

23. **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.

24. **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.

25. **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.

26. **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.

27. **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.
28 **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.

29. **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.

30. **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.

31. **Contractor's State License Board.** Contractors and Subcontractors are required by law to be licensed and regulated by the California Contractors' License Board.

32. **Fingerprinting.** This Section applicable to K-12 only.

33. **Disabled Veterans Participation Goals.** This Section is applicable to K-12 only.

34. **Labor Compliance Program.** This contract is **X** subject to a labor compliance program, as pursuant to §§1771.5 and 1771.7 of the Labor Code. If this Contract is subject to the requirements of §1771.7 of the Labor Code, the District's labor compliance program shall be part of the Contract Documents and shall include, but not be limited to, the following requirements:

   a. A pre-job conference shall be conducted with the Contractor and Subcontractors to discuss federal and state labor law requirements applicable to the Contract.
   b. Contractors and Subcontractors shall maintain and furnish, at a designated time, a certified copy of each weekly payroll containing a statement of compliance signed under penalty of perjury.
   c. The District shall review, and if appropriate, audit payroll records to verify compliance with Labor Code, Part 7, Chapter 4.
   d. The District shall withhold contract payments when payroll records are delinquent or inadequate.
   e. The District shall withhold contract payments equal to the amount of underpayment and applicable penalties when, after investigation, it is established that underpayment has occurred.
35. **Evaluation and Selection**

**Evaluation Criteria.**

This proposal will be evaluated and select the Best Value to the District. The District reserves the right to select the firm which, in the District's opinion, will provide the most responsive and best value to the District. The District is not bound to award the contract based solely on the lowest bid submitted.

a. **Capacity to Perform** .......................... 25 points

b. **Boiler efficiency** ................................. 30 points

c. **Compatibly with the existing infrastructures** .......................... 30 points

d. **Best value based on overall package.** .......................... 25 points

e. **Piping and piping trim** .......................... 10 points

f. **Proposal** .......................... 10 points

g. **References** .......................... 5 points

**Evaluation Procedure**

a. An Evaluation Committee made up of District staff that will review the proposals submitted and evaluation criteria referenced above. The names of the Evaluation Committee will not be revealed prior to the bid closing. The individual or composite rating and evaluation forms prepared by the Evaluation Committee will not be revealed.

b. The Evaluation Committee will be scheduled to meet the week after the proposals are submitted.

c. The District reserves the right to select the firm which, in the District's opinion, will provide the most responsive and best value to the District. The District is not bound to award the contract based solely on the lowest bid submitted.

d. It is anticipated evaluations and proposals will be completed and the successful firm recommended to the District Board of Trustees by March 11, 2014.

Notwithstanding the method used by the District to determine the Best Value responsible bidder, the District retains the right to add to or deduct from the Contract any of the items included in the bid solicitation.

36. **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.
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 Kentfield Learning Resources Center Boiler Replacement Project #14-0127, (“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 construction of the Project in strict conformity with the Contract Documents, including the Plans and Specifications as follows:

BASE BID:

For the sum of: ____________________________________________________________________________________________

___________________________________________________________________ Dollars ($ ______________________________)

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.

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: _______
Respectfully Submitted,

Company: ______________________________________________

Address: ______________________________________________

______________________________________________

By:   ______________________________________________

(Please Print Or Type)

Signature:  ______________________________________________

Title:   ______________________________________________

Date:  ______________________________________________

Phone:  ______________________________________________

Contractor’s License No: ________________ Expiration Date ________

Required Attachments:

Subcontractor List Form

Non-Collusion Affidavit

Bid Bond (or Cashier’s or Certified Check)

Bidder's Questionnaire

Worker’s Compensation Certificate
1.4 SUBCONTRACTOR LIST FORM

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>
<thead>
<tr>
<th>DESCRIPTION OF WORK</th>
<th>SUBCONTRACTOR NAME</th>
<th>LOCATION OF BUSINESS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
1.5 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.
1.6 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

1.6 - NONCOLLUSION AFFIDAVIT 2014
1.7 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"): Kentfield Learning Resources Center Boiler Replacement Project #14-0127,

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 _______________, 2014, 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

By ________________________________________
Title _______________________________________

Attach Attorney-In-Fact

By ________________________________________
Certificate
Title _______________________________________

To be signed by Principal and Surety and Acknowledgment and Notary Seal to be attached.
# 1.8 CONTRACTORS W-9

## Request for Taxpayer Identification Number and Certification

<table>
<thead>
<tr>
<th>Form W-9 Request for Taxpayer Identification Number and Certification</th>
<th>Give Form to the requester. Do not send to the IRS.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name (as shown on your income tax return)</td>
<td></td>
</tr>
<tr>
<td>Business name disregard entity name, if different from above</td>
<td></td>
</tr>
<tr>
<td>Check appropriate box for Federal tax classification:</td>
<td></td>
</tr>
<tr>
<td>☐ Individual sole proprietor</td>
<td>☐ Corporation</td>
</tr>
<tr>
<td>☐ Other (see instructions)</td>
<td></td>
</tr>
<tr>
<td>Print or type on this line:</td>
<td></td>
</tr>
<tr>
<td>Address (number, street, and apt, or suite no)</td>
<td>Requester’s name and address (optional)</td>
</tr>
<tr>
<td>City, state, and ZIP code</td>
<td>1800 Ignacio Blvd</td>
</tr>
<tr>
<td>Last account number(s) here (optional)</td>
<td>Novato CA 94945-4912</td>
</tr>
</tbody>
</table>

### 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 a 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 3.

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

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Employer identification number

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 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 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.

<table>
<thead>
<tr>
<th>Sign Here</th>
<th>Signature of U.S. person</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 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/9. Information about any future developments affecting Form W-9 (such as legislative enacted offers or releases) 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 income paid to you, payments made to you in settlement of payment card and third party network transactions, real estate transactions, mortgage interest you 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, or
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.

**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 301.7701-2).**

**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.

Cat. No. 10235X  Form W-9 (Rev. 8-2013)
1.9 BIDDER’S QUESTIONNAIRE

To be completed by bidder and submitted with bid.
Kentfield Boiler Replacement Project #14-0127

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:

      ________________________________________________________________

      ________________________________________________________________

1.9 - BIDDER’S QUESTIONNAIRE
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 construction work similar to that called for under this bid? ____________________________

3. Have you now contracts, or have you ever contracted, to provide construction 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 construction 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 construction 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. 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 construction 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>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1.9 - BIDDER’S QUESTIONNAIRE
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:

___________________________________________________________________
___________________________________________________________________
___________________________________________________________________

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>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</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) ____________________________________________________________
1.10 - EXAMPLE OF CONTRACT

This Contract ("Contract") is made by and between the Marin Community College District ("District"), and ________________________________ ("Contractor").

District and Contractor hereby agree as follows:

1. Description of Work

The Contractor agrees to furnish all labor, materials, equipment, tools, supervision, appurtenances, and services, including transportation and utilities, required to perform and satisfactorily complete all work required for the following project ("Project") in full conformance with the Contract Documents:
Kentfield Learning Resources Center Boiler Replacement Project #14-0127.

2. Contract Documents

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 and any supplemental conditions, the Technical Specifications, the Drawings, the completed Bidder’s Questionnaire, Disabled Veteran Business Enterprises Requirements (if applicable), Labor Compliance Program (if applicable).

3. Compensation

As full compensation for Contractor’s complete and satisfactory performance of the work and activities described in the Contract Documents, the District agrees to pay Contractor, and Contractor agrees to accept the sum of _________________________ ($ __________), which shall be paid to the Contractor according to the Contract Documents.

4. Prevailing Wages

This Project is subject to prevailing wage requirements, and Contractor and its Subcontractors are required to pay all workers employed for the performance of this Contract no less than the applicable prevailing wage rate for each such worker.

5. Time for Completion

The starting date of the Contract shall be the day listed by the District in the Notice to Proceed and the Contractor shall fully complete all the work before the expiration of 90 calendar days from the starting date. Time is of the essence in the performance of this Contract.

6. Liquidated Damages

Liquidated damages for Contractor’s failure to complete the Contract within the time fixed for completion are established in the amount of Two Hundred and Fifty Dollars ($250.00) per calendar day.
IN WITNESS WHEREOF, the parties agree to the terms of this Contract on the day and year written below.

___________________________________  ____________________________________
District                        Contractor

____________________________________  ____________________________________
Contractor License No.    and    Expiration Date

By:  ______________________________
Individual Signature

______________________________
Title

______________________________
Date

For:     _______________________________
Corporation or Partnership

If Corporation, Seal Below.
# 1.11 - GENERAL CONDITIONS

**TABLE OF CONTENTS**

1. Definitions ...................................................................................................................... 1  
2. Contract Documents ...................................................................................................... 2  
3. Intent of Drawings and Specifications ......................................................................... 4  
4. Trade Divisions ............................................................................................................. 4  
5. Master Mandatory Provisions ...................................................................................... 5  
6. Contractor ....................................................................................................................... 5  
7. Responsibility of General Contractor ......................................................................... 6  
8. Subcontractors ............................................................................................................... 7  
9. Performance and Payment Bonds ............................................................................... 7  
10. Insurance ...................................................................................................................... 8  
11. Codes and Regulations ............................................................................................ 11  
12. Permits and Taxes ....................................................................................................... 12  
13. Patents and Royalties ................................................................................................. 12  
14. Safety and Fire Prevention ......................................................................................... 12  
15. Hazardous Materials ................................................................................................. 13  
16. Temporary Facilities .................................................................................................. 15  
17. Signs .......................................................................................................................... 15  
18. Time ............................................................................................................................ 15  
19. Construction Schedule ............................................................................................... 16  
20. Delays and Time Extensions ....................................................................................... 16  
21. Liquidated Damages ................................................................................................. 17  
22. District’s Right To Stop Work; Terminate The Contract .......................................... 18  
23. Assignment of Contract ............................................................................................ 19  
24. Coordination With Other Contracts .......................................................................... 20  
25. Submittals: Shop Drawings, Cuts and Samples ....................................................... 21  
26. Payments ................................................................................................................... 21  
27. Modifications of Contract ......................................................................................... 24  
28. Indemnity ................................................................................................................... 27  
29. Warranty of Title ....................................................................................................... 27  
30. Use of Completed Parts of The Work Before Acceptance ...................................... 27  
31. Guarantee & Warranty ............................................................................................. 27  
32. Protection of Work and Property ............................................................................... 28  
33. Use of Roadways and Walkways ............................................................................ 29  
34. Materials .................................................................................................................... 29  
35. Substitutions ............................................................................................................. 29  
36. Testing ......................................................................................................................... 30  
37. Inspection ................................................................................................................... 30  
38. Cleanup ....................................................................................................................... 31  
39. Construction Waste Management Requirements ................................................ 32  
40. Instructions and Manuals ......................................................................................... 36
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 construction work for the Project as described in the Contract Documents.

Construction Manager: The individual or entity named as such by the District. If no Construction Manager is designated for the project, all references to the Construction 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: 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 construction 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.

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 construction 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.

2. PROVISIONS REQUIRED BY LAW DEEMED INSERTED

1.11 - GENERAL CONDITIONS
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.

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 construction details indicated in the specifications or otherwise specified are in conflict with accepted industry standards for quality construction 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.

1) 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 construction 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. 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.

c. 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.

d. 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 §§4-336 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 §4-343, 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 Eligible Surplus Lines (“LESLI 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:**

1.11 - GENERAL CONDITIONS
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 construction 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

1.11 - GENERAL CONDITIONS
a. 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 construction under this Contract.

b. Contractor is required to ensure Material Safety Data Sheets (“MSDS”) are available in a readily accessible place at the work site for any material requiring a MSDS 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. A copy of the MSDS shall also be submitted directly to the District.

c. 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.

d. 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.

e. 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

This Contract includes the removal, handling, or disturbance of any hazardous substances or materials encountered in the removal and replacement construction or on the Project grounds. If such substances or materials are encountered, work shall cease in that area and the District shall be promptly notified and Contractor will 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 construction or in any tools, devices, clothing or equipment used to further this construction.

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

de.

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
1.11 - GENERAL CONDITIONS

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 construction.

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 construction, 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.

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 construction 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. **CONSTRUCTION SCHEDULE**

   a. Within fifteen (15) calendar days after the Award of Contract, the Contractor shall prepare and submit to the District an as-planned construction schedule showing in detail how the Contractor plans to prosecute the work within the time set for Final Completion. The schedule shall include the work of all trades necessary for construction 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 construction 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.

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 construction 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.

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 Construction 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, construction
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.

1.11 - GENERAL CONDITIONS
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 construction 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. 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.

b. References


3) “Where to Recycle Construction and Demolition Debris.” For a copy of the guide call 1-888-442-2666 or go to www.recycleworks.org.

c. 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.

d. 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.

e. Performance Requirement

1) The Contractor shall divert a minimum of fifty percent (50%) of the total Project construction and demolition waste from landfills.

f. 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:

i) 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.

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

iii) The Contractor shall include construction waste management as an item on the agenda of all progress meetings.

3) The Waste Management Plan:

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

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

iv) 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.

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

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

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

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

ix) 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.

g. **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.

h. 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.

i. 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 salvagability 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 District furnished equipment.

42. AS-BUILT DRAWINGS

The Contractor and all his 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 construction, 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:**

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 CONSTRUCTION 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 issue 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. DISABLED VETERANS PARTICIPATION GOALS (Applies to K-12 districts only.)

This section is not applicable.

50. RETENTION OF DVBE RECORDS (Applies to K-12 districts only.)

This section is not applicable.

51. FINGERPRINTING (Applies to K-12 districts only.)

This section is not applicable.

52. LABOR COMPLIANCE PROGRAM (This section is not applicable to this project)

A labor compliance program is required if the project will be funded by either the Kindergarten-University Public Education Facilities Bond Act of 2002 or the Kindergarten-University Public Education Facilities Bond Act of 2004 and will commence on or after April 1, 2003, or other state bond act if made applicable thereto. This section is not applicable to this project.

53. DRUG-FREE WORKPLACE CERTIFICATION

Contractor certifies all of the following:
1) Contractor is aware of the provisions and requirements of California Government Code §§8350 et seq., the Drug Free Workplace Act of 1990.
2) Contractor is authorized to certify, and does certify, that a drug free workplace will be provided by doing all of the following:
   a) Publishing a statement notifying all employees that the unlawful manufacture, distribution, dispensation, possession or use of a controlled substance is prohibited in Contractor's workplace and specifying actions that will be taken against employees for a violation of the prohibition
   b) Establishing a drug-free awareness program to inform employees about all of the following
      (i) The dangers of drug abuse in the workplace;
      (ii) Contractor's policy of maintaining a drug-free workplace;
      (iii) The availability of drug counseling, rehabilitation and employee-assistance programs; and
      (iv) The penalties that may be imposed upon employees for drug abuse violations.
   c) Requiring that each employee engaged in the performance of Work on the Project be given a copy of the statement required by subdivision a) above, and that as a condition of employment by Contractor in connection with the Work on the Project, the employee agrees to abide by the terms of the statement.

3) Contractor understands that if the District determines that Contractor has either: (a) made a false certification herein, or (b) violated this certification by failing to carry out and to implement the requirements of Government Code §§8350 et seq., the Contract is subject to termination, suspension of payments, or both. Contractor further understands that, should Contractor violate the terms of the Drug-Free Workplace Act of 1990, Contractor may be subject to debarment in accordance with the provisions of Government Code §§8350 et seq.

54. 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.

55. 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 construction or interpretation of any provision in the Contract Documents nor affect any of the rights or obligations of the parties to the Contract.
1.12 - EXAMPLE OF NOTICE OF AWARD

SAMPLE

To:

Project Description: Enter Project Name

The District has considered the bid submitted by you for the above described work in response to its Notice Inviting Bids, dated ____________________________.

