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PROJECT MANUAL

FOR

ROBERTS FERRY TK AND KINDERGARTEN CLASSROOM (REBID)

For Roberts Ferry Union Elementary School District

OWNER:

**Roberts Ferry Union Elementary School District
101 Roberts Ferry Road
Waterford, CA 95386
(209) 874-2331**


ARCHITECT:

**TPH Architects
519 McHenry Avenue
Modesto, CA 95354
(209) 571-2232**

ROBERTS FERRY TK AND KINDERGARTEN CLASSROOM

Timothy P. Huff & Associates
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Architect

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(209) 478-8270



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Electrical Engineer

ROBERTS FERRY TK AND KINDERGARTEN CLASSROOM
FOR
ROBERTS FERRY UNION ELEMENTARY SCHOOL DISTRICT

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ROBERTS FERRY UNION ELEMENTARY SCHOOL DISTRICT
101 Roberts Ferry Road, Waterford, CA 95386

NOTICE TO BIDDERS
ROBERTS FERRY TK AND KINDERGARTEN CLASSROOM (REBID)

Sealed bids for ROBERTS FERRY TK AND KINDERGARTEN CLASSROOM, for ROBERTS FERRY UNION ELEMENTARY SCHOOL DISTRICT will be received in the District office of ROBERTS FERRY UNION ELEMENTARY SCHOOL DISTRICT, 101 Roberts Ferry Road, Waterford, CA 95386 until **May 15, 2024 at 2:00 p.m.** at which time they will be opened and read.

Plans and Specifications are on file and may be viewed or downloaded from the website of :
TPH Architects, at <http://tpharchitects.com/bidding/>

If further information is needed, call Michael Clark, AIA, at (209) 571-2232.

Bids shall be submitted on forms prepared by the Architect. A 3% Disabled Veteran Business Enterprise (DVBE) participation has been established for this project. All bidders must submit the required DVBE forms supplied in this project manual. Failure to submit DVBE documentation will deem the Bidder non-responsive. The District has determined the general prevailing rate to be the per diem wages for each craft or type of workman or mechanic needed to execute this contract as set forth in the collective bargaining agreements for Stanislaus, San Joaquin, Merced, Mariposa and Tuolumne Counties, California. Copies of all collective bargaining agreements relating to the work are on file and available for inspection in the office of the California Department of Industrial Relations, Division of Labor Statistics and Research, 455 Golden Gate Avenue, San Francisco, CA, 94102, (415-703-4780), <http://www.dir.ca.gov/dlsr/> .

In compliance with SB 854, no contractor or subcontractor may be listed on a bid proposal for a public works project unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5 [with limited exceptions from this requirement for bid purposes only under Labor Code section 1771.1(a)]. In addition, no contractor or subcontractor may be awarded a contract for public work on a public works project unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5.

A valid A or B contractor's license will be required.

ROBERTS FERRY UNION ELEMENTARY SCHOOL DISTRICT reserves the right to waive any irregularity or informality in the bidding.

Published: April 14, 2024
April 21, 2024

INSTRUCTIONS TO BIDDERS

Securing Documents:

Drawings and Specifications are available at: <http://tpharchitects.com/bidding/>.

Proposals:

Proposals to receive consideration shall be made in accordance with the following instructions:

1. Proposals shall be made on a form obtained from the Architect or Owner. All items on the form must be filled out. Numbers must be stated in figures, and the signatures of all individuals must be in longhand. The completed form must be without interlineation, alterations, or erasures.
2. No proposal will be considered which makes exceptions, changes, or in any manner makes reservations to the terms of the Contract Documents.
3. Questions regarding documents, discrepancies, omissions, or doubt as to meanings shall be referred immediately to the Architect who will send written instructions clarifying such questions to each bidder.
4. Each bid must give the full business address of the bidder and be signed by him and his usual signature. Bids by partnerships must furnish the full name of all partners and must be signed in the partnership name by one of the members of the partnership, or by an authorized representative, followed by the signature and designation of the person signing.

Bids by corporations must be signed with the legal name of the corporation, followed by the name of the state of incorporation and by the signature and designation of the president, secretary, or other person authorized to bind it in the matter. The name of each person signing shall also be typed or printed below the signature. When requested by the Owner, satisfactory evidence of the authority of the officer signing in behalf of the corporation shall be furnished.

5. Contractor Registration: In compliance with SB 854, no contractor or subcontractor may be listed on a bid proposal for a public works project unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5 [with limited exceptions from this requirement for bid purposes only under Labor Code section 1771.1(a)].

In addition, no contractor or subcontractor may be awarded a contract for public work on a public works project unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5.

6. Labor Compliance Requirements: This contract/project is subject to compliance monitoring and enforcement by the Department of Industrial Relations, Office of the Labor Commissioner.

Vendor/Contractor must comply with all labor compliance requirements including but not limited to prevailing wage, SB 854, Labor Code section 1771, 1771.1., 1774-1776, 1777.5, 1813 and 1815, as applicable.

1771.1. (a) A contractor or subcontractor shall not be qualified to bid on, be listed in a bid proposal, subject to the requirements of Section 4104 of the Public Contract Code, or engage in the performance of any contract for public work, as defined in this chapter, unless currently registered and qualified to perform public work pursuant to Section 1725.5. It is not a violation of this section for an unregistered contractor to submit a bid that is authorized by Section 7029.1 of the Business and Professions Code or by Section 10164 or 20103.5 of the Public Contract Code, provided the contractor is registered to perform public work pursuant to Section 1725.5 at the time the contract is awarded.

7. Pursuant to the provisions of Sections 4100 to 4114, inclusive, of the Public Contract Code of the State of California, every Bidder shall, in his bid, set forth:
 - A. The name, location of the place of business, Contractor's License Number, and DIR Registration Number of each subcontractor who will perform work or labor or render service to the bidder in or about the construction of the work or improvement, or a subcontractor licensed by the State of California who, under subcontract to the bidder, specially fabricates and installs a portion of the work or improvement according to detailed drawings contained in plans and specifications, in an amount in excess of one-half (1/2) of one percent (1%) of the bidder's total bid.
 - B. The portion of the work which will be done by each such subcontractor. Only one subcontractor shall be listed for each such portion of the work as defined in the bid. If the bidder fails to specify a subcontractor for each 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, he agrees to perform that portion himself. The successful bidder shall not, without the consent of the Owner either:
 - 1) Substitute any person as subcontractor in place of the subcontractor designated in the original bid.
 - 2) Permit any subcontractor to be assigned or transferred or allow it to be performed by anyone other than the original subcontractor listed in the bid.
 - 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 his original bid did not designate a subcontractor.

8. Proposals shall be sealed and filed in the District Office, Roberts Ferry Union Elementary School District, 101 Roberts Ferry Road, Waterford, CA 95386 **no later than May 14, 2024 at 2:00 p.m.. The following DVBE documentation are to be submitted no later than May 15, 2024 at 2:00 p.m., at the location noted above. including:**
- A. Prime Bidder Certification of Disabled Veteran Business Enterprise Participation;
 - B. Prime Bidder Good Faith Effort Work Sheet;
 - C. As well as DVBE letters from the office of Small Minority Business (OSMB) as applicable,

Disabled Veteran Business Enterprises. In Accordance with education Code section 17076.11 the District has a DVBE participation goal of 3% per year of the overall dollar amount of state funds allocated to the District pursuant to the Leroy F. Greene School Facilities Act of 1998, and expended each year by the District. Bidders must make a good faith effort to contact and utilize DVBE subcontractors and suppliers in securing bids for performance of the contract and certify, under penalty of perjury, that a good faith effort was made to include DVBE subcontractors and suppliers in the bid. Information regarding certified DVBE firms can be obtained from the Office of Small Business Certification and Resources (OSBCR) at (916)323-5498 or (916)322-5060 as well as the OSBCR website at www.dgs.ca.gov/osbcr. Verification of DVBE status must be obtained from the OSBCR by receiving an approved certification letter and reference number from that office. Bidders are encouraged to retain documentation of their good faith efforts, in the event such documentation is requested by the District. If a Bidder is certified DVBE Certification Letter issued by OSBCR. In addition, bidders must indicate on the Designation of Subcontractors form whether a subcontractor is DVBE Certified, and provide the District a copy of the DVBE Certification Letter issued by OSBCR. Failure to comply with the requirements set forth in this paragraph shall render a bid non-responsive.

Prior to, and as condition precedent for final payment under the Contract, the successful bidder shall provide the District with written documentation identifying the amount paid (if applicable) to certified DVBE subcontractors and suppliers in performance of the contract and provide a copy of the DVBE Certification Letter issued by OSBCR for each DVBE. This documentation will be used by the District to evaluate its success in meeting its DVBE participation goals.

California Nonresident Vendors

- A. California nonresident vendors may be subject to a 7% withholding on payments over \$1500 annually who are paid for:
 - 1) Performing services in California,
 - 2) A rental/lease of property located in California,
 - 3) Rental/lease of machinery and equipment,
 - 4) Royalties.

- B. California nonresident vendors will be required to fully complete and provide the appropriate tax forms as required by the State of California Franchise Tax Board.
 - C. California nonresident vendors will also be required to fully complete and provide a Form 587 or 590.
 - D. All vendors will be required to fully complete and provide a Form W-9.
9. Proposals must be accompanied with a certified cashier's check, bank issued official check, or bidder's bond, for an amount not less than ten percent (10%) of the amount of the base bid. The certified cashier's check, bank issued official check, or bidder's bond shall be made payable to the order of ROBERTS FERRY UNION ELEMENTARY SCHOOL DISTRICT. If a bidder's bond accompanied the proposal, said bond shall be secured by a California based surety company satisfactory to ROBERTS FERRY UNION ELEMENTARY SCHOOL DISTRICT.

Said check or bond shall be given as a guarantee that the bidder will enter into the contract and furnish the necessary bonds and insurance if awarded the work, and in case of refusal or failure to enter into said contract, the check or bond, as the case may be, shall be payable to ROBERTS FERRY UNION ELEMENTARY SCHOOL DISTRICT and retained as liquidated damages.

10. Proposals shall be sealed and filed in the District Office, Roberts Ferry Union Elementary School District, 101 Roberts Ferry Road, Waterford, CA 95386 no later than May 14, 2024 at 2:00 p.m..

Withdrawal of Proposals:

Proposals may be withdrawn by the bidder prior to the time fixed for the opening of bids.

Opening of Proposals:

Opening of proposals shall be as soon after the hour set as will be possible. Any and all bidders will be permitted to attend. The Board of Trustees is allowed sixty (60) days from that date in which to determine low bidder.

Examination of Contract Documents and Site:

Before submitting a proposal, bidders shall examine the contract documents. They shall visit the site of the proposed work, examine the building, or buildings, if any, and any work that may have been done thereon. They shall fully inform themselves of all conditions, in, at, and about the site, the building or buildings, if any, and any work that may have been done thereon.

Form of Contract:

The form of contract which the successful bidder will be required to execute, if awarded the work, is attached hereto and is made a part hereof. Such contract contains, among other things, matters required by State Law to be inserted in contracts for public work, including wage scale, hours of work per day, etc.

Addenda:

Any addenda or bulletins, issued during the time of bidding, shall form a part of the contract documents loaned to the bidder for the preparation of his proposal, shall be covered in the proposal, and shall be made a part of the contract.

Award of Contract:

Rejection of any or all proposals, to abandon work entirely or waiver of any informality in receiving of bids is reserved as the right of the Owner. Before the contract is awarded, the Board of Trustees may at his sole discretion, require from the proposed Contractor further evidence of the reasonably qualifications of such contractor to faithfully, capable, and reasonable perform such proposed contract and may consider such evidence before making its decision on the award of such proposed contract.

The contract shall be awarded to the lowest responsible bidder as interpreted by the Owner and specified herein and shall be entered into by the successful bidder within the (10) days after being notified by the Owner. Identity of lowest bidder will be determined by adding to or subtracting from the base bid the cost of such alternatives as Owner decided to include in the work and contract. The award, if made, will be made within sixty (60) days after the opening of the proposal.

Public Works Project Award Notification:

The PWC 100 form should be completed on-line by the Awarding Body. The completion and the submission of this form fulfills the required public works project award notification to both the Division of Apprenticeship Standards [Labor Code sec. 1773.3 (replacing former DAS-13 notification) and the Division of Labor Standards Enforcement Public Works Compliance Monitoring Unit [8 Cal. Code Reg. sec. 16451(a)].

Execution of Contract:

The Contract shall be signed by the successful bidder in duplicate counterpart and returned, together with the contract bonds and required insurance certificates, policies and endorsements within ten (10) days after the bidder has received notice that the contract has been awarded. Contractor and Owner shall sign a set of the contract documents for filing with the contract.

Contract Bonds:

Two bonds, as itemized below and in the forms presented in these contract documents, shall be furnished by the successful bidder at the time of entering into contract and filed with the Board of Trustees. They shall be in the form of surety bonds issued by corporations duly and legally licensed to transact business in the State of California, satisfactory to the Owner.

Performance Bond in the amount of one hundred percent (100%) of the contract sum to insure Owner during construction and for one year after completion against faulty or improper materials or workmanship and to assure Owner of full and prompt performance of contract and shall be secured from a California based surety or sureties satisfactory to the Owner.

Contractor's Bond (Labor and Material) in the amount of one hundred percent (100%) of the contract sum in accordance with the laws of the State of California to secure payment of any and all claims for labor and materials used or consumed in performance of this contract and shall be secured from a California based surety or sureties satisfactory to the Owner.

Payments:

Payments to the Contractor on account of the contract shall be made in accordance with the terms of the contract.

Certified Payroll:

All contractors and subcontractors must furnish electronic certified payroll records directly to the Labor Commissioner (aka Division of Labor Standards Enforcement).

These new requirements will apply to all public works that are subject to the prevailing wage requirements of the Labor Code, without regard to funding source.

Time of Completion and Liquidated Damages:

Time is of the essence in this contract, and all work called for herein and all requirements shall be completed within three hundred (300) calendar days.

Should said work not be completed within the time limit as may be extended as herein provided, damages will be sustained by the Owner. It is understood and agreed that it is and will be impracticable or extremely difficult to determine the actual amount of damages which the Owner will sustain in the event of and by reason of such delay, and it is therefore agreed that the contractor will pay the Owner liquidated damages as specified in Article 8 of the General Conditions.

Partial Payments:

Once each month during the progress of the work, Contractor shall submit to Architect a progress payment request. The progress payment request shall be based on the approved bid breakdown for the cost of the work completed plus the acceptable materials delivered to the site or stored subject to the control of Contractor and not yet installed. The progress payment request shall be submitted on the monthly anniversary of the day selected by the Owner at job start meeting. Architect shall review and may certify as to the validity of the request. No progress payment shall be made without the certification of Architect. Progress payment requests shall be processed with a minimum of a five percent (5%) retention. This retention is part security for the fulfillment of the contract by Contractor. Progress payments shall not be construed as acceptance of any work which is not in accordance with the requirements of the contract.

END OF SECTION

BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned _____
_____ as principal, and _____
_____ as Surety, are hereby held and firmly bound unto
ROBERTS FERRY UNION ELEMENTARY SCHOOL DISTRICT, hereinafter called the
"Owner", in the sum of:

_____ Dollars
(\$ _____)

for payment of which sum, well and truly to be made, we hereby jointly and severally find ourselves,
our heirs, executors, administrators, successors, and assigns.

The condition of the above obligation is such that whereas the Principal has submitted to the Owner
a certain bid, attached hereto and hereby made a part hereof, to enter into a contract in writing for
the:

ROBERTS FERRY TK AND KINDERGARTEN CLASSROOM
for
ROBERTS FERRY UNION ELEMENTARY SCHOOL DISTRICT

in strict accordance with Contract Documents.

NOW, THEREFORE,

- a. If said bid shall be rejected, or, in the alternate;
- b. If said bid shall be accepted and the Principal shall execute and deliver a contract in the form
of agreement attached hereto and shall execute and deliver Performance and Contractor's
Bonds in the forms attached hereto (all property completed in accordance with said bid), and
shall in all other respects perform the agreement created by the acceptance of said bid;

Then this obligation shall be void, otherwise the same shall remain in force and effect, it being
expressly understood and agreed that the liability of the Surety for any and all default of the
Principal hereunder shall be the amount of this obligation as herein stated. Surety, for value
received, thereby stipulates and agrees that no change, extension of time, alteration or addition to
the terms of the contract on the call for bids, or to the work to be performed thereunder, or the
specifications accompanying the same, shall in anyway affect its obligation under this bond, and it
does hereby waive notice of any such change, extension of time, alteration or addition to the terms
of said contract or the call for bids, or to the work, or to the specifications.

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

IN WITNESS WHEREOF, the above-bounden parties have executed this Instrument under their several seals this _____ day of _____, 2024 the name and corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

In presence of:

_____ (Seal)

(Address)

(Business Address)

(Seal)

(Individual Principal)

(Address)

(Business Address)

Attest:

(Corporate Principal)

(Business Address)

By: _____
(Affix Corporate Seal)

The rate or premium on this bond is _____ per thousand. Total amount of premium charged, \$_____.

(This bond must be signed and acknowledged by both Principal and Surety before a Notary Public, and acknowledgments with Notarial Seals attached hereto.)

Surety

By: _____
Attorney-in-fact

(The above must be filled in by Corporate Surety. Surety company must be California admitted insured.)

END OF SECTION

PAYMENT BOND
(Labor & Material)

KNOW ALL MEN BY THESE PRESENTS:

That WHEREAS,

and _____

Hereinafter designated as the "Principal," have entered into a contract for the furnishing of all materials and labor, services and transportation, necessary, convenient, and proper to:

ROBERTS FERRY TK AND KINDERGARTEN CLASSROOM
for

ROBERTS FERRY UNION ELEMENTARY SCHOOL DISTRICT
101 Roberts Ferry Rd, Waterford, CA 95386

Which said agreement dated _____, 2024, and all of the contract documents attached to or forming a part of said agreement, are hereby referred to and made a part hereof; and

WHEREAS, the Principal is required, before entering upon the performance of the work, to file a good and sufficient bond with the body by whom the contract is awarded to secure the claims arising under said agreement.

NOW, THEREFORE, THESE PRESENTS WITNESSETH:

That the said Principal and the undersigned _____
_____ as Corporate Surety, are held and firmly bound unto all laborers,
material men, and other persons referred to in said statutes in the sum of

_____ Dollars
which sum well and truly be made, we bind ourselves, our heirs, executors, administrators,
successors, or assigns, jointly and severally, by these presents.

The conditions of this obligation is that if the said Principal or any of his or its subcontractors, or the heirs, executors, administrators successors, or assigns of any, all, or either of them, shall fail to pay for any materials, provisions, provender or other supplies, or teams, used in, upon, for, or about the performance of the work contracted to be done, or for any work or labor thereon of any kind, or for amounts due under the Unemployment Insurance Act with respect to such work or labor, that said Surety will pay the same in an amount not exceeding the amount hereinabove set forth, and also in case suit is brought upon this bond, will pay a reasonable attorney's fee to be awarded and fixed by the Court, and to be taxed as costs and to be included in the judgment therein rendered.

It is hereby expressly stipulated and agreed that this bond shall inure to the benefit of any and all persons, companies, and corporation entitled to file claims so as to give a right of action to them or their assigns in any suit brought upon this bond.

Should the condition of this bond be fully performed, then this obligation shall become null and void, otherwise it shall be and remain in full force and effect.

And the said Surety, for value received, hereby stipulates and agrees that no charge, extension of time, alteration, or addition to the terms of said contract or the specifications accompanying the same shall in any manner affect its obligations on this bond, and it does hereby waive notice of any such change, extension, alteration, or addition.

IN WITNESS WHEREOF, this instrument has been duly executed by the Principal and Surety this _____ day of _____, 2024.

(To be signed by _____)
(Principal and Surety, _____)
(and acknowledged and _____)
(Notarial Seal Attached. _____)
Principal

Surety

By _____
(Attorney-in-fact)

The above bond is accepted and approved this _____ day of _____, 2024.

END OF SECTION

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS, that we _____
_____, as Principal, and _____
_____, as Surety, are held and firmly bound unto ROBERTS
FERRY UNION ELEMENTARY SCHOOL DISTRICT, in the County of _____ ,
State of California, hereinafter called the "Owner", in the sum of

_____ Dollars
(\$ _____)

for the payment of which sum well and truly made, we bind ourselves, our heirs, executors,
administrators, and successors, jointly and severally, firmly by these presents.

The condition of this obligation is such, that whereas the Principal entered into a certain contract
with the Owner, date _____, 2024 for:

ROBERTS FERRY TK AND KINDERGARTEN CLASSROOM

for

ROBERTS FERRY UNION ELEMENTARY SCHOOL DISTRICT
101 Roberts Ferry Rd, Waterford, CA 95386

NOW THEREFORE, if the Principal shall well and truly perform and fulfill all the undertakings,
covenants, terms, conditions, and agreements of said contract during the original term of said
contract and any extension thereof that may be granted by the Owner, with or without notice to the
Surety, and during the life of any guaranty required under the contract, and shall also well and truly
perform and fulfill all the undertakings, covenants, terms, conditions, and agreements of any and all
duly authorized modifications of said contract that may hereafter be made, then, this obligation to
be void, otherwise to remain in full force and virtue.

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

IN WITNESS WHEREOF, the above-bounden parties have executed this instrument under their
several seals this _____ day of _____, 2024, the name and corporate seal of each
corporate party being hereto affixed and these presents duly signed by its undersigned
representative, pursuant to authority of its governing body.

In presence of:

(Individual Principal)	(Seal)
(Address)	(Business Address)

Attest:

	(Corporate Principal)
	(Business Address)
	By: _____
	(Affix Corporate Seal)

Attest:

	(Corporate Surety)
	(Business Address)
	By: _____
	(Affix Corporate Seal)

The rate or premium on this bond is _____ per thousand.

Total amount of premium charged, \$ _____ .

(The above must be filled in by Corporate Surety.)

END OF SECTION

FORM OF PROPOSAL

_____, California

_____, 2024

Board of Trustees
ROBERTS FERRY UNION ELEMENTARY SCHOOL DISTRICT
101 Roberts Ferry Road, Waterford, CA 95386

Members of the Board:

The undersigned doing business under the firm name of _____

_____ understands that the District may select from any line item(s) or combination of line items listed on the Base Bid. Furthermore, the undersigned, having carefully examined the Contract Documents, titled,

ROBERTS FERRY TK AND KINDERGARTEN CLASSROOM

for

ROBERTS FERRY UNION ELEMENTARY SCHOOL DISTRICT

proposes to furnish all materials and labor called for by them for the entire work, including all taxes for the following amounts:

Base Bid: The undersigned proposes to perform **all** work as defined in the Plans and Specifications to construct the project and all appurtenant work thereto for the sum of:

_____ Dollars

(\$ _____).

If written notice of the acceptance of this bid is mailed, telegraphed, or delivered to the undersigned within sixty (60) days after the date of opening of the bids, or any time thereafter before the bid is withdrawn, the undersigned will, within ten (10) days after the date of such mailing, telegraphing, or delivering of such notice, execute and deliver a contract in the form of agreement present in these contract documents and give Performance and Contractor's Bonds and insurance certificates, endorsements, and/or policies in accordance with the Contract Documents.

The Undersigned hereby designates as his office to which such notice of acceptance may be mailed, telegraphed, or delivered:

Our Public Liability and Property Damage Insurance is placed with:

Our Worker's Compensation Insurance is placed with:

Circular letters, addenda, etc., bound with specifications or issued during the time of bidding are included in the proposal, and, in completing the contract, they are to become part thereof.

The receipt of the following addenda to the specifications is acknowledged:

Addendum No.	_____	Date	_____
Addendum No.	_____	Date	_____
Addendum No.	_____	Date	_____

This bid may be withdrawn by the bidder at any time prior to the scheduled time for the opening of bids. The representations made herein are made under penalty of perjury.

Dated _____ ,

License No. _____

Expiration Date of License _____

By (please print) _____

Signed _____

Business Address _____

Telephone _____

Fax _____

Federal I.D# or Social Security #: _____

Department of Industrial Relations #: _____

Note: If Bidder is a corporation, write state of incorporation under signature, attach notarized proof of authority to bind corporation and list corporation officers; and, if a partnership, give full names of all partners. Use space below to record this information.

Do not include in the envelope any bids for other work.

DESIGNATION OF SUBCONTRACTORS

Contractor's Name: _____

In accordance with the provisions of Division 1, Chapter 4 of the Public Contract Code, known as the "Subletting and Subcontracting Fair Practices Act," the contractor signatory to this agreement shall be known as the prime contractor of the work herein specified, and he shall set forth in his bid the complete name, location of the place of business and license number of each subcontractor who will perform work or labor, or render service to the prime contractor in or about the construction of the work in an amount in excess of one-half (1/2) of one (1) percent of the prime contractor's total bid, and the portion of the work which will be done by each subcontractor if the contract for said work is awarded to said bidder. The prime contractor shall list only one subcontractor for each such portion of the work as is defined by the prime contractor in his bid.

If the prime contractor fails to specify a subcontractor or if he specified more than one subcontractor for any portion of work to be performed under the contract, in excess of one-half (1/2) of one (1) percent of the prime contractor's total bid, he agrees that he is fully qualified to perform that portion himself, and that he shall perform that portion himself. If, after the award of the contract, the prime contractor shall, except as provided for in said Chapter herein above referred to, subcontract any such portion of the work, the prime contractor shall be subject to the penalties provided.

Subcontractor Name: _____ **Location:** _____
Portion of Work: Modular Building **License#:** _____ **DIR#:** _____

Subcontractor Name: _____ **Location:** _____
Portion of Work: _____ **License#:** _____ **DIR#:** _____

Subcontractor Name: _____ **Location:** _____
Portion of Work: _____ **License#:** _____ **DIR#:** _____

Subcontractor Name: _____ **Location:** _____
Portion of Work: _____ **License#:** _____ **DIR#:** _____

Subcontractor Name: _____ **Location:** _____
Portion of Work: _____ **License#:** _____ **DIR#:** _____

Subcontractor Name: _____ **Location:** _____
Portion of Work: _____ **License#:** _____ **DIR#:** _____

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Subcontractor Name: _____ **Location:** _____
Portion of Work: _____ **License#:** _____ **DIR#:** _____

Subcontractor Name: _____ **Location:** _____
Portion of Work: _____ **License#:** _____ **DIR#:** _____

"NONCOLLUSION AFFIDAVIT"

(TO BE EXECUTED BY BIDDER AND SUBMITTED WITH BID)

_____, being first duly sworn, deposes and says that he or she is

_____ of _____
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, 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."

Added Stats 1988 ch 1548 sec 1.

Signature

Date

Notary

END OF SECTION

**DECLARATION OF GOOD FAITH EFFORTS TO USE
DISABLED VETERAN BUSINESS ENTERPRISES (DVBE)**

I, _____, declare that I am _____
(Name of Representative) (Title of Representative)

of _____ .
(Name of Business)

The party making the foregoing bid declares that the bidder has made good faith efforts to meet the participation goal of not less than three percent (3%) of the bid amount to include disabled veteran business enterprises in the work to be performed. Good faith efforts include those efforts set forth in Public Contractor Code, Section 10115.2, which the Contractor will document and make available upon request by the District.

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

Executed this _____ day of _____ 2024 in _____ CA

(Signature of Representative)

NOTE: This declaration does not have to be notarized.

END OF SECTION

**PRIME BIDDER CERTIFICATION OF DISABLED VETERAN
BUSINESS ENTERPRISE PARTICIPATION**

To be completed by the Prime Bidder

PART I – IDENTIFICATION INFORMATION		
BIDDER'S NAME	BUSINESS ADDRESS	TELEPHONE NUMBER
SCHOOL DISTRICT	COUNTY	APPLICATION NO.
<p>PART II – METHOD OF COMPLIANCE WITH DVBE PARTICIPATION GOALS – Include this form and any other applicable documents listed in this table with your bid/proposal. Read the three columns in the table below as sentences from left to right. Check the appropriate box to indicate your method of committing the contract dollar amount.</p> <p>NOTE: <i>Architectural, engineering, environmental, land surveying or construction management firms must indicate their method of compliance by marking the appropriate box A, B, C, or D after selection by the District and before the contract is signed.</i></p>		
YOUR BUSINESS ENTERPRISE	AND YOU	AND YOU
A. <input type="checkbox"/> <i>is Disabled Veteran owned and your forces, will perform at least 3 percent of this contract</i>	<i>will include a copy of your DVBE letter from the Office of Small Minority Business (OSBCR).</i>	
B. <input type="checkbox"/> <i>is Disabled Veteran owned but is unable to perform the 3 percent of this contract with your forces</i>	<i>will use DVBE subcontractors/ suppliers to bring the contract participation to at least 3 percent</i>	<i>will include a copy of each DVBE's letter from OSBCR (including yours, if applicable).</i>
C. <input type="checkbox"/> <i>is not Disabled Veteran owned</i>	<i>will use DVBE subcontractors/ suppliers for at least 3 percent of this contract</i>	
D. <input type="checkbox"/> <i>is unable to meet the required participation goals</i>	<i>will complete a Good Faith Effort to obtain DVBE participation</i>	<i>will include the Prime Bidder's Good Faith Effort Worksheet.</i>

Note: An Office of Small Business, Certification and Resources (OSBCR) letter must be attached for each DVBE participating in the contract. The DVBE letter is obtained by application through the OSBCR and must be provided at the time of bid opening. If the letter is not provided, the bid may be deemed nonresponsive and may be ineligible for award of the contract.

Continued on reverse side

PART III – DVBE DOLLAR PARTICIPATION OF BID/PROPOSAL – *Architectural, engineering, environmental, land surveying or construction management firms complete this part after selection by the district and before the contract is signed.*

Show deductive alternate(s) in parenthesis. For more alternates/base bids, use a separate page to show items.

- A. If your business enterprise is a DVBE, list in the appropriate column the total dollar amount of your bid to be performed by your own participation.
- B. List all your DVBE subcontractors/suppliers. Enter in the appropriate column the dollar amount for each of your subcontractors/suppliers.
- C. Enter the total of Lines A and B for each column.
- D. Enter the dollar amount of the bid/proposal to be performed by **non-DVBE** firms. Note: This line is the sum of the prime and subcontractor(s) **non-DVBE** dollar participation.
- E. Enter the sum of the column totals from Line C and Line D. Note: Please be aware that the final determination of DVBE compliance is made based on the contract amount resulting from the district’s acceptance or rejection of alternates.

	BASE BID/PROPOSAL	ALTERNATE #1	ALTERNATE #2	ALTERNATE #3 OR BASE BID B	ALTERNATE #4 OR BASE BID C	ALTERNATE #5 (Modernization or Reconstruction Only)
A. Prime Bidder, <i>if DVBE (own participation)</i>	\$	\$	\$	\$	\$	\$
B. DVBE Subcontractor or Supplier						
1.						
2.						
3.						
4.						
C. Subtotal (A & B)						
D. Non-DVBE						
E. Total Bid						

PRIME BIDDER GOOD FAITH EFFORT WORKSHEET

This worksheet is to be used to assist the Prime Bidder in meeting the 3% DVBE participation goal

PAGE 1 OF 2

BIDDER'S NAME	BUSINESS ADDRESS	CONTACT PERSON
TELEPHONE NUMBER	OWNER	COUNTY

GENERAL INSTRUCTIONS:

This worksheet is to be used to assist you in meeting the 3 percent DVBE participation goal. If specific information is not provided for Parts I through III, you do not meet the test of the "Good Faith Effort" and cannot so certify. If you are qualifying based on a "Good Faith Effort" you must include this form with your bid/proposal to the Owner.

PART I – CONTACTS

To identify DVBE subcontractors/suppliers for participation in your bid/proposal, contact must be made with each of the following categories. It is recommended that you contact several DVBE organizations.

CATEGORY	TELEPHONE NUMBER	DATE CONTACTED	PERSON CONTACTED
1. Owner			
2. Office of Small Business and DVBE Services (OSDS). OSDS publishes a searchable list of Disabled Veteran Business Enterprises Internet address – http://www.bidsync.com/DPXRisCASB	(916) 375-4940		
3. DVBE Organizations (<i>List</i>):			
4. Write "recorded message" in this column, if applicable.			

PART II – ADVERTISEMENTS *You must make at least two (2) advertisements, one (1) in a paper that focuses on DVBE and one (1) in a trade paper. Advertisements should be published at least 14 days prior to bid/proposal opening; if you cannot advertise 14 days prior, advertise as soon as possible and provide an explanation. (Advertisements must be published in time to allow for a reasonable response). Advertisements must include that your firm is seeking DVBE participation, the project name and location, your firm’s name, your firm’s contact person, and phone number.*

Attach copies of advertisements to this form.

FOCUS/TRADE PAPER NAME	CHECK ONE		DATE OF ADVERTISEMENT
	TRADE	FOCUS	

PART III – DVBE SOLICITATIONS *List DVBE subcontractors/suppliers that were invited to bid. Use the following instructions to complete the remainder of this section (read the three columns as a sentence from left to right). If you need additional space to list DVBE solicitations, please use a separate page and attach to this form.*

IF THE DVBE.....	THEN.....	AND.....		
Was selected to participate	Check "yes" in the "SELECTED" column, include the applicable dollar amount in Part III of the Prime Bidder Certification	Include a copy of their DVBE letter from OSBCR.		
Was not selected to participate	Check "no" in the "SELECTED" column	State why in the "REASON NOT SELECTED" column.		
Did not respond to your solicitation	Check the "NO RESPONSE" column			
DISABLED VETERANS BUSINESS ENTERPRISES CONTACTED	SELECTED		REASON NOT SELECTED <i>This section must be completed</i>	NO RESPONSE
	YES	NO		

IMPORTANT NOTE:

Please be aware that certification of the "Good Faith Effort" may only be made if you fully complete Parts I, II, and III on both sides of this form. A copy of this form must be retained by you and may be subject to a future audit.

CERTIFICATION

I, _____ certify that I am the bidder's Chief Executive Officer and that I have made a diligent effort to ascertain the facts with regard to the representations made herein. In making this certification, I am aware of Section 12650 *et seq.* of the Government Code providing for the imposition of treble damages for making false claims.

SIGNATURE OF CHIEF EXECUTIVE OFFICER	DATE
--------------------------------------	------

GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION

ARTICLE 1 - CONTRACT DOCUMENTS

1.1 DEFINITIONS

- 1.1.1 The Contract Documents - The Contract Documents consist of the Contract, the Instructions to Bidders, the Bid Bond, Performance and Payment Bond, the Conditions of the Contract (General, Supplemental, and other Conditions), the Drawings, the Specifications, all Addenda, issued prior to execution of the Contract, and all Modifications thereto. A Modification is (1) a written amendment to the Contract signed by both parties, (2) a Change Order, (3) a written interpretation issued by the Architect pursuant to Subparagraph 1.2.5., or (4) a written order for a minor change in the work issued by the Architect pursuant to Paragraph 12.4. A Modification may be made only after execution of the Contract.
- 1.1.2 The Contract - The Contract Documents form the Contract. The Contract represents the entire and integrated agreement between the parties hereto, and supersedes all prior negotiation, representations, or agreements, either written or oral, including the bidding documents. The Contract may be amended or modified only by a Modification as defined in Subparagraph 1.1.1.
- 1.1.3 The Work - The term work comprises the completed construction required by the Contract Documents and includes all labor necessary to produce the construction required by the Contract Documents, and all materials and equipment incorporated or to be incorporated in such construction.
- 1.1.4 The Project - The Project is the total construction designed by the Architect of which the work performed under the Contract Documents may be the whole or a part.
- 1.1.5 Owner - The Owner is ROBERTS FERRY UNION ELEMENTARY SCHOOL DISTRICT, of Stanislaus County, California, and named as such in the Agreement.
- 1.1.6 District - The District shall mean ROBERTS FERRY UNION ELEMENTARY SCHOOL DISTRICT, Stanislaus County, California.
- 1.1.7 Estimated Completion Date - The Estimated Completion Date shall be the date set forth as such in the Supplemental General Conditions.
- 1.1.8 Fixed Completion Date - The fixed Completion Date shall be the date set forth as such in the Supplemental General Conditions.

1.2 EXECUTION, CORRELATION, INTENT AND INTERPRETATIONS

- 1.2.1 The Contract Documents, including the Contract in the forms furnished the bidder prior to his bid, shall be signed in not less than triplicate by the Owner and Contractor.
- 1.2.2 By executing the Contract, the Contractor represents that he has visited the site, familiarized himself with the local conditions under which the work is to be performed, and correlated his observations with the requirements of the Contract Documents.
- 1.2.3 The Contract Documents are complementary, and what is required by any one shall be as binding as if required by all. The intention of the Documents is to include all labor, materials, equipment, and other items as provided in Subparagraph 4.4.1 necessary for the proper execution and completion of the work. It is not intended that work not covered under any heading, section, branch, class, or trade of the Specifications shall be supplied unless it is required elsewhere in the Contract Documents or is reasonable inferable therefrom as being necessary to produce the intended results. Words which have well-known technical or trade meanings are used herein in accordance with such recognized meanings.
- 1.2.4 The organization of the Specifications into divisions, sections, and articles, and the arrangement of Drawings shall not control the Contractor in dividing the work among Subcontractors or in establishing the extent of work to be performed by any trade.
- 1.2.5 Written interpretations necessary for the proper execution of progress of the work, in the form of drawings or otherwise, will be issued with reasonable promptness by the Architect and in accordance with any schedule agreed upon. Such interpretations shall be consistent with and reasonable inferable from the Contract Documents, and may be effected by Field Order.

1.3 COPIES FURNISHED AND OWNERSHIP

- 1.3.1 Unless otherwise provided in the Contract Documents, the Contractor will be furnished, free of charge, six (6) copies of Drawings and Specifications.

ARTICLE 2 - ARCHITECT

2.1 DEFINITION

- 2.1.1 The Architect is the person or organization identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number and masculine in gender. The term Architect means the Architect or his authorized representative.

2.1.2 Nothing contained in the Contract Documents shall create any contractual relationship between the Architect and the Contractor.

2.2 ADMINISTRATION OF THE CONTRACT

2.2.1 The Architect will provide general Administration of the Construction Contract, including performance of the functions hereinafter described.

2.2.2 The Architect will be the Owner's representative during construction and until final payment. The Architect will have authority to act on behalf of the Owner to the extent provided in the Contract Documents, unless otherwise modified by written instrument which will be shown to the Contractor. The Architect will advise and consult with the Owner, and all of the Owner's instructions to the Contractor shall be issued through the Architect.

2.2.3 The Owner will provide one or more full time inspectors to assist the Architect in providing competent and adequate inspection during all normal working periods. The Inspector is to be approved by the Architect and The Division of the State Architect.

2.2.4 The Architect, his representatives, including the inspectors and owner, shall at all times have access to the work wherever it is in preparation and progress. The Contractor shall provide facilities for such access so the architect may perform his functions under the Contract Documents.

2.2.5 The Architect will make periodic visits to the site to familiarize himself generally with the progress and quality of the work and to determine, in general, if the work is proceeding in accordance with the Contract Document. On the basis of his on-site observations as an Architect, he will keep the Owner informed of the progress of the work, and will endeavor to guard the Owner against defects and deficiencies in the work of the Contractor. The Architect will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the work. The Architect will not be responsible for construction means, methods, techniques, sequences, or procedures, or for safety precautions and programs in connections with the work, and he will not be responsible for the Contractor's failure to carry out the work in accordance with the Contract Documents.

2.2.6 Based on such observations and the Contractor's Applications for Payment, the Architect will determine the amounts owing to the Contractor and will issue Certificates for Payment in such amounts, as provided in Paragraph 9.4.

2.2.7 The Architect will be, in the first instance, the interpreter of the requirements of the Contract Documents and the judge of the performance thereunder by both the Owner and Contractor. The Architect will, within a reasonable time, render such

interpretations as he may deem necessary for the proper execution of progress of the work.

- 2.2.8. Claims, disputes and other matters in question between the Contractor and the Owner relating to the execution or progress of the work or the interpretation of the Contract Documents shall be referred initially to the Architect for decision which he will render in writing within a reasonable time.
- 2.2.9 All interpretations and decisions of the Architect shall be consistent with the intent of the Contract Documents.
- 2.2.10 The Architect's decision in matters relating to artistic effect will be final if consistent with the intent of the Contract Documents.
- 2.2.11 The Architect will have authority to reject work which does not conform to the Contract Documents. Whenever he considers it necessary or advisable to insure the proper implementation of the Contract Documents, he will have authority to require the contractor to stop the work or any portion thereof, or to require special inspection or testing of the work as provided in Subparagraph 7.8.2 whether or not such work be then fabricated, installed or completed. However, neither the Architect's authority to act under this Subparagraph 2.2.11, nor any decision made by him in good faith either to exercise or not to exercise such authority, shall give rise to any duty or responsibility of the Architect to the Contractor, any subcontractor, any of their agents or employees, or any other person performing any of the work.
- 2.2.12 The Architect will review Shop Drawings and Samples as provided in Subparagraph 4.12.1 through 4.12.8 inclusive.
- 2.2.13 The Architect will prepare Change Orders in accordance with Article 12, and will have authority to order minor changes in the work as provided in Subparagraph 12.5.1.
- 2.2.14 The Architect will conduct inspections to determine the dates of the Substantial Completion and final completion, will review written guarantees and related documents required by the Contract and assembled by the Contractor, and will issue a final Certificate for Payment.
- 2.2.15 The Architect will not be responsible for the acts or omissions of the Contractor, or any Subcontractors, or any of his or their agents or employees, or any other persons performing any of the work.

2.2.16 In case of the termination of the employment of the Architect, the Owner shall appoint an architect whose status under the Contract Documents shall be that of the former architect.

ARTICLE 3 - OWNER

3.1 INFORMATION AND SERVICES REQUIRED OF THE OWNER

- 3.1.1 The Owner shall furnish all surveys describing the physical characteristics, legal limits and utility locations for the site of the project.
- 3.1.2 The Owner shall secure and pay for easements for permanent structures or permanent changes in existing facilities.
- 3.1.3 Information or services under the Owner's control shall be furnished by the Owner with reasonable promptness to avoid delay in the orderly progress of the work.
- 3.1.4 The Owner shall issue all instructions to the Contractor through the Architect.
- 3.1.5 The foregoing are in addition to other duties and responsibilities of the Owner enumerated herein and especially those in respect to Payment and Insurance in Article 9 and 11 respectively.

3.2 OWNER'S RIGHT TO STOP THE WORK

- 3.2.1 If the Contractor fails to correct defective work as required by Paragraph 13.2 or persistently fails to carry out the work in accordance with the Contract Documents, the Owner, by a written order signed personally or by an agent specifically so empowered by the Owner in writing, may order the Contractor to stop the work, or any portion thereof, until the cause for such order has been eliminated; however, this right of the Owner to stop the work shall not give rise to any duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity.

ARTICLE 4 - CONTRACTOR

4.1 DEFINITION

- 4.1.1 The Contractor is the person or organization identified as such in the Contract and is referred to throughout the Contract Documents as if singular in number and masculine in gender. The term Contractor means the Contractor or his authorized representative.

4.2 REVIEW OF CONTRACT DOCUMENTS

4.2.1 The Contractor shall carefully study and compare the Contract Documents and shall at once report to the Architect any error, inconsistency or omission he may discover; but the Contractor shall not be liable to the Owner or the Architect for any damage resulting from any such errors, inconsistencies or omissions in the Contract Documents. The Contractor shall perform no portion of the work at any time without Contract Documents or where required, approved Shop Drawings, Product Data or Samples for such portion of the work.

4.3 SUPERVISION AND CONSTRUCTION PROCEDURES

4.3.1 The Contractor shall supervise and direct the work, using his best skill and attention. He shall be solely responsible for all construction means, methods, techniques, sequences and procedures and for coordinating all portions of the work under the Contract.

4.3.2 The Contractor shall be responsible to the owner for the acts and omissions of his employees, Subcontractors, and their agents and employees, and other persons performing any of the work under a contract with the Contractor.

4.3.3 The Contractor shall not be relieved from his obligations to perform the work in accordance with the Contract Documents either by the activities or duties of the Architect in his administration of the Contract, or by inspections, tests or approvals required or performed under Paragraph 7.8 by persons other than the Contractor.

4.4 LABOR AND MATERIALS

4.4.1 Unless otherwise specifically provided in the Contract Documents, the Contractor shall provide and pay for all labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for the proper execution and completion of the work, whether temporary or permanent and whether or not incorporated or to be incorporated in the work.

4.4.2 The Contractor shall at all times enforce strict discipline and good order among his employees and shall not employ on the work any unfit person or anyone not skilled in the task assigned to him.

4.5 WARRANTY

4.5.1 The Contractor warrants to the Owner and the Architect that all materials and equipment furnished under this contract will be new unless otherwise specified, and that all work will be of good quality, free from faults and defects, and in

conformance with the Contract Documents. All work not so conforming to these standards may be considered defective.

4.5.2 The warranty provided in this Paragraph 4.5 shall be in addition to and not in limitation of any other warranty or remedy required by law or by the Contract Documents.

4.6 TAXES

4.6.1 The Contractor shall pay all sales, consumer, use, and other similar taxes required by law.

4.7 PERMITS, FEES, AND NOTICES

4.7.1 The Contractor shall secure and pay for all permits and licenses necessary for the prosecution of the work, including utility fees. District will reimburse Contractor the actual documented cost of such permits, licenses and fees, with no overhead or profit added.

4.7.2 The Contractor shall give all notices and comply with all laws, ordinances, rules, regulations, and orders of any public authority bearing on the performance of the work. If the Contractor observes that any of the Contract Documents are at variance therewith in any respect, he shall promptly notify the Architect in writing, and any necessary changes shall be adjusted by appropriate modification. If the Contractor performs any work knowing it to be contrary to such laws, ordinances, rules, and regulations, and without such notice to the Architect, he shall assume full responsibility therefore, and shall bear all costs attributable thereto.

4.7.3 All materials and workmanship shall conform to the California Code of Regulations and Title 24, Parts 1 to 5, Part 9, and Part 12, Division of the State Architect, and the Contractor shall keep a copy of Title 24 on the job at all times. All work and materials shall be in full accordance with the latest Rules and Regulations of the State Fire Marshal, National Board of Fire Underwriters, California Electric Code, Safety Orders of Division of Industrial Safety, California Plumbing Code, and other applicable federal and state laws and regulations. Such laws and regulations shall be considered a part of these specifications, as if set forth herein in full and all work hereunder shall be executed in accordance therewith. Nothing in these plans or specifications is to be construed to permit work not conforming to the Codes.

4.7.4 All materials furnished and all work done under these specifications shall be subject to rigid inspection by the Architect and Owner who shall furnish competent and adequate inspection during normal working periods. When specific inspection is required as called for in plans and specifications, the Contractor shall inform the Architect and Inspector of the schedule of such work. Failure to do so may require

such work to be torn out and replaced under proper inspection, and the entire cost of tearing out and replacement including cost of any materials furnished by the Owner and used in the work torn out, shall be borne by the Contractor. Work covered up without the approval of the Architect or the Owner shall be uncovered to the extent required and the Contractor shall similarly bear the cost of performing all the work and furnishing all the materials necessary for the removal of the covering and its subsequent replacement.

4.7.5 Whenever the Contractor arranges to work at night, or at any time when work is not usually in progress, or to vary the period during which work is carried out each day, he shall give the Owner due notice so that inspection may be provided. Such work shall be done without extra compensation to the Contractor and such additional inspection costs shall be chargeable to the Contractor providing such work is not performed at the request of the Owner to meet earlier completion time than that established in the Contract, or for a cause not under control of the Contractor.