You are hereby notified that your bid has been accepted for items in the amount of:

$ _____________________

You are required by the Information for Bidders to execute the Agreement and furnish the Performance Bond and Payment Bond (if Contract Price is $25,000 or more), and certificates of insurance within ten (10) days from the date of receipt of this Notice.

If you fail to execute the Agreement and to furnish the bonds 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.

You are required to return an acknowledged copy of this Notice of Award to the District.

Dated this__________ day of _________________, 201__.

By _____________________________________
Authorized District Signature

Receipt of this above Notice of Award is hereby acknowledged by:

_______________________________________, this is the ____________

day of _________________, 201__.

By _____________________________________

Title _____________________________________

1.12 - EXAMPLE OF NOTICE OF AWARD
1.13 - EXAMPLE OF NOTICE TO PROCEED

SAMPLE

To:        Date:

PROJECT:

You are hereby notified to commence work in accordance with the Agreement dated, 
________________ ____________, 201_, on or before ____________________, 201__, and you
are to complete the work _______________ consecutive calendar days thereafter.

By: _____________________________________
    Authorized District Signature
2.1-SUMMARY GENERAL RELATED DOCUMENTS

Subject: Kentfield Learning Resources Center Boiler Replacement Project #14-0127

The overall scope of work associated with the Kentfield Learning Resource Center Boiler Replacement Project is to replace the existing Ajax boiler with one (1) Camus Dynaforce DRH 1200 Hydronic Heating Boiler. As a design build project, the contractor will be responsible to present the best value replacement of the boiler as well as all associated piping and piping trim for a complete operating system. All work must be completed per manufacturer’s installation guide following industry standards for good piping practices.

Marin College will review all proposals to detriment best value. As such, the contractor will need to provide a proposal with a clear scope of work listing the boiler and all system trim being provided.

This project is a design build project. Each bid will be evaluated for “best value” and completeness, not necessarily low bid.

Design build a best value replacement for Learning Resource Center Ajax boiler, with a high efficiency boiler, that meets applicable PG&E rebate criteria:

Space Heating

Space Heating Boilers

Rebate H111 will not be available after June 30, 2014, due to new Title 24 regulations.

Requirements:

- Must be used for space heating to induce human comfort, as defined by the California Energy Commission Title 20 and 24 standards.
- Must meet efficiency requirements based on input ratings and types shown in the Space Heater Boiler Table to the right.
- Must include a manufacturer’s specification sheet documenting the boiler type, input rating and efficiency rating with your application.
- Installation address must have a commercial natural gas account with PG&E.

<table>
<thead>
<tr>
<th>Space Heater Boiler Table</th>
</tr>
</thead>
<tbody>
<tr>
<td>Space Heater Type</td>
</tr>
<tr>
<td>Small Water</td>
</tr>
<tr>
<td>Small Steam</td>
</tr>
<tr>
<td>Large Steam or Water</td>
</tr>
<tr>
<td>Condensing</td>
</tr>
</tbody>
</table>

Rebate Code | Description | Rebate/ Unit Measure |
-------------|-------------|---------------------|
H111         | Small Water Boiler for Space Heating | $0.25/M Btu/h |
H112         | Small Steam Boiler for Space Heating | $1/M Btu/h   |
H113         | Large Steam or Water Boiler for Space Heating | $1/M Btu/h   |
H746         | Condensing Space Heating Boiler     | $2/M Btu/h   |

Ensure all mandatory requirements per manufacturer are included, and any applicable manufactures recommendations beyond mandatory requirements are included as well.

The proposal should include the following:
- Project management and supervision
- Engineering (as list below)

2.1 - SUMMARY GENERAL DOCUMENTS
- Remove and dispose of existing Ajax boiler per Appliance Recycling Assembly Bill 2277, including all debris generated as part of this project
- Receiving new boiler and all rigging requirements for installation
- Supply and install (1) Camus Dynaforce DRH 1200 boiler with all required piping and trim per manufacturer’s installation guide
- Insulation of all piping and equipment per Title 24 requirements
- Mounting of boiler per IBC 2010
- Installation of boiler flue per OEM requirements with no exception
- Water balance report (boiler flow only) by certified third party balance contractor
- Modifications of combustion air if required
- Boiler start up to be performed by boiler manufacturer's technician
- Permits

**Engineering package requirements below to be included in the contractor’s scope of work with no exceptions:**

- Mechanical engineering with wet stamped drawing for building permit by PE (mechanical engineer of record is responsible for building permit package for submittal to Marin Building Department)
- Electrical engineering with wet stamped drawing for building permit by PE
- Structural engineering for boiler attachment with wet stamped drawing and calculations for building permit by PE
- Structural engineering for all new piping installation and support with wet stamped calculation where required by code for building permit by PE
- Include final as-built drawings (two hard copies and electronic PDF versions) at completion of project
- Engineer of record shall respond to all remarks generated by city plan checker at no additional cost
- Mechanical engineering services required beyond permit set drawings:
  a. Submittal review and wet stamped approval for equipment and materials
  b. Site inspection to develop project drawing
  c. Site inspection of all installed equipment and piping (punch list walk-through and final acceptance walk-through) at completion of project
  d. Final letter of acceptance of all work and review of final boiler start-up report
- Electrical engineering services required beyond permit set drawing:
  a. Submittal review and wet stamped approval for equipment and materials
  b. Site inspection to develop project drawing
  c. Site inspection of all installed equipment and piping (punch list walk-through and final acceptance walk-through) at completion of project
  d. Final letter of acceptance of all work and review of final boiler start-up report

**WORK COVERED BY CONTRACT DOCUMENTS**

- Project Identification: Kentfield Learning Resources Center Boiler Replacement Project #14-0127.
- Project Location: College of Marin Learning Resources Center (LRC), 835 College Avenue Kentfield, CA, 94904.
- The work consists of removal and replacement of the Kentfield Learning Resources Center boilers.
- Will provide all labor and materials.

**NOTE:** The old boiler will need to be removed before the new boiler will be installed.
WORKS BY DISTRICT

A. The (District) will:
   1. Provide project oversight and review.

WORK UNDER SEPARATE CONTRACTS

A. General: Cooperate fully with separate contractors so work on those contracts may be carried out smoothly, without interfering with or delaying work under this Contract or other contracts. Coordinate the Work of this Contract with work performed under separate contracts.

TYPE OF CONTRACT

A. Project may be constructed under a general construction contract

USE OF PREMISES

A. Contractor shall have use of premises for renovation operations, including use of Project site, during renovation period. Contractor's use of premises is limited only by District's right to perform work or to retain other contractors on portions of Project.

ACCESS TO SITE

A. Contractor will have access to the site at College of Marin, 835 College Avenue, Lot 5, Kentfield CA, 94904.

B. Use of Site: Limit use of Project site to areas within the Contract limits indicated. Do not disturb portions of project site beyond areas in which the Work is indicated.
   1. Limits: Limit site disturbance. Review limits of construction, staging, and storage operations with District.
   2. Driveways, Walkways and Entrances: Keep driveways, loading areas, and entrances serving premises clear and available to District, District's employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials.
   3. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site. Maintain portions of existing building affected by construction operations in a weather tight condition throughout construction period. Repair damage caused by construction operations.

COORDINATION WITH OCCUPANTS

A. Full District Occupancy: District will occupy building during entire renovation period.
   1. Cooperate with District during construction operations to minimize conflicts and facilitate District usage. Perform the Work so as not to interfere with District's day-to-day operations. Maintain existing exits unless otherwise indicated.
   2. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from District and approval of authorities having jurisdiction.

WORK RESTRICTIONS

A. Work Restrictions, General: Comply with restrictions on construction operations.
   1. Notify the District not less than 72 hours in advance of activities that will affect District's operations.
   2. Comply with limitations on use of public streets and requirements of authorities having jurisdiction.

2.1 - SUMMARY GENERAL DOCUMENTS
B. On-Site Work Hours: Limit work in the existing building to normal business working hours of, Monday through Friday, except as otherwise agreed upon by District. Review and coordinate following work hours with District prior to start of Work.
   1. Weekend Hours: (Restrictions on times permitted for weekend work).
   2. Early Morning Hours: (Restrictions or references to regulations by authorities having jurisdiction for restrictions on noisy work).
   3. Hours for Utility Shutdowns: (Review District's restrictions).
   4. Hours for Core Drilling and Noisy Activity: (Review District's restrictions).

C. Existing Utility Interruptions:
   1. Do not interrupt utilities serving facilities occupied by District or others unless permitted under the following conditions and then only after providing temporary utility services according to requirements indicated
   2. Notify District not less than five (5) days in advance of proposed utility interruptions.

D. Noise, Vibration, and Odors: Coordinate operations that may result in high levels of noise and vibration, odors, or other disruption to District occupancy with District.
   1. Notify District not less than five (5) days in advance of proposed disruptive operations.
   2. Nonsmoking Campus: Smoking is not permitted within the building or on the College of Marin Campus.

E. Controlled Substances: Use of tobacco products and other controlled substances within the existing building and on the Project site is not permitted.

F. Employee Identification: Provide identification tags for Contractor personnel working on the Project site. Require personnel to utilize identification tags at all times.

G. Employee Screening: Comply with District's requirements regarding drug and background screening of Contractor personnel working on the Project site.
   1. Maintain list of approved screened personnel with District's Representative.
2.2 - PROJECT MANAGEMENT AND COORDINATION

- RELATED DOCUMENTS

A. Contractor’s Drawings and general provisions of the Contract. Contractor will have one College of Marin employee contact during the entire replacement project. Employee will be introduced at pre-start project meeting.

- SUMMARY

A. This Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:

- PROJECT MEETINGS

A. General: Schedule and conduct one hour meetings and conferences at Project site, unless otherwise indicated.
   1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify District of scheduled meeting dates and times.
   2. Agenda: Prepare the meeting agenda. Distribute the agenda to all invited attendees.
   3. Minutes: Record significant discussions and agreements achieved. Distribute the meeting minutes to everyone concerned, including District within two (2) days of the meeting.

B. Preconstruction Conference: Schedule a preconstruction conference before starting construction, at a time convenient to District, but no later than 15 days after execution of the Agreement. Hold the conference at Project site. Conduct the meeting to review responsibilities and personnel assignments.
   1. Attendees: Authorized representatives of District, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the conference. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
   2. Agenda: Discuss items of significance that could affect progress, including the following:
      3. Tentative construction schedule.
      4. Phasing of work increments.
      5. Critical work sequencing and long-lead items.
      6. Designation of key personnel and their duties.
      7. Procedures for requests for interpretations (RFIs).
      8. Procedures for testing and inspecting.
      9. Procedures for processing Applications for Payment.
     11. Submittal procedures.
     12. Preparation of Record Documents.
     13. Use of the premises and existing building.
     15. District’s occupancy requirements.
     16. Responsibility for temporary facilities and controls.
     17. Construction waste management and recycling.
     18. Parking availability.
     19. Office, work, and storage areas.
     20. Equipment deliveries and priorities.
     23. Progress cleaning.
24. Working hours.

C. Minutes: District will record and distribute meeting minutes.

D. Progress meetings:
   1. The Contractor will contact District regularly and conduct four (4) progress meetings on a regular weekday and time warranted by the Work, or as requested by District, and/or Contractor. Progress meetings shall be held on a regular day and time as mutually agreed by the District and Contractor. The Contractor shall allow for a maximum meeting duration of 1 hour each week. These meetings will be conducted and sequenced in respect to the participants (District and Contractor) need for involvement. The goal is not to have a needlessly long meeting but to expedite the work.
   2. The District shall distribute the meeting agenda to all interested parties at least 1 full working day before each meeting, will be determined.
   3. The Contractor shall prepare and bring an updated progress schedule, a “one (1) week” schedule to each meeting. The Contractor shall be responsible for inviting other, subcontractors or suppliers to the meetings.
   4. The District will maintain logs for Submittals, Request for Information, Supplements and Change Orders for review at weekly meetings.
   5. All parties will assist with coordination of planned work, timing and programming issues, changes to the scope of work and duration, and payment application reviews. The purpose of the progress meetings shall include, but is not limited to:
      a) Review meeting notes from the previous weekly progress meeting.
      b) Review of the renovation progress and reasons for schedule changes.
      c) Review planned work and coordination issues.
      d) Review the status of submittals.
      e) Review the status of requests for information.
      f) Discuss and resolve conflicts and potential conflicts.
      g) Coordinate and expedite completion of the Work.
      h) Review of renovation change orders and change order quotes.
      i) Review of actual percent of construction that is complete.
      j) Review of Applications for Payment if appropriate.
   6. The District will write notes of meeting (highlighting the major issues only) and distribute copies of these, along with updated schedules, to all participants and interested parties at a maximum of 2 working days after the meeting.

END OF SECTION
2.3 CONSTRUCTION PROGRESS DOCUMENTATION

- GENERAL

- RELATED DOCUMENTS

A. Contractor's Drawings and general provisions of the Contract, including General and Supplementary Conditions,

- SUMMARY

A. This Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:
   1. Contractor's Construction Schedule.

B. Related Sections include the following:
   1. "Payment Procedures" for submitting the Schedule of Values.

- DEFINITIONS

A. Activity: A discrete part of a project that can be identified for planning, scheduling, monitoring, and controlling the construction project. Activities included in a construction schedule consume time and resources.
   1. Critical activities are activities on the critical path. They must start and finish on the planned early start and finish times.
   2. Predecessor Activity: An activity that precedes another activity in the network.
   3. Successor Activity: An activity that follows another activity in the network.

B. Cost Loading: The allocation of the Schedule of Values for the completion of an activity as scheduled. The sum of costs for all activities must equal the total Contract Sum, unless otherwise approved by District.

C. CPM: Critical path method, which is a method of planning and scheduling a construction project where activities are arranged based on activity relationships. Network calculations determine when activities can be performed and the critical path of Project.

D. Critical Path: The longest connected chain of interdependent activities through the network schedule that establishes the minimum overall Project duration and contains no float.

E. Event: The starting or ending point of an activity.

F. Float: The measure of leeway in starting and completing an activity.
   1. Float time is not for the exclusive use or benefit of either District or Contractor, but is a jointly owned, expiring Project resource available to both parties as needed to meet schedule milestones and Contract completion date.
   2. Free float is the amount of time an activity can be delayed without adversely affecting the early start of the successor activity.
   3. Total float is the measure of leeway in starting or completing an activity without adversely affecting the planned Project completion date.

G. Fragmented Network: A partial or fragmentary network that breaks down activities into smaller activities for greater detail.

H. Major Area: A story of construction, a separate building, or a similar significant construction element.
I. Milestone: A key or critical point in time for reference or measurement.

J. Network Diagram: A graphic diagram of a network schedule, showing activities and activity relationships.

K. Resource Loading: The allocation of manpower and equipment necessary for the completion of an activity as scheduled.

- SUBMITTALS
  
  A. Submittals Schedule: Submit a copy of schedule. Arrange the following information in a tabular format:
     A. Name of subcontractor.
     B. Description of the Work covered.
     C. Scheduled date for District final approval.

  B. Contractor's Construction Schedule: Submit copies of initial schedule, large enough to show entire schedule for entire construction period.

- COORDINATION
  
  A. Coordinate preparation and processing of schedules and reports with performance of construction activities and with scheduling and reporting of separate contractors.

  B. Coordinate Contractor's Construction Schedule with the Schedule of Values, list of subcontracts, progress reports, payment requests, and other required schedules and reports.
     A. Secure time commitments for performing critical elements of the Work from parties involved.
     B. Coordinate each construction activity in the network with other activities and schedule them in proper sequence.

- SUBMITTALS SCHEDULE
  
  A. Preparation: Submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, re-submittal, ordering, manufacturing, fabrication, and delivery when establishing dates.
     A. Coordinate Submittals Schedule with list of subcontracts, the Schedule of Values, and Contractor's Construction Schedule.