4.8 ALLOWANCES (not used)

4.9 SUPERINTENDENT

4.9.1 The Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance at the project site during the progress of the work. The superintendent shall be satisfactory to the Architect, and shall not be changed except with the consent of the Architect, unless the superintendent proves to be unsatisfactory to the Contractor and ceases to be in his employ. The superintendent shall represent the Contractor and all communications given to the superintendent shall be as binding as if given to the contractor. Important communications will be confirmed in writing. Other communications will be so confirmed on written request in each case.

4.10 PROGRESS SCHEDULE

4.10.1 The Contractor, immediately after being awarded the Contract, shall prepare and submit for the Architect's approval an estimated progress schedule for the work. The progress schedule shall be related to the entire Project to the extent required by the Contract Documents. This schedule shall indicate the dates for the starting and completion of the various stages of construction and shall be revised as required by the conditions of the work, subject to the Architect's approval.

4.11 DRAWINGS AND SPECIFICATIONS AT THE SITE

4.11.1 The Contractor shall maintain at the site for the Owner one copy of all Drawings, Specifications, Addenda, approved Shop Drawings, Change Orders, and other modifications, in good order and marked to record all changes made during construction. these shall be available to the Architect. The Drawings, marked to record all changes made during construction, shall be delivered to the Architect for the Owner upon completion of the work.

4.12 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

4.12.1 Shop Drawings are drawings, diagrams, illustrations, schedules, performance charts, brochures and other data which are prepared by the Contractor or any Subcontractor, manufacturer, supplier or distributor, and which illustrate some portion of the work.

4.12.2 Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information furnished by the Contractor to illustrate a material, product or system for some portion of the work.

4.12.3 Samples are physical examples furnished by the Contractor to illustrate materials, equipment, or workmanship, and to establish standards by which the work will be judged.

4.12.4 The Contractor shall review, stamp with his approval and submit, with reasonable promptness and in orderly sequence so as to cause no delay in the work or in the work of any other contractor, all Shop Drawings and Samples required by the Contract Documents or subsequently by the Architect as covered by modifications. Shop Drawings and Samples shall be properly identified as specified, or as the Architect may require. At the time of submission the Contractor shall inform the Architect in Writing of any deviation in the Shop Drawings or Samples from the requirements of the Contract Documents.

4.12.5 By approving and submitting Shop Drawings, Product Data and Samples, the Contractor thereby represents that he has determined and verified all field measurements, field construction criteria, materials, catalog numbers and similar data, or will do so, and that he has checked and coordinated the information contained within such submittal with the requirements of the work and of the Contract Documents.

4.12.6 The Architect will review and approve Shop Drawings, Product Data and Samples with reasonable promptness so as to cause no delay, but only for conformance with the design concept of the project and with the information given in the Contract Documents. The Architect's approval of a separate item shall not indicate approval of an assembly in which the item functions.

- 4.12.7 The Contractor shall make any corrections required by the Architect and shall resubmit the required number of corrected copies of Shop Drawings, Product Data or new Samples until approved. The Contractor shall direct specific attention in writing or on resubmitted Shop Drawings to revisions other than the corrections requested by the Architect on previous submissions.
- 4.12.8 The Architect's approval of Shop Drawings, Product Data or samples shall not relieve the Contractor of responsibility for any deviation from the requirements of the Contract Documents unless the Contractor has informed the Architect in writing of such deviation at the time of submission and the Architect has given written approval to the specific deviation, nor shall the Architect's approval relieve the Contractor from responsibility for errors or omissions in the Shop Drawings, Product Data or Samples.
- 4.12.9 No portion of the work requiring a Shop Drawing, Product Data, or Sample submission shall be commenced until the submission has been approved by the Architect. All such work shall be in accordance with approval submittal.
- 4.12.10 The Contractor shall submit to the Architect and Owner for approval, within thirty-five(35) days after the signing of the Contract, a complete list setting forth the brand name and manufacturer of all materials and/or equipment proposed for use under this Contract. The list shall include all items required under the Contract, although the brand name or manufacturer may not be specifically included in the specifications. Where specific brands are specified, substitutions therefore shall be clearly indicated on the material equipment list.
- 4.12.11 Wherever samples are called for in the specifications, or where it is desired to substitute another material or article for the specified, the Contractor shall submit samples in triplicate to the Architect with all freight charges prepaid. One sample will be returned to him at his expense, with letter stating that it is approved or rejected, and one sample will be returned to the Owner for his records. All materials delivered on the site or placed in the building shall be equal to the sample in every respect.
- 4.12.12 Where special makes or brands are called for, they are mentioned as a "Standard." Others of equal quality may be used, provided approval is first obtained in writing from the Architect. Unless substitutions are requested, no deviation from the plans and specifications will be allowed. Substitutions shall be requested or offered for investigation in ample time, as no delay or extra time will be allowed on account thereof.
- Requests for substitution will only be considered when offered by the General Contractor and such requests must be made within thirty-five (35) days after the award of the Contract.

4.12.13 All materials shall be delivered as to insure a speedy and uninterrupted progress of the work. All materials shall be stored so as to cause no obstruction and so as to prevent overloading of any portion of the structure, and the Contractor shall be entirely responsible for damage or loss by weather or other cause.

4.13 USE OF SITE

4.13.1 The Contractor shall confine operations at the site to areas permitted by law, ordinances, permits and the Contract Documents and shall not unreasonably encumber the site with any materials or equipment.

4.14 CRIMINAL HISTORY CLEARANCE/SITE PROTECTION CERTIFICATION

4.14.1 The Criminal History Clearance/Site Protection Certification form, see Article 21 of the General Conditions, is required from all successful bidders pursuant to the requirements mandated by California Education Code Sections 33192 and 45124.1 et seq., the Michelle Montoya School Safety Act of 1997. This provides that a school district may require a construction contractor that has a contract with the district to obtain a criminal history clearance from the Department of Justice of all employees working on a school site under that contract.

4.15 CUTTING AND PATCHING OF WORK

4.15.1 The Contractor shall be responsible for all cutting, fitting, or patching that may be required to complete the work or to make its several parts fit together properly.

4.15.2 The Contractor shall not damage or endanger any portion of the work or the work of the Owner or any separate contractors by cutting, patching, or otherwise altering any work, or by excavation. The Contractor shall not cut or otherwise alter the work of the Owner or any separate contractor except with the written consent of the Owner and of such separate contractor. The Owner shall not unreasonably withhold from the Contractor or any separate contractor his consent to cutting or otherwise altering the work.

4.16 CLEANING UP

4.16.1 The Contractor at all times shall keep the premises free from accumulation of waste materials or rubbish caused by his operations.

At the completion and during the work he shall remove all his waste materials and rubbish from and about the Project as well as all his tools, construction equipment, machinery and surplus materials, and shall clean all glass surfaces and leave the work "broom clean" or its equivalent, except as otherwise specified. The Contractor cannot use the Owner's trash bins.

4.16.2 If the Contractor fails to clean up, the Owner may do so and the cost thereof shall be charged to the Contractor as provided in Paragraph 7.6.

4.17 COMMUNICATIONS

4.17.1 The Contractor shall forward all communications to the Owner through the Architect.

4.18 INDEMNIFICATION

4.18.1 To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Owner and the Architect and their agents and employees from and against all claims, damages, losses, and expenses including attorney's fees arising out of or resulting from the performance of the work, or the failure, neglect or refusal of the Contractor to perform the work provided that any such claim, damage, loss or expenses (a) is attributable to bodily injury, sickness, disease or death, or in injury to or destruction of tangible property (other than the work itself) including the loss of use resulting there from, and (b) is caused in whole or in part by any negligent act or omission of the Contractor, any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, regardless or whether or not it is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or otherwise reduce any other right or obligation of indemnity which would otherwise reduce any other right or obligation of indemnity which would otherwise exist as to any party described in this Paragraph 4.18.

4.18.2 In any and all claims against the Owner or the Architect or any of their agents or employees by an employee of the Contractor, any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, the indemnification obligation under this Paragraph 4.18 shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the contractor or any Subcontractor under worker's compensation acts disability benefits acts or other employee benefit acts.

ARTICLE 5 - SUBCONTRACTORS

5.1 DEFINITION

5.1. A Subcontractor is a person or organization who has a direct contract with the Contractor to perform any of the work at the site. The term Subcontractor is referred to throughout the Contract Documents as if singular in number and masculine in gender, and means a Subcontractor or his authorized representatives. The term Subcontractor does not include any separate contractor or his subcontractors.

- 5.1.2 A Sub-subcontractor is a person or organization who has a direct or indirect contract with the Subcontractor to perform any of the work at the site. The term Sub-subcontractor is referred to throughout the contract Documents as if singular in number and masculine in gender and means a Sub-subcontractor or an authorized representative thereof.
- 5.1.3 Nothing contained in the Contract Documents shall create any contractual relation between the Owner or the Architect and any Subcontractor or Sub-subcontractor.

5.2 AWARD OF SUBCONTRACTS AND OTHER CONTRACTS FOR PORTIONS OF THE WORK

- 5.2.1 The Contractor shall include with his Bid Proposal the names of each Subcontractor who will perform work or labor or render service to the Contractor in or about the work in an amount in excess of 1/2 of 1% of the bidder's total bid. The Contractor shall not, without written consent of the Owners, make any substitution thereto, or permit any subcontract to be assigned or transferred or performed by anyone other than the original Subcontractor listed in the Bid Proposal. The Contractor agrees that he is as fully responsible to the Owners for the acts and omissions of his Subcontractors and for the persons directly employed by him. The Owner will deal only through the General Contractor, who shall be responsible for the proper execution of the entire work.

Subletting the whole or any part of the Contract, if approved, shall be done only in accordance with the provisions of Sections 4100 to 4114 inclusive of the public Contract Code of the State of California, which are hereby incorporated by reference and made a part hereof.

- 5.2.2 If, prior to the award of the Contract, the Owner or Architect has a reasonable and substantial objection to any person or organization on such list, and refuses in writing to accept such person or organization, the successful bidder may, prior to the award, withdraw his bid without forfeiture of bid security. If the successful bidder submits an acceptable substitute, the Owner shall accept such substitute without any increase in bid price. If no satisfactory substitute is submitted, the Owner may disqualify the bid. If, after the award, the Owner or Architect refuses to accept any person or organization on such list, the Contractor shall submit an acceptable substitute and the Contract Sum shall be increased or decreased by the difference in cost occasioned by such substitution and an appropriate Change Order shall be issued; however, no increase in the Contract Sum shall be allowed for any such substitution unless the Contractor has acted promptly and responsively in submitting a name with respect thereto prior to the award.

- 5.2.3 The Contractor shall not contract with any Subcontractor or any person or organization proposed for portions of the work designated in the bidding requirements or, if none is so designated, with any Subcontractor proposed for the principal portions of the work who has not been accepted by the Owner and the Architect. The Contractor will not be required to contract with any subcontractor or person or organization against whom he has a reasonable objection.
- 5.2.4 If the Owner and the Architect requires a change of any proposed Subcontractor or person or organization previously accepted by them, the Contract Sum shall be increased or decreased by the difference in cost occasioned by such change and an appropriate Change Order shall be issued.
- 5.2.5 The Contractor shall not make any substitution for any Subcontractor or person or organization who has been accepted by the Owner and Architect, unless the substitution is acceptable to the Owner and the Architect.

5.3 SUBCONTRACTUAL RELATIONS

- 5.3.1 All work performed for the Contractor by a Subcontractor shall be pursuant to an appropriate agreement between the Contractor and the Subcontractor (and where appropriate between Subcontractors and Sub-subcontractors) which shall contain provisions that:
1. Preserve and protect the rights of the Owner and the Architect under the Contract Documents with respect to the work to be performed under the subcontract so that the subcontracting thereof will not prejudice such rights;
 2. Require that such work be performed in accordance with the requirements of the Contract Documents;
 3. Require submission to the Contractor of applications for payment under such subcontract to which the contractor is a party, in reasonable time to enable the Contractor to apply for payment in accordance with Article 9;
 4. Require that all claims for additional costs, extensions of time, damages for delays or otherwise with respect to subcontracted portions of the work shall be submitted to the Contractor (via any Subcontractor or Sub-subcontractor where appropriate) in the manner provided in the Contract Documents for like claims by the Contractor upon the Owner;
 5. Waive all right the contracting parties may have against one another for damages caused by fire or other perils covered by the property insurance described in Paragraph 11.2, except such rights as they may have to the proceeds of such insurance help; and

6. Obligate such Subcontractor specifically to consent to the provisions of this Paragraph 5.3, and identify to each Subcontractor any terms and conditions of each proposed Subcontract which may be a variance with the Contract Documents.

5.4 CLAIMS FOR EXTRA WORK / FOR EXTENSIONS OF TIME

- 5.4.1 The Contractor shall not be entitled to the payment of any additional compensation or any extension of time for any cause, including any act, or failure to act by the Architect, or happening of any event, thing or occurrence, unless the Contractor shall have given the Architect due written notice of potential claims as hereinafter specified. It is the intention of this Section 5.4 that the differences between the parties, arising under and by virtue of the Contract be brought to the attention of the Architect at the earliest possible time in order that such matters may be settled, if possible, or other appropriate action promptly taken. It is also the intention of this Section 5.4 to implement the provisions of Article 1.5 (commencing with Section 20104) of Chapter 1 of Part 3 of the Public Contract Code of California. The Contractor hereby agrees that he or she shall have no right to additional compensation or an extension of item for any claim that may be based on any act, failure to act, event, thing or occurrence for which no written notice of potential claim as hereby required was filed.

All claims shall be filed in writing on or before the times prescribed herein, but in no event later than the date of final payment. Claims shall be filed with the Architect prior to the time that the Contractor commences performance of the work giving rise to the potential claim for additional compensation, if based on any act or failure to act by the Architect, or in all other cases within ten (10) days after the happening of event, thing or occurrence giving rise to the potential claim. All claims shall set forth clearly and in detail, for each item of additional compensation or extension of time claimed, the reasons for the specifications, the nature and the amount of the cost involved, the computations used in determining such costs, and all pertinent factual data necessary to substantiate the claim.

ARTICLE 6 - WORK BY OWNER OR BY SEPARATE CONTRACTORS

6.1 OWNER'S RIGHT TO PERFORM WORK AND TO AWARD SEPARATE CONTRACTS

- 6.1.1 The Owner reserves the right to perform work related to the Project with his own forces, and to award separate contracts in connection with other portions of the Project or other work on the site under these or similar Conditions of the Contract. If the Contractor claims that delay or additional cost is involved because of such action by the Owner, he shall make such claim as provided elsewhere in the Contract Documents.

- 6.1.2 When separate contracts are awarded for different portions of the Project, "the Contractor" in the Contract Documents in each case shall be the contractor who signs each separate contract.

6.2 MUTUAL RESPONSIBILITY OF CONTRACTORS

- 6.2.1 The Contractor shall afford the Owner and separate contractors reasonable opportunity for the introduction and storage of their materials and equipment and the execution of their work, and shall properly connect and coordinate his work with theirs.
- 6.2.2 If any part of the Contractor's work depends for proper executioner results upon the work of the Owner or any separate contractor, the Contractor shall inspect and promptly report to the Architect and Inspector any discrepancies or defects in such other work that render it unsuitable for such proper execution and results. Failure of the Contractor to so inspect and report shall constitute an acceptance of the Owner's or the separate Contractor's work as fit and proper to receive his work, except as to defects which may develop in the other separate contractor's work after the execution of the Contractor's work.
- 6.2.3 Should the Contractor cause damage to the work or property of any separate contractor on the Project, the Contractor shall, upon due notice, settle with such other contractor by agreement or arbitration, if he will so settle. If such separate contractor sues the Owner on account of any damage alleged to have been so sustained, the Owner shall notify the Contractor and the Contractor shall defend such proceedings at the Contractor's expense and, if any judgment against the Owner arises therefrom, the Contractor shall pay or satisfy it and shall reimburse the Owner for all attorneys fees and court cost which the Owner has incurred.
- 6.2.4 Any cost caused by defective or ill-timed work shall be borne by the party responsible therefore.

6.3 OWNER'S RIGHT TO CLEAN UP

- 6.3.1 If a dispute arises between the separate contractors as to their responsibility for cleaning up as required by paragraph 4.15, the Owner may clean up and charge the cost thereof to the several contractors as the Architect shall determine to be just.

ARTICLE 7 - MISCELLANEOUS PROVISIONS

7.1 LAW OF THE PLACE

- 7.1.1 The Contract shall be governed by the law of the place where the project is located.

7.2 SUCCESSORS AND ASSIGNS

7.2.1 The Owner and the Contractor each binds himself, his partners, successors, assigns and legal representatives to the other party hereto and to the partners, successors, assigns and legal representatives of such other party in respect to all covenants, agreements and obligations contained in the Contract Documents. Neither party to the Contract shall assign the Contract or sublet it as a whole without the written consent of the other, nor shall the Contractor assign any monies due or to become due or to become due to him hereunder, without the previous written consent of the Owner.

7.3 WRITTEN NOTICE

7.3.1 Written notice shall be deemed to have been duly served if delivered in person to the individual or member of the firm or to an officer of the corporation for whom it was intended, or if delivered at or sent by registered or certified mail to the last business address known to him who gives the notice.

7.4 CLAIMS FOR DAMAGES

7.4.1 Should either party to the Contract suffer injury or damage to person or property because of any act or omission of the other party or if any of his employees, agents or others for whose acts he is legally liable, claim shall be made in writing to such other party within a reasonable time after the first observance of such injury or damage.

7.5 PERFORMANCE BOND AND LABOR AND MATERIAL PAYMENT BOND

7.5.1 The Owner shall require the Contractor to furnish bonds covering the faithful performance of the Contract and the payment of all obligations arising thereunder in such form and amount as the Owner may prescribe and with such sureties as may be agreeable to the parties. If such bonds are stipulated in the bidding requirements, the premiums shall be paid by the Contractor; if required subsequent to the submission of quotations or bids, the cost shall be reimbursed by the Owner. The Contractor shall deliver the required bonds to the Owner not later than the date of execution of the Contract, or if the work is commenced prior thereto in response to a notice to proceed, the Contractor shall, prior to commencement of the work, submit evidence satisfactory to the Owner that such bonds will be issued.

7.6 OWNER'S RIGHT TO CARRY OUT THE WORK

7.6.1 If the Contractor defaults or neglects to carry out the work in accordance with the Contract Documents or fails to perform any provision of the Contract, the Owner may, after seven days written notice to the Contractor and without prejudice to any

other remedy he may have, make good such deficiencies. In such case an appropriate Change Order shall be issued deducting from the payments then or thereafter due the Contractor, the cost of correcting such deficiencies, including the cost of the Architect's and the Owner's inspectors, additional services made necessary by such default, neglect or failure. If the payments then or thereafter due the Contractor are not sufficient to cover such amount, the Contractor shall pay the difference to the Owner.

7.7 ROYALTIES AND PATENTS

7.7.1 The Contractor shall pay all royalties and license fees. He shall defend all suits or claims for infringement of any patent rights and shall save the Owner harmless from loss on account thereof, except that the Owner shall be responsible for all such loss when a particular design, process or the product of a particular manufacturer or manufacturers is specified, but if the Contractor has reason to believe that the design, process or product specified is an infringement of a patent, he shall be responsible for such loss unless he promptly gives such information to the Architect.

7.8 TESTS

7.8.1 If the Contract Documents, Laws, ordinances, rules, regulations or orders of any public authority having jurisdiction require any work to be inspected, tested, or approved, the Contractor shall give the Architect timely notice of its readiness and of the date arranged so the Architect may observe such inspection, testing or approval. The Owner shall bear all costs of such inspection, tests, and approvals unless otherwise provided.

7.8.2 If, after the commencement of the work, the Architect determines that any work requires special inspection, testing, or approval which Subparagraph 7.8.1 does not include, he will, upon written authorization from the Owner, instruct the Contractor to order such special inspection, testing, or approval, and the Contractor shall give notice as in Subparagraph 7.8.1. If such special inspection or testing reveals a failure of the work to comply (1) with the requirements of the Contract Documents or, (2) with respect to the performance of the work, with laws, ordinances, rules, regulations or orders of any public authority having jurisdiction, the Contractor shall bear all cost thereof, including the Architect's and the Owner's inspectors, additional service made necessary by such failure; otherwise the Owner shall bear such costs, and an appropriate Change Order will be issued.

7.8.3 All sampling and tests shall be made by a properly qualified person or testing laboratory, approved by the Division of the State Architect, who shall furnish copies of the test results to the Contractor, Architect, Owner, and the Division of the State Architect. All tests as well as sampling and preparation of samples where applicable shall be in accordance with Standards as latest adopted by A.S.T.M.

- 7.8.4 If the Architect wishes to observe the inspections, tests or approvals required by this Paragraph 7.8, he will do so promptly and, where practicable, at the source of supply.
- 7.8.5 Neither the observations of the Architect in his administration of the Contract, nor inspections, tests or approvals by persons other than the Contractor shall relieve the Contractor from his obligations to perform the work in accordance with the Contract Documents.
- 7.8.6 Payment for Tests and Inspection will be made as follows:
- A. District will pay cost of testing and inspection except the following for which the Contractor shall reimburse the District:
 1. Any retesting and sampling required due to failure of original test.
 2. Concrete design mix.
 3. Bacteriological Water Analysis testing for new relocatable buildings.
- 7.8.7 The Inspector of Record is to be employed by the Owner and approved by the Architect and DSA.

ARTICLE 8 - TIME - LIQUIDATED DAMAGES

8.1 DEFINITIONS

- 8.1.1 Unless otherwise provided, the Contract Time is the period of time allotted in the Contract Documents for substantial completion of the work as defined in Subparagraph 8.1.3, including authorized adjustments thereto.
- 8.1.2 The date of commencement of the work is the date established in a Notice to Proceed. If there is no Notice to Proceed, it shall be the date of the Contract or such other date as may be established therein.
- 8.1.3 The Date of Substantial Completion of the work or designated portion thereof is the Date certified by the Architect when construction is sufficiently completed, in accordance with the Contract Documents, so the Owner may occupy the work or designated portion thereof for the use for which it is intended.
- 8.1.4 The term "day" as used in the Contract Documents shall mean calendar day unless specifically designated.

8.2 PROGRESS AND COMPLETION

- 8.2.1 All time limits stated in the Contract Documents are of the essence of the Contract.
- 8.2.2 The Contractor shall begin the work on the date of commencement as defined in Subparagraph 8.1.2. He shall carry the work forward expeditiously with adequate forces and shall complete it within the contract time.

8.3 DELAYS AND EXTENSIONS OF TIME - TIME LIMIT

- 8.3.1 The project shall be completed in the manner provided for in the Contract on or before the completion date as set forth in the Supplementary General Conditions (hereinafter called the "Fixed Completion Date"), unless extensions of time are granted in accordance with the Contract for delays caused by the perils covered by the insurance required by Article 1 hereof or by any are declared by an enactment of the Congress of the United States of America as set forth herein. Failure to complete the work within such time and in the manner provided for by the Contract shall subject the Contractor to liquidated damages in accordance with Paragraph 8.4 "Liquidated Damages." Time is and shall be of the essence.
- 8.3.2 The Contractor shall commence work on the Project on or before five (5) calendar days from and after receipt of written "Notice to Proceed" from the Owner to the Contractor, and will diligently prosecute the work to completion. Said Notice to Proceed shall be issued following execution of Contract and the filing by the Contractor of the required bonds and insurance. The Contractor agrees to complete all of the work on or before the Estimated Completion Date. The continuous prosecution of the work within such time shall be subject only to delays caused by any changes in the work or by any default, act or omission of the Owner, or by any other contractor employed by the Owner on the work or by riots, strikes, lock-outs, fire, earthquake, flood and conditions resulting therefrom or by the inability to obtain material, equipment or labor due to Federal Government restrictions or requirements arising out of any defense or war program. Such delays, if any, shall operate only to extend the Estimated Completion Date above specified (not in excess of the period of such delay).
- 8.3.3 In the event it is deemed necessary by the Owner and the Contractor to extend the time of completion of the work to be done under these specifications beyond the dates of required completion herein specified, such extensions as shall be granted by the Owner shall in no way release any guarantee given by the Contractor pursuant to the provisions of the Contract, or to relieve or release the sureties on the bonds executed pursuant to said provision. The sureties in executing the bonds on the Contract shall be deemed to have expressly agreed to any such extension of time. The Owner shall not be required to pay extended overhead cost to the Contractor for allowing an extension of time to the Contract.