  B. Initial Submittal: Submit concurrently with preliminary bar-chart schedule. List those required to maintain orderly progress of the Work CONTRACTOR'S CONSTRUCTION SCHEDULE, GENERAL

  C. Procedures: Comply with procedures contained in AGC's "Construction Planning & Scheduling."

  D. Time Frame: Extend schedule from date established for the Notice to Proceed to date of Final Completion.
     A. Contract completion date shall not be changed by submission of a schedule that shows an early completion date, unless specifically authorized by Change Order.

  E. Activities: Treat each separate area as a separate numbered activity for each principal element of the Work. Comply with the following:
     A. Activity Duration: Define activities so no activity is longer than 7 days, unless specifically allowed by District.
B. Procurement Activities: Include procurement process activities for the following long lead items as separate activities in schedule. Procurement cycle activities include, but are not limited to, submittals, approvals, purchasing, fabrication, and delivery.

C. Submittal Review Time: Include review and re-submittal times indicated in Division 1, Section "Submittal Procedures" in schedule. Coordinate submittal review times in Contractor's Construction Schedule with Submittals Schedule.

D. Startup and Testing Time: Include days for startup and testing.

E. Substantial Completion: Indicate completion in advance of date established for Substantial Completion, and allow time for District's administrative procedures necessary for certification of Substantial Completion.

F. Milestones: Include milestones indicated in the Contract Documents in schedule, including, but not limited to, the Notice to Proceed, Substantial Completion, and Final Completion.

G. Contract Modifications: For each proposed contract modification and concurrent with its submission, prepare a time-impact analysis using fragmented network to demonstrate the effect of the proposed change on the overall project schedule.

CONTRACTOR'S CONSTRUCTION SCHEDULE

A. Contractor's Construction Schedule Updating: As necessary, update schedule to reflect actual construction progress and activities. Issue schedule one week before each regularly scheduled progress meeting.

   A. Revise schedule immediately after each meeting or other activity where revisions have been recognized or made. Issue updated schedule concurrently with the report of each such meeting.

   B. Include a report with updated schedule that indicates every change, including, but not limited to, changes in logic, durations, actual starts and finishes, and activity durations.

   C. As the Work progresses, indicate Actual Completion percentage for each activity.

B. Distribution: Distribute copies of approved schedule to District, separate contractors, testing and inspecting agencies, and other parties identified by Contractor with a need-to-know schedule responsibility.

   A. Post copies in Project meeting rooms.

   B. When revisions are made, distribute updated schedules to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in performance of construction activities.

END OF SECTION
2.4 - QUALITY REQUIREMENTS

- GENERAL

- RELATED DOCUMENTS
  A. Contractor's drawings and general provisions of the Contract.

- SUMMARY
  A. This Section includes administrative and procedural requirements for quality assurance and quality control.
  B. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
    A. Specific quality-assurance and -control requirements for individual construction activities are specified in the Sections that specify those activities. Requirements in those Sections may also cover production of standard products.
    B. Specified tests, inspections, and related actions do not limit Contractor's other quality-assurance and -control procedures that facilitate compliance with the Contract Document requirements.
    C. Requirements for Contractor to provide quality-assurance and -control services required by District, or authorities having jurisdiction are not limited by provisions of this Section.

- DEFINITIONS
  A. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.
  B. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Services do not include contract enforcement activities performed by District.
  C. Preconstruction Testing: Tests and inspections that are performed specifically for the Project before products and materials are incorporated into the Work to verify performance or compliance with specified criteria.
  D. Product Testing: Tests and inspections that are performed by a testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with industry standards.
  E. Source Quality-Control Testing: Tests and inspections that are performed at the source, i.e., plant, mill, factory, or shop.
  F. Field Quality-Control Testing: Tests and inspections that are performed on-site for installation of the Work and for completed Work.
  G. Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.
  H. Installer/Applicator/Erector: Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.
1. Using a term such as “carpentry” does not imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as “carpenter.” It also does not imply that requirements specified apply exclusively to trades people of the corresponding generic name.

I. Experienced: When used with an entity, "experienced" means having successfully completed a minimum of five previous projects similar in size and scope to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.

- CONFLICTING REQUIREMENTS

A. General: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer uncertainties and requirements that are different, but apparently equal, to District for a decision before proceeding.

B. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to District for a decision before proceeding.

- SUBMITTALS

A. Qualification Data: For testing agencies specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.

B. Reports: Prepare and submit certified written reports that include the following:

A. Date of issue.
B. Project title and number.
C. Name, address, and telephone number of testing agency.
D. Dates and locations of samples and tests or inspections.
E. Names of individuals making tests and inspections.
F. Description of the Work and test and inspection method.
G. Identification of product and Specification Section.
H. Complete test or inspection data.
I. Test and inspection results and an interpretation of test results.
J. Record of temperature and weather conditions at time of sample taking and testing and inspecting.
K. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
L. Name and signature of laboratory inspector.
M. Recommendations on retesting and re-inspecting.

C. Permits, Licenses, and Certificates: For District's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

- QUALITY ASSURANCE

A. General: Qualifications paragraphs in this Article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.
B. Installer Qualifications: A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.

C. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.

D. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.

E. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of the system, assembly, or products that are similar to those indicated for this Project in material, design, and extent.

F. Specialists: Certain sections of the Specifications require that specific construction activities shall be performed by entities who are recognized experts in those operations. Specialists shall satisfy qualification requirements indicated and shall be engaged for the activities indicated.

A. Requirement for specialists shall not supersede building codes and regulations governing the Work.

G. Testing Agency Qualifications: An independent agency with the experience and capability to conduct testing and inspecting indicated, as documented according to ASTM E 548; and with additional qualifications specified in individual Sections; and where required by authorities having jurisdiction, that is acceptable to authorities.

H. Factory-Authorized Service Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.

QUALITY CONTROL

A. District Responsibilities: Where quality-control services are indicated as District's responsibility, District will engage a qualified testing agency to perform these services.

A. District will furnish Contractor with names, addresses, and telephone numbers of testing agencies engaged and a description of types of testing and inspecting they are engaged to perform.

B. Costs for retesting and re-inspecting construction that replaces or is necessitated by work that failed to comply with the Contract Documents will be charged to Contractor.

B. Tests and inspections not explicitly assigned to District are Contractor's responsibility. Unless otherwise indicated, provide quality-control services specified and those required by authorities having jurisdiction. Perform quality-control services required of Contractor by authorities having jurisdiction, whether specified or not.

1. Contractor shall not employ same entity engaged by District, unless agreed to in writing by District.

2. Notify testing agencies at least 48 hours in advance of time when Work that requires testing or inspecting will be performed.

3. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.

4. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.

2.4 - QUALITY REQUIREMENTS
5. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.

C. Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing as specified in Division 1 Section "Submittal Procedures."

D. Retesting / Re-inspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and re-inspecting, for construction that replaced Work that failed to comply with the Contract Documents.

E. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and -control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.
   1. Schedule times for tests, inspections, obtaining samples, and similar activities.

**SPECIAL TESTS AND INSPECTIONS**

A. Special Tests and Inspections: Conducted by a qualified testing agency as required by authorities having jurisdiction, as indicated in individual Specification Sections, and as follows:
   1. Verifying that manufacturer maintains detailed fabrication and quality-control procedures and reviewing the completeness and adequacy of those procedures to perform the Work.
   2. Notifying District and Contractor promptly of irregularities and deficiencies observed in the Work during performance of its services.
   3. Submitting a certified written report of each test, inspection, and similar quality-control service to District with copy to Contractor and to authorities having jurisdiction.
   4. Submitting a final report of special tests and inspections at Substantial Completion, which includes a list of unresolved deficiencies.
   5. Interpreting tests and inspections and stating in each report whether tested and inspected work complies with or deviates from the Contract Documents.
   6. Retesting and re-inspecting corrected work.

**TEST AND INSPECTION LOG**

A. Prepare a record of tests and inspections. Include the following:
   1. Date test or inspection was conducted.
   2. Description of the Work tested or inspected.
   3. Date test or inspection results were transmitted to District.
   4. Identification of testing agency or special inspector conducting test or inspection.

B. Maintain log at Project site. Post changes and modifications as they occur. Provide access to test and inspection log for District's reference during normal working hours.

**REPAIR AND PROTECTION**

A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.

B. Protect construction exposed by or for quality-control service activities.

C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION

2.4 - QUALITY REQUIREMENTS
2.5-REFERENCES

### GENERAL

### DEFINITIONS

A. General: Basic Contract definitions are included in the Conditions of the Contract.

B. "Approved": When used to convey District's action on Contractor's submittals, applications, and requests, "approved" is limited to District's duties and responsibilities as stated in the Conditions of the Contract.


D. "Contractor": When used herein shall mean <Contractor Name>.

E. "Directed": A command or instruction by District. Other terms including "requested," "authorized," "selected," "approved," "required," and "permitted" have the same meaning as "directed."

F. "Experienced": When used with an entity, 'experienced' means having successfully completed a minimum of 5 previous projects similar in size and scope to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.

G. "Indicated": Requirements expressed by graphic representations or in written form on Drawings, in Specifications, and in other Contract Documents. Other terms including "shown," "noted," "scheduled," and "specified" have the same meaning as "indicated."

H. "Installer": Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.

I. Using a term such as ‘carpentry’ does not imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as ‘carpenter.’ It also does not imply that requirements specified apply exclusively to trades people of the corresponding generic name.

J. "Regulations": Laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, and rules, conventions, and agreements within the construction industry that control performance of the Work.

K. "Furnish": Supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.

L. "Install": Operations at Project site including unloading, temporarily storing, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.

M. "District/District": When used herein shall mean College of Marin.


P. "Provide": Furnish and install, complete and ready for the intended use.

Q. "Project Site": Space available for performing construction activities. The extent of Project site is shown on Drawings and may or may not be identical with the description of the land on which Project is to be built.

### INDUSTRY STANDARDS

A. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.

B. Publication Dates: Comply with standards in effect as of date of the Contract Documents, unless otherwise indicated.

C. Copies of Standards: Each entity engaged in construction on Project should be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.

D. Where copies of standards are needed to perform a required construction activity, obtain copies directly from publication source.
ABBREVIATIONS AND ACRONYMS

A. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities indicated in Gale Research’s “Encyclopedia of Associations” or in Columbia Books’ “National Trade & Professional Associations of the U.S.”

B. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list.

- AIA: American Institute of Architects (The)
- ANSI: American National Standards Institute
- CSI: Construction Specifications Institute (The)
- FED-STD: Federal Standard
- FM: Factory Mutual System
- MPI: Master Painters Institute
- NECA: National Electrical Contractors Association
- OSHA: Occupational Safety and Health Administration
- PDCA: Painting & Decorating Contractors of America
- UL: Underwriters Laboratories Inc.
- NEMA: National Electrical Manufacturers Association

C. Code Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list.

- California Building Code
- Uniform Building Code

D. Federal Government Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list.

- EPA: Environmental Protection Agency
- GSA: General Services Administration

E. State Government Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list.

- CBHF: State of California, Department of Consumer Affairs
- BHFTI: Bureau of Home Furnishings and Thermal Insulation

END OF SECTION
2.6 - TEMPORARY FACILITIES AND CONTROLS

- GENERAL

- RELATED DOCUMENTS
  A. Contractor’s drawings and general provisions of the Contract.

- SUMMARY
  A. This Section includes requirements for construction facilities and temporary controls, including temporary utilities, support facilities, and security and protection.

- EQUIPMENT
  A. Provide and maintain temporary storage on-site.

- CONSTRUCTION UTILITIES

- BARRICADES AND TEMPORARY FENCES
  A. Erect and maintain such barricades as necessary and be responsible for protection of property and the public from hazards due to the Work.
    1. Barricades, and fences, at public thoroughfares shall meet requirements for disabled access.

- EXECUTION

- GENERAL CONTROLS
  A. Maintain full access for disabled persons along public sidewalks and thoroughfares during construction. Provide temporary, special barricades and guides, and signs as needed.
  B. Maintain premises and public properties free from accumulations of waste, and debris due to the Work. Legally dispose of waste materials, debris, and rubbish off the site.

- DUST CONTROL
  A. Provide control on the site as required to abate any dust or other air pollution nuisance on or adjacent to the site.

- NOTICES
  A. Post and maintain notices required by law.

- REMOVAL
  A. Remove temporary facilities upon completion of project.

END OF SECTION
2.7 - PRODUCT REQUIREMENTS

▪ GENERAL

▪ RELATED DOCUMENTS
A. Drawings and general provisions of the Contract.

▪ SUMMARY
A. This Section includes administrative and procedural requirements for selection of products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; product substitutions; and comparable products.
A. Related Sections include the following:
1. Division 1, Section, "Closeout Procedures" for submitting warranties for Contract closeout.
2. Divisions 2 through 50 Sections for specific requirements for warranties on products and installations specified to be warranted.

▪ DEFINITIONS
A. Products: Items purchased for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
1. Named Products: Items identified by manufacturer's product name, including make or model number or other designation shown or listed in manufacturer's published product literature, that is current as of date of the Contract Documents.
2. New Products: Items that have not previously been incorporated into another project or facility. Products salvaged or recycled from other projects are not considered new products.
3. Comparable Product: Product that is demonstrated and approved through submittal process, or where indicated as a product substitution, to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.
B. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.
C. Basis-of-Design Product Specification: Where a specific manufacturer's product is named and accompanied by the words "basis of design," including make or model number or other designation, to establish the significant qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics for purposes of evaluating comparable products of other named manufacturers.

▪ SUBMITTALS
A. Documentation: Show compliance with requirements for substitutions and the following, as applicable:
1. Statement indicating why specified material or product cannot be provided.
2. Coordination information, including a list of changes or modifications needed to other parts of the Work and to construction performed by District and separate contractor that will be necessary to accommodate proposed substitution.
3. Detailed comparison of significant qualities of proposed substitution with those of the Work specified. Significant qualities may include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
4. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
5. Samples, where applicable or requested.

2.7 - PRODUCT REQUIREMENTS
6. List of similar installations for completed projects with project names and addresses and names and addresses of Districts.

7. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.

8. Research/evaluation reports evidencing compliance with building code in effect for Project, from a model code organization acceptable to authorities having jurisdiction.

9. Detailed comparison of Contractor's Construction Schedule using proposed substitution with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating lack of availability or delays in delivery.

10. Cost information, including a proposal of change, if any, in the Contract Sum.

11. Contractor's certification that proposed substitution complies with requirements in the Contract Documents and is appropriate for applications indicated.

11. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.

i. District's Action: If necessary, District will request additional information or documentation for evaluation within 7 days of receipt of a request for substitution. District will notify Contractor of acceptance or rejection of proposed substitution within 3 days of receipt of request, or 5 days of receipt of additional information or documentation, whichever is later.

C. QUALITY ASSURANCE

D. PRODUCT DELIVERY, STORAGE, AND HANDLING

v. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft. Comply with manufacturer's written instructions.

vi. Delivery and Handling:

vii. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
viii. Inspect products on delivery to ensure compliance with the Contract Documents and to ensure that products are undamaged and properly protected.

ix. Storage:

x. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.

E. PRODUCT WARRANTIES

xi. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.

xii. Manufacturer's Warranty: Preprinted written warranty published by individual manufacturer for a particular product and specifically endorsed by manufacturer to District.

xiii. Submittal Time: Comply with requirements in Division 1, Section "Closeout Procedures."

- PRODUCT SELECTION PROCEDURES

i. General Product Requirements: Provide products that comply with the Contract Documents, that are undamaged and, unless otherwise indicated, that are new at time of installation.

a. Provide products complete with accessories, fasteners, and other items needed for a complete installation and indicated use and effect.

b. District reserves the right to limit selection to products with warranties not in conflict with requirements of the Contract Documents.

c. Descriptive, performance, and reference standard requirements in the Specifications establish "salient characteristics" of products.

ii. Product Selection Procedures:

a. Product: Where Specifications name a single product and manufacturer, provide the named product that complies with requirements.

b. Manufacturer/Source: Where Specifications name a single manufacturer or source, provide a product by the named manufacturer or source that complies with requirements.

c. Product Options: Where Specifications indicate that sizes, profiles, and dimensional requirements on Drawings are based on a specific product or system, provide the specified product or system. Comply with provisions in Part 2 "Product Substitutions" Article for consideration of an unnamed product or system.

d. Basis-of-Design Product: Where Specifications name a product and include a list of manufacturers, provide the specified product or a comparable product by one of the other named manufacturers. Drawings and Specifications indicate sizes, profiles, dimensions, and other characteristics that are based on the product named. Comply with provisions in Part 2 "Comparable Products" Article for consideration of an unnamed product by the other named manufacturers.

- PRODUCT SUBSTITUTIONS

i. Conditions: District will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, District will return requests without action, except to record noncompliance with these requirements:

a. Requested substitution offers District a substantial advantage in cost, time, energy conservation, or other considerations, after deducting additional responsibilities District must assume.
b. Requested substitution does not require extensive revisions to the Contract Documents.

c. Requested substitution is consistent with the Contract Documents and will produce indicated results.

d. Substitution request is fully documented and properly submitted.

e. Requested substitution will not adversely affect Contractor’s Construction Schedule.

f. Requested substitution has received necessary approvals of authorities having jurisdiction.

g. Requested substitution is compatible with other portions of the Work.

h. Requested substitution has been coordinated with other portions of the Work.

i. Requested substitution provides specified warranty.

END OF SECTION
2.8 - EXECUTION REQUIREMENTS

- RELATED DOCUMENTS
  A. Drawings and general provisions of the Contract.
  This Section includes general procedural requirements governing execution of the Work including, but not limited to, the following:
  2. General installation of products.
  3. Coordination of District-installed products.
  4. Progress cleaning.
  5. Starting and adjusting.
  6. Protection of installed construction.
  7. Correction of the Work.
  A. Related Sections include the following:
  8. Division 01, Section "Project Management and Coordination" for procedures for coordinating field engineering with other construction activities.
  9. Division 01, Section "Submittal Procedures" for submitting surveys.
  10. Division 01, Section "Cutting and Patching" for procedural requirements for cutting and patching necessary for the installation or performance of other components of the Work.

"Closeout Procedures" for submitting final property survey with Project Record Documents, recording of District-accepted deviations from indicated lines and levels, and final cleaning.

- EXAMINATION
  A. Existing Conditions: The existence and location of improvements, utilities, and other construction indicated as existing are not guaranteed. Before beginning work, investigate and verify the existence and location of mechanical and electrical systems and other construction affecting the work.
  B. Acceptance of Conditions: Examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.
  C. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
  D. Examine roughing-in for mechanical and electrical systems to verify actual locations of connections before equipment and fixture installation.
  E. Examine floors, walls and ceilings for suitable conditions where products and systems are to be installed.
  F. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

- PREPARATION
  A. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
  B. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.

- CONSTRUCTION LAYOUT
  A. Verification: Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to existing conditions. If discrepancies are discovered, notify District promptly.
• INSTALLATION
B. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
   1. Make vertical work plumb and make horizontal work level.
   2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
   3. Conceal pipes, ducts, and wiring in finished areas, unless otherwise indicated.
   4. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.
   5. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.
   6. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.
   7. Tools and Equipment: Do not use tools or equipment that produce harmful noise levels.
   8. Anchors and Fasteners: Provide anchors and fasteners as required to anchor each component securely in place, accurately located and aligned with other portions of the Work.
   9. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by District.
  10. Allow for building movement, including thermal expansion and contraction.
  11. Coordinate installation of anchorages. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.

A. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.

B. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.

• PROGRESS CLEANING
A. General: Clean Project site and work areas daily, including common areas. Coordinate progress cleaning for joint-use areas where more than one installer has worked. Enforce requirements strictly. Dispose of materials lawfully.
B. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
C. Do not hold materials more than 7 days during normal weather or 3 days if the temperature is expected to rise above 80 deg F.
D. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.
E. Site: Maintain Project site free of waste materials and debris.
F. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.
   1. Remove liquid spills promptly.
   2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.
G. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.
H. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.
I. Exposed Surfaces in Finished Areas: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.
J. Waste Disposal: Burying or burning waste materials on-site will not be permitted. Washing waste materials down sewers or into waterways will not be permitted.
K. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.

L. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.

M. Limiting Exposures: Supervise construction operations to assure that no part of the construction completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

• STARTING AND ADJUSTING
  A. Start equipment and operating components to confirm proper operation. Remove malfunctioning units, replace with new units, and retest.
  B. Adjust operating components for proper operation without binding. Adjust equipment for proper operation.
  C. Test each piece of equipment to verify proper operation. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.

• PROTECTION OF INSTALLED CONSTRUCTION
  A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.
  B. Comply with manufacturer's written instructions for temperature and relative humidity.

• CORRECTION OF THE WORK
  A. Repair or remove and replace defective construction. Restore damaged substrates and finishes. Comply with requirements in Division 1, Section “Cutting and Patching.”
    1. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment.
  B. Restore permanent facilities used during construction to their specified condition.
  C. Remove and replace damaged surfaces that are exposed to view if surfaces cannot be repaired without visible evidence of repair.
  D. Repaired components that do not operate properly. Remove and replace operating components that cannot be repaired.
  E. Remove and replace chipped, scratched, and broken glass or reflective surfaces

END OF SECTION
2.9 - CUTTING AND PATCHING

• GENERAL

• RELATED DOCUMENTS
A. Contractor’s Drawings and general provisions of the Contract.

• SUMMARY
B. This Section includes procedural requirements for cutting and patching.
A. Related Sections include the following:

• DEFINITIONS
A. Cutting: Removal of in-place construction necessary to permit installation or performance of other Work.
B. Patching: Fitting and repair work required to restore surfaces to original conditions after installation of other Work.

• QUALITY ASSURANCE
B. Structural Elements: Do not cut and patch structural elements in a manner that could change their load-carrying capacity or load-deflection ratio.
C. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that result in increased maintenance or decreased operational life or safety. Operating elements include the following:
1. Primary operational systems and equipment.
2. Air or smoke barriers.
3. Water or moisture.
4. Mechanical systems piping and ducts.
5. Control systems.
6. Electrical wiring systems.
D. Miscellaneous Elements: Do not cut and patch miscellaneous elements or related components in a manner that could change their load-carrying capacity, which results in reducing their capacity to perform as intended, or that result in increased maintenance or decreased operational life or safety. Miscellaneous elements include the following:
1. Equipment supports.
2. Piping, ductwork, and equipment.
E. Visual Requirements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch construction exposed in occupied spaces in a manner that would, in District’s opinion, reduce the building’s aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.
F. Hazardous Materials:
1. Hazardous materials may be encountered on the project. Should the Contractor encounter suspected hazardous materials during the execution of the Work, the Contractor shall immediately stop work in the area, and immediately notify the District in writing of the suspected hazardous materials. The District shall be responsible to test for, and remove suspected hazardous materials prior to continuation of the Work by the Contractor.

• MATERIALS
A. General: Comply with requirements specified in other Sections.
B. In-Place Materials: Use materials identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.
1. If identical materials are unavailable or cannot be used, use materials that, when installed, will match the visual and functional performance of in-place materials.
EXECUTION

EXAMINATION
A. Examine surfaces to be cut and patched and conditions under which cutting and patching are to be performed.
B. Compatibility: Before patching, verify compatibility with and suitability of substrates, including compatibility with in-place finishes or primers.
C. Proceed with installation only after unsafe or unsatisfactory conditions have been corrected.

PREPARATION
A. Temporary Support: Provide temporary support of Work to be cut.
B. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.
C. Adjoining Areas: Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.
D. Existing Utility Services and Mechanical / Electrical Systems: Where existing services / systems are required to be removed relocated, or abandoned, bypass such services / systems before cutting to prevent interruption to occupied areas.

PERFORMANCE
A. General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.
1. Cut in-place construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.
2. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer’s written recommendations.
3. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots as small as possible, neatly to size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
4. Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
5. Mechanical and Electrical Services: Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.
6. Proceed with patching after construction operations requiring cutting are complete.
B. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other Work. Patch with durable seams that are as invisible as possible. Provide materials and comply with installation requirements specified in other Sections.
1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate integrity of installation.
2. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.
C. Clean piping, conduit, and similar features before applying paint or other finishing materials.
3. Restore damaged pipe covering to its original condition.
4. Ceilings: Patch, repair, or re-hang in-place ceilings as necessary to provide an even-plane surface of uniform appearance.

Cleaning: Clean areas and spaces where cutting and patching are performed.

END OF SECTION
2.10 - CONSTRUCTION WASTE MANAGEMENT

GENERAL

- RELATED DOCUMENTS
  A. Contractor drawings and general provisions of the Contract.

- SUMMARY
  A. This project shall minimize the creation of construction and demolition waste on the job site.
  B. Factors that contribute to waste such as over-packaging, improper storage, ordering error, poor planning, breakage, mishandling, and contamination shall be minimized.
  C. As far as is economically feasible, reuse, salvage, and recycle waste materials.
  D. Minimize landfill disposal:
  E. Diversion goals: A minimum of 50% of total project waste shall be diverted from landfill.
  F. Divert the following materials from landfill disposal:
     1. Clean dimensional wood, palette wood.
     2. Cardboard, paper packaging.
     4. Beverage containers.

- WASTE MANAGEMENT PLAN
  A. Within 10 calendar days after receipt of Notice of Award of Bid, or prior to any waste removal, whichever occurs sooner, the Contractor shall submit to the District a Waste Management Plan. The Plan shall contain the following:
  B. Estimate of total project waste to be generated, name of the landfill(s) where project waste would normally be disposed, tipping fees, and estimated cost of landfill disposal.
  C. Estimated total tons of concrete, asphaltic concrete, or masonry to be diverted from landfill, and names of recycling facilities.
  D. Estimated total cubic yards of clean dimensional wood, cardboard, paper packaging or other material to be diverted from landfill and names of recycling facilities.
  E. Identify how materials will be separated and stored. Provide an estimate of how often bins will need to be emptied.
  F. Estimated net cost savings or added costs resulting from separating and recycling or reusing (versus landfilling) each material. Subtract revenue from the sale of recycled or salvaged materials and savings from avoided tipping fees from the cost of separating and recycling.

- WASTE MANAGEMENT DOCUMENTATION
  A. Application for Progress Payments: The Contractor shall submit with each Application for Progress Payment a summary of the project waste generated. Failure to submit this information shall render the Application for Payment incomplete and shall delay Progress Payment. The summary shall include the following information:
  B. The amount (tons or cubic yards) of material land filled from the Project, the identity of the landfill, total amount of tipping fees paid at the landfill, and total disposal costs. Include manifests, weight tickets, receipt, and invoices.
  C. For each material recycled, reused, or salvaged from the Project, include the amount (in tons, cubic yards, pounds, feet, square yards, gallons, as appropriate), the date removed from the job site, the receiving party, the transportation cost, the amount of any money paid or received for the recycled or salvaged material, and the net total cost or savings of salvage or recycling each material. Attach manifests, weight tickets, receipts, and invoices.

- WASTE MANAGEMENT PLAN IMPLEMENTATION
  A. Plan distribution: The Contractor shall provide seven (7) copies of the Waste Management Plan to the District, plus copies to Jobsite Superintendent and any affected Subcontractors.

2.10 - CONSTRUCTION WASTE MANAGEMENT
B. Instruction: The Contractor shall provide on-site instruction of appropriate separation, handling, and recycling, salvage, reuse, and return methods to be used by all parties at the appropriate stages of the Project.

C. Meetings: The Contractor shall discuss waste management implementation at pre-bid, pre-construction, and regular jobsite meetings. Meetings shall include all subcontractors affected by the waste management plan.

D. Separation facilities: The Contractor shall designate a specific area or areas to facilitate separation of materials for potential reuse, salvage, recycling, and return. Recycling and waste bin areas are to be kept neat, clean, and clearly marked in order to avoid commingling of materials. Bins shall be protected during non-work hours from off-site contamination.

E. Materials handling procedures: Materials to be recycled shall be protected from contamination and shall be handled, stored, and transported in a manner that meets the requirements set for acceptance by the recycling facility.

F. Hazardous wastes: Separate, store, and dispose of hazardous wastes in accordance with local regulations.

END OF SECTION
2.11 - PROJECT RECORD DOCUMENTS

- RELATED DOCUMENTS
  A. Contractors Drawings and general provisions of the Contract.

- SUMMARY
  A. This Section includes administrative and procedural requirements for Project Record Documents, including the following:
     (1) Record Drawings.
     (2) Record Specifications.
     (3) Record Product Data.
  B. Related Sections include the following:
     (4) Section "Closeout Procedures".
     (5) Division "Operation and Maintenance Data".

- SUBMITTALS
  A. Record Drawings: Comply with the following:
     (1) Number of Copies: Submit one set of marked-up Record Prints.
  B. Record Specifications: Submit one copy of marked-up Specifications, including addenda and contract modifications.

- PRODUCTS
  • RECORD DRAWINGS

  A. Record Prints: Maintain one set of black-line prints of the Contractor's Drawings and floor plan.
     (1) Preparation: Mark Record Prints to show the actual installation where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is Installer, subcontractor, or similar entity, to prepare the marked-up Record Prints.
     (2) Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.
     (3) Accurately record information in an understandable drawing technique.
     (4) Record data as soon as possible after obtaining it. Record and check the markup before enclosing concealed installations.
        a. Content: Types of items requiring marking include, but are not limited to, the following
           Revision to details shown on drawings. Revisions to routing of piping and conduits.
        b. Revisions to electrical circuitry.
        c. Actual equipment locations.
        d. Duct size and routing.
        e. Locations of concealed internal utilities.
        f. Changes made by Change Order.
        g. Details not on the original Contract Drawings.
        h. Field records for variable and concealed conditions.
        i. Record information on the Work that is shown only schematically.
        j. Mark the Contract Drawings or Shop Drawings, whichever is most capable of showing actual physical conditions, completely and accurately. If Shop Drawings are marked, show cross-reference on the Contract Drawings.
        k. Mark record sets with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at same location.
        l. Mark important additional information that was either shown schematically or omitted from original Drawings.
        m. Note construction changes by Change Order number, or similar identification, where applicable.
  B. Format: Identify and date each Record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location.
      sheets.
(RECORD SPECIFICATIONS
A. Preparation: Mark Specifications to indicate the actual product installation where installation varies from that indicated in Specifications, addenda, and contract modifications.
   (1) Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
   (2) Mark copy with the proprietary name and model number of products, materials, and equipment furnished, including substitutions and product options selected.
   (3) Record the name of manufacturer, supplier, installer, and other information necessary to provide a record of selections made.
   (4) For each principal product, indicate whether Record Product Data has been submitted in operation and maintenance manuals instead of submitted as Record Product Data.
   (5) Note related Change Orders and Record Drawings where applicable.

• MISCELLANEOUS RECORD SUBMITTALS
A. Assemble miscellaneous records required by other Specification Sections for miscellaneous record keeping and submittal in connection with actual performance of the Work. Bind or file miscellaneous records and identify each, ready for continued use and reference.
B. Mark product data to indicate the actual product installation where installation varies substantially from that indicated in product data submittal.
   (1) Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
   (2) Include significant changes in the product delivered to project site, and changes in Manufacturer’s written instructions for installation.
   (3) Note related Change Orders, Record Drawings, and Product Data where applicable.

• RECORDING AND MAINTENANCE
A. Recording: Maintain one copy of each submittal during the construction period for Project Record Document purposes. Post changes and modifications to Project Record Documents as they occur; do not wait until the end of Project.
B. Maintenance of Record Documents and Samples: Store Record Documents and Samples in the field office apart from the Contract Documents used for construction. Do not use Project Record Documents for construction purposes. Maintain Record Documents in good order and in a clean, dry, legible condition, protected from deterioration and loss. Provide access to Project Record Documents for District reference during normal working hours.

END OF SECTION
2.12 - OPERATION AND MAINTENANCE DATA

- RELATED DOCUMENTS
  A. Drawings and general provisions of the Contract.