- 8.3.4 All claims for extension of time shall be made in writing to the Architect no more than fifteen days after the occurrence of the delay; otherwise they shall be waived. In the case of a continuing cause of delay, only one claim is necessary.
- 8.3.5 If no schedule or agreement is made stating the dates upon which written interpretations as set forth in Subparagraph 1.2.5 shall be furnished, then no claim for delay shall be allowed on account or failure to furnish such interpretations until fifteen days after demand is made for them, and not then unless such claim is reasonable.
- 8.3.6 This Paragraph 8.3 does not exclude the recovery of damages for delay by either party under other provisions of the Contract Documents.

8.4 LIQUIDATED DAMAGES

- 8.4.1 The actual fact of the occurrence of damages and the actual amount of the damages which the Owner would suffer if the work were not completed within the specified times set forth are dependent upon many circumstances and conditions and could prevail in various combinations, and, from the nature of the case, it is impracticable and extremely difficult to fix the actual damages. Damages which the Owner would suffer in the event of delay include loss of the use of the project, and, in addition, include, but are not limited to, expenses of prolonging employment of an engineering staff, costs of administration, inspection, supervision and the loss suffered by the public within the District by reason of the delay in the construction of the project to serve the public at the earliest possible time. Accordingly, the parties hereto agree that the amounts herein set forth shall be presumed to be the amount of damages sustained by the failure of the Contractor to complete the project within the respective times specified.
- 8.4.2 The amount of liquidated damages to be paid by the Contractor to the Owner for failure to complete the work specified will be **\$500.00 for each calendar day** by which completion of the project is delayed beyond the Fixed Completion Date and continuing thereafter to the time at which the Project is completed such amount being in each case the actual cash value agreed upon as the loss to the Owner resulting from the Contractor's default.
- 8.4.3 In the event the Contractor shall become liable for liquidated damages under this section, the Owner, in addition to all other remedies provided by law, shall have the right to withhold any and all retained payments which would otherwise be or become due the Contractor until the liability of the Contractor under this section has been finally determined.
- The Owner shall have the right to use and apply such retained amounts, in whole or in part, to reimburse the Owner for all damages due to or to become due to the Owner. Any remaining balance of such retained amounts shall be paid to the

Contractor only after discharge in full of all liability incurred by the Contractor under this article. If the retained amount is not sufficient to discharge all liabilities of the Contractor incurred under this article the Contractor and its sureties shall continue to remain liable to the Owner until all such liabilities are satisfied in full.

- 8.4.4 In addition to any other rights it may have, the Owner may terminate the Contract at any time after the Fixed Completion Date unless the Contractor shall have been granted an extension of time for delay pursuant to this Article 8. Upon such termination the Contractor shall not be entitled to any compensation for services rendered by before or after such termination, and he shall be liable to the Owner for liquidated damages for all periods of time beyond such date until the project is fully completed.

ARTICLE 9 - PAYMENTS AND COMPLETION

9.1 CONTRACT SUM - DEFINITION

- 9.1.1 The Contract Sum is stated in the Contract, or is as may be modified by duly executed change orders, and is the total amount payable by the Owner to the Contractor for their performance of the work under the Contract Documents.

9.2 SCHEDULE OF VALUES

- 9.2.1 Before the first Application for Payment, the Contractor shall submit to the Architect a schedule of values allocated to the various portions of the work, including quantities if required by the Architect, aggregating the total Contract Sum, divided by section as enumerated in the Project Manual's "Table of Contents", so as to facilitate payments to Subcontractors. Prepare schedule of values on AIA Documents G702 and G703, and supported by such data to substantiate its correctness as the Architect may require. Each item in the schedule of values shall include its proper share of overhead, and profit. This schedule, when approved by the Architect, shall be used as a basis for the Contractor's Applications for Payment.

9.3 PROGRESS PAYMENTS

- 9.3.1 At least ten days before each progress payment falls due, the Contractor shall submit to the Architect an itemized Application for Payment, supported by such data substantiating the Contractor's right to payment as the Owner or the Architect may require.
- 9.3.2 If payments are to be made on account of materials or equipment not incorporated in the work but delivered and suitable stored at the site, or at some other location agreed upon in writing, such payments shall be conditioned upon submission by the Contractor of bills of sale or such other procedures satisfactory to the Owner to establish the Owner's title to such materials or equipment or otherwise protect the Owner's interest including applicable insurance and transportation to the site.

9.3.3 The Contractor warrants and guarantees that title to all work, materials, and equipment covered by an application for payment, whether incorporated in the project or not, will pass to the Owner upon the receipt of such payment of the Contractor, free and clear of all liens, claims, security interests or encumbrances, hereinafter referred to in this Article 9 as "liens" and that no work, materials, or equipment covered by an Application for Payment will have been acquired by the Contractor, or by any other person performing the work at the site or furnishing materials and equipment for the Project, subject to an agreement under which an interest therein or an encumbrance thereon is retained by the seller or otherwise imposed by the contractor or such other person.

9.3.4 SUBMISSION OF CERTIFIED PAYROLL RECORDS: For all on-site work only, ROBERTS FERRY UNION ELEMENTARY SCHOOL DISTRICT requires weekly submission of certified payroll certificates. In addition to the weekly payroll records for your company, you are required to submit the weekly payroll records for all subcontractors.

9.4 CERTIFICATES FOR PAYMENTS

9.4.1 If the Contractor has made Application for Payment as above, the Architect will, with reasonable promptness but not more than seven (7) days after the receipt of the Application, issue a Certificate for Payment to the Owner with a copy to the contractor for such amount as he determines to be properly due or state in writing his reasons for withholding a Certificate as provided in Subparagraph 9.5.1.

9.4.2 The issuance of a Certificate for Payment will constitute a representation by the Architect to the Owner, based on his observations at the site as provided in Subparagraph 2.2.4 and the data comprising the Application for Payment, that the work has progressed to the point indicated; that, to the best of his knowledge, information and belief, the quality of the work is in accordance with the Contract Documents (subject to an evaluation of the work as a functioning whole upon substantial Completion, to the results of any subsequent tests required by the Contract Documents, to minor deviations from the Contract Documents correctable prior to completion, and to any specific qualifications stated in his Certificate and that the Contractor is entitled to payment in the amount certified). In addition, the Architect's final Certificate for Payment will constitute a further representation that the conditions precedent to the Contractor's being entitled to final payment as set forth in Subparagraph 9.7.2 have been fulfilled. However, by issuing a Certificate for Payment, the Architect shall not thereby be deemed to represent that he has made exhaustive or continuous on-site inspections to check the quality or quantity of the work or that he has reviewed construction means, methods, techniques, sequences, or procedures, or that he has made any examination to ascertain how or for what purpose the Contractor has used the monies previously paid on account of the Contract sum.

9.4.3 After the Architect has issued a Certificate for Payment, the Owner shall make payment in the manner provided in the Contract.

9.4.4 No Certificate for a progress payment, nor any progress payment, nor any partial or entire use or occupancy of the project by the Owner, shall constitute an acceptance of any work not in accordance with the Contract Documents.

9.5 PAYMENTS WITHHELD

9.5.1 The Architect may decline to approve an Application for Payment and may withhold his Certificate in whole or in part if in his opinion he is unable to make representations to the Owner as provided in Subparagraph 9.4.2. The Architect may also decline to approve any Applications for Payment or, because of subsequently discovered evidence or subsequent inspections, he may nullify the whole or any part of any Certificate for payment previously issued to such extent as may be necessary in his opinion to protect the Owner from loss because of:

1. Defective work not remedied;
2. Claims filed or reasonable evidence indicating probably filing of claims;
3. Failure of the Contractor to make payments properly to Subcontractors or for labor, materials, or equipment;
4. Reasonable doubt that the work can be completed for the unpaid balance of the Contract Sum;
5. Damage to another contractor;
6. Reasonable indication that the work will not be completed within the Contract Time; or,
7. Unsatisfactory prosecution of the work by the Contractor.

9.5.2 When the above grounds in Subparagraph 9.5.1 are removed, payment shall be made for amounts withheld because of them.

9.5.3 The Contractor may, in accordance with the provisions of Public Contract Code, Section 22300, substitute securities for any monies which the Owner may withhold to insure performance under the Contract.

9.6 FAILURE OF PAYMENT

9.6.1 If the Architect should fail to issue any Certificate for Payment, through no fault of the Contractor, within ten days after receipt of the Contractor's Application for Payment, or if the Owner would fail to pay the Contractor within twenty days after the date of payment established in the Contract any amount certified by the Architect, then the Contractor may, upon seven (7) additional days written notice to the Owner and the Architect, stop the work until payment of the amount owing has been received.

9.7 SUBSTANTIAL COMPLETION AND FINAL PAYMENT

9.7.1 When the Contractor determines that the work or a designated portion thereof acceptable to the owner is substantially complete, the Contractor shall prepare for submission to the Architect a list of items to be completed or corrected. The failure to include any items on such list does not alter the responsibility of the Contractor to complete all work in accordance with the Contract Documents.

When the Architect on the basis of an inspection determines that the work is substantially complete he will then prepare a Certificate of Substantial Completion, which shall establish the Date of Substantial Completion, which shall state the responsibilities of the Owner and the Contractor for maintenance, heat, utilities, and insurance, and shall fix the time listed therein, said time to be within the Contract Time unless extended pursuant to Paragraph 8.3.

The Certificate of Substantial Completion shall be submitted to the Owner and the Contractor for their written acceptance of the responsibilities assigned to them in such Certificate.

9.7.2 Upon receipt of written notice that the work is ready for final inspection and acceptance, and upon receipt of a final Application for Payment, the Architect will promptly make such inspection and, when he finds that work acceptable under the Contract Documents and the Contract fully performed, he will promptly issue a final Certificate for Payment stating that to the best of his knowledge, information, and belief, and on the basis of his observations and inspections, the work has been completed in accordance with the terms and conditions of the Contract Documents and that the entire balance found to be due the Contractor, and noted in said final Certificate, is due and payable.

9.7.3 Neither the final payment nor the remaining retained percentage shall become due until the Contractor submits to the Architect (1) and Affidavit that all payrolls, bills for materials and equipment, and other indebtedness connected with the work for which the Owner or his property might in any way be responsible, have been paid or otherwise satisfied, (2) consent of surety, if any, to final payment and (3) if

required by the Owner, other data establishing payment or satisfaction of all such obligations, such as receipts, releases and waivers of liens, claims or stop notices, arising out of the Contract, to the extent and in such form as may be designated by the Owner. If any Subcontractor refuses to furnish a release or waiver required by the Owner, the contractor may furnish a bond satisfactory to the Owner to indemnify him against any such lien, claim, or stop notice. If any such lien, claim, or stop notice remains unsatisfied after all payments are made, the Contractor shall refund to the Owner all monies that the alter may be compelled to pay in discharging such lien, claim, or stop notice, including all costs and reasonable attorneys fees.

9.7.4 If after Substantial Completion of the work final completion thereof is materially delayed through no fault of the Contractor, and the Architect so confirms, the Owner shall, upon certification by the Architect, and without terminating the Contract, make payment of the balance due for that portion of the work fully completed and accepted. If the remaining balance for work not fully completed or corrected is less than the retainage stipulated in the Contract, and if bonds have been furnished as required in Subparagraph 7.5.1, the written consent of the surety to the payment of the balance due for that portion of the work fully completed and accepted shall be submitted by the Contractor to the Architect prior to certification of such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of claims.

9.7.5 The making of final payment shall constitute a waiver of all claims by the Owner except those arising from:

1. Unsettled liens;
2. Faulty or defective work appearing after Substantial Completion;
3. Failure of the work to comply with the requirements of the Contract Documents; or,
4. Terms of any special guarantees required by the Contract Documents.

9.7.6 The acceptance of final payment shall constitute a waiver of all claims by the Contractor except those previously made in writing and still unsettled.

ARTICLE 10 - PROTECTION OF PERSONS AND PROPERTY

10.1 SAFETY PRECAUTIONS AND PROGRAMS

10.1.1 The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the work.

10.2 SAFETY OF PERSONS AND PROPERTY

10.2.1 The Contractor shall take all reasonable precautions for the safety of, and shall provide all reasonable protection to prevent damage, injury, or loss to:

1. Employees on the work and all other persons who may be affected thereby;
2. All the work and all materials and equipment to be incorporated therein whether in storage on or off the site, under the care, custody or control of the Contractor or any of his Subcontractors; and,
3. Other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadway, structures and utilities not designated for removal, relocation or replacement in the course of construction.

10.2.2 The Contractor shall give all notices and comply with all applicable laws, ordinances, rules, regulations, and orders of any public authority having jurisdiction for the safety of persons or property or to protect them from damage, injury or loss. He shall erect and maintain, as required by existing conditions and progress of the work, all reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards, promulgating safety regulations and notifying owners and users of adjacent utilities.

10.2.3 When the use or storage of explosives or other hazardous material or equipment is necessary for the execution of the work, the Contractor shall exercise the utmost care and shall carry on such activities under the supervision of properly qualified personnel.

10.2.4 Shoring and Trench Safety Plan - Attention is directed to Section 832 of the Civil Code of the State of California relating to lateral and subjacent support, and the Contractor shall comply with this law.

10.2.5 In accordance with Section 6705 of the State Labor Code, the Contractor shall submit to the District specific plans to show details of provisions for worker protection from caving ground. Not less than thirty (30) days before beginning excavation for any trench or trenches five feet or more in depth required under this Contract, the Contractor shall furnish to the Architect working drawings of his trench safety plan. The trench safety plan working drawings shall be detailed plans showing the design of shoring, bracing, sloping or other provisions to be made for worker protection from the hazard of caving ground.

If such plan varies from the shoring system standards established by the Construction Safety Orders of the California Division of Industrial Safety or the Federal safety standards of the Department of Health, Education and Welfare, the plan shall be

prepared by a registered civil or structural engineer. In no event shall the Contractor use a shoring, sloping, or protective system less effective than that required by said Construction Safety Orders, or less effective than that required by said Federal Safety Standards. Submission of this plan in no way relieves the Contractor from the requirement to maintain safety in all operations performed by him or his Subcontractors.

- 10.2.6 All damage or loss to any property referred to in Clauses 10.2.1.2 and 10.2.1.3 caused in whole or in part by the Contractor, any Subcontractor, any Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable, shall be remedied by the Contractor, except damage or loss attributable to faulty Drawings or Specifications or to the acts or omissions of the Owner or Architect or anyone employed by either of them or for whose acts either of them may be liable, and not attributable to the fault or negligence of the Contractor.
- 10.2.7 The Contractor shall designate a responsible member of his organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated in writing by the Contractor to the Owner and the Architect.
- 10.2.8 The Contractor shall not load or permit any part of the work to be loaded so as to endanger its safety.
- 10.2.9 Should the Contractor encounter material reasonably believed to be asbestos or polychlorinated biphenyl (PCB) on the site which has not been rendered harmless, the Contractor shall immediately stop work in the affected area and notify the District and the Architect of the condition in writing. Work in the affected area shall not be resumed except by written agreement of the District and Contractor if the material is asbestos or PCB, or when it has been rendered harmless.
- 10.2.10 The Contractor shall not be required to perform without consent any work relating to asbestos or PCB.

10.3 EMERGENCIES

- 10.3.1 In any emergency affecting the safety of persons or property, the Contractor shall act, at his discretion, to prevent threatened damage, injury or loss. Any additional compensation or extension of time claimed by the Contractor on account of emergency work shall be determined as provided in Article 12 for Changes in the work.

ARTICLE 11 - INSURANCE

11.1 PROJECT INSURANCE

11.1.1 Scope - Contractor shall procure prior to commencing any activities and maintain for the duration of the contract insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder by the Contractor, his agents, representatives, employees or subcontractors. The cost of such insurance shall be included in the Contractor's bid.

11.1.2 Minimum Limits of Insurance - Contractor shall maintain coverage and limits no less than:

Liability - Comprehensive General Liability Insurance or Commercial General Liability Insurance including coverage for premises and operation, contractual liability, personal injury liability, products/completed operations liability, broad form property damage and owners/contractors protective liability in an amount not less than one million dollars (\$1,000,000) per occurrence, combined aggregate single limit for bodily injury, personal injury and property damage written on as occurrence form. For protection of the aggregate a separate liability policy must be used for this Contract or an endorsement issued to reserve the required aggregate for this specific contract.

Automobile - Comprehensive Automobile Liability Insurance, including as applicable owned, non-owned, and hired automobile in an amount not less than one million dollars (\$1,000,000) per occurrence combined single limit for bodily injury and property damage written on an occurrence form.

Workers' Compensation - The Contractor shall submit proof that Workers' Compensation Insurance as required by the Labor Code of the State of California is secured. The insurance shall include Employers Liability limits of one million dollars (\$1,000,000) per accident.

11.1.3 Builder's Risk Insurance: The contractor shall take out and maintain until final acceptance of the project, Builder's Risk Insurance against all perils on a special form basis with the customary exclusions. The District shall be named as an additional insured and the policy shall be in sufficient amount to cover fully the replacement cost of structures constituting any part of the project excluding excavation, grading and land filling.

11.2 GENERAL CONDITIONS

11.2.1 Deductibles and Self-Insured Retention - Any deductible or self-insured Retention must be declared to and approved by the District. At the option of the District either

the insurer shall reduce or eliminate such deductibles or self-insured Retention as respects the District, its officials and employees; or the Contractor shall procure a bond guaranteeing payment of losses and related investigation, claim administration and defense expenses.

11.2.2 Other Provisions - The policies are to contain, or be endorsed to contain, the following provisions:

1. General Liability and Automobile Liability Coverage:

- a. The District, its officials, employees and volunteers are to be covered as additional insured as respects: liability arising out of activities performed by or on behalf of the Contractor; products and completed operations of the Contractor; premises owned, leased or used by the Contractor.
- b. The Contractor's insurance coverage shall be primary insurance as respects the District, its officials, employees and volunteers. Any insurance or self-insurance maintained by the district, its officials, employees and volunteers shall be excess of the Contractor's insurance and shall not contribute with it.
- c. Any failure to comply with reporting provisions of the policies shall not affect coverage provided to the District, its officials, employees or volunteers.
- d. Coverage shall state that the contractor's insurance shall apply separately to each insured against who claim is made or suit is brought, except with respect to the limits of the insurer's liability.

ARTICLE 12 - CHANGES IN THE WORK

12.1 ADDENDA

12.1.1 Addenda are to be signed by the Architect and approved by DSA.

12.2 CONSTRUCTION CHANGE DOCUMENTS (CCD)

12.2.1 Construction Change Documents (CCD) shall be the process for documenting changes to the approved Plans or Specifications after the contract has been awarded. CCD's shall comply with DSA Interpretation of Regulations IR A-6. All CCD's shall be signed by the Architect and approved by DSA.

12.3 CHANGE ORDERS

12.3.1 A Change Order is a written order to the Contractor signed by the Owner and the Architect, and approved by the Division of the State Architect, issued after the

execution of the Contract, authorizing a Change in the work or an adjustment in the Contract Sum or the Contract Time. The Contract Sum and the Contract Time may be changed only by Change Order. A Change Order signed by the Contractor indicates his agreement therewith, including the adjustment in the Contract Sum or the Contract Time.

12.3.2 The Owner, without invalidating the Contract, may order changes in the work within the general scope of the Contract consisting of additions, deletions or other revisions, the Contract Sum and the Contract Time being adjusted accordingly. All such changes in the work shall be authorized by Change Order, and shall execute under the applicable conditions of the Contract Document. Change Orders shall be approved by the Division of the State Architect and signed by the Contractor, in addition to the Owner and Architect.

12.3.3 The cost or credit to the Owner resulting from a change in the work shall be determined in one or more of the following ways:

1. By mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;
2. By unit prices stated in the Contract Documents, Form of Proposal or subsequently agreed upon;
3. By costs to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or,
4. By the method provided in Subparagraph 12.2.4.
5. For all changes in the work, the allowance for overhead, profit and bond combined, included in the total cost to the Owner, shall be based upon the following schedule:
For the Contractor, for any work performed by his own force, twelve percent (12%) of the cost;

For each subcontractor involved, work performed by his own forces, twelve percent (12%) of the cost;

For the Contractor, for work performed by his subcontractor, six percent (6%) of the amount due the subcontractor.

Cost shall be limited to the following: cost of materials, including sales tax and cost of delivery, cost of labor, including Social Security, Old Age and Unemployment Insurance (labor cost may include a prorated share of foreman charge); worker's Compensation Insurance; Rental cost of power tools and equipment.

12.3.4 If none of the methods set forth in Clauses 12.2.3.1, 12.2.3.2 or 12.2.3.3 is agreed upon, the Contractor, provided he receives a written order signed by the Owner, shall promptly proceed with the work involved. The cost of such work shall then be determined by the Architect on the basis of the reasonable expenditures and savings of those performing the work attributable to the change, including, in the case of an increase in the Contract Sum, an allowance for overhead and profit in accordance with the schedule set forth above in paragraph 12.2.3.5.

In such case, and also under Clauses 12.2.3.3 and 12.2.3.4 above, the Contractor shall keep and present, in such form as the Architect may prescribe, an itemized accounting together with appropriate supporting data for inclusion in a Change Order. Unless otherwise provided in the Contract Documents, cost shall be limited to the following:

1. Cost of materials, including sales tax and cost of delivery.
2. Cost of labor, including social security, old age and unemployment insurance and fringe benefits required by collective bargaining agreement or custom.
3. Worker's compensation insurance.
4. Bond premiums.
5. Rental cost of equipment and machinery
6. Additional cost of supervision and field office personnel directly attributable to the change.
7. As-Builts.

Pending final determination of cost to the Owner, payments on account shall be made on the Architect's Certificates for Payment. The amount of credit to be allowed by the Contractor to the Owner for any deletion or change which results in a net decrease in the Contract Sum will be the amount of the actual net cost as confirmed by the Architect. When both additions and credits covering related work or substitutions are involved in any one change, the allowance for overhead and profit shall be figured on the basis of the net increase, if any with respect to that change.

12.4 CONCEALED CONDITIONS

12.4.1 Should concealed conditions encountered in the performance of the work below the surface of the ground be at variance with the conditions indicated by the Contract Documents or, should unknown physical conditions below the surface of the ground of an unusual nature, differing materially from those ordinarily encountered and

generally recognized as inherent in the work of the character provided for in this Contract, be encountered, the Contract Sum shall be equitably adjusted by Change Order upon claim by either party made within a reasonable time after the first observance of the conditions.

12.5 CLAIMS FOR ADDITIONAL COST OR TIME

12.5.1 If the Contractor wishes to make a claim for an increase in the Contract Sum or an extension in the Contract Time, he shall give the Architect and the Construction Manager written notice thereof within ten (10) days time after the occurrence of the event giving rise to such claim. This notice shall be given by the Contractor before proceeding to execute the work except in an emergency endangering life or property in which case the Contractor shall proceed in accordance with Subparagraph 12.5.1. No such claim shall be valid unless so made.

If the Owner and the Contractor cannot agree on the amount of the adjustment in the Contract Sum or the Contract Time, it shall be determined by the Architect. Any change in the Contract Sum or Contract Time resulting from such claim shall be authorized by Change Order.

12.5.2 If the Contractor claims that additional cost or time is involved because of (1) any written interpretation issued pursuant to Subparagraph 1.2.5, (2) any order by the Architect to stop the work pursuant to Subparagraph 2.2.11 where the Contractor was not at fault, or (3) any written order for a minor change in the work issued pursuant to Paragraph 12.5, the Contractor shall make such claim as provided in this Paragraph 12.4.1.