- SUMMARY
  A. This Section includes administrative and procedural requirements for preparing operation and maintenance manuals, including the following:
     (1) Operation manuals for systems, subsystems, and equipment.
     (2) Maintenance manuals for the care and maintenance of products, materials, and finishes systems and equipment.

- DEFINITIONS
  A. System: An organized collection of parts, equipment, or subsystems united by regular interaction.
  B. Subsystem: A portion of a system with characteristics similar to a system.

- SUBMITTALS
  A. Final Submittal: Submit one copy of each manual in final form at least 15 days before final inspection. District will return copy with comments within 15 days after final inspection.
  B. Correct or modify each manual to comply with District's comments. Submit 3 copies of each corrected manual within 15 days of receipt of District's comments.

- COORDINATION
  A. Where operation and maintenance documentation includes information on installations by more than one factory-authorized service representative, assemble and coordinate information furnished by representatives and prepare manuals.

- PRODUCTS

- MANUALS, GENERAL
  A. Organization: Unless otherwise indicated, organize each manual into a separate section for each system and subsystem, and a separate section for each piece of equipment not part of a system. Each manual shall contain the following materials, in the order listed:
     (1) Title page.
     (6) Table of contents.
  B. Title Page: Enclose title page in transparent plastic sleeve. Include the following information:
     (1) Subject matter included in manual.
     (2) Name and address of Project.
     (3) Name and address of District.
     (8) Date of submittal.
     (9) Name, address, and telephone number of Contractor.
     (10) Cross-reference to related systems in other operation and maintenance manuals.
  C. Table of Contents: List each product included in manual, identified by product name, indexed to the content of the volume, and cross-referenced to Specification Section number in Project Manual.
     (1) If operation or maintenance documentation requires more than one volume to accommodate data, include comprehensive table of contents for all volumes in each volume of the set.
  D. Manual Contents: Organize into sets of manageable size. Arrange contents alphabetically by system, subsystem, and equipment. If possible, assemble instructions for subsystems, equipment, and components of one system into a single binder.
     (1) Binders: Heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, in thickness necessary to accommodate contents, sized to hold 8.5 -by-11-inch paper; with clear plastic sleeve on spine to hold label describing contents and with pockets inside covers to hold folded oversize sheets. If two or more binders are necessary to accommodate data of a system, organize data in each binder.
into groupings by subsystem and related components. Cross-reference other binders if necessary to provide essential information for proper operation or maintenance of equipment or system. Identify each binder on front and spine, with printed title "OPERATION AND MAINTENANCE MANUAL," Project title or name, and subject matter of contents. Indicate volume number for multiple-volume sets.

(2) Dividers: Heavy-paper dividers with plastic-covered tabs for each section. Mark each tab to indicate contents. Include typed list of products and major components of equipment included in the section on each divider, cross-referenced to Specification Section number and title of Project Manual.

(3) Protective Plastic Sleeves: Transparent plastic sleeves designed to enclose diagnostic software diskettes for computerized electronic equipment.

(4) Supplementary Text: Prepared on 8-1/2-by-11-inch white bond paper.

(5) Drawings: Attach reinforced, punched binder tabs on drawings and bind with text.

• OPERATION MANUALS
  A. Content: In addition to requirements in this Section, include operation data required in individual Specification Sections and the following information:
     (1) System, subsystem, and equipment descriptions.
     (2) Operating standards.
     (3) Operating procedures.
     (4) Operating logs.
     (5) Wiring diagrams.
     (6) Control diagrams.
     (11) Piped system diagrams.
     (12) Precautions against improper use.
     (13) License requirements including inspection and renewal dates.

B. Descriptions: Include the following:
   (1) Product name and model number.
   (2) Manufacturer’s name.
   (3) Equipment identification with serial number of each component.
   (4) Equipment function.
   (5) Operating characteristics.
   (6) Limiting conditions.
   (7) Performance curves.
   (8) Engineering data and tests.
   (9) Complete nomenclature and number of replacement parts.

C. Operating Procedures: Include the following, as applicable:
   (1) Startup procedures.
   (2) Equipment or system break-in procedures.
   (3) Routine and normal operating instructions.
   (4) Regulation and control procedures.
   (5) Instructions on stopping.
   (6) Normal shutdown instructions.
   (7) Seasonal and weekend operating instructions.
   (8) Required sequences for electric or electronic systems.
   (9) Special operating instructions and procedures.

D. Systems and Equipment Controls: Describe the sequence of operation, and diagram controls as installed.

E. Piped Systems: Diagram piping as installed, and identify color-coding where required for identification.

• PRODUCT MAINTENANCE MANUAL
  A. Content: Organize manual into a separate section for each product, material, and finish. Include source information, product information, maintenance procedures, repair materials and sources, and warranties and bonds, as described below.

B. Source Information: List each product included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or
supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual.

C. Product Information: Include the following, as applicable:
   (1) Product name and model number.
   (2) Manufacturer's name.
   (3) Color, pattern, and texture.
   (4) Material and chemical composition.
   (5) Reordering information for specially manufactured products.

D. Maintenance Procedures: Include manufacturer's written recommendations and the following:
   (1) Inspection procedures.
   (2) Types of cleaning agents to be used and methods of cleaning.
   (3) List of cleaning agents and methods of cleaning detrimental to product.
   (4) Schedule for routine cleaning and maintenance.
   (5) Repair instructions.

E. Repair Materials and Sources: Include lists of materials and local sources of materials and related services.

F. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.
   (1) Include procedures to follow and required notifications for warranty claims.

• SYSTEMS AND EQUIPMENT MAINTENANCE MANUAL

A. Content: For each system, subsystem, and piece of equipment not part of a system, include source information, manufacturers' maintenance documentation, maintenance procedures, maintenance and service schedules, spare parts list and source information, maintenance service contracts, and warranty and bond information, as described below.

B. Source Information: List each system, subsystem, and piece of equipment included in manual identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual.

C. Manufacturers' Maintenance Documentation: Manufacturers' maintenance documentation including the following information for each component part or piece of equipment:
   (1) Standard printed maintenance instructions and bulletins.
   (2) Drawings, diagrams, and instructions required for maintenance, including disassembly and component removal, replacement, and assembly.
   (3) Identification and nomenclature of parts and components.
   (4) List of items recommended to be stocked as spare parts.

D. Maintenance Procedures: Include the following information and items that detail essential maintenance procedures:
   (1) Test and inspection instructions.
   (2) Troubleshooting guide.
   (3) Precautions against improper maintenance.
   (4) Disassembly; component removal, repair, and replacement; and reassembly instructions.
   (5) Aligning, adjusting, and checking instructions.
   (6) Demonstration and training videotape, if available.

E. Maintenance and Service Schedules: Include service and lubrication requirements, list of required lubricants for equipment, and separate schedules for preventive and routine maintenance and service with standard time allotment.
   (1) Scheduled Maintenance and Service: Tabulate actions for daily, weekly, monthly, quarterly, semiannual, and annual frequencies.
   (2) Maintenance and Service Record: Include manufacturers' forms for recording maintenance.

F. Spare Parts List and Source Information: Include lists of replacement and repair parts, with parts identified and cross-referenced to manufacturers' maintenance documentation and local sources of maintenance materials and related services.

G. Maintenance Service Contracts: Include copies of maintenance agreements with name and telephone number of service agent.
H.  Warranties and Bonds:  Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.
   (1)  Include procedures to follow and required notifications for warranty claims.

* MANUAL PREPARATION
  A.  Operation and Maintenance Documentation Directory:  Prepare a separate manual that provides an organized reference to emergency, operation, and maintenance manuals.
  B.  Product Maintenance Manual:  Assemble a complete set of maintenance data indicating care and maintenance of each product, material, and finish incorporated into the Work.
  C.  Operation and Maintenance Manuals:  Assemble a complete set of operation and maintenance data indicating operation and maintenance of each system, subsystem, and piece of equipment not part of a system.
     1.  Engage a factory-authorized service representative to assemble and prepare information for each system, subsystem, and piece of equipment not part of a system.
     2.  Prepare a separate manual for each system and subsystem, in the form of an instructional manual for use by District's operating personnel.
  D.  Manufacturers' Data:  Where manuals contain manufacturers' standard printed data, include only sheets pertinent to product or component installed.  Mark each sheet to identify each product or component incorporated into the Work.  If data include more than one item in a tabular format, identify each item using appropriate references from the Contract Documents.  Identify data applicable to the Work and delete references to information not applicable.
     1.  Prepare supplementary text if manufacturers' standard printed data are not available and where the information is necessary for proper operation and maintenance of equipment or systems.
  E.  Drawings:  Prepare drawings supplementing manufacturers' printed data to illustrate the relationship of component parts of equipment and systems and to illustrate control sequence and flow diagrams.  Coordinate these drawings with information contained in Record Drawings to ensure correct illustration of completed installation.
  F.  Do not use original Project Record Documents as part of operation and maintenance manuals.
     1.  Comply with requirements of newly prepared Record Drawings in Division 1, Section "Project Record Documents."
     2.  Comply "Closeout Procedures" for schedule for submitting operation and maintenance documentation.

END OF SECTION
3.1 - VALVES AND PLUMBING

• GENERAL

• RELATED DOCUMENTS
  A. Contractor’s drawings and general provisions of the Contract.

• SUMMARY
  A. This Section includes general-duty valves.
  B. Product Data: For each type of valve indicated. Include body, seating, and trim materials; valve design; pressure and temperature classifications; end connections; arrangement; dimensions; and required clearances. Include list indicating valve and its application. Include rated capacities; furnished specialties; and accessories.

• QUALITY ASSURANCE
  A. ASME Compliance: ASME B-31.9 for building services piping valves.
  B. Exceptions: Domestic hot- and cold-water, sanitary waste, and storm drainage piping valves unless referenced.
  C. ASME Compliance for Ferrous Valves: ASME B-16.10 and ASME B-16.34 for dimension and design criteria.
  D. NSF Compliance: NSF 61 for valve materials for potable-water service.

• PRODUCTS

• MANUFACTURERS
  A. Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to the manufacturers listed.

• VALVE INSTALLATION USING GENERAL STANDARDS
  A. Piping installation requirements are to be specified.
  B. Install main shut-off valves for buildings and toilet rooms with unions or flanges and at each piece of equipment arranged to allow service, maintenance, and equipment removal without system shutdown.
  C. Locate valves for easy access and provide separate support where necessary.
  D. Install valves in horizontal piping with stem at or above center of pipe.
  E. Install valves in position to allow full stem movement.
  F. Install check valves for proper direction of flow and as follows:
     1. Swing Check Valves: In horizontal position with hinge pin level.
     1. Dual-Plate Check Valves: In horizontal or vertical position, between flanges.
     2. Lift Check Valves: With stem upright and plumb.
  G. Install all valves with unions.

• JOINT CONSTRUCTION
  A. Basic Mechanical Materials, Methods and Identification for basic piping joint construction.
  B. Grooved Joints: Assemble joints with keyed coupling housing, gasket, lubricant, and bolts according to coupling and fitting manufacturer’s written instructions.
  C. Soldered Joints: Use ASTM B-813, water-flushable, lead-free flux; ASTM B-32, lead-free-alloy solder; and ASTM B-828 procedure, unless otherwise indicated.

• ADJUSTING
  A. Adjust or replace valve packing after piping systems have been tested and put into service but before final adjusting and balancing. Replace valves if persistent leaking occurs.

END OF SECTION
3.2 - WATER PIPING

- GENERAL

- RELATED DOCUMENTS
  A. Drawings and general provisions of the Contract.

- SUMMARY
  A. This Section includes potable domestic water piping inside the building.

- SUBMITTALS
  A. Field quality-control test reports.

- QUALITY ASSURANCE
  A. Comply with Code or manufacturer's documents.

- PRODUCTS

- PIPING MATERIALS as required
  1. Comply with manufacturer's documents or Code.

- EXECUTION

- PIPE AND FITTING APPLICATIONS
  1. Comply with manufacturer's documents or Code.

- VALVE APPLICATIONS
  A. Specifications indicate valve types to be used. Where specific valve types are not indicated, the following requirements apply:
     1. Shutoff Duty: Use bronze ball for piping NPS 3 and smaller. Use cast-iron butterfly or gate valves with flanged ends for piping NPS 4 and larger.
     2. Throttling Duty: Use bronze ball or globe valves for piping NPS 2 and smaller. Use cast-iron butterfly valves with flanged ends for piping NPS 2-1/2 and larger.
  B. Drain Duty: Hose-end drain valves.
  C. Install shutoff valve close to water main on each branch and riser serving plumbing fixtures or equipment, on each water supply to equipment, and on each water supply to plumbing fixtures that do not have supply stops. Use ball or gate valves for piping NPS 3 and smaller. Use butterfly or gate valves for piping NPS 4 and larger.
  D. Install drain valves for equipment at base of each water riser, at low points in horizontal piping, and where required to drain water piping.
     1. Install hose-end drain valves at low points in water mains, risers, and branches.
     2. Install stop-and-waste drain valves where indicated.
     3. Install balancing valve in each hot-water circulation return branch and discharge side of each pump and circulator. Set balancing valves partly receive to restrict but not stop flow. Use ball valves for piping NPS 3 and smaller and butterfly valves for piping NPS 4 and larger.
     4. Install calibrated balancing valves in each hot-water circulation return branch and discharge side of each pump and circulator. Set calibrated balancing valves partly receive to restrict but not stop flow.

- PIPING INSTALLATION
  A. Basic piping installation requirements are specified in Basic Mechanical Materials, Methods, and Identification.
  B. Install shutoff valve at each domestic water service entrance.
  C. Install domestic water piping level and plumb.
• **JOINT CONSTRUCTION**
  A. Basic piping joint construction requirements are specified in Section 23 00 00 - Basic Mechanical Materials, Methods, and Identification.
  B. Soldered Joints: Use ASTM B-813, water-flushable, lead-free flux; ASTM B-32, lead-free-alloy solder; and ASTM B-828 procedure, unless otherwise indicated.
  C. Extruded-Tee Connections: Form tee in copper tube according to ASTM F-2014. Use tool designed for copper tube; drill pilot hole, form collar for outlet, dimple tube to form seating stop, and braze branch tube into collar.

• **HANGER AND SUPPORT INSTALLATION**
  A. Pipe hanger and support devices are specified in Hangers, Supports, Mechanical Vibration and Seismic Controls - Plumbing.
  1. Install the following:
     a. Vertical Piping: MSS Type 8 or Type 42, clamps.
  B. Individual, Straight, Horizontal Piping Runs: According to the following:
     1. 100 Feet and Less: MSS Type 1, adjustable, steel clevis hangers.
     2. Longer Than 100 Feet: MSS Type 43, adjustable roller hangers.
     3. Longer Than 100 Feet: MSS Type 49, spring cushion rolls, if indicated.
  C. Multiple, Straight, Horizontal Piping Runs 100 Feet or Longer: MSS Type 44, pipe rolls. Support pipe rolls on trapeze.
  D. Base of Vertical Piping: MSS Type 52, spring hangers.
     1. Support vertical piping and tubing at base and at each floor.

• **CONNECTIONS-PIPING**
  A. Install piping adjacent to equipment and machines to allow service and maintenance.
  B. Connect domestic water piping to exterior water-service piping. Use transition fitting to join dissimilar piping materials, EPCO, Plico or equal.
  C. Connect domestic water piping to water-service piping with shutoff valve, and extend and connect to the following:
     1. Boiler: Cold-water supply and hot-water outlet piping in sizes indicated, but not smaller than sizes of water boiler connections.
     2. Plumbing Fixtures: Cold- and hot-water supply piping in sizes indicated, but not smaller than required by plumbing code.
     3. Equipment: Cold- and hot-water supply piping as indicated, but not smaller than equipment connections. Provide shutoff valve and union for each connection. Use flanges instead of unions for NPS 2-1/2 and larger.