12.6 MINOR CHANGES IN THE WORK

12.6.1 The Architect shall have authority to order minor changes in the work not involving an adjustment in the Contract Sum or an extension of the Contract Time and not inconsistent with the intent of the Contract Documents. Such changes may be effected by Field Order or by other written order. Such changes shall be binding on the Owner and the Contractor. The Owner shall be notified in writing by the Architect of such changes. The Contractor shall carry out such written orders promptly.

12.7 FIELD ORDERS

12.7.1 The Architect may issue written Field Orders which interpret the Contract Documents in accordance with Subparagraph 1.2.5 or which order minor changes in the work in accordance with Paragraph 12.5 without change in Contract Sum or Contract Time. The Contractor shall carry out such Field Orders promptly.

ARTICLE 13 - UNCOVERING AND CORRECTION OF WORK

13.1 UNCOVERING OF WORK

13.1.1 If any work should be covered contrary to the request of the Architect, or to requirement specifically expressed in the Contract Document, it must if required in writing by the Architect, be uncovered for his observation and replaced, at the Contractor's expense.

13.1.2 If any other portion of the work has been covered which the Architect has not specifically requested to observe prior to being covered, the Architect may request to see such work and it shall be uncovered by the Contractor.

If such work be found in accordance with the Contract Documents, the cost of uncovering and replacement shall be by appropriate Change Order, be charged to the Owner. If such work be found not in accordance with the Contract Document, the Contractor shall pay such costs unless it be found that this condition was caused by the Owner or a separate contractor employed as provided in Article 6, and in that event the Owner shall be responsible for the payment of such costs.

13.2 CORRECTION OF WORK

13.2.1 The Contractor shall promptly correct all work rejected by the Architect as defective or as failing to conform to the Contract Documents whether observed before or after substantial completion and whether or not fabricated, installed or completed. The Contractor shall bear all costs of correcting such rejected work, including the cost of the Architect's additional services thereby made necessary.

13.2.2 If, within one year after the Date of Substantial Completion or within such longer period of time as may be prescribed by law or by the terms of any applicable special guarantee required by the Contract Documents, any of the work is found to be defective or not in accordance with the Contract Documents, the Contractor shall correct it promptly after receipt of a written notice from the Owner to do so unless the Owner has previously given the Contractor a written acceptance of such condition. The Owner shall give such notice promptly after discovery of the condition.

13.2.3 The Contractor shall remove from the site all portions of the work which are defective or non-conforming and which have not been corrected under Subparagraphs 4.5.1, 13.2.1 and 13.2.2, unless removal is waived by the Owner.

13.2.4 If the Contractor fails to correct defective or non-conforming work as provided in Subparagraphs 4.5.1, 13.2.1 and 13.2.2, the Owner may correct it in accordance with Paragraph 7.6.

13.2.5 If the Contractor does not proceed with the correction of such defective or non-conforming work within a reasonable time fixed by written notice from the Architect, the Owner may remove it and may store the materials or equipment at the expense of the Contractor.

If the Contractor does not pay the cost of such removal and storage within ten days thereafter, the Owner may upon ten additional days written notice sell such work at auction or at private sale and shall account for the net proceeds thereof, after deducting all the cost that should have been borne by the Contractor, including compensation for additional architectural services. If such proceeds of sale do not cover all cost which the Contractor should have borne, the difference shall be charged the Contractor and an appropriate Change Order shall be issued. If the payments then or thereafter due the Contractor are not sufficient to cover such amount, the Contractor shall pay the difference to the Owner.

13.2.6 The Contractor shall bear the cost of making good all work of the Owner or separate contractors destroyed or damaged by such correction or removal.

13.2.7 Nothing contained in this Paragraph 13.2 shall be construed to establish a period of limitation with respect to any other obligation which the Contractor might have under the Contract Documents, including Paragraph 4.5 hereof. The establishment of the time period of one year after the Date of Substantial Completion or such long period of time as may be prescribed by law or by the terms of any warranty required by the Contract Documents relates only to the specific obligation of the Contractor to correct the work, and has no relationship to the time within which his obligation to comply with the Contract Documents may be sought to be enforced, not to the time within which proceedings may be commenced to establish the Contractor's liability with respect to his obligations other than specifically to correct the work.

13.3 ACCEPTANCE OF DEFECTIVE OR NON-CONFORMING WORK

13.3.1 If the Owner prefers to accept defective or non-conforming work, he may do so instead of requiring its removal and correction, in which case the Change Order will be issued to reflect an appropriate reduction in the Contract Sum, or, if the amount is determined after final payment, it shall be paid by the Contractor.

ARTICLE 14 - TERMINATION OF THE CONTRACT

14.1 TERMINATION BY THE CONTRACTOR

14.1.1 If the work is stopped for a period of thirty (30) days under an order of any court or other public authority having jurisdiction, through no act or fault of the Contractor or a Subcontractor or their agents or employees or any other persons performing any of the work under a contract with the Contractor, or if the work should be stopped

for a period of thirty days by the Contractor because the Architect has not issued a Certificate for Payment as provided in Paragraph 9.6 or because the Owner has not made payment thereon as provided in Paragraph 9.6, then the Contractor may, upon fifteen days written notice to the Owner and the Architect, terminate the Contract and recover from the Owner payment for all work executed and for any proven loss sustained upon any materials, equipment, tools, construction equipment and machinery, including reasonable profit and damages.

14.2 TERMINATION BY THE OWNER

14.2.1 If the Contractor is adjudged bankrupt, or if he makes general assignment for the benefit of his creditors, or if a receiver is appointed on account of his insolvency, or if he persistently or repeatedly refuses or fails, except in cases for which extension of time is provided, to supply enough property skilled workmen or proper materials, or if he fails to make prompt payment to Subcontractors or for materials or labor, or persistently disregards laws, ordinances, rules, regulations or order of any public authority having jurisdiction, or otherwise is guilty of a substantial violation of a provision of the Contract Documents, the Owner, upon certification by the Architect that sufficient cause exists to justify such action, may, without prejudice to any right or remedy and after giving the Contractor and his surety, if any, seven days written notice, terminate the employment of the Contractor and take possession of the site, and of all materials, equipment, tools, construction, equipment and machinery thereon owned by the Contractor and may finish the work by whatever method he may deem expedient. In such case the Contractor shall not be entitled to receive any further payment until the work is finished.

14.2.2 If the unpaid balance of the Contract Sum exceeds the costs of finishing the work, including compensation for the Architect's and the Owner's inspectors, additional services, such excess shall be paid to the Contractor. If such costs exceed such unpaid balance, the Contractor shall pay the difference to the Owner.

The costs incurred by the Owner as herein provided shall be certified by the Architect.

ARTICLE 15 - GUARANTEE OF WORK

15.1.1 In addition to guarantees called for elsewhere in these specifications, the Contractor shall guarantee all of his work for a period of one (1) year after the date of filing of the Notice of Completion against defective material or faulty workmanship that may arise within that period. All guarantees must be submitted to the Owner in the form attached hereto.

ARTICLE 16 - USE OF ASBESTOS

- 16.1.1 The use of asbestos or asbestos containing materials in this project is absolutely forbidden.

ARTICLE 17 - CHECK-IN AT SCHOOL OFFICE

- 17.1.1 California State Law requires that anyone, other than District personnel, must check-in at a school office before beginning work on a school site. Field crews, foremen and sub-contractors must check-in at the school office daily, must give location of work area, must describe work to be performed and must give an estimate of time required to complete the work. Compliance with these requirements will facilitate timely response from District staff including assistance to the Contractor to gain site access.

ARTICLE 18 - DIVISION OF THE STATE ARCHITECT REQUIREMENTS

- 18.1 All addenda shall be signed by the Architect, in compliance with Title 24, Part 1, Section 4-338 and approved by D.S.A.
- 18.2 All work shall be in compliance with Title 24, parts 1 through 5 and Title 19 and copies kept on job site at all times by the Contractor. Copies shall be most recent editions.
- 18.3 The Project Inspector shall be employed by the Owner and approved by the Architect, Structural Engineer and D.S.A. The Inspector must be present during all work proceedings.
- 18.4 The Testing Laboratory shall be employed by the Owner and approved by the Architect and D.S.A.
- 18.5 Changes, deletions or additions shall be documented by the Architect by means of Construction Change Documents, per DSA IR A-6 and approved by the Division of the State Architect.

ARTICLE 19 - ASBESTOS NOTIFICATION

- 19.1 Asbestos Hazard Emergency Response Act (AHERA) B regulations require that every firm doing contract work on a school site be informed of the presence of asbestos in the areas where they would be working. The attached "Short Term Worker Notification" provides that information. Contractors are hereby advised that their work must not disturb the asbestos and that certain health hazards are associated with exposure to asbestos fibers. Short Term Worker Notification form will be completed and signed by LEA Designee and Contractor at the Pre-Construction Conference.

**ARTICLE 20
CONTRACTOR'S GUARANTEE**

GUARANTEE FOR _____

We hereby guarantee the _____

Which we have installed in the _____

at _____ for _____ years from date of final payment.

We Agree to repair or replace to the satisfaction of the Owner any and all such work that may prove defective in workmanship or materials within that period, ordinary wear and tear and unusual abuse or neglect excepted, together with any other work which may be damaged or displaced in so doing. In the event of our failure to comply with the above mentioned conditions within a reasonable time after being notified in writing, we collectively and separately do hereby authorize the Owner to proceed to have the defects repaired and made good at our expense, and we will pay the costs and charges therefore immediately upon demand.

(Signature of Subcontractor)

(Signature of Subcontractor)

Date _____

**ARTICLE 21
CRIMINAL HISTORY CLEARANCE/
SITE PROTECTION CERTIFICATION**

In accordance with statutory, regulatory and constitutional restrictions governing the use and dissemination of criminal offender record information, the above mentioned Education Code sections allow for exceptions from obtaining a criminal history clearance of all employees under the following conditions:

1. The installation of a physical barrier at the worksite to limit contact with pupils.
2. Continual supervision and monitoring of all employees of the contractor by an employee of the contractor whom the Department of Justice has ascertained has not been convicted of a violent or serious felony.

Construction contractors are not required to comply with the backgrounding requirements set forth in the Michelle Montoya School Safety Act if one or more of the above mentioned conditions exist.

I, the undersigned, agree to fulfill the terms and requirements of Education Code Sections 33192 and 45125.1 listed above and required that the employee agree to abide by the terms of that statement.

I also, understand that if the District determines that I have either;

- (a) made a false certification herein, or
- (b) violated this certification by failing to carry out the requirements of Sections 33192 and 45125.1,

that the contract awarded herein is subject to termination, suspension of payments or both. I further understand that, should I violate the terms of the Michelle Montoya Safety Act of 1997, I may be subject to punishment in accordance with the requirements of Sections 33192 and 45125.1 et seq.

I acknowledge that I am aware of the provision of Education Code Sections 33192 and 4512.1 et seq., and hereby certify that I will adhere to the requirements of the Michelle Montoya School Safety Act of 1997.

Signature

Date

END OF SECTION

SUPPLEMENTAL GENERAL CONDITIONS

ARTICLE 1 - DEFINITIONS

- 1.1 MATERIALS - Materials incorporated in the project, or used, or consumed, in the performance of the work.
- 1.2 BUILDING - Includes the entire structure, drives, walks, steps, approaches, and site.
- 1.3 SIMILAR - Shall be taken in its general sense and not meaning identical, and all details of such work shall be in proper relation to the location and connection of other parts of the work.
- 1.4 PROVIDE - Shall mean, "Furnish and install in place".
- 1.5 (As Directed) Or others of similar meaning which authorize any exercise of judgment shall (Acceptable) be distinctly understood to mean that such power to direct, accept, reject, and (Rejected) approve shall be vested Only in the Owner and/or Architect.
- 1.6 N.I.C. - Where the indication, "N.I.C." is noted on the drawings or listed in the specifications, such item is shown or listed for the purpose of general information is, "Not in Contract." Installation and connection to services for such work are not in the contract.
- 1.7 O.F.C.I. - Where the indication, "O.F.C.I." is noted on the drawings or listed in the specifications, such item is shown or listed for information and will be, "Owner **furnished**, Contractor **installed**." The Contractor shall verify all dimensions and details necessary for the proper installation of this item.
- 1.8 TIME LIMITS - All time limits stated in the contract documents are of the essence of the contract.
- 1.9 CALLED FOR - As called for, shown, noted, and/or indicated in the specifications and/or drawings.

ARTICLE 2 - COMPLETION DATES

- 2.1 FIXED COMPLETION AND ESTIMATED COMPLETION DATE: The Work shall be commenced on the date stated in the Owner's, "Notice to Proceed" (which date will not be less than five (5) consecutive calendar days from and after the date of execution of the Contract) and **shall be completed within three hundred (300) calendar days**. Reference Paragraph 8.3 of the General Conditions. This fixed completion date is defined as the Estimate Completion Date.

END OF SECTION

CONTRACT FORM

This agreement made on the _____, at
ROBERTS FERRY UNION ELEMENTARY SCHOOL DISTRICT, in Stanislaus County,
California, by and between:

_____ and
**ROBERTS FERRY UNION ELEMENTARY SCHOOL DISTRICT, 101 Roberts Ferry
Road, Waterford, CA 95386**, hereinafter called the Owner.

WITNESSETH: That the Contractor and the Owner for the consideration hereinafter named agree
as follows:

ARTICLE I. The Contractor agrees to furnish all labor and materials, including tools, implements,
and appliances required, and to perform all the Work in a good and worker-like manner, free from
any and all liens and claims of mechanics, material suppliers, subcontractors, artisans, machinists,
teamsters, drayers, and laborers required for:

ROBERTS FERRY TK AND KINDERGARTEN CLASSROOM

for

ROBERTS FERRY UNION ELEMENTARY SCHOOL DISTRICT

all in strict compliance with the plans, drawings and specifications therefore prepared by Timothy
P. Huff, Architect, and other Contract Documents relating thereto.

ARTICLE II. The contractor and the Owner agree that the Advertisement (Notice to Contractors),
the Wage Scale, the General Conditions of the Contract, the Supplemental General Conditions of
the Contract, Instructions to Bidders, the Specifications, the Drawings and the Addenda and
Bulletins thereto, together with this Agreement, form the Contract, and they are as fully a part of the
Contract as if thereto attached or therein repeated. The specifications and drawings are intended to
cooperate, so that any work exhibited in the drawings and not mentioned in the specifications, or
vice versa, is to be executed the same as if both mentioned in the specifications and set forth in the
drawings, to the true intent and meaning of the said drawings and specifications when taken
together. But no part of said specifications that is in conflict with any portion of this Contract, or that
is not actually descriptive of the work to be done thereunder, or of the manner in which the said
work is to be executed, shall be considered as any part of this Contract, but shall be utterly null and
void, and anything that is expressly stated, delineated or shown in or upon the specifications or
drawings shall govern and be followed, notwithstanding anything to the contrary in any other source
of information or authority to which reference may be made.

ARTICLE III. The Owner agrees to pay to the Contractor in current funds for the performance of the Contract:

(\$ _____) Dollars

and to make payments or account thereof as provided for in the Contract Documents.

ARTICLE IV. In the event of a dispute between the Owner or Architect and the Contractor as to an interpretation of any of the specifications or as to the quality or sufficiency of material or workmanship, the decision of the Architect shall for the time being prevail and the Contractor without delaying the job, shall proceed as directed by the Architect without prejudice to a final determination by negotiation, arbitration by mutual consent or litigation, and should the Contractor be finally determined to be either wholly or partially correct, the Owner shall reimburse him for any added costs he may have incurred by reason of work done or material supplied beyond the terms of the Contract as a result of complying with the Architect's directions as aforesaid.

ARTICLE V. Pursuant to the provisions of Sections 1773 et seq. of the Labor Code of the State of California, which are hereby incorporated by reference and made a part thereof, the Director of the Department of Industrial Relations has determined the general prevailing rate of per diem wages and the general prevailing rate for holiday and overtime work in the locality of which the Work is to be performed, for each craft, classification or type of workman needed to execute this contract. Per diem wages shall be deemed to include employer payments for health and welfare, pension, vacation, apprenticeship or other training programs, and similar purposes. The director of the Department of Industrial Relations has further determined that the rate of prevailing wage for any craft, classification or type of worker to be employed on the Project is the rate established by the applicable collective bargaining agreement on file at the Director of the Department of Industrial Relations principal office at San Francisco, phone, (415) 972-8846, which rate so provided is hereby adopted by reference and shall be effective for the life of this agreement or until the Director of Department of Industrial Relations determines that another rate be adopted. It shall be mandatory upon the Contractor and on any subcontractor to pay not less than the said specified rates to all workmen employed in the execution of this agreement.

There shall be paid to each worker needed to execute the work to be performed hereunto such travel and subsistence payments as are defined in the applicable collective bargaining agreements filed in accordance with the provision of Labor Code Section 1773.8.

The Contractor as a penalty to the Owner shall forfeit Twenty-five Dollars (\$25.00) for each calendar day or portion thereof for each worker paid less than the stipulated prevailing rates for such work or craft in which such worker is employed.

The difference between such stipulated prevailing wage rates and the amount paid to each worker for each calendar day or portion thereof for which each worker was paid less than the stipulated prevailing wage rate shall be paid to each worker by the Contractor.

The Contractor and each subcontractor shall keep or cause to be kept an accurate record showing the names and occupations of all laborers, workers, and mechanics employed by him in connection with the extension of this Contract or any subcontract thereunder, and showing also the actual per diem wage paid to each of such workers, which records shall be open at all reasonable hours to inspection by the Owner, its officers and agents and to the representatives of the Division of Labor Law Enforcement of the State Department of Industrial Relations.

ARTICLE VI. It is further understood and agreed that in accordance with the provision of Sections 1810 to 1815, inclusive, of the Labor Code of the State of California, which are hereby incorporated and made a part hereof, the time of service of any worker employed by the Contractor or subcontractor doing or contracting to do any part of the work contemplated by this agreement is limited and restricted to eight hours during any one calendar day and forty hours during any one calendar week, provided, however, work may be performed by such employee in excess of said eight hour per day and forty hours per week provided that compensation for all hours worked in excess of eight hours per day and forty hours per week, is paid at a rate not less than one and one-half times the basic rate of pay. Every Contractor and subcontractor shall keep an accurate record showing the name of and the actual hours worked each calendar day and each calendar week by each worker employed by him in connection with the work. The records shall be kept open at all reasonable hours to inspection by representatives of the Owner and the Division of Labor Law Enforcement. The Contractor shall as a penalty to the Owner forfeit Twenty-five Dollars (\$25.00) for each worker employed in the execution of this Contract by the Contractor or by any subcontractor for each calendar day during which such worker is required or permitted to work more than eight hours in any one calendar day and forty hours in any one calendar week, except as herein provided.

ARTICLE VII. Contractor agrees to comply with Chapter 1, Part 7, Division 2, Section 1777.5 and 1777.6 of the California Labor Code, which are hereby incorporated and made a part hereof. These sections require that contractors and subcontractors employ apprentices in apprenticeable occupations in a ratio of not less than one apprentice for each five journeymen (unless an exemption is granted in accordance with Section 1777.5) and that contractors and subcontractors shall not discriminate among otherwise qualified employees as indentured apprentices on any public works solely on the ground of sex, race, religious creed, national origin, ancestry or color.

Only apprentices as defined in Section 3077, who are in training under apprenticeship standards and who have signed written apprentice agreements will be employed on public works in apprenticeable occupations. The responsibility for compliance with these provisions is fixed with the prime contractor for all apprenticeable occupations.

ARTICLE VIII. The Contractor will indemnify the Owner against and hold it harmless of all and any liability for damages on account of injury to persons or damage to property resulting from or arising out of or in any way connected with the performance by the Contractor of his Contract and reimburse the Owner for all cost, expenses and loss incurred by it in consequence of any claims, demands, and causes of action which may be brought against it arising out of the performance by the Contractor of this Contract.

This indemnity shall be in addition to the other indemnification provisions contained in the Contract Documents.

By this statement the Contractor represents that he has secured the payment of Workers Compensation in compliance with the provisions of the Labor Code of the State of California and during the performance of the work contemplated herein will continue so to comply with said provision of said Code. The Contractor shall supply the Owner with certificates of insurance evidencing that Workers Compensation Insurance is in effect and providing that the Owner will receive 30 days notice of cancellation.

_____ Contractor	<u>Roberts Ferry Union Elem School District</u> Owner
By _____ Signature	By _____ Signature
_____ Print Name	_____ Print Name
_____ Title	_____ Title

Federal I.D.#

Department of Industrial Relations #

Note: If a corporation is the contractor, state the capacity (i.e., President) of the corporate office signing and affix the corporation seal; if a partnership, all partners should sign under the partnership name.

END OF SECTION

SUBMITTALS
SECTION 013300

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division-1 Specification Sections, apply to this Section.
- B. Related Work:
 - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications.

1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements for submittals required for performance of the Work, including:
 - 1. Contractor's construction schedule.
 - 2. Shop Drawings.

1.3 SUBMITTAL PROCEDURES

- A. Coordination: Coordinate preparation and processing of submittals with performance of construction activities. Transmit each submittal sufficiently in advance of performance of related construction activities to avoid delay.
 - 1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals and related activities that require sequential activity.
- B. Processing: Allow sufficient review time so that installation will not be delayed as a result of the time required to process submittals, including time for resubmittals.
 - 1. Allow two weeks for initial review. Allow additional time if processing must be delayed to permit coordination with subsequent submittals. The Architect will promptly advise the Contractor when a submittal being processed must be delayed for coordination.
 - 2. If an intermediate submittal is necessary, process the same as the initial submittal.

3. Allow one week for reprocessing each submittal.
 4. No extension of Contract Time will be authorized because of failure to transmit submittals to the Architect sufficiently in advance of the Work to permit processing.
- C. Submittal Preparation: Place a permanent label or title block on each submittal for identification. Indicate the name of the entity that prepared each submittal on the label or title block. The Contractor shall stamp the submittals acknowledging that they have been reviewed.
- D. Submittal Transmittal: Package each submittal appropriately for transmittal and handling. Transmit each submittal from Contractor to Architect using a transmittal form. Submittals not stamped as listed and received from sources other than the contractor will be returned without action.

1.4 CONTRACTORS CONSTRUCTION SCHEDULE

- A. Bar-Chart Schedule: Prepare a fully developed, horizontal bar-chart type Contractor's construction schedule.
1. Provide a separate time bar for each significant construction activity. Provide a continuous vertical line to identify the first working day of each week. Use the same breakdown of units of the Work as indicated in the "Schedule of Values."
 2. Indicate completion in advance of the date established for Substantial Completion. Indicate Substantial Completion on the schedule to allow time for the Architect's procedures necessary for certification of Substantial Completion.

1.5 SHOP DRAWINGS

- A. Submit newly prepared information, drawn to accurate scale. Highlight, encircle, or otherwise indicate deviations from the Contract Documents. Do not reproduce Contract Documents or copy standard information as the basis of Shop Drawings. Standard information prepared without specific reference to the Project is not considered Shop Drawings.
- B. Shop Drawings include fabrication and installation drawings, setting diagrams, schedules, patterns, templates and similar drawings.
- C. Do not use Shop Drawings without an appropriate final stamp indicating action taken in connection with construction. Architect's action stamp is defined in paragraph 18 of this Section.

1.6 ARCHITECT'S ACTION

- A. Except for submittals for record, information or similar purposes, where action and return is required or requested, the Architect will review each submittal and shop drawing, mark to indicate action taken, and return promptly.
- B. Compliance with specified characteristics is the Contractor's responsibility.
- C. Action Stamp: The Architect will stamp each submittal and shop drawing with a uniform, self-explanatory action stamp. The stamp will be appropriately marked.

END OF SECTION

TEMPORARY FACILITIES
SECTION 015000

PART 1 - GENERAL

1.1 SUMMARY

- A. Furnish required temporary facilities as shown or specified herein plus such facilities as required for proper performance of the Contract. Locate temporary facilities where directed and maintain in a safe and sanitary condition at all times until completion of the Contract. The Conditions of the Contract and the other sections of Division 1 apply to this section as fully as if repeated herein.