• **CLEANING**
  A. Clean and disinfect potable domestic water piping using purging and disinfecting procedures prescribed by authorities having jurisdiction.
  B. Submit water samples in sterile bottles to authorities having jurisdiction. Repeat procedures if biological examination shows contamination.
  C. Prepare and submit reports of purging and disinfecting activities.

END OF SECTION
3.3 - GENERAL MECHANICAL PROVISIONS

- GENERAL

- RELATED DOCUMENTS
  A. Contractor’s Drawings and general provisions of the Contract.
  B. Consult all other Sections, determine the extent and character of related work and properly coordinate work specified herein with that specified elsewhere to produce a complete and operable installation. This section is provided to assist Contractor in coordination of work scope but shall not be construed to limit Contractor’s scope of work encompassed by the contract documents.

- SUMMARY
  A Work included: Materials, equipment, fabrication, installation, starting, testing and commissioning in conformance with applicable codes and authorities having jurisdiction for Mechanical Work covered by all sections within this Division including, but not limited to:
  B. Plumbing.

- REFERENCE STANDARDS
  A Reference to codes, standards, specifications and recommendations of technical societies, trade organizations and governmental agencies shall mean that latest edition of such publications adopted and published prior to submittal of the bid. Such codes or standards shall be considered a part of this Specification as though fully repeated herein.
  1. Work shall be performed in accordance with all applicable requirements of the latest edition of all governing codes, rules and regulations including but not limited to the following minimum standards, whether statutory or not.
  2. Requirements of Regulatory Agencies:
     a. In accordance with the requirement of - General Requirements.
     b. Nothing in contract documents shall be construed to permit work not conforming to current and applicable laws, ordinances, rules and regulations.
     c. When contract documents exceed requirements of applicable laws, ordinances, rules and regulations, comply with documents establishing the more stringent requirement.
     d. It is not the intent of contract documents to repeat requirements of codes except where necessary for completeness or clarity.
     e. Seismic construction and restraints: In accordance with requirements of CBC 2010 and ASCE/SEI 7-05.
     f. Comply with the Safety Orders issued by California Occupational Safety and Health Act, OSHA and any other safety, health or environmental regulations of the State of California and any districts having jurisdictional authority. Where an omission or conflict appears between COSHA requirements and the Drawings and Specifications, COSHA requirements shall take precedence.
  3. Applicable codes as listed below, in addition to others specified in individual sections:
     a. CEC - California Electrical Code.
     b. CBC - California Building Code.
     c. CMC - California Mechanical Code.
     d. CPC - California Plumbing Code.
     e. California Code of Regulations, including Titles 8, 17, 19, 20, 21, 22 and the California Building Standards Code Part 2, Basic Building Regulations.
  B. District's specifications, standards, tests or recommended method of trade, industry or governmental organizations as listed below apply to all work. - Mechanical, in addition to other standards which may be specified in individual sections.
     1. All base material shall meet ASTM and ANSI standards.
     2. All Gas Fired Devices: Comply with standards and bear label of AGA.
3. All Pressure Vessels, Relief Valves, Safety Relief Valves and Safety Valves: Comply with standards, ASME stamped.
4. All Electrical Devices and Wiring.
   a. Conform to standards of CEC/NEC.
   b. All devices UL or ETL listed and identified.
5. Guidelines and Standards: The latest edition of guidelines and standards published by the following groups will govern the Mechanical Systems and associated support system design. The systems shall be designed to meet or exceed these guidelines and standards.
   a. AGA - American Gas Association
   b. AMCA - Air Movement and Control Association, Inc.
   c. ANSI - American National Standards Institute
   d. ASC - Adhesive and Sealant Council
   e. ASHRAE - American Society of Heating, Refrigeration and Air Conditioning Engineers
   f. ASME - American Society of Mechanical Engineers
   g. ASTM - American Society for Testing and Materials
   h. AWWA - American Water Works Association
   i. AWS - American Welding Society
   j. COSHA - California Occupational Safety and Health Act
   k. ETL - Intertek Semko (Formerly Electrical Testing Laboratories)
   l. GISO - General Industry Safety Orders
   m. HI - Hydraulic Institute
   n. IEEE - Institute of Electrical and Electronic Engineers
   o. NBS - National Bureau of Standards
   p. NEBB - National Environmental Balancing Bureau
   q. NEMA - National Electrical Manufacturer's Association
   r. NFPA - National Fire Protection Association
   s. OSHPD - Office of Statewide Health Planning and Development
   t. SFA - California State and Local Fire Marshall
   u. SMACNA - Sheet Metal and Air Conditioning Contractors National Association, Inc.
   v. UL - Underwriters' Laboratories, Inc.

- QUALITY ASSURANCE
  A. Supply all equipment and accessories in compliance with the applicable standards listed and with all applicable national, state and local codes.
  B. All equipment and accessories shall be new and the product of a manufacturer regularly engaged in its manufacture.
     1. All items of a given type shall be the products of same manufacturer.

- SUBMITTALS
  A. No work may begin on any part of this Project until the related submittals have been reviewed for conformity with the design intent and the Contractor has responded to all comments to the satisfaction of the District's Representative.
  B. Submit drawings, product data, samples and certificates of compliance required as hereinafter specified.
  C. Provide submittals promptly in accordance with schedule and in such sequence as to cause no delay in work or in work of any other division.
  D. Submission and resubmission procedure:
     1. Each submittal shall have a unique serial number that includes the associated specification section followed by a number for each sub-part of the submittal for that specification section, such as "SUBMITTAL 23 xx xx".
     2. Each resubmittal shall have an original unique serial number plus unique revision number such as "SUBMITTAL 23 xx xx REVISION 1."
        a. Submit in format specified below. Submissions made in the wrong format will be returned without action.
        b. Product Submittals as in Summary
        c. Shop Drawings: Number of copies and format as required by 2.1 Summary General Related Documents.
d. District's Representative will return a memo or mark-up of submittal with comments and corrections noted where required.

3. Make corrections:
   a. Revise initial submittal to resolve review comments and corrections.
   b. Indicate any changes that have been made other than those requested.
   c. Clearly identify resubmitted by original submittal number and revision number.
   d. Resubmit revised submittals until no exceptions are taken.

4. Product Data Submittals:
   E. Content:
      1. Manufacturer's name and model number.
      2. All information required to completely describe materials and equipment and to indicate compliance with drawings and specifications, including, but not limited to:
      3. Schedule when more than one of each item is covered by submittal.
      4. Physical data, as applicable:
         a. Dimensions.
         b. Weight.
         c. Finishes and colors.
         d. Dimensional shop drawings.

      Performance data, as applicable:
         a. Rated capacities.
         b. Performance curve.
         c. Operating temperature and pressure.
            1. Flow and wiring diagrams as applicable.
            2. Description of system operation.
         d. All other pertinent information requested in individual sections.

• CLOSE-OUT REQUIREMENTS
  A. Procedure:
     1. Until the documents required in this section are submitted and approved, the system will not be considered "accepted".
     2. Before requesting acceptance of work, submit one set of Completion Documents for review and approval of District's Representative.

  B. After review, furnish quantity of sets indicated below to District.
     1. Format:
     2. Paper copies; assemble in chronological order following alpha-numeric system used in specification, in heavy three-ring binder.
        a. Where electronic copies are required, comply with the following:
     3. Provide in word-searchable electronic format; acceptable formats are MS Word, Adobe Acrobat (pdf) and HTML; submit other formats for review and approval prior to submission; scanned paper documents not acceptable.
        a. For submittals, provide separate file for each type of equipment.
        b. For Test & Balance report, provide separate files for each air handling system.
        c. Record drawings shall be in original.

  C. Operating and Maintenance (O&M) Manual
     1. Record Drawings:
        a. Keep up-to-date during progress of job, one set of reproducible of MechanicaDrawings indicating the Record installation. In addition to changes made during course of Work, show following by dimension from readily obtained base lines:
        b. Fully illustrate all revisions made by all trades in the course of work.
           Include all field changes, adjustments, variances, substitutions and deletions, including all Change Orders.
        c. Exact location, type and function of concealed valves, controllers, piping, air vents and piping drains.
     2. Progress drawing set shall be available for inspection by District's Representative weekly.
3.3 - GENERAL MECHANICAL PROVISIONS

a. Update shop drawings and record drawings to reflect revisions and additional data listed above at completion of Project:

3. Original engineering design drawings will be provided to Contactor.

4. Drawings required to be updated if revisions were made:
   a. Floor plans.
   b. Shop drawings.
   c. Sections.
   d. Riser diagrams.

5. Commissioning Reports:
   Coordinate with District’s Representative.
   a. Miscellaneous Certificates:
      1. Pressure and Leakage Test documentation/certificates.
      2. Training/Instruction completion certificates.
      3. Fire Department approvals of system, as required.
      4. Final inspection certificate signed by governing authorities.
      5. Warranty period, including start and end period.
      6. Field test report, including as applicable:
      7. Startup documents with date and name of technician.
      8. Piping pressure tests.
      9. Drain pan drainage tests.
     10. Letters from manufacturers certifying their supervision of equipment installation and start-up procedures as required, District to coordinate.
     11. Machinery vibration test reports.

• DESCRIPTION OF BID DOCUMENTS

A. Specifications:
   1. Specifications, in general, describe quality and character of materials and equipment to be used.
   2. Specifications are of simplified form and do include incomplete sentences.
   3. Words or phrases such as “The Contractor shall,” “shall be,” “furnish,” “provide,” “a,” “an,” “the,” and “all” have often been omitted for brevity.

B. Drawings:
   1. Contractor’s drawings in general are diagrammatic. Intention is to show size, capacity, approximate location, direction and general relationship of one work phase to another, but not exact detail or arrangement.
   2. Scaled and figured dimensions are approximate and are for estimating purposes only. Indicated dimensions are limiting dimensions where noted. Duct and piping elevation requirements shall be determined by the Contractor after final coordination with other trades.
      a. Before proceeding with work check and verify all dimensions in field.
      b. Assume all responsibility for fitting of materials and equipment to other parts of equipment and structure.
      c. Make adjustments that may be necessary or requested in order to resolve space problems, preserve headroom and avoid openings, structural members and work of other trades.
      d. For exact locations of building elements, refer to dimensional Structural drawings.
      e. Do not use equipment exceeding dimensions indicated on drawings or equipment or arrangements that reduce required clearances or exceed specified maximum dimensions.
      f. If any part of Specifications appears unclear or contradictory, apply to District’s Representative for an interpretation and decision as early as possible.
         1. Do not proceed with work without the decision of the District’s Representative.

• PROJECT CONDITIONS

A. Examine site related work and surfaces before starting work of any Section:

3.3 - GENERAL MECHANICAL PROVISIONS
In case of conflict, the most stringent takes precedence.

1. For purposes of clarity and legibility, Contractor’s Drawings are essentially diagrammatic to extent that many duct or piping offsets, bends, unions, special fittings, exact locations of items are not indicated, unless specifically dimensioned. Especially note a number of required duct and pipe offsets to coordinate with structure and not shown. Coordinate dimensioned conditions, including invert elevations, with other trades prior to installation by any trade.

2. Exact routing of piping, ductwork, etc. shall be governed by structural conditions, obstructions. Not all offsets in ductwork or piping are shown on the Mechanical Drawings. Determine which item to offset or relocate. Maintain required slope in piping. Make use of data in Contract Documents. In addition, District’s Representative reserves right, at no additional cost to the District, to make any reasonable change in location of mechanical items, exposed at ceiling or on walls, to group them into orderly relationships or increase their utility. Verify District’s Representative’s requirements in this regard prior to rough-in.

3. Take dimensions, location of doors, partitions, similar physical features from Contractor’s Drawings. Verify at Site under this Division. Consult Contractor’s Drawings for exact location of outlets to center with building features, panels, etc., at the approximate location shown on mechanical Drawings.

4. Mounting heights of brackets, outlets, etc., as required.

5. Report to District’s Representative, in writing, conditions which will prevent proper provision of this work.

6. Beginning work of any Section without reporting unsuitable conditions to District’s Representative constitutes acceptance of conditions by Contractor.

7. Perform any required removal, repair or replacement of this work caused by unsuitable conditions at no additional cost to the District. Coordination:

8. Work out all congested conditions involving Work specified under this Division and Work in other Divisions in advance of installation. If necessary, and before Work proceeds in these areas, prepare supplementary Drawings under this Division for review showing all Work in congested area. Provide supplementary Drawings, additional Work necessary to overcome congested conditions, at no additional cost to the District.

9. Supervision: An authorized and competent representative shall constantly supervise the work from beginning to completion.

10. Provide templates, information and instructions to other Divisions to properly locate holes and openings to be cut or provided.

11. The drawings govern in matters of quantity, and the specifications govern in matters of quality. In the event of conflict within the drawings involving quantities, or within the specifications involving quantities, or within the specifications involving quality, the greater quantity and higher quality shall apply. Such discrepancies shall be noted and clarified in the Bid. No additional allowances will be made because of errors, ambiguities, or omissions that reasonably should have been discovered during the preparation of the Bid.

a. Equipment Rough-In:

- PRODUCT DELIVERY, HANDLING AND STORAGE
  A. General Requirements.
  1. Deliver equipment in its original package to prevent damage or entrance of foreign matter. Provide materials on factory provided shipping skids and lifting lugs if required for handling, provide protective coverings during construction.
  2. Handle and ship in accordance with manufacturer’s recommendations. Identify materials and equipment delivered to Site to permit check against approved materials list.
  3. Protect from loss or damage. Replace lost or damaged materials and equipment with new at no additional cost to the District.
  4. Where necessary, ship in crated sections of size to permit passing through available space.

- PROJECT MANAGEMENT AND COORDINATION SERVICES
  A. General Requirements.
1. Overview: Provide a project manager/engineer for the duration of the Project to coordinate mechanical work with all other trades. Coordination services, procedures and documentation responsibility shall include, but shall not be limited to the items listed in this section.

2. Review of Contractor's drawings.
   a. Obtain copies of all drawings for equipment provided by others that require electrical service connections or interface with Mechanical.
   b. Perform a thorough review of the shop drawings to confirm compliance with the service requirements contained in the Mechanical contract documents. Document any discrepancy or deviation as follows:

3. Prepare report summarizing the discrepancy.

4. Provide a copy of the specific shop drawing, indicating via cloud, the discrepancy.
   a. Prepare and maintain a shop drawing review log indicating the following information:
   b. Shop drawing number and brief description of the system/material.

5. Date of your review.

6. Indication if follow-up coordination is required.
   a. Request for information (RFI):

   • REVIEW OF CONSTRUCTION
     A. Work may be reviewed at any time by the District's Representative
     B. Advise District's Representative that work is ready for review at following times:
        1. Prior to concealment of work in walls and above ceilings.
        2. When all requirements of Contract have been complete.
           a. Do not conceal work without District's Representative's consent.
        3. Maintain on job set of Specifications and Drawings for use by District's Representative's:
           C. Include all change orders.
              1. Contractor is responsible for construction methods, sequences and safety precautions.
                 a. In accordance with Division 1:
                 b. Arrange work to conform to schedule of construction established or required to comply with Contract Documents.
                 c. In scheduling, anticipate means of installing equipment through available openings in structure.
              2. Confirm in writing to District's Representative, anticipated number of days required to perform test, balance, acceptance testing and commissioning of mechanical systems. Schedule test, balance and acceptance testing of mechanical systems as follows:
                 a. Test and commissioning must occur after completion of mechanical systems, including all control calibration and adjustment, and requires substantial completion of the building, including closure, ceilings, lighting, partitioning, etc.
                 b. Complete and test all systems early enough to enable completion of commissioning prior to District move-in.

   • CUTTING AND PATCHING
     a. General Requirements.

   • UTILITY CONNECTIONS
     a. Connect to on-site piping mains.