1.2 QUALITY ASSURANCE

- A. Comply with governing regulation and utility company regulations and recommendations. Comply with pollution and environmental protection regulations for use of water and energy, for discharge of wastes and storm drainage from project site, and for control of dust, air pollution and noise.

PART 2- PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 TEMPORARY SANITARY FACILITIES

- A. Provide adequate temporary sanitary conveniences for the use of employees and persons engaged on the work, including subcontractors and their employees, as required by law, ordinances, or regulation of public authorities having jurisdiction.
- B. Maintain sanitary facilities in a clean and sanitary condition during the entire course of the work.

3.2 TEMPORARY ELECTRIC FACILITIES

- A. Make arrangements and pay costs for electricity required for construction purposes during the progress of the work, electrical power and wiring requirements to facilitate the work of all trades and services connected with the work.
- B. Install temporary panel served from off site electrical service and all wire, breaker, conduits for the execution of the work in conformance with C.E.C. Remove temporary panel at the end of the project. Coordinate with electrical service supplier.

3.3 TEMPORARY WATER

- A. Make arrangements and pay costs for water required for construction purposes. Furnish and install piping or hoses to carry water to points needed on the project. Water used on the project shall be potable water.
- B. Provide adequate fire protection for the duration of work in accordance with local codes, ordinances and Governing Regulations.
- C. The Contractor shall take necessary precaution to guard against and eliminate possible fire hazards and to prevent damage to construction work, building materials, equipment, and public property. The Contractor shall be responsible for providing, maintaining and enforcing fire protection methods.

3.4 CONSTRUCTION EQUIPMENT

- A. Contractor shall erect, equip, and maintain construction equipment in accordance with applicable statutes, laws, ordinance, rules and regulations of authority having jurisdiction.
- B. Contractor shall provide, maintain and remove upon completion of the work all temporary rigging, scaffolding, hoisting equipment, rubbish chutes, barricades around openings and excavations, ladders, fences and other temporary work as required for all work hereunder.
- C. Temporary work shall conform to requirements of State, County, and local authorities and underwriters which pertain to operation, safety and fire hazard. Contractor shall furnish and install items necessary for conformity with such requirements, whether or not called for under the separate divisions of these specifications.

3.5 FENCES AND BARRICADES

- A. Construct and maintain fences, planking, barricades, lights, shoring, and warning signs as indicated on the drawings and as required by local authorities and State safety ordinances and as required to protect the Owner's property from injury or loss and as necessary for the protection of the public:

3.6 STORAGE

- A. Operations of the contractor, including storage of materials, shall be confined to areas approved. Contractor shall be liable for damage caused by him during such use of property of the Owner or other parties. Contractor shall save the Owner, its officers and agents, and the Architect and his employees free and harmless from liability of any nature or kind arising from any use, trespass, or damage occasioned by his operations on premises of third persons.

- B. Provide lockable storage containers for the security of materials and equipment as deemed appropriate by the Contractor.

3.7 ENVIRONMENTAL PROTECTION

- A. Provide protection, operate temporary facilities and conduct construction in ways and by methods that comply with environmental regulations, and minimize the possibility that air, waterways and subsoil might be contaminated or polluted or that other undesirable effects might result. Use of tools and equipment that produce noise shall comply with OSHA regulations.

3.8 REMOVAL AT COMPLETION

- A. Upon completion of the work, or prior thereto, when so directed by the Architect, Contractor shall remove temporary facilities, structures and installation from the Owner's property. Similarly, return exterior areas utilized for temporary facilities to substantially their original state, or when called for on the drawings, complete the areas as shown or noted. Sanitary facilities shall be properly disinfected and evidence removed from the site.

END OF SECTION

**CONSTRUCTION WASTE MANAGEMENT
SECTION 015240**

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes administrative and procedural requirements for the following:
 - 1. Recycling nonhazardous construction waste.
 - 2. Disposing of nonhazardous construction waste.

1.2 DEFINITIONS

- A. Construction Waste: Building and site improvement materials and other solid waste resulting from construction, remodeling, renovation, or repair operations. Construction waste includes packaging.
- B. Disposal: Removal off-site of demolition and construction waste and subsequent sale, recycling, reuse, or deposit in landfill or incinerator acceptable to authorities having jurisdiction.
- C. Recycle: Recovery of demolition or construction waste for subsequent processing in preparation for reuse.

1.3 ACTION SUBMITTALS

- A. Construction Waste Management Plan: Submit plan to the Local Jurisdiction at the time of permit pickup.
- B. Waste Management Worksheet: Submit worksheet to the Local Jurisdiction at the time of permit final.
- C. Construction Waste Management Acknowledgment: Submit Acknowledgment to the Local Jurisdiction at permit final.

1.4 QUALITY ASSURANCE

- A. Regulatory Requirements: Conduct construction waste management activities in accordance with 2022 California Green Building Standard Code Section 5.408, the local jurisdictions' Solid Waste Division Requirements, and all other applicable laws and ordinances.

- B. Preconstruction Conference: Review methods and procedures related to waste management including, but not limited to, the following:
 - 1. Review and discuss waste management plan including responsibilities of Waste Management Coordinator.
 - 2. Review requirements for documenting quantities of each type of materials that will be salvaged, recycled, or disposed of as waste.
 - 3. Review and finalize procedures for materials separation and verify availability of containers and bins needed to avoid delays.
 - 4. Review procedures for periodic waste collection and transportation of recycling and disposal facilities.
 - a. King County Solid Waste Divisions Report of Co-mingled Recycling Facilities.

1.5 INFORMATIONAL SUBMITTALS

- A. Waste Reduction Progress Reports: Concurrent with each Application for Payment, submit report. Include the following information:
 - 1. Material category.
 - 2. Generation point of waste.
 - 3. Total quantity of waste in tons.
 - 4. Quantity of waste salvaged, both estimated and actual in tons.
 - 5. Quantity of waste recycled, both estimated and actual in tons.
 - 6. Total quantity of waste recovered (salvaged plus recycled) in tons.
 - 7. Total quantity of waste recovered (salvaged plus recycled) as a percentage of total waste.
- B. Recycling and Processing Facility Records: Indicated receipt and acceptance of recyclable waste by recycling and processing facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.
- C. Landfill Disposal Records: Indicate receipt and acceptance of waste by landfills and incinerator facilities licensed to accept them. Include manifests, weight tickets, receipts and invoices.

1.6 CONSTRUCTOIN WASTE MANAGEMENT PLAN (CWM)

- A. Waste Identification: Indicate on form included at the end of Part, anticipated types and quantities of construction waste generated by the Work. Include estimated quantities and assumptions for estimates.
- B. Waste Reduction Work Plan: List each type of waste and whether it will be salvaged, recycled, or disposed of in landfill or incinerator. Include points of waste generation, total quantity of each type of waste, quantity for each means of recovery, and handling and transportation procedures.

1. Recycled Materials: Include list of local receivers and processors and type of recycled materials each will accept. Include names, addresses, and telephone numbers.
 2. Disposed Materials: Indicate how and where materials will be disposed of. Include name, address, and telephone number of each landfill and incinerator facility.
 3. Handling and Transportation Procedures: Include method that will be used for separating recyclable waste including sizes of containers, container labeling, and designated location on Project site where materials separation will be located.
- C. The Contractor is to divert from land fill a minimum of 65% (by weight) of construction waste by means of recycling, compost and/or salvage of the non-hazardous construction debris.

PART 2 - PRODUCTS

2.1 NOT USED

PART 3 - EXECUTION

3.1 PLAN IMPLEMENTATION

- A. General: Implement approved waste management plan. Provide handling, containers, storage, signage, transportation, and other items as required to implement waste management plan during the entire duration of the Contract.
- B. Training: Train workers, subcontractors, and supplies on proper waste management procedures, as appropriate for the Work occurring at Project site.
 1. Distribute waste management plan to everyone concerned within three (3) days of submittal return.
 2. Distribute waste management plan to entities when they first begin work on-site. Review plan procedures and locations established for salvage, recycling, and disposal.
- C. Site Access and Temporary Controls: Conduct waste management operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
 1. Designate and label specific areas on Project site necessary for separating materials that are to be salvaged, recycled, reused, donated, and sold.

3.2 RECYCLING CONSTRUCTION WASTE, GENERAL

- A. General: Recycle paper and beverage containers used by on-site workers.

- B. Recycling Incentives: Revenues, savings, rebates, tax credits, and other incentives received for recycling waste materials shall accrue to Contractor.
- C. Preparation of Waste: Prepare and maintain recyclable waste materials according to recycling or reuse facility requirements. Maintain materials free of dirt, adhesives, solvents, petroleum contamination, and other substances deleterious to the recycling process.
- D. Procedures: Separate recyclable waste from other waste materials, trash, and debris. Separate recyclable waste by type at Project site to the maximum extent practical according to approved construction waste management plan.
 - 1. Provide appropriately marked containers or bins for controlling recyclable waste until they are removed from Project site. Include list of acceptable and unacceptable materials at each container and bin.
 - a. Inspect containers and bins for contamination and remove contaminated materials if found.
 - 2. Stockpile processed materials on-site without intermixing with other materials. Place grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
 - 3. Stockpile materials away from construction area. Do not store within drip line of remaining trees.
 - 4. Store components off the ground and protect from the weather.
 - 5. Remove recyclable waste off Owners's property and transport to recycling receiver or processor.

3.3 RECYCLING CONSTRUCTION WASTE

- A. Packaging:
 - 1. Cardboard and Boxes: Break down packaging into flat sheets. Bundle and store in dry location.
 - 2. Polystyrene Packaging: Separate and bag materials.
 - 3. Pallets: as much as possible, require deliveries using pallets to remove pallets from Project site. For pallets that remain on-site, break down pallets into component wood pieces and comply with requirements for recycling wood.
 - 4. Crates: Break down crates into component wood pieces and comply with requirements for recycling wood.
- B. Wood Materials:
 - 1. Clean Cut-Offs of Lumber: Grind or chip into small pieces.
 - 2. Clean Sawdust: Bag sawdust that does not contain painted or treated wood.
- C. Gypsum Board: Stack large clean pieces on wood pallets or in container and store in a dry location.

3.4 DISPOSAL OF WASTE

- A. General: Except for items or materials to be recycled, or otherwise reused, remove waste materials from Project site and legally dispose of them in a landfill or incinerator acceptable to authorities having jurisdiction.
 - 1. Except as otherwise specified, do not allow waste materials that are to be disposed of to accumulate on site.
 - 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

- B. Disposal: Transport waste materials off Owner's property and legally dispose of them.

END OF SECTION

Construction Waste Management (CWM) Plan

Note: This sample form may be used to assist in documenting compliance with the waste management plan.

Project Name: _____
 Job #: _____
 Project Manager: _____
 Waste Hauling Company: _____
 Contact Name: _____

All Subcontractors shall comply with the project's Construction Waste Management Plan.
 All Subcontractor foremen shall sign the CWM Plan Acknowledgment Sheet.

Subcontractors who fail to comply with the Waste Management Plan will be subject to backcharges or withholding of payment, as deemed appropriate. For instance, Subcontractors who contaminate debris boxes that have been designated for a single material type will be subject to backcharge or withheld payment, as deemed appropriate.

1. The project's overall rate of waste diversion will be 65 %.
2. This project shall generate the least amount of waste possible by planning and ordering carefully, following all proper storage and handling procedures to reduce broken and damaged materials and reusing materials whenever possible. The majority of the waste that is generated on this jobsite will be diverted from the landfill and recycled for other use.
3. Spreadsheet 1, enclosed, identifies the waste materials that will be generated on this project, the diversion strategy for each waste type and the anticipated diversion rate.
4. Waste prevention and recycling activities will be discussed at the beginning of weekly subcontractor meetings. As each new subcontractor comes on-site, the WMP Coordinator will present him/her with a copy of the CWM Plan and provide a tour of the jobsite to identify materials to be salvaged and the procedures for handling jobsite debris. All Subcontractor foremen will acknowledge in writing that they have read and will abide by the CWM Plan. Subcontractor Acknowledgment Sheet enclosed. The CWM Plan will be posted at the jobsite trailer.
5. Salvage: Excess materials that cannot be used in the project, nor returned to the vendor, will be offered to site workers, the owner, or donated to charity if feasible.
6. [HAULING COMPANY] will provide a commingled drop box at the jobsite for most of the construction waste. These commingled drop boxes will be taken to [Sorting Facility Name and Location]. The average diversion rate for commingled waste will be ____%. As site conditions permit, additional drop boxes will be used for particular phases of construction (e.g., concrete and wood waste) to ensure the highest waste diversion rate possible.
7. In the event that the waste diversion rate achievable via the strategy described in (6) above, is projected to be lower than what is required, then a strategy of source-separated waste diversion and/or waste stream reduction will be implemented. Source separated waste refers to jobsite waste that is not commingled but is instead allocated to a debris box designated for a single material type, such as clean wood or metal.

Notes:

1. Waste stream reduction refers to efforts taken by the builder to reduce the amount of waste generated by the project to below four (4) pounds per square foot of building area.
2. When using waste stream reduction measures, the gross weight of the product is subtracted from a base weight of four (4) pounds per square foot of building area. This reduction is considered additional diversion and can be used in the waste reduction percentage calculations.
8. [HAULING COMPANY] will track and calculate the quantity (in tons) of all waste leaving the project and calculate the waste diversion rate for the project. [HAULING COMPANY] will provide Project Manager with an updated monthly report on gross weight hauled and the waste diversion rate being achieved on the project. [HAULING COMPANY]'s monthly report will track separately the gross weights and diversion rates for commingled debris and for each source-separated waste stream leaving the project. In the event that [HAULING COMPANY] does not service any or all of the debris boxes on the project, the [HAULING COMPANY] will work with the responsible parties to track the material type and weight (in tons) in such debris boxes in order to determine waste diversion rates for these materials.
9. In the event that Subcontractors furnish their own debris boxes as part of their scope of work, such Subcontractors shall not be excluded from complying with the CWM Plan and will provide [HAULING COMPANY] weight and waste diversion data for their debris boxes.
10. In the event that site use constraints (such as limited space) restrict the number of debris boxes that can be used for collection of designated waste the project Superintendent will, as deemed appropriate, allocate specific areas onsite where individual material types are to be consolidated. These collection points are not to be contaminated with non-designated waste types.
11. Debris from jobsite office and meeting rooms will be collected by [DISPOSAL SERVICE COMPANY]. [DISPOSAL SERVICE COMPANY] will, at a minimum, recycle office paper, plastic, metal and cardboard.

Construction Waste Management (CWM) Worksheet

Note: This sample form may be used to assist in documenting compliance with the waste management plan.

Project Name: _____			
Job Number: _____			
Project Manager: _____			
Waste Hauling Company: _____			
Construction Waste Management (CWM) Plan			
DIVERSION METHOD:			
WASTE MATERIAL TYPE	COMMINGLED AND SORTED OFF SITE	SOURCE SEPARATED ON SITE	PROJECTED DIVERSION RATE
Asphalt			
Concrete			
Shotcrete			
Metals			
Wood			
Rigid insulation			
Fiberglass insulation			
Acoustic ceiling tile			
Gypsum drywall			
Carpet/carpet pad			
Plastic pipe			
Plastic buckets			
Plastic			
Hardiplank siding and boards			
Glass			
Cardboard			
Pallets			
Job office trash, paper, glass & plastic bottles, cans, plastic			
Alkaline and rechargeable batteries, toner cartridges, and electronic devices			
Other:			
Other:			
Other:			
Other:			

**CUTTING AND PATCHING
SECTION 017329**

PART 1 - GENERAL

1.1 SUMMARY

- A. Work included: Cutting and patching for this work includes, but is not necessarily limited to:
1. Sawcutting;
 2. Removal of existing asphalt and concrete;
 3. Trenching and trench backfilling;
 4. Final patching;
- B. Related work described elsewhere:
1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications
 2. Division 22 Mechanical
 3. Division 26 Electrical
 4. Division 28 Electronic Safety and Security

1.2 JOB CONDITIONS

- A. Dust Control: use all means necessary to control dust on and near the Work and on and near all areas if such dust is caused by the Contractor's operations during performance of the Work or if resulting from the condition in which the Contractor leaves the site.
1. Thoroughly moisten all surfaces as required to prevent being a nuisance to the public, neighbors, and concurrent performance of other work on the site.
- B. Protection: Use all means necessary to protect all materials of this section before, during, and after installation and to protect all objects designed to remain.
1. In the event of damage, immediately make all repairs and replace necessary to the approval of the Architect and at no additional cost to the Owner.

PART 2 - PRODUCTS

2.1 MATERIALS, GENERAL

- A. Use materials identical to existing materials. For exposed surfaces, use materials that visually match existing adjacent surfaces to the fullest extent possible if identical materials are unavailable or cannot be used. Use materials whose installed performance will equal or surpass that of existing materials.

PART 3 - EXECUTION

3.1 INSPECTION

- A. Examine surfaces to be cut and patched and conditions under which cutting and patching is to be performed before cutting. If unsafe or unsatisfactory conditions are encountered, take corrective action before proceeding.
 - 1. Before proceeding, meet at the project site with parties involved in cutting and patching, including mechanical and electrical trades. Review areas of potential interference and conflict. Coordinate procedures and resolve potential conflicts before proceeding.

3.2 PREPARATION

- A. Temporary Support: Provide temporary support of work to cut.
- B. Protection: Protect existing construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of the Project that might be exposed during cutting and patching operations.
- C. Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.
- D. Avoid cutting existing pipe, conduit or ductwork serving the building but scheduled to be removed or relocated until provisions have been made to bypass them.

3.3 PERFORMANCE

- A. General: Employ skilled workmen to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time and complete without delay.
 - 1. Cut existing construction to provide for installation of other components or performance of other construction activities and the subsequent fitting and patching required to restore surfaces to their original condition.

- B. Cutting: Cut existing construction using methods least likely to damage elements retained or adjoining construction. Where possible, review proposed procedures with the original Installer; comply with the original Installer's recommendations.
- C. Patching: Patch with durable seams that are as invisible as possible. Comply with specified tolerances.
 - 1. Where feasible, inspect and test patched areas to demonstrate integrity of the installation.
 - 2. 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.
 - 3. All concrete or asphalt to be removed and patched shall be sawcut in a straight and true line. Replace existing asphaltic concrete with minimum 2" A.C. over minimum 4" aggregate base, over 90% compacted grade. Replace existing concrete with 4" minimum concrete over 90% compacted grade. Finish shall match that of existing.
 - 4. Compaction of trenches shall be done by mechanical means and all lines shall be inspected for proper inspection by the Inspector prior to backfilling of trenches.
 - 5. All round holes through concrete slabs or walls shall be core drilled with a diamond drill bit. In no case shall any concrete beam or column be cut.
 - 6. Asphalt trenches which are to be patched shall be prepped by cleaning the existing surfaces so to be free of debris and dust. Area shall be primed prior to asphalt being applied.
 - 7. Patching which shows evidence of settling shall be removed and replaced at the Contractors expense. The Contractor shall provide appropriate means to protect asphalt and concrete from acts of vandalism until material is cured.

3.4 CLEANING

- A. Clean areas and spaces where cutting and patching are performed. Completely remove paint, mortar, oils, putty and similar items. Thoroughly clean piping, conduit and similar features before applying paint or other finishing materials. Restore damaged pipe covering to its original condition.

END OF SECTION

**CLEANING
SECTION 017400**

PART 1 - GENERAL

1.1 SUMMARY

- A. Throughout the construction period, maintain the site in a standard of cleanliness as described in this Section.

1.2 PROGRESS CLEANING

- A. Site:
1. Daily, and more often if necessary, inspect the site and pick up all scrap, debris, and waste material. Remove such items to the place designated for their storage.
 2. Maintain the site in a neat and orderly condition at all times.

1.3 FINAL CLEANING

- A. Site:
1. Unless otherwise specifically directed by the Architect, broom clean paved areas on the site and public paved areas adjacent to the site.
 2. Completely remove resultant debris.
- B. Buildings:
1. Carpets are to be vacuumed to remove any construction debris caused by communication and fire alarm wiring installation.
 2. Clean any hand prints or marks on wall and ceiling surfaces.
 3. Windows to be cleaned inside and outside.

END OF SECTION

**PROJECT CLOSEOUT
SECTION 017700**

PART 1 - GENERAL

1.1 RELATED DOCUMENTS:

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division-1 Specification sections, apply to the work of this section.

1.2 DESCRIPTION OF REQUIREMENTS:

- A. Definitions: Project closeout is the term used to describe certain collective project requirements, indicating completion of the Work that are to be fulfilled near the end of the Contract time in preparation for final acceptance and occupancy of the Work by the Owner, as well as final payment to the Contractor and the normal termination of the Contract.
 - 1. Specific requirements for individual units of work are included in the appropriate sections in Divisions 2 through 32.
 - 2. Time of closeout is directly related to "Substantial Completion"; therefore, the time of closeout may be either a single time period for the entire Work or a series of time periods for individual elements of the Work that have been certified as substantially complete at different dates. This time variations, if any, shall be applicable to the other provisions of this section.

1.3 PREREQUISITES TO SUBSTANTIAL COMPLETION:

- A. General: Complete the following before requesting the Architect's inspection for certification of substantial completion, either for the entire Work or for portions of the Work. List known exceptions in the request.
 - 1. Submit specific warranties, workmanship/maintenance bonds, maintenance agreements, final certifications and similar documents.
 - 2. Submit record drawings and maintenance manuals.
- B. Give particular attention to concealed work that would be difficult to measure and record at a later date.
 - 1. Complete final cleaning up requirements, including touch-up painting of marred surfaces.

2. Touch-up and otherwise repair and restore marred exposed finishes.
- C. Inspection Procedures: Upon receipt of Contractor's request for inspection, the Architect will either proceed with inspection or advise Contractor of unfulfilled prerequisites.
1. Results of the completed inspection will form the initial "punch-list" for final acceptance.

1.4 **PREREQUISITES TO FINAL ACCEPTANCE:**

- A. General: Complete the following before requesting the Architect's final inspection for certification of final acceptance, and final payment as required by the General Conditions. List known exceptions, if any, in request.
1. Submit the final payment request with final releases and supporting documentation not previously submitted and accepted. Include certificates of insurance for products and completed operations where required.
 2. Submit a copy of the Architect/Engineer's final punch-list of itemized work to be completed or corrected, stating that each item has been completed or otherwise resolved for acceptance and has been endorsed and dated by the Architect/Engineer.
 3. Submit the final payment request with final releases and supporting documentation not previously submitted and accepted. Include certificates of insurance for products and completed operations where required.

END OF SECTION

**DEMOLITION
SECTION 024100**

PART 1 - GENERAL

1.1 SUMMARY

- A. In accordance with pertinent provisions of this Section, carefully demolish and remove from the site those items scheduled to be so demolished and removed. The Conditions of the Contract apply to this section as fully as if repeated herein.
- B. Related Work:
 - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications.
 - 2. Section 01 7329: Cutting and Patching.

1.2 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.

1.3 DUST CONTROL

- A. Take appropriate action to check the spread of dust and to avoid the creation of a nuisance in the surrounding area. Do not use water if it results in hazardous or objectionable conditions, such as ice, flooding or pollution. Comply with all dust regulations imposed by local air pollution agencies.

PART 2 - PRODUCTS

(No products are required in this Section)

PART 3 - EXECUTION

3.1 SURFACE CONDITIONS

- A. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions are corrected.