   • WARRANTY
     a. In accordance with Division 1.
     b. Warranty all materials, equipment, apparatus and workmanship to be free of defective materials and faulty workmanship for period of one year from date of filing of Notice of Completion or upon beneficial use, at the direction of the District's Representative.
     c. Provide new materials, equipment, apparatus and labor to replace that determined by District's Representative to be defective or faulty.
     d. This guarantee also applies to services including instructions, adjusting, testing, noise, balancing, etc.
     e. Furnish Manufacturers' standard Warranties in excess of one year.

   • PRODUCTS

3.3 - GENERAL MECHANICAL PROVISIONS
• MANUFACTURERS
  a. Identify materials, equipment by manufacturer's name, nameplate data. Remove unidentified materials, equipment from Site.
  b. Equipment specified by manufacturer's number shall include all accessories, controls, etc., listed in catalog as standard with equipment. Furnish optional or additional accessories as specified. Where no specific make of material or equipment is mentioned, any first class product of reputable manufacturer may be used, provided it conforms to requirements of system and meets with acceptance.
  c. Provide an authorized representative to constantly supervise work of this Division, check all materials prior to installation for conformance with Drawings, Specifications, reviewed Submittals and reviewed Shop Drawings.
  d. Conform to conditions shown and specified. Coordinate with other trades for best possible assembly of combined Work. Relocate equipment when necessitated by failures to coordinate Work or to advise District's Representative of conflicts in writing.
  e. Material and Equipment-General Requirements:
     1. New.
     2. Approved for use by State Fire Marshal.
     3. Testing agency labeled or with other identification wherever standards have been established.
     4. District's Representative reserves right to reject items not in accordance with Specification either before or after installation.
     5. Comprised to render complete and operable systems; provide additional items needed to complete installation to conform with design intent.
     6. Compatible with space allocated; modifications necessary to adjust items to space limitations at Contractor's expense.
     7. Installed fully operating and without objectionable noise or vibration.
  f. Electrical Requirements
     1. Electrical Work performed under Division 23 - Mechanical shall conform to requirements of Division 26 - Electrical.

• EXECUTION

• INSPECTION
  A. Verify that conditions are satisfactory for the installation of materials and equipment. Notify District’s Representative if conditions are not satisfactory and do not commence work until conditions have been corrected.

  Installation:
  A. Install materials and equipment in compliance with governing codes.
  B. Use printed descriptions, specifications and recommendations of manufacturers as a guide for installation of Work. Follow in all cases where manufacturers' of articles used furnish directions covering points not specified or shown.
  C. Equipment:
     1. General Requirements.
        a. Assemble equipment which is required to be field assembled under the direct supervision of the manufacturers' agent.
        b. Prior to the final acceptance submit letters from the manufacturers that equipment has been assembled under the direct supervision of the manufacturers' agent.
        c. Accurately set and level equipment with supports neatly placed and properly fastened. Properly fasten equipment in place with bolts to prevent movement during a seismic event.
        d. Coordinate the installation of equipment with openings in structure.
        e. Coordinate and fully dimension steel or wood supports for mechanical equipment where shown on drawings with installing contractor.
     2. Concrete:

3.3 - GENERAL MECHANICAL PROVISIONS
3.3 - GENERAL MECHANICAL PROVISIONS

- **Concrete work**, include forming, steel bar reinforcing, cast-in-place concrete, finishing and grouting is specified under Division 3 - Concrete.
- Coordinate and fully dimension concrete housekeeping pads and curbs with installing contractor; dimensions shall be as required for structural and seismic requirements.

3. **Electrical**:
   - **Restoration of Damage**:
   - Repair or replace, as directed by District's Representative, materials and parts of premises which become damaged.
   - Remove replaced parts from premises at no additional cost to the District.

- **PROTECTION OF MATERIALS**
  1. **General Requirements**.
     - Completely cover motors and other moving machinery to protect from dirt and water during construction.
     - Cap all openings in pipe and ductwork daily to protect against entry by foreign matter.
     - Material, equipment or apparatus damaged because of improper storage or protection will be rejected.
     - Remove from site and provide new, duplicate, material, equipment or apparatus in replacement of that rejected.
     - Any porous materials, such as duct liner or flexible ductwork that becomes wet; for example, due to rain shall be replaced; drying is not sufficient acceptable. Perform Work in manner precluding unnecessary fire hazard.

- **ADJUSTMENT**
  A. **Preliminary Operation**:
     1. Operate any portion of installation for District's convenience if so requested by District's Representative. Such operation does not constitute acceptance of Work as complete but does constitute beneficial use. Cost of utilities, such as gas and electrical power, will be borne by the District if operation is requested by District's Representative.
  B. **Startup Service**:
     1. Prior to startup, ensure that systems are ready, including checking the following: Proper equipment rotation, proper wiring, auxiliary connections, lubrications, venting, controls and installed and properly set relief and safety valves.
     2. Start and operate all systems.

- **SPECIAL TOOLS**
  A. Furnish to District at completion of work:
     1. One set of any special tools required to operate, adjust, dismantle or repair equipment furnished under any section of this Division.
     2. Pressure gage and temperature sensor for piping test plug.

- **CLEANING**
  A. Cleaning.
  B. Thoroughly clean equipment, fans, pumps, motors, piping and other materials under this Division free from all rust, scale and all other dirt before any covering or painting is done, or the systems put in operation; leave in condition satisfactory to District's Representative.
  C. At all times keep the premises free from accumulation of waste material and debris caused by his employees. At the completion of the Project, and at other times as District's Representative may direct, remove refuse from within and around the building. All tools, scaffolding and surplus materials shall also be removed, leaving the Site of his Work clean.
D. Completely cover all motors and other moving machinery to prevent entry of dirt and water during construction.
E. Effectively cap all openings into ducts and pipes to keep moisture and foreign matter out during construction.

- FIELD QUALITY CONTROL
  a. See- General Requirements.
  b. Tests:
     c. 1.Perform as specified in individual sections and as required by authorities having jurisdiction.
     d. Provide required labor, material, equipment and connections.
     e. Furnish written report and certification that tests have been satisfactorily completed.
     f. Repair or replace defective work, as directed by District's Representative in writing, at no additional cost to the District.
     g. Restore or replace damaged work due to tests as directed by District's Representative in writing, at no additional cost to the District. Restore or replace damaged work of others, due to tests, as directed by District's Representative in writing, at no additional cost to the District.
     h. Remedial work shall be performed to the satisfaction of the District's Representative, at no additional cost to the District.
     i. Remedial work shall include performing any commissioning or other tests related to remedial work an additional time at no additional cost to the District.

END OF SECTION
3.4 - FUEL-GAS PIPING

- GENERAL

- RELATED DOCUMENTS
  A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

- SUMMARY
  A. This Section includes all interior fuel gas piping.

- SUBMITTALS
  A. Product Data: For the following:
     1. Piping and fittings: Include pressure rating and data of selected product.
     2. Shutoff valves.
     3. Shop Drawings: For fuel gas piping. Include plans and attachments to other work.
     5. Field quality-control test reports.

- QUALITY ASSURANCE
  A. Welding: Qualify processes and operators according to ASME Boiler and Pressure Vessel Code: Section IX.

- PROJECT CONDITIONS
  A. Gas System Pressure: .25 PSIG. (Building Side of Regulator).
  B. Adjust pressure regulator springs as required to achieve manufacturer requirement min. inlet pressure at all gas fired appliances.
  C. Design values of fuel gas supplied for these systems are as follows:
     1. Nominal Heating Value: 1000 Btu/cu.ft.
     2. Nominal Specific Gravity: 0.6.

- PRODUCTS

- MANUFACTURERS
  A. In other Part 2 articles where titles below introduce lists, the following requirements apply to product selection:
     1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, manufacturers specified.
     2. Manufacturers: Subject to compliance with requirements, provide products by one of the manufacturers specified.

- PIPING MATERIALS
  A. Refer to Part 3 “Piping Applications” Article for applications of pipe, tube, fitting, and joining materials.

3.4 - ELECTRICAL GENERAL REQUIREMENTS AND INTERIOR PAINTING
PIPES, TUBES, FITTINGS, AND JOINING MATERIALS
A. Steel Pipe: ASTM A-53/A53M; Type E or S; Grade B; black. Wall thickness of wrought-steel pipe shall comply with ASME B-36.10M.
   1. Malleable-Iron Threaded Fittings: ASME B-16.3, Class 150, standard pattern, with threaded ends according to ASME B-1.20.1.
   2. Steel Threaded Fittings: ASME B-16.11, forged steel with threaded ends according to ASME B-1.20.1.
   3. Steel Welding Fittings: ASME B-16.9, wrought steel or ASME B-16.11, forged steel.
   4. Unions: ASME B-16.39, Class 150, malleable iron with brass-to-iron seat, ground joint, and threaded ends according to ASME B-1.20.1.
   7. Steel Flanges and Flanged Fittings: ASME B-16.5.
   8. Gasket Material: Thickness, material, and type suitable for natural gas.

SPECIALTY VALVES
A. Valves, NPS 2 and Smaller: Threaded ends according to ASME B-1.20.1 for pipe threads.
B. Valves, NPS 2-1/2 and Larger: Flanged ends according to ASME B-16.5 for steel flanges and according to ASME 16.24 for copper and copper-alloy flanges.
C. Manufacturers:
   1. Homestead:
      a. Figure 601 and 602 semi-steel, lubricated plug, lever handle, 200 lb.
      b. Plug Valves, NPS 2-1/2 and Larger: ASME B-16.38 and MSS SP-78 cast-iron, lubricated plug valves, with 125-psig pressure rating.
      A. Manufacturers:
         1. Homestead:
            a. Figure 652.
            B. Tamperproof Feature: Include design for locking.

VALVE TAGS
A. Valve Tags: Stamped or engraved with 1/4-inch letters for piping system abbreviation and 1/2-inch numbers, with numbering scheme. Provide 5/32-inch hole for fastener.
B. Material: 0.032-inch thick brass.
C. Valve-Tag Fasteners: Brass wire-link or beaded chain; or S-hook.

FLEXIBLE APPLIANCE AND/OR HEATING AND VENTILATING EQUIPMENT CONNECTIONS
A. Metraflex braided stainless steel flexible hose. AGA listed and/or approved.

EXECUTION

EXAMINATION
A. Examine roughing-in for fuel gas piping system to verify actual locations of piping connections before equipment installation.
B. Proceed with installation only after unsatisfactory conditions have been corrected.

PREPARATION

3.4 - FUEL GAS PIPING
A. Close equipment shutoff valves before turning off fuel gas to premises or section of piping. Perform leakage test as specified in "Field Quality Control" Article to determine that all equipment is turned off in affected piping section.

- PIPING APPLICATIONS
  A. Flanges, unions, transition, and special fittings with pressure ratings same as or higher than system pressure rating may be used in applications below, unless otherwise indicated.
  B. Above Grade – steel pipe and fittings 2-1/2” or greater pipe shall be welded.

- VALVE APPLICATIONS
  A. Piping Line Valves, NPS 2 and Smaller: Gas valve.
  B. Piping Line Valves, NPS 2-1/2 and Larger: Plug valve or general-duty valve.

- PIPING INSTALLATION
  A. Use eccentric reducer fittings to make reductions in pipe sizes. Install fittings with level side down.
  B. Connect branch piping from top or side of horizontal piping.
  C. Install unions in pipes NPS 2 and smaller, adjacent to each valve. Unions are not required on flanged devices.
  D. Install flanges on valves, specialties, and equipment having NPS 2-1/2 and larger connections.

- JOINT CONSTRUCTION
  A. Patch factory-applied protective coating as recommended by manufacturer at field welds and where damage to coating occurs during construction.

- CONNECTIONS
  A. Drawings indicate general arrangement of fuel gas piping, fittings, and specialties.
  B. Ground equipment according to Division 26.
     1. Do not use gas pipe as grounding electrode.

- PAINTING
  A. Use materials and procedures in Division 9.

- FIELD QUALITY CONTROL
  A. Test, inspect, and purge piping according to NFPA 54 and requirements of authorities having jurisdiction.
  B. Repair leaks and defects with new materials and retest system until satisfactory results are obtained.
  C. Test and repair capacities and pressure ratings of service meters, pressure regulators, valves, and specialties.
  D. Verify correct pressure settings for pressure regulators.
  E. Verify that specified piping tests are complete.

END OF SECTION
4.1 - ELECTRICAL GENERAL REQUIREMENTS

• GENERAL

• RELATED DOCUMENTS
  A. Contractor's Drawings and general provisions of the Contract
     Section Includes:
     1. Quality Assurance
     2. Submittals
     3. Coordination
     4. Record Documents
     5. Operation and Maintenance Manuals
     6. Demolition
     7. Rough-In
     8. Electrical Installation
     9. Cutting, Patching, Painting, and Sealing
     10. Field Quality Control
     11. Project Close-Out
  B. Related Work:
     Division 1 - General Requirements
     Division 5 - Miscellaneous Metal Work
     Division 6 - Wood and Plastic: Rough Carpentry
     Division 7 - Thermal and Moisture Control: Conduit Penetrations
     Division 9 - Finishes: Patching and Painting

• QUALITY ASSURANCE
  A. Reference to codes, standards, specifications and recommendations of technical societies, trade
     organizations and governmental agencies shall mean that latest edition of such publications adopted and
     published prior to submittal of the bid. Such codes or standards shall be considered a part of this
     Specification as though fully repeated herein.
  B. When codes, standards, regulations, etc. allow work of lesser quality or extent than is specified under this
     Division, nothing in said codes shall be construed or inferred authority for reducing the quality, requirements
     or extent of the Drawings and Specifications. The contract documents address the minimum requirements
     for construction.
  C. Work shall be performed in accordance with all applicable requirements of the latest edition of all governing
     codes, rules and regulations including but not limited to the following minimum standards, whether statutory
     or not:
     2. California Code of Regulations (CCR) Title 24, Part 2, Basic Building Regulations and Part 3,
        Basic Electrical Requirements, State Building Standards Electrical Code
     4. Uniform Fire Code (UFC); California Fire Code 2007
     5. Uniform Mechanical Code (UMC); California Mechanical Code 2007
  D. Standards: Equipment and materials specified under this Division shall conform to the following standards
     where applicable:
     1. ACI American Concrete Institute
     2. ANSI American National Standards Institute
     3. ASTM American Society for Testing Materials
     4. CBM Certified Ballast Manufacturers
     5. ETL Electrical Testing Laboratories
     6. FS Federal Specification
     7. IPCEA Insulated Power Cable Engineer Association
4.1 - ELECTRICAL GENERAL REQUIREMENTS AND INTERIOR PAINTING

8. NEMA  National Electrical Manufacturer's Association
9. UL  Underwriters' Laboratories
   a. All base material shall be ASTM and/or ANSI standards.
   b. All electrical apparatus furnished under this Section shall conform to NEMA standards and the NEC and bear the UL label where such label is applicable.
   c. All materials, equipment and parts comprising the units specified herein shall be new and unused, and of current manufacturer.
   d. Only products and applications listed in these sections may be used on the project unless otherwise submitted and approved.
   e. Certify that each welder performing work has satisfactorily passed AWS qualification tests for welding processes involved and, if pertinent, has undergone recertification.
   f. Required products not listed in the specification or on drawings shall be of similar quality to specified products.