3.2 **DEMOLITION**

- A. Contractor is responsible to review the Contract Documents, and visit site to determine the location and extent of demolition to be performed.
- B. In company with the Architect, visit the site and verify the extent and location of demolition required.
 - 1. Carefully identify limits of demolition.
 - 2. Mark interface surfaces as required to enable workmen also to identify items to be removed and items to be left in place intact.
- C. Prepare and follow an organized plan for demolition and removal of items.
 - 1. Protect existing public utility lines in accordance with the requirements of the public agency or utility having jurisdiction.
 - 2. Completely remove items scheduled to be so demolished and removed, leaving surfaces clean, solid, and ready to receive new materials specified elsewhere.
 - 3. In all activities, comply with pertinent regulations of governmental agencies having jurisdiction.
 - 4. Demolition activity shall be conducted when school is not in session.
- D. Demolished material shall be considered to be property of the Contractor and shall be completely removed from the job site, unless noted otherwise on the drawings.
- E. Use means necessary to prevent dust becoming a nuisance to the public, to neighbors, and to other work being performed on or near the site.
- F. Contractor shall shutoff and disconnect all existing utilities to site (i.e.: power, communications, fire alarm, water, sewer, natural gas and other related utilities) prior to commencement of demolition. Coordinate scheduling with the District.
- G. Install temporary fencing, caution signs and barricades around project area for duration of project to keep area clear of vehicles and spectators.
- H. The Contractor shall be responsible for strict compliance with all requirements of the California Occupational Safety and Health Act (OSHA) which are applicable to the work to be accomplished pursuant to this contract. OSHA shall be construed to include, but not be limited to all applicable safety orders issued by the Division of Industrial Safety, State of California. In the event the Contractor or any of the Contractor's employees shall observe any violation of OSHA in or on the premises on which the Contractor is to preform work pursuant to this contract, the Contractor shall immediately give written notice to the County of such violation.

- I. Contractor shall obtain any and all permits required for such work in accordance with applicable local, state and federal laws and regulations, including Sacramento Metropolitan Air Quality Management District.

3.3 REPLACEMENTS

- A. In the event of demolition of items not so scheduled to be demolished, promptly replace such items to the approval of the Architect and at no additional cost to the Owner.

END OF SECTION

SEALANTS AND CAULKING
SECTION 079200

PART 1 - GENERAL

1.1 SUMMARY

- A. The work includes the furnishing and installing of all caulking and sealing work required to weatherproof the building, including exterior caulking and sealing, as shown and noted on the drawings and specified herein. The conditions of the contract and Division 1 apply to this section as fully as if repeated herein.

1.2 SUBMITTALS

- A. Prior to ordering materials or their installation, submit for selection, samples indicating the color range available for each caulking and sealant material intended for installation in exposed locations. Materials installed prior to selection of color will be subject to removal and replacement with approved materials. Color of finished caulking and sealant shall match approved samples.
- B. Division 1 for number and manner of submittals.
- C. Division 9 - Painting.

1.3 DELIVERY, STORAGE AND HANDLING

- A. Do not expose caulking and sealants to excessive heat, cold or other conditions that would adversely affect the serviceability of the materials. Do not store caulking and sealants past the shelf-life recommended by the manufacturer.

1.4 JOB CONDITIONS

- A. Apply caulking and sealants only when weather conditions are within the manufacturer's recommended limits for satisfactory installation.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Caulking and Sealant Compounds: Compounds shall be products and manufacturers listed herein or equal products approved in accordance with Division 1.
 - 1. Exterior Vertical Applications: One part low modulus silicone sealant; Dow Corning No. 790, General Electric "Silpruf" or equal.

2. Exterior Horizontal Applications: Two component, self leveling, polyurethane base sealant, Mameco “Vulkem 245”, Pecora, “NR200 Urexpam”, Sonneborn “Sonolastic Paving Joint Sealer” or equal.
- B. Primers: Primers shall be quick-drying, colorless, non-staining sealer of type of consistency as recommended by the manufacturer of the caulking and sealant material for the particular surfaces to be caulked or sealed.
 - C. Packing: Sealant backup and packing for caulking and sealant compounds shall be non-staining resilient material, such as glass fiber rope, or neoprene, butyl, polyurethane, or other open cell foams, compatible with the compound used.

PART 3 - EXECUTION

3.1 INSPECTION

- A. Inspect joint sizes and surfaces prior to start of work. Do not start work until deficiencies or other conditions that would adversely affect performance, installation or quality of the application have been corrected. Start of work constitutes acceptance of joint surfaces.

3.2 SURFACE PREPARATION

- A. Joints and spaces to be caulked or sealed shall be completely cleaned of dirt, dust, mortar, oil, and other foreign materials which might adversely affect the caulking and sealant work. Where necessary, degrease with an approved solvent or commercial degreasing agent. Surfaces shall be thoroughly dry before application of caulking compounds.
- B. If recommended by manufacturer, remove paint and other protective coatings from surfaces to be caulked or sealed prior to priming and caulking or sealant application.
- C. All joints shall be enclosed on three sides. Where grooves for adequate caulking or sealing have not been provided, suitable grooves shall be cleaned out to the depth required or as indicated on drawings and ground to a minimum width of 1/4 inch without damage to the adjoining work. No grinding shall be required on metal surfaces.
- D. Preparation of surfaces to receive caulking or sealant compound shall conform to the compound manufacturer’s specifications. Use air pressure or other approved methods to achieve required results. Use masking tape to keep compound off surfaces that will be exposed in the finished work.

3.3 APPLICATION

- A. Caulk and seal around all openings in exterior walls, and other locations shown or required for waterproofing the building. Caulk and seal all other joints as herein specified, shown on drawings, and required to properly complete the building.
- B. Caulking and sealants shall be applied by experienced mechanics using specified materials and proper tools. Preparatory work (cleaning etc.) And application of caulking and sealants shall be as specified herein and in accordance with the manufacturer's printed instruction and recommendations.
- C. Plaster and other porous surfaces, and other surfaces if recommended by the manufacturer, shall be primed before applying caulking and sealants. Primer shall be applied with a brush that will reach all parts of joints to be filled with compound.
- D. Joints and spaces deeper than ½ inch shall be filled with packing as specified to within ½ inch of the surface.
- E. Caulking and sealants shall not be used when they become too jelled to be discharged in a continuous flow from the gun. Modification of compounds by addition of liquids, solvents, or powders will not be permitted.
- F. Compounds shall be applied with guns having proper size nozzles. Sufficient pressure shall be used to fill all voids and joints solid. In caulking and sealing around openings, include entire perimeter of each impracticable, suitable hand tools shall be used.
- G. Caulked and sealed joints shall be neatly pointed on flush surfaces with beading tool and internal corners with eaving tool. Excess material shall be cleanly removed. Caulking and sealant where exposed, shall be free of wrinkles and uniformly smooth. Caulking and sealing shall be complete before final coat of paint are applied.

3.4 MISCELLANEOUS CAULKING AND SEALING WORK

- A. The entire extent of caulking and sealing work is not necessarily fully or individually described herein. Caulking and sealing shall be provided wherever required to prevent light leakage as well as moisture leakage. Refer to drawings for conditions and related parts of the work.

3.5 CLEANING

- A. Clean surfaces of materials adjoining caulked and sealed joints of smears of compound or other soiling due to caulking and sealing application.

END OF SECTION

**MODULAR BUILDING
SECTION 133423.14**

PART 1 - GENERAL

1.1 SUMMARY

- A. Work is to fabricate, deliver and set up 72'x40' single story steel rigid frame modular building.

1.2 QUALITY ASSURANCE

- A. The building is to be DSA 'PC' approved with current 2022 CBC requests.

PART 2 - PRODUCT

1.1 MATERIALS

- A. Modular Buildings shall be single story rigid steel moment frame building.
- B. Modular building to be DSA 'PC' approved for 2022 CBC requests.
- C. Building lay out shall be per approved DSA Drawings consisting of:
 - 1. 9' high ceiling height.
 - 2. LED 2x4 troffe light fixtures.
 - 3. Suspended ceiling grid and 2'x4' ceiling tiles.
 - 4. 3"x7" steel doors - exterior doors with panic hardware and lighted exit signs.
 - 5. 3"x7" steel doors - interior with Schlage lever hardware.
 - 6. Interior walls finished with 1/2" tackboard full height over G.W.B.
 - 7. Two 4'x8' porcelain steel marker boards (per classroom).
 - 8. Electrical receptacles and branch circuitry as indicated on Drawings.
 - 9. Two 125 amp single phone electrical panel (68v).
 - 10. Two 3 1/2 ton 'bard' wall mount HVAC with ducted air supply (concealed in ceiling) with programable thermostats.
 - 11. Roof metal standing seam 26 ga over wood roof dock slope min 1/4"/ft. with 5'-0" overhang front and 2'-6" overhand rear.
- D. Concrete foundation shall be as indicated on the approved Drawings, concrete material properties and reinforcing are as indicated on the Drawings.
- E. Exterior wall finish to be cement based stucco.

- F. Windows: Exterior to be manufacturers's standard 4'x8' dual glazed.
Interior to be 4'x4' single glazed.
Glazing are to be tempered where indicated on plans and/or required by code.
- G. Flooring: 26.02 with unitary backing, Bugelow 'New Basics II', 4" topset base, 5'x6' walk off at entry doors, Armstrong Commercial sheet vinyl flooring with welded seams and carpet transition strips.

PART 3 - EXECUTION

3.1 PREPARATION

- A. All workmen and trades shall be skilled and qualified for work which they perform. All materials used unless otherwise specified shall be new and of the types and grades specified.
- B. Relocatable buildings are steel rigid design as defined by DSA, with finish floor as indicated on site plans. Finish floor heights shall be coordinated in field, to match up with site conditions and elevations.
- C. Site preparation, by the general contractor includes layout, clearing, and excavation for the underfloor classroom installation of storm drain which will be beneath the building.

3.2 FOUNDATION

- A. Modular building shall be set on concrete foundation with 18" clear underfloor crawl space and 2" 'Rat Slab'. Anchor building the foundation as indicated on the drawings.

3.3 MODULAR BUILDING IS TO BE CRANE SET ON TO THE FOUNDATION.

3.4 COORDINATION

- A. Site work contractor is to mark out building corner for proper building placement and alignment, as well as coordinating with vendor on building set height. Any additional concrete removal and replacement needed to meet code required ADA slopes shall be borne by the contractor.

3.5 SECURITY

- A. Security of the buildings against vandalism is the sole responsibility of the contractor until installation of the building, according to the terms of this contract, has been completed and the buildings have been accepted by the District.

3.6 CLEAN-UP

- A. Because of the nature of the sites, i.e., school grounds, the contractor shall lock up all materials and equipment at the end of the day's work. All scrap material shall be removed from the site at the end of each day's work, no exception.
- B. The building site shall be clean and ready for occupancy prior to acceptance by the District.

END OF SECTION

**PLUMBING
SECTION 220100**

PART 1 - GENERAL

1.1 The General Conditions and Supplementary Conditions apply to this Section.

1.2 **SCOPE**

Provide plumbing where shown on the Drawings, as specified herein, and as needed for a complete and proper installation including, but not necessarily limited to:

- A. Domestic hot and cold water piping systems
- B. Drain, waste, and vent systems
- C. Gas, water and sewer service connections per local requirements
- D. Plumbing fixtures and trim as shown on the Drawings
- E. Condensate lines

1.3 **DRAWINGS**

- A. Examine all drawings prior to starting of work and report any discrepancies in writing to the Architect.
- B. Verify all dimensions at the building site and check existing conditions before beginning work. Make changes which are necessary to install the work in harmony with other crafts; they shall be first approved by the Architect.
- C. Execute work mentioned in the specifications and not shown on the drawings, or vice versa, the same as if specifically mentioned in both.

1.4 **CODES AND REGULATIONS:**

- A. Provide all work and materials in full accordance with the latest rules and regulations of the:
 - 1. 2022 California Building Code, reference 2021 IBC.
 - 2. 2022 California Plumbing Code, reference 2021 UPC.
 - 3. 2022 California Mechanical Code, reference 2021 UMC.
 - 4. 2022 California Electrical Code, reference 2021 NEC.
 - 5. 2022 California Fire Code, reference 2021 IFC.
 - 6. Title 24, California Code of Regulations.

Nothing in these plans or specifications is to be construed to permit work not conforming to these codes. Furnish without extra charge, any additional material and labor required to comply with these rules and regulations.

1.5 UTILITY COORDINATION

- A. It shall be the contractor's responsibility to arrange and coordinate with the utility companies all requests for service(s) and the installation of meter(s) and services. The contractor shall furnish all documentation and information that the utility companies require prior to start of construction. Within 35 calendar days of the award of contract, the contractor shall submit to the architect a letter with copies of drawings that are sent to the utility companies for such services.

1.6 SUBSTITUTIONS AND MATERIALS LIST

- A. Product names are used as qualitative standards, however other materials or methods shall not be used unless approved in writing by the architect. The burden of proof as to the equality of any proposed material shall be upon the contractor, and the architect's decision is final. Only one request for substitution shall be considered for each item. Equipment capacities specified are minimum acceptable.
- B. Product Data: Submit seven (7) hard copies or one (1) electronic copy of the manufacturer's technical product data and installation instructions for each type of fixture, material, or piece of equipment. The submittals shall be accompanied by equipment shop drawings, pump performance curves, and other pertinent data, showing the size, capacity and the proposed materials to be used. Submittals shall be provided, whether substitutions are made or not, and shall be listed in the order in which they appear in the schedules. Submittals shall be provided and approved prior to start of construction.
- C. Any mechanical, electrical, structural or other changes required for the installation of any substituted equipment shall be made to the satisfaction of the architect and without additional cost to the owner. Approval by the architect of the substituted equipment and/or dimensional drawings does not waive these requirements. With submittal, provide drawings showing substituted equipment.
- D. Approval of material shall not be construed as authorizing any deviations from the specifications unless the attention of the architect has been directed to the specific deviations.
- E. Furnish to the Inspector, upon request, complete installation shop drawings of the same approved substitutions and drawings.

1.7 STERILIZATION CERTIFICATE

- A. Upon completion of water line sterilization, deliver to the Architect two copies of an acceptable "Certificate of Performance" for that activity.

1.8 MAINTENANCE AND OPERATING INSTRUCTION

- A. Furnish four complete sets of operating and maintenance instructions bound in a hardboard binder and indexed. Start compiling the data upon approval of list of materials, Final inspection will not be made until booklets are approved by the architect.
- B. These sets shall incorporate the following:
 - 1. Complete operating instructions for each item of equipment listing in detail the lubricants to be used, frequency of lubrication, inspections required, adjustments, etc.
 - 2. Manufacturer's documentation with part numbers, instructions etc., for each item of equipment.
- C. Post service telephone numbers and/or addresses in an appropriate place as designated by the architect.

1.9 FIELD MEASUREMENT

- A. Make necessary measurements in the field to assure precise fit of items included in plumbing. Verify dimensions with all framing and concrete work prior to installing any components. Notify architect immediately of any discrepancies.

1.10 RECORD DRAWINGS

- A. Upon completion of the work, and as precedent to final payment, the contractor shall provide and deliver, to the architect, updated reproducible drawings showing the work exactly as installed.

PART 2 – MATERIALS

2.1 MISCELLANEOUS MATERIALS

- A. Gate valves: Provide solid wedge disc, rising stem, WOG; rising stem: Provide Nibco T-126 bronze, screwed, or 5-126, solder.
- B. Globe valves: Provide replaceable composition disc suitable for 200 degree F water: 2 1/2 and smaller; Provide Nibco F-718-B, bronze, screwed.
- C. Gas cocks: 2" and smaller: Provide 250#, bronze, screwed, square head, 125# (Rockwell Fig 142).
- D. Ball valves: two or three piece construction, forged bronze body, chrome plated brass ball, threaded ends, Teflon seats, PTFE or reinforced Teflon stem seals, lever handles. Milwaukee BA100/150, BA300/350.

- E. Flashing: Where pipes of this Section pass through the roof, flash with 24 ga. galvanized sheet metal, counter flashing to be 24 ga. sheet metal.
- F. Traps for lavatories and sinks, except service sinks, chrome plated 17-ga. brass with clean out.
- G. Provide other materials, not specifically described but required for a complete and proper installation, as selected by the Contractor subject to the approval of the Architect.

PART 3 - EXECUTION

3.1 SURFACE CONDITIONS

- A. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions are corrected.

3.2 PLUMBING SYSTEM LAYOUT

- A. Lay out the plumbing system in careful coordination with the Drawings, determining proper elevations for all components of the system and using only a minimum number of bends to produce a satisfactorily functioning system.
- B. Follow the general layout shown on the Drawings in all cases except where other work may interfere.
- C. Lay out pipes to fall within partition, wall, or roof cavities, and to not require furring other than as shown on the Drawings.

3.3 Perform trenching and backfilling associated with the work of this Section in strict accordance with all provisions of these Specifications.

- A. Cut bottom of trenches to grade. Make trenches 12" wider than the greatest dimension of the pipe.
- B. Bedding and backfilling:
 - 1. Install piping promptly after trenching. Keep trenches open as short a time as practicable.
 - 2. Under the building, install pipes on a 6" bed of damp sand. Backfill to bottom of slab with damp sand.
 - 3. Outside the building, install underground piping on a 6" bed of damp sand. Backfill to within 12" of finish grade with damp sand. Backfill remainder with native soil.

4. Do not backfill until installation has been approved and until Project Record Documents have been properly annotated.

3.4 **INSTALLATION OF PIPING AND EQUIPMENT**

A. General:

1. Proceed as rapidly as the building construction will permit.
2. Thoroughly clean items before installation. Cap pipe openings to exclude dirt until fixtures are installed and final connections have been made.
3. Cut pipe accurately, and work into place without springing or forcing, properly clearing windows, doors, and other openings. Excessive cutting or other weakening of the building will not be permitted.
4. Show no tool marks or threads on exposed plated, polished, or enameled connections from fixtures. Tape all finished surfaces to prevent damage during construction.
5. Make changes in directions with fittings; make changes in main sizes with eccentric reducing fittings. Unless otherwise noted, install water supply piping with tap tees feeding up to fixtures.
6. Run horizontal sanitary and storm drainage piping at a uniform grade of 1/4" per ft, unless otherwise noted. Run horizontal water piping with an adequate pitch upwards in direction of flow to allow complete drainage.
7. Provide sufficient swing joint, ball joints, expansion loops, and devices necessary for a flexible piping system, whether or not shown on the Drawings.
8. Support piping independently at pumps, coils, tanks, and similar locations, so that weight or pipe will not be supported by the equipment.
9. Pipe the drains from pump glands, drip pans, relief valves, air vents, and similar locations, to spill over an open sight drain, floor drain, or other acceptable discharge point, and terminate with a plain end unthreaded pipe 6" above the drain.
10. Securely bolt all equipment, isolators, hangers, and similar items in place.
11. Support each item independently from other pipes. Do not use wire for hanging or strapping pipes.
12. Provide complete dielectric isolation between ferrous and non-ferrous metals.
13. Provide union and shut off valves suitably located to facilitate maintenance and removal of equipment and apparatus, whether shown or not.
14. Provide adequate drainage slope on condensate drains.
15. Equipment access:

- a. Install piping, equipment, and accessories to permit access for maintenance. Relocate items as necessary to provide such access, and without additional cost to the Owner.
 - b. Provide access doors where valves, water hammer arrestors, motors, or equipment requiring access for maintenance are located in walls or chases or above ceilings. Coordinate location of access doors with other trades as required.
- B. Pipe Joints
- 1. Copper tubing:
 - a. Cut square, remove burrs, and clean inside of female fitting to a bright finish.
 - (1) Apply solder flux with brush to tubing.
 - (2) Remove internal parts of solder-end valves prior to soldering.
 - b. Provide dielectric unions at points of connection of copper tubing to ferrous piping and equipment.
 - c. For joining copper tubing, use:
 - (1) Water piping 3" and smaller: "Lead free" solder;
 - (2) Underground: "sil-fos" brazing.
 - 2. Screwed piping:
 - a. Deburr cuts.
 - (1) Do not ream exceeding internal diameter of the pipe.
 - (2) Thread to requirements of ANSI B2.1.
 - b. Use Teflon tape on male thread prior to joining other services.
 - 3. Leaky joints:
 - a. Remake with new material.
 - b. Remove leaking section and/or fitting as directed.
 - c. Do not use thread cement or sealant to tighten joint.
- C. Cleanouts:
- 1. Secure the Architect's approval of locations for cleanouts in finished areas prior to installation.
 - 2. Provide cleanouts of same nominal size as the pipes they serve.
 - 3. Make cleanouts accessible. After pressure tests are made and approved, thoroughly graphite the cleanout threads.

- D. Valves:
1. Provide valves in water and gas systems. Locate and arrange so as to give complete regulation of apparatus, equipment and fixtures.
 2. Provide valves in at least the following locations:
 - a. In branches and/or headers of water piping serving a group of fixtures.
 - b. On both sides of apparatus and equipment.
 - c. For shutoff of risers and branch mains.
 - d. For flushing and sterilizing the system.
 - e. Where shown on the Drawings.
 3. Locate valves for easy accessibility and maintenance.
- E. Backflow Prevention:
1. Protect plumbing fixtures, faucets with hose connections, and other equipment having plumbing connection, against possible back-siphonage.
 2. Arrange for testing of backflow devices as required by the governmental agencies having jurisdiction.
- F. Disinfection of Water Systems
1. Disinfect hot and cold water systems.
 - a. Notify the Architect at least 48 hours prior to start of the disinfection process.
 - b. Upon completion of disinfecting, secure and submit the Certificate of Performance required under Article 2a of this Section, stating system capacity, disinfectant used, time and rate of disinfectant applied and resultant residuals in ppm at completion.
 2. When disinfection operation is completed, and after final flushing, securing, and analysis, based on water samples from the system, showing test negative for coli-aerogene organisms. Provide a total plate count of less than 100 bacteria per cc, or equal to the control sample.
 - a. Upon completion of disinfecting, secure and submit the Certificate of Performance required by the County Health Dept, stating system capacity, disinfectant used, time and rate of disinfectant applied and resultant residuals in ppm at completion.
 - b. Use disinfectant method approved by the Owner.
 3. If analysis results are not satisfactory, repeat the disinfection procedures and retest until specified standards are achieved.

G. Other Testing and Adjusting.

1. Provide personnel and equipment, and arrange for and pay the costs of, all required tests and inspections required by governmental agencies having jurisdiction.
2. Where tests show materials or workmanship to be deficient, replace or repair as necessary, and repeat the tests until the specified standards are achieved.
3. Adjust the system to optimum standards of operation.

END OF SECTION

**ELECTRICAL GENERAL REQUIREMENTS
SECTION 260100**

PART 1 - GENERAL

1.1 INCLUSION OF GENERAL CONDITIONS AND DIVISION ONE

- A. The General Conditions, Supplemental Conditions, and Division 1, General Requirements, are a part of this Section and the Contract for this work and apply to this Section as fully as if repeated herein.

1.2 SCOPE

- A. Work under this Section includes all labor, materials, tools, plant equipment, transportation and perform all operations necessary for proper execution and completion of all electrical work whether specifically mentioned or not; all as indicated, specified herein, and/or implied thereby to carry out the apparent intent thereof. Items of work include, but are not limited to, the following:
1. Study work and related drawings and specifications of all other crafts whose work abuts, adjoins, or in any manner is affected by work of this section. Consult with other trades and with them expedite and coordinate materials and labor to avoid omissions and delays.
 2. Complete system of wiring distributions including panelboards, transformers and all power hookups to relocatables, as shown on the drawings.
 3. Addition to existing Fire Alarm system and all modifications.
 4. Addition to existing Phone system.
 5. Addition to existing Data system.
 6. Excavation, backfill, framing and other associated work required for the installation of the electrical system.
 7. Submission of shop drawings.
 8. As-Built drawings.
 9. Tests.
 10. Prepare day-by-day record of "as built" changes as specified hereinafter.

11. Furnish, install and connect all line voltage wiring to mechanical equipment and other electrical equipment.

1.3 WORK NOT INCLUDED

- A. The following work as outlined is not included in the Electrical Contract; however, this Contractor shall cooperate with other contractors involved and shall be responsible to give complete directions on sizes of openings, locations, etc., and to insure that the completed electrical installations shall be of good workmanship and in accordance with drawings and specifications.
- B. Equipment or work indicated "NIC" or "By others."