- SUBMITTALS
  A. Format: Furnish submittal data neatly bound in an 8-1/2" x 11" folder or binder for each Specification Section with a Table of Contents listing materials by Section and Paragraph Number.
  B. Submittals shall consist of detailed shop drawings, specifications, block wiring diagrams, “catalog cuts” and data sheets containing physical and dimensional information, performance data, electrical characteristics, materials used in fabrication, and material finish. Clearly indicate by arrows or brackets precisely what is being submitted on and those optional accessories which are included and those which are excluded. Furnish quantities of each submittal as noted in Division 1.
  C. Each submittal shall be labeled with the Specification Section Number and shall be accompanied by a cover letter and shall bear a stamp stating that the submittal has been thoroughly reviewed by the Contractor and is in full compliance with the requirements of the Contract Documents.
  D. As part of the equipment submittals, the manufacturer shall provide anchorage calculations for floor and wall mounted electrical equipment so that it shall remain attached to the mounting surface after experiencing forces in conformance with CCR, Title 24, Chapter 16 “Structural Design” of the “California Building Code” for Seismic Design Category for Foster City, California, Importance Factor of 1.50. Structural Calculations shall be prepared and signed by a California Registered Structural Engineer.
  E. All resubmittals shall include a cover letter which lists the action taken and revisions made to each drawing and equipment data sheet in response to Submittal Review Comments.
  F. Substitutions:
     1. All requests for substitutions shall conform to the general requirements and procedure outlined in Division 1.
     2. Where items are noted as "or equal", a product of equal design, construction and performance will be considered. Contractor must submit to the District all pertinent test data, catalog cuts and product information required to substantiate that the product is in fact equal to that specified. Only one substitution will be considered for each product specified. Some products listed are sole source due to no equal, matching existing, or standardization for the School District. (Sole source manufacturer for Fire Alarm System and Intercommunication/Clock/Public Address System.)
     3. Manufacturers’ names and model numbers used in conjunction with materials, processes or equipment included in the Contract Documents are used to establish standards of quality, utility and appearance.
     4. Substitutions shall be equal, in the opinion of the District, to the specified product. The burden of proof of such shall rest with the Contractor. When the District, in writing accepts a substitution, it is with the understanding that the Contractor guaranteed the substituted article or material to be equal to the one specified and dimensioned to fit within the construction. Approved substitutions shall not relieve the Contractor of responsibilities for the proper execution of the work, or from any provisions of the Specifications.
     G. The Contractor shall be responsible for all expenses in connection with the substitution materials, processes and equipment, including the effect of his substitution on him, his subcontractor's or other Contractor's work.
4.1 - ELECTRICAL GENERAL REQUIREMENTS AND INTERIOR PAINTING

• COORDINATION
  A. Discrepancies:
    1. In the event of discrepancies within the Contract Documents, the District shall be so notified, within sufficient time, as delineated in
    2. If, in the event that time does not permit notification or clarification of discrepancies prior to the Bid Receiving, the following shall apply: The drawings govern in matters of quantity, and the specifications govern in matters of quality. In the event of conflict within the drawings involving quantities, or within the specifications involving quantities, or within the specifications involving quality, the greater quantity and higher quality shall apply. Such discrepancies shall be noted and clarified in the Contractor’s Bid.
  B. Job Conditions:
    1. Examination of Site: The Contractor shall visit the site and thoroughly review the locale, working conditions, conflicting utilities and the conditions in which the electrical work will take place. Verify all existing conditions in the field.
    2. Protection: Keep conduits, junction boxes, outlet boxes and other openings closed to prevent entry of foreign matter. Cover fixtures, equipment devices, apparatus and protect them against dirt, paint, water, chemical or mechanical damage, before and during construction period. Prior to final acceptance, restore to original condition any fixture, apparatus or equipment damaged including restoration of damaged factory applied painted finishes. Protect bright finished surfaces and similar items until in service. No rust or damage will be permitted.
    3. Supervision: Contractor shall personally or through an authorized and competent representative constantly supervise the work from beginning to completion and, within reason, keep the same foreman and workmen on the project throughout the project duration.
    4. Coordinate all phasing with Contractor’s Phasing Plan.
  C. Drawings:
    1. Layout: General layout shown on the Drawings shall be followed except where other work may conflict with the Drawings.
    2. Accuracy: Drawings for the Work under this Section are essentially diagrammatic within the constraints of the symbology applied.

• RECORD DOCUMENTS
  A. Provide project record drawings as described herein:
  B. Drawings shall fully represent installed conditions including actual locations of outlets, true panelboard connections following phase balancing routines, correct conduit and wire sizing as well as routing, revised fixture schedule listing manufacturers and products actually installed, and revised panel schedules. Contractor shall record all changes in the work during the course of construction on blue or black line prints. These prints shall be made subject of monthly review by the District’s representative to ascertain that they are current. If not current monthly payments may be withheld.
  C. Record drawings shall be the transfer of information on these prints to the construction documents via computer aided drafting (CAD) process. A set of CAD files of the electrical documents will be provided by the contractor.
  D. A single set of half size prints of record drawing package shall be submitted for review by the engineer. Upon receipt of the engineer’s review comments, corrections shall be made and the contractor shall provide the following:
    1. One set of full size reproducibles
    2. CAD files of drawings
    b. Panel Schedules: Typewritten panel schedules shall be provided for panelboards indicating the loads served and the correct branch circuit number. Schedules shall be prepared on forms provided by the manufacturer and inserted in the pocket of the inner door of each panelboard.

• OPERATION AND MAINTENANCE MANUALS
A. Prior to project closeout furnish to the District, three (3) hardback 3-ring binders containing all bulletins, operation and maintenance instructions, part lists, service telephone numbers and other pertinent information as noted in each section all equipment furnished under Division 16. Binders shall be indexed into division sections and labeled for easy reference. Bulletins containing more information than the equipment concerned shall be properly stripped and assembled. Include copies of all test results.

- EXECUTION

- ROUGH-IN
  A. Contractor shall verify lines, levels and dimensions shown on the Drawings and shall be responsible for the accuracy of the setting out of Work and for its strict conformance with existing conditions at the site.
  B. Verify final locations for rough-ins with field measurements and with the requirements for the actual equipment to be connected.
  C. Refer to equipment specification in Divisions 2 through 16 for rough-in requirements.

- ELECTRICAL INSTALLATION
  A. Preparation, sequencing, handling, and installation shall be in accordance with manufacturer's written instructions and technical data particular to the product specified and/or accepted equal except as otherwise specified. Comply with the following requirements:
    1. Shop drawings prepared by manufacturer.
    2. Verify all dimensions by field measurements.
    3. Sequence, coordinate, and integrate installations of electrical materials and equipment for efficient flow of the Work.
    4. Where mounting heights are not detailed or dimensioned, contact the District for direction prior to proceeding with rough-in.
    5. Install systems, materials, and equipment to conform with approved submittal data, including coordination drawings, to greatest extent possible. Conform to arrangements indicated by the Contract Documents, recognizing that portions of the work are shown only in diagrammatic form. Where coordination requirements conflict with individual system requirements, refer conflict to the District.
    6. Install systems, materials, and equipment level and plumb, parallel and perpendicular to other building systems and components, where installed exposed in finished spaces.
    7. Install electrical equipment to facilitate servicing, maintenance, and repair or replacement of equipment components. As much as practical, connect equipment for ease of disconnecting, with minimum of interference with other installations.
    8. Coordinate electrical systems, equipment, and materials installations with other building components.
    9. Provide metal access panel or doors where devices or equipment are concealed behind finished surfaces. Verify door type with District.
   10. Install systems, materials, and equipment giving right-of-way priority to systems required to be installed at a specified slope.
   11. Conform to the National Electrical Contractor's Association "Standard of Installation" for General Installation Practice.

- CUTTING, PATCHING, PAINTING, AND SEALING
  A. Electrical contractor shall provide all cutting, patching, painting and sealing as required for his work.
  B. Structural members shall in no case be drilled, bored or notched in such a manner that will impair their structural value. Cutting of holes, if required, shall be done with core drill and only with the approval of the District.
  C. Protection of Installed Work: During cutting and patching operations, protect adjacent installations.
D. Cut, remove, and legally dispose of selected electrical equipment, components, and materials as indicated, including but not limited to removal of electrical items indicated to be removed and items made obsolete by the new Work.

E. Protect the structure, furnishings, finishes, and adjacent materials not indicated or scheduled to be removed.

F. Provide and maintain temporary partitions or dust barriers adequate to prevent the spread of dust and dirt to adjacent areas.

G. Patch existing surfaces and building components using experienced installers and new materials matching existing materials and the original installation. For installers’ qualifications refer to the materials and methods required for the surface and building components being patched.

H. Application of Joint Sealers:
   (1) General: Comply with joint sealer manufacturers' printed application instructions applicable to products and applications indicated, except where more stringent requirements apply.

I. Installation of fire-stopping sealant: Install sealant, including forming, packing, and other accessory materials, to fill openings around electrical services penetrating floors and walls, to provide firestops and fire-resistance ratings indicated for floor or wall assembly in which penetration occurs. Comply with installation requirements established by testing and inspecting agency.

J. Roof Penetrations:
   (1) Provide roof jacks for all conduit penetrations through roof.
   a. Seal all penetrations watertight.

FIELD QUALITY CONTROL

A. General: Perform tests to prove installation is in accordance with contract requirements. Perform tests in presence of the District’s representative and furnish test equipment, facilities, and technical personnel required to perform tests. Tests shall be conducted during the construction period and at completion to determine conformity with applicable codes and with these specifications.

B. Product Failure: Any products which fail during the tests or are ruled unsatisfactory by the District’s representative shall be replaced, repaired or corrected as prescribed by the District’s representative at the expense of the Contractor. Tests shall be performed after repairs, replacements, or corrections until satisfactory performance is demonstrated.

C. Miscellaneous: Include all test results in the maintenance manual. Cost, if any, for all tests shall be paid by the Contractor.

D. Cleaning: After other work such as sanding, painting, etc. has been completed; clean lighting fixtures, panelboards, switchboards and other electrical equipment to remove dust, dirt, grease or other marks. Leave work in clean condition.

END OF SECTION
4.2 - ELECTRICAL IDENTIFICATION

- RELATED DOCUMENTS
  A. Contractor's drawings and general provisions of the Contract.

- SUMMARY
  A. Electrical Equipment Nameplates
  B. Panel board Directories
  C. Wire and Cable Identification
  D. Junction Box Identification
  E. Warning and Caution Signs
  F. Device Cover plates.
  G. Comply with code specification.

- SUBMITTALS
  A. Comply with provisions of code.
  B. Provide manufacturer's literature describing products.
  C. Nameplate schedule.

- QUALITY ASSURANCE
  A. Provide new material supplied by a manufacturer producing identification systems.
  B. Comply with OSHA, NFPA 70 or local jurisdiction identification requirements for electrical systems.

- NAMEPLATES
  A. Type NP; Engraved, plastic-laminated labels, Signs, and Instruction Plates: Engrave stock melamine plastic laminate 1/16-inch minimum thickness for signs up to 20 square inches, or 8 inches in length; 1/8-inch thick for larger sizes. Furnish nameplates with pre-punches mechanical fastener mounting holes.
  B. Color and letter height as required

- PANELBOARD DIRECTORIES (400 AMPERE OR LESS)
  A. Directories: Provide a 6 by 8 inch minimum size circuit directory frame and card with clear plastic covering inside the inner panel door.
  B. Circuit Numbering: Starting at the top, odd numbered circuits in sequence down the left hand side and even numbered circuits down the right hand side. For multi-section panel boards use continuous consecutive circuit numbers, for example Section 1 (circuit numbers 1-42), Section 2 (circuit numbers 43-84), Section 3 (circuit numbers 85-126).

- WIRE AND TERMINAL MARKERS
  A. Provide self-adhering, pre-printed, machine printable or write-on, self-laminating vinyl wrap around strips. Inscribe blank markers using the printer or pen recommended by manufacturer for this purpose. Thomas & Betts WSL, Brady B191 series, or equivalent.

- CONDUCTOR PHASE MARKERS
  A. Colored vinyl plastic electrical tape, 3/4 inch wide, for identification of phase conductors. Scotch 35 Brand Tape or equivalent.
• **INSCRIBED DEVICE COVERPLATES**
  A. Methods of Inscription: (Unless otherwise directed)
     1. Type-on Tape:
        a. Provide Imprinted thermal transfer characters onto tape labeling system.
        b. Tape option. Use UV stable tape rated for indoor/outdoor applications. Use black image on clear tape cartridge. (Kroy industrial cartridge or equivalent)
  B. Embossed metallic or plastic tape is not acceptable for any application.

• **EXECUTION AND GENERAL**
  A. Degrease and clean surfaces to receive nameplates.
  B. Install nameplates parallel to equipment lines.
  C. Secure nameplates to equipment fronts using No. 4 machine screws.

• **NAMEPLATES**
  A. Provide type NP color coded nameplates as applicable, with the following information:
  B. Equipment or device designation.
  C. Amperage, KVA or horsepower rating, where applicable.
  D. Voltage or signal system name.
     1. “Served from” identification.
     2. System (e.g., Normal #1, Normal #2, UPS Dist. #1, UPS Dist. #2, Emergency, DC, Ground).
     3. Miscellaneous information as shown in “Examples”.
        a. Examples:
           (1) Panels: 2EH1
           (2) Disconnects or Individual Motor Starters.
              (a) EF-1
              (b) 20 HP
              (c) 480V, 3φ, 3W
              (d) Served From: MCCNH-1
              (e) Emergency System

• **PANELBOARD DIRECTORIES (400 AMPERE OR LESS)**
  A. Provide typewritten directories arranged in numerical order denoting loads served by room number or area for each circuit. Provide new directories in panel boards with changes.
  B. Verify final room numbers or area designation with project manager.
  C. Mount panel board directories in a minimum 6 by 8 inch metal frame under clear plastic cover inside every panel board

• **WIRE AND CABLE IDENTIFICATION**
  A. Provide wire markers on each conductor in panel board gutters, pull boxes, outlet and junction boxes and at load connection. Identify with branch circuit or feeder number for power and lighting circuits and with control wire number as indicated on equipment manufacturer’s shop drawings for control wiring.
  B. Provide colored phase markers for color coding. Apply colored, pressure-sensitive plastic tape in half-lapped turns for a distance of 3 inches from terminal points and in boxes where splices or taps are made. Apply the last two laps of tape with no tension to prevent possible unwinding. Do not cover cable identification markers by taping.
  C. Provide round colored vinyl tags, 1.25 inch diameter (minimum), for system cable identification. Use color-coding listed below. Install tags every 25 feet and attach using nylon ties.
  D. Power Conductor Color Coding
     1. AC Systems
     2. Switch legs for local wall switches shall be same color as phase wires.

4.2 - ELECTRICAL IDENTIFICATION
3. Colored insulation in sizes up through No. 8.
4. Maintain the same phase, neutral and ground color from circuit breaker or switch to last device.

- JUNCTION BOX IDENTIFICATION
  A. Paint junction, pull and connection box covers, located above suspended ceiling and below ceilings in non-public areas, using the color coding listed below.
  B. Use finish paint suitable for use on metal surfaces. Provide spray paint that complies with local VOC (Volatile Organic Compound) regulations. Acceptable paint manufacturers; One-Shot, Sem or equivalent.
  C. Legibly mark the painted covers using black permanent ink felt pen; identify circuit(s) contained in the box by circuit number(s) and panel designation.
  D. Color Coding:

- WARNING, CAUTION AND INSTRUCTION SIGNS
  A. Provide warning, caution, or instruction signs where required by OSHA, where indicated, or where reasonably required to assure safe operation and maintenance of electrical systems and of the items to which they connect.

- INSCRIBED DEVICE COVERPLATE
  A. General:
     1. Lettering Type: Helvetica, 12 point or 1/8 inch high.
     2. Color of characters shall be black.
     3. Locate the top of the inscription 1/2 inch below the top edge of the cover plate.
     4. Install so the inscription is centered and square with cover plate.
     5. Provide inscribed cover plates as noted on the Drawings or in the Specifications for receptacles, switches, outlet, plug mold, etc.
     6. Provide inscribed cover plates for all receptacles with panel circuit number (For example “HA1-16”).
     7. Label multi-outlet assembly receptacles with panel and circuit number.
  B. Methods of Inscription
     1. Use imprinted thermal type-on-tape labels and install as follows:
        a. Trim tape using manufactured tape trimmer.
        b. Install the label so that both tape ends wrap around the cover plate side edges and are attached to the cover plate back side.

- RECEPTACLES AND WALL SWITCHES
  A. Write the circuit number on the front side of the device body. Locate so that cover plate conceals number. Use a fine point black permanent marking pen. Identify by noting panel board and circuit number, for example: “HA1-16”.

END OF SECTION