1.4 PERMITS AND ORDINANCES

- A. Comply with all codes, ordinances, and authorities having jurisdiction, including all local public utility requirements, the California Building Code and the California Electrical Code. Electrical Contractor shall procure and pay for all permits, licenses, etc. required to carry on and complete the work.

1.5 SPECIFICATION AND CONTRACT DRAWINGS

- A. Accuracy of data given herein and on the drawings are as exact as could be secured, but their extreme accuracy is not guaranteed. The drawings and specifications are for the assistance and guidance of the Contractor and exact locations, distances, levels, etc., will be governed by the building and the Contractor shall accept same with the understanding.
- B. Drawings and specifications may be superseded by later detail specifications and detail drawings prepared by the Architect, and the Contractor shall conform to them and to such reasonable changes in the Contract drawings as may be called for by those revised drawings without extra cost to the Owner. Where work called for exceeds code requirements, drawings and specifications shall take precedence.
- C. Layouts of equipment, accessories and wiring systems are diagrammatic (not pictorial), but shall be followed as closely as possible. Architectural, structural and other mechanical drawings shall be examined, noting all conditions that may affect this work. Report conflicting conditions to the Architect for adjustment before proceeding with work.
- D. Should Contractor proceed with work without so reporting the matter, he does so on his own responsibility, and shall alter work if directed by the Architect at his own expense. Right is reserved to make minor changes in locations of equipment and wiring systems shown, providing change is ordered before conduit runs and/or work directly connected to same is installed and no extra materials are required.

1.6 STRUCTURAL REQUIREMENTS

- A. Installation under this Section shall comply with the California Building Code and Title 24.

1.7 EXAMINATION OF SITE

- A. The Contractor shall be held to have visited the site and satisfied himself as to the conditions under which the work is to be performed. He shall check existing conditions which may affect his work. No allowance shall subsequently be made in his behalf for any extra expense to which he may be put due to failure or neglect to discover conditions affecting his work.

1.8 MANUFACTURER'S DIRECTIONS

- A. Follow manufacturer's directions where these directions cover points not included in the drawings or in the specifications.

1.9 CLEANING

- A. After all work has been accomplished such as sanding, painting, etc., lighting fixtures, panelboards, and switchboards shall be cleaned to remove all dust, dirt, grease, paint, or other marks. All electrical equipment shall be left in a clean condition inside and outside, satisfactory to the Architect.

1.10 WORKMANSHIP

- A. Workmanship shall be of the best quality and shall be performed by skilled craftsmen to insure long and trouble-free service. The requirements of the Codes and Safety Orders are minimum standards.

1.11 REVIEW SUBMITTALS

- A. Materials List: Submit to the Architect for review, seven (7) copies of submittals covering the following items to be furnished under this Section. This submittal shall specifically include:
 - 1. Service switchboards.
 - 2. Panelboards.
 - 3. Fire Alarm system addition.
- B. For ease of maintenance and parts replacement, to the maximum extent possible use equipment of a single manufacturer. The Architect reserves the right to reject any submittals which contains equipment from various manufacturers if suitable materials can be secured from fewer manufacturers and to require that the source of materials be unified to the maximum extent possible.

- C. When specific names are used in connection with materials, they are used as standards only, but this implies no right upon the part of the Contractor to use other materials or methods unless approved as equal in quality and utility by the Architect in writing and in accordance with provisions for substitutions previously stipulated in these specifications.
- D. Shop drawings and all supporting data shall be submitted as instruments of the Contractor. Contractor shall place his stamp on the cover sheet of submittal documents, thereby stating that the equipment meets all requirements of the conditions. At least one set of submittals shall have check marks at each item indicating that the Contractor has verified compliance with the above requirements.
- E. Should the original submittal of a proposed substitution be rejected, the specified item shall be furnished.
- F. Within twenty one (21) days after award of contract, submit (7) bound copies of brochures containing complete information and catalog cuts on all equipment including that which is to be furnished as specified. Include wiring diagrams where so required. The brochures shall be bound separately according to classifications of equipment such as power, light fixtures, fire alarm system, signals systems and miscellaneous systems. Submittals which consist of all brochures for all classifications of equipment to be furnished bound in one single book shall be returned unreviewed. Proposed substitutions shall be accompanied by catalog cuts, ratings, sizes, performance curves, shop drawings and other data complete to prove full equality to the specified item. At least one copy of the submittals for each system shall be made up of original printed manufacturer's cut sheets. Additional copies may be made up of Xerox copies. FAX submittals are not acceptable and will be returned unreviewed.
- G. Approval of a substitution does not authorize any deviation from the utility, size or function of the specified item unless specifically pointed out and approval requested in the letter of submittals. Responsibility for conflicts due to space limitations are not relieved by approval of a substitution. If revision of wiring, piping or arrangement of other equipment is necessary, after approval, furnish the Architect with (7) copies for file and future reference.
- H. Panelboard submittals shall be arranged to show bussing circuit numbers with respective branch circuit devices similar to schedules on drawings. Switchboard and motor control center submittals shall show elevations indicating layout of devices, metering, etc. Device ratings, circuit numbers and nameplates shall be in table form. Terminal cabinet submittals shall include elevations with terminal strip mounting arrangement.
- I. Unless otherwise shown or specified, material shall be new, full weight, standard, the best quality of its' kind and satisfactory to the Architect. Materials shall be stored and protected as necessary and/or required by the Architect, and the Contractor shall be entirely responsible for damage or loss from any cause. Unless otherwise shown or

specified, major equipment shall be the product of a manufacturer who has for a period of not less than five (5) years, been in successful manufacture of the equipment and who has nationally distributed catalog covering ratings and specifications of said equipment.

- J. Electrical materials shall bear the label of, or be listed by, the Underwriters' Laboratories unless of a type for which label or listing service is not provided.
- K. Materials and components shall conform to industrial standards including:
 - 1. N.E.M.A. - National Electrical Manufacturers' Association.
 - 2. A.S.A. - American Standards Association.
 - 3. A.S.T.M. - American Society of Testing Materials.
 - 4. I.P.C.E.A. - Insulated Power Cable Engineers' Association.
 - 5. C.B.M. - Certified Ballast Manufacturers.
- L. Samples of fixtures, materials and equipment shall be submitted for approval of Architect if requested.

1.12 CUTTING AND PATCHING

- A. Obtain the Architect's and DSA approval before performing any cutting or patching of concrete, masonry, or wood structure by this installation and including provisions for holes in concrete before concrete is poured.

1.13 PROTECTION

- A. The Contractor shall protect from damage during construction, the work and materials of other trades as well as the electrical work and materials. Electrical equipment stored and installed on the job site shall be protected from dust, water, or any other damage.

1.14 IDENTIFICATION OF EQUIPMENT

- A. Nameplates shall be installed on electrical equipment. Equipment to be labeled shall include the following:
 - 1. Individual enclosures such as disconnect switches, time switches, pushbuttons, contractors, relays, motor starters, etc.
 - 2. Group mounted equipment such as panelboards, switchboards, motor control devices.
 - 3. Individual circuit breakers on switchboards.

4. Wall switches for lighting or other use where the control function is not self-evident.
 5. Existing panel boards, disconnects, etc which are reused shall be re-labelled in accordance with this section. All old labeling, if any, shall be removed.
- B. Each panel shall be labeled externally to provide the following information as a minimum:
1. Panel name.
 2. Size of feeder feeding the panel.
 3. Rated voltage, amps and phases.
- C. Each main service switchboard and distribution panel shall be labeled to provide the following information as a minimum:
1. Rated voltage, amps and phases.
 2. Main switch rating.
 3. Feeder circuit breaker rating with name of panel or equipment fed and size of feeder to this equipment.
- D. Nameplates shall adequately describe the item and its' function or use of the particular equipment involved.
- E. Manufacturers label shall include date of manufacture.
- F. Nameplate material shall be laminated phenolic plastic, black front and back with white core. Engraving shall be through the outer layer. Embossed plastic pressure sensitive labels are not acceptable.
- G. In lieu of plastic plates, device plates shall be engraved directly with lettering filled with black enamel.
- H. Nameplates shall be securely fastened to the equipment with #4 Phillips round head cadmium plated steel self-tapping screws.

1.15 EXCAVATION AND BACKFILL

- A. Perform excavation and backfill required for electrical installation. Restore surfaces, roadways, walks, curbs, walls, existing underground installations or original condition in an acceptable manner.

- B. Excavation: Dig trenches straight and true to line and grade, with bottom smoothed of any rock points. Support conduit for entire length on undisturbed, original earth. Minimum conduit depth of pipe crown shall be twenty four (24") below finished or natural grade.
- C. Backfill: Provide all necessary backfill material placement and compaction for trenches. Backfill may be sand or native soil.

1.16 TESTS

- A. The entire electrical installation shall be free from short circuits and improper grounds. Test all wiring and connections for continuity and grounds before any fixtures or equipment are connected and where such tests indicate faulty insulation or other defects, they shall be located, repaired and retested at the Contractor's expense. Electrical load shall be balanced at the panelboards. Rotation of all motors shall be checked and corrected, if necessary, after final connections are made. Demonstrate to the Owner and the Engineer that the entire installation is complete, in proper operating condition and that the Contract has been properly and fully executed. Provide all instruments to make such tests.
- B. All signal systems listed and described in Part 2 shall be tested in the presence of the Owner's representative or the enforcing authority as applicable and provide a completion certificate and a successful test report to the Architect. Three copies shall be provided. Provide a minimum of five days notice prior to tests.
- C. System test shall be performed only by an individual who has attended a manufacturer's training school for installation and testing the system as described herein. Testing of the system shall be performed with the test instruments as required by the manufacturer; testing by means other than the manufacturer's procedures will not be acceptable unless agreed to by the Owner, specifying Engineer and the Manufacturer.

1.17 WORKING SPACE

- A. Adequate working space shall be provided around electrical equipment in strict compliance with the California Electrical Code and Electrical Safety Orders, with particular reference to CEC Article 110-16 and 384-4. In general, provide six and one-half feet (6'-6") of headroom and thirty-six inches (36") minimum clear work space in front of panelboards and controls for 120 volts and forty-two inches (42") for 480 volts.

1.18 AS-BUILT DRAWINGS

- A. Upon completion of work covered by this Contract, furnish Architect with mylar transparencies, as required by the General Conditions, upon which shall be shown all changes of feeders, panels, circuits, light fixtures, etc., within building and installed under this Contract, which are not in accord with these drawings for the work. Diazo sepia transparencies will not be acceptable.

- B. In addition, furnish one tracing showing all outside utility lines, transformer pad, pull boxes, etc. installed under this Contract. Locate and dimension all work with reference to permanent landmarks.
- C. All symbols and designations used in preparing "Record" drawings shall match those used in Contract drawings.
- D. Properly identify all stubs for future connections, as to locations and use, by setting of concrete marker at finished grade in the manner suitable to the Architect.

1.19 GUARANTEE

- A. Acceptance of the Contract for this work includes this guarantee: The Contractor guarantees that he has performed the work in accordance with the Contract Documents. Contractor agrees to replace or repair, as new, any defective work, materials, or part which may appear within one year (1) year of final acceptance, if, in the opinion of the Architect or the Owner, the defect is due to workmanship or material.

1.20 WARRANTIES, GUARANTEES, CERTIFICATES, ETC.

- A. Warranties, Guarantees, Certificates, etc. that are furnished and available for equipment and materials furnished and installed under this Section shall be properly filled out as of the date of acceptance of the work by the Owner and shall be delivered to the Architect.

1.21 COOPERATION AND COORDINATION

- A. Cooperate and coordinate with other crafts in putting the installation in place at a time when the space required by this installation is accessible. Work done without regard to other crafts shall be moved at the Contractor's expense.

1.22 FLASHING AND SEALING

- A. Flash and counter flash roof and wall penetrations in manner described under other applicable sections of this specification and as approved by the Architect. Conduits, ducts, etc. passing through finished walls shall be fitted with steel escutcheon plates, chrome or paint finish as directed. Conduits which penetrate floor slabs and concrete or masonry walls shall be grouted and sealed watertight at penetration.

1.23 ELECTRICAL WORK FOR MOTORS AND APPLIANCES FURNISHED BY OTHERS:

- A. Work is shown on drawings according to best information available at time drawings was prepared; but this Contractor shall obtain accurate information on equipment power requirements and connection points from Contractors furnishing the actual equipment and

shall install electrical work to suit at no extra cost to Owner. Should Contractor proceed with work without first verifying accuracy of the plans, he does so at his own risk and shall alter work if required at his own expense.

- B. Mechanical and Plumbing Contractors shall furnish written or printed specifications, dimension sheets and diagrams for the electrical work applying to the actual equipment being installed. Electrical Contractor shall be responsible for obtaining this information in a timely manner and shall assist other Contractors in testing of their systems, but his responsibility is restricted to having correctly installed and connected electrical work in accordance with diagrams and specifications furnished him by the other Contractors.

1.24 ACCEPTANCE BY GOVERNING AUTHORITIES

- A. Upon the completion of the electrical work, and as a condition of its acceptance, this Contractor shall obtain final inspections and acceptance from local building inspection agencies, utility companies, and/or other governing authorities. Deliver to the Owner and the Architect verification of such acceptance.

1.25 CLEANING UP

- A. Keep the premises in a neat, safe and orderly condition at all times during the execution of the electrical work. Areas adjacent to the electrical work, both interior and exterior shall be free from accumulations of debris and/or shipping containers and packing. All refuse shall be removed to the area of the job site set aside for its storage. All items removed from the existing installation shall be removed from the site.

1.26 OPERATIONS AND MAINTENANCE MANUALS

- A. Submit the following prior to final acceptance and request for final payment for Division 16 work, in conformance with the Project Closeout requirements of the General Provisions.
 - 1. As-Built Drawings.
 - 2. Operation and Maintenance Manuals.
- B. Provide four complete sets of Operation and Maintenance Manuals including, but not limited to, the following:
 - 1. Shop Drawings and Installation, Operation and Maintenance Manuals for all power distribution and control equipment including service and distribution equipment, branch panels, etc.
 - 2. Schematic diagrams, installation wiring diagrams and instructions and Operation and Maintenance Manuals for all communications, special systems, signaling and control systems and equipment.

3. Copies of certificates of code authority acceptance, and test data and other special guarantees, warranties, etc. specified elsewhere herein and/or indicated on the Drawings.
- C. Assemble each set in standard hardback, 3-ring binders. Do not exceed binder fill of 50 percent; i.e., 1-inch thickness of paper in 2-inch binder. Use tabular dividers to organize the materials in the same order as this Specification. Mark each divider according to (sub)section number and name.

END OF SECTION

RACEWAYS AND FITTINGS
SECTION 260533

PART 1 - GENERAL

1.1 RACEWAYS:

A. All wiring shall be in raceways unless otherwise so specifically noted. Raceways shall be

run in slabs, walls, above ceilings or exposed as indicated on drawings. Acceptable raceway and their limitations of use are as follows:

1. Rigid Steel Conduit may be used in all areas.
 - a. Standard weight, zinc coated on outside by hot dipping or sherardized process, with either zinc coating or other approved corrosion resistant coating on the inside.
 - b. Fittings shall be threaded and finished similar to conduit. Threadless fittings shall not be used.
 - c. Conduits connected to boxes and cabinets shall be fitted with two locknuts and insulated bushing, OA "A" Series.
 - d. Conduits not connected with locknuts and bushings shall be fitted with grounding bushing, OZ "BL" Series, U. L. approved and bonded.
 - e. Conduit stubs underground shall be capped with coupling, nipple, coupling and plug.
 - f. Conduits connected to boxes, cabinets, etc., exposed to weather or in areas subject to excessive moisture shall be fitted with watertight sealing hubs of steel or malleable iron with sealing ring and insulated throat, T & B 370 Series, Efcor 40-50B Series or equal.
 - g. Conduit shall be wrapped with black 10 mil PVC tape for underground installation. Not required to be concrete encased when run underground except at road or alley crossings.
 - h. Only conduit approved for use on roof and within 8 feet of grades on exterior walls.
2. Electrical Metallic Tubing (EMT):
 - a. Rolled steel, zinc coated outside with either zinc-coating or other approved corrosion-resistant coating on the inside.
 - b. Couplings shall be rain compression type Appleton TWC-CS series or equal.
 - c. Connectors shall be raintight compression type with insulated throat Appleton TW-CS1 Series or equal.
 - d. May be used:
 - (1.) Concealed in drywall partitions.
 - (2.) Exposed in telephone and electrical equipment rooms above six foot elevation.
 - (3.) Concealed above furred ceilings.

- (4.) Exposed in fan rooms and/or plenum chambers provided location is dry.
 - e. May not be used:
 - (1.) Any location subject to physical damage.
 - (2.) Normal exposed locations on exterior walls, within 8 ft. of grade or roofs.
 - (3.) In boiler and mechanical rooms.
 - (4.) Any other areas not listed under (5) above unless specifically otherwise noted on the plans.
- 3. Flexible Metal Conduit may be used only for indoor final connections to mechanical equipment (not to exceed 36") and final connections to recessed fluorescent lighting fixtures (not to exceed 72") unless otherwise noted on drawings.
 - a. Minimum trade size - one-half inch (1/2").
 - b. Connectors - T & B "Tite Bite" insulated.
 - c. Suitable for connection of recessed fixtures, control and mechanical equipment. Not permitted where exposed to weather or other wet or corrosive conditions.
 - d. Length shall be a practical minimum, but to allow for movement of equipment connected without restricting flexibility of conduit.
- 4. Liquid Tight Flexible Metal Conduit - Sealtight: May be used only for outdoor final connections to mechanical equipment and to surface panels and boxes on portable classrooms which are not anchored and tied down to bases.
 - a. Minimum trade size - one-half inch (1/2").
 - b. Connectors - Appleton STB Series through two inch trade size and ST Series with insulated bushings over two inch trade size. Appleton, Crouse-Hinds or equal may be used.
 - c. Length shall be practical minimum, but to allow for movement of equipment connected without restricting flexibility of Sealtight.
- 5. Poly-Vinyl-Chloride Schedule 40
 - a. Minimum trade size - three-fourths inch (3/4").
 - b. Joints shall be solvent welded.
 - c. All portions shall be below grade.
 - d. Not suitable for conduit stub for future extension.
 - e. A copper bonding conductor shall be pulled in each power raceway and bonded to equipment at each end with approved lugs.
 - f. Continuation of run above concrete slab or into building interior from underground shall be with rigid steel elbow or bend.
 - g. Connection to steel conduit shall be made with approved threaded adapters.
- 6. Conduit Support:
 - a. Conduit shall be supported with straps, with galvanized malleable split ring and rod for individual runs or with Kindorf, Unistrut, or equal channel for multiple runs. Distance between supports shall not exceed 10

- feet. Conduits shall be supported independently of one another.
- b. Conduits run on roof shall be fastened to a 4" x 6" x length as required fire retardant redwood block set in mastic on roof structure using galvanized double hole straps and screws. Multiple conduit runs shall be gathered neatly in straight lines and fastened individually to the redwood block.
 7. Conduit straps for individual runs shall be secured by toggle bolts on hollow masonry, expansion shields and machine screws on solid concrete or masonry, machine screws or bolts on metal surfaces and wood screws on wood construction. Use of nails to anchor straps on wood construction is prohibited. Straps shall be two hole malleable iron or snap type steel with ribbed back, galvanized or cadmium plated. Use of perforated strap iron or nail type straps is prohibited.
 8. Conduit Fittings: Except where otherwise noted, conduit fittings shall be Appleton. Unilets shall be malleable iron and fitted with covers and gaskets. Aluminum fittings are not acceptable.
 9. Telephone and signal conduit bends where required shall have a radius of ten times the conduit trade size.
 10. Underground conduit bends shall have a minimum radius of twelve times the conduit trade size.
 11. Conduits shall be capped during construction.
 12. Provide pull wires in empty conduits. Pull wires shall be #12 TW in conduits 1" and smaller and 3/16" polypropylene rope in conduits 1-1/4" and larger.
 13. Minimum size underground conduit shall be 3/4".

1.2 BOXES

- A. Boxes shall be of the shape and size best suited for the particular application and shall be supported directly to structural members, framing or blocking by means of screws, anchors, bolts or embedded in masonry.
- B. Switch and receptacle box shall be one piece drawn steel boxes. Minimum size shall be four inches (4") square. Boxes shall be fitted with flush device covers, plaster rings, or tile switch rings in masonry. In areas where exposed wiring is permissible, boxes shall be fitted with surface type covers.
- C. Lighting outlets shall be four inch (4") octagon, minimum fitted with three-eighths inch (3/8") malleable fixture studs.
- D. Floor Boxes: Hubbell dual level fully adjustable round type standard or shallow type as required. Provide multi service box where so indicated.
- E. Weatherproof boxes shall be Appleton FD Series and fitted with gasketed cast covers.

- F. Telephone and television outlet boxes shall be 4-11/16" x 2-1/2" deep minimum, fitted with plaster rings.
- G. Boxes for special equipment shall be suitable for the particular equipment.
- H. Boxes shall be located and placed according to architectural and structural requirements.

1.3 PULL OR JUNCTION BOXES

- A. Install where indicated, or as required by Code, pull boxes and junction boxes of sufficient size and capacity to facilitate all wiring. Boxes shall be sized to properly accommodate all conductors entering same.

1.4 SUPPORTS

- A. Furnish all necessary foundations, supports, backing, etc., for all electrical enclosures, conduits and equipment.
- B. Attach all boxes, cabinets, etc. to wood with wood or lag screws, to metal with machine screws or bolts and to concrete with expansion anchors and machine screws or bolts.
- C. Electrical lighting fixtures weighing 50 lbs. or more shall not be installed using wood screws for supports to the ceiling. Each such fixture shall have pre-stretched galvanized wires or rods anchored to the roof or structural member of the building.

1.5 CONDUCTORS

- A. Deliver to the site in unbroken packages, plainly marked with the manufacturer's name, date of manufacture (not more than six months old), voltage size and classification number.
- B. Branch circuit conductors shall be copper conductors, Type THHN/THWN, unless otherwise noted.
- C. Conductors for feeders and branch circuits installed on the roof shall be copper conductors, Type THWN/THHN, unless otherwise noted.
- D. Minimum size of all conductors shall be #12 AWG unless otherwise indicated on the drawings.
- E. All wiring in continuous rows of fluorescent fixtures shall be Type TEW/AWM.
- F. Conductors shall be as manufactured by Essex, American, Rome Cable Co., or equal.

1.6 SPLICES

- A. Splices of #10 and smaller, including fixture tape, shall be made with Scotchlok connectors, T & B "Piggys" or equal.
- B. Splices of #8 through #4 shall be split bolt service connectors "Kerneys", T & B "Lock Tites" or equal, insulated with Scotch #88 or Okeweld four-purpose tape.
- C. Splices #2 and larger shall be OZ "ST" Series insulated with Scotchfil and Scotch #88 or Okeweld.
- D. Splices in underground pull boxes shall be Scotchcast cast resin splices.
- E. Wire splicing devices shall be sized according to manufacturer's recommendations.

1.7 CONDUCTORS IN PANELS

- A. Conductors in panels, motor control centers, etc. shall be laced with T & B Ty-raps.
- B. LUBRICANT: Lubricant for conductor installation shall be powdered soapstone, Y-er EAS, Minerallac "Pull-In" compound or other U.L. approved lubricant. Flax soap is not approved and not permitted on the job.

1.9 SIGNAL CONDUCTORS

- A. Signal conductors shall be as listed on drawings and hereinafter specified.
- B. Connections in terminal cabinets shall be on terminal blocks suitable for the system being installed.

1.10 EXPOSED WIRING

- A. All wiring that is permitted per this specifications to be installed exposed shall be low-smoke plenum-rated. Such exposed wiring shall only be installed in accessible ceiling space.
- B. Wall drops for such wiring shall be in raceways, installed concealed in wall in all new walls and preferably in existing walls as well.
- C. Such cables shall be gathered neatly and tied into bundles every three feet and hung from "J" hangers attached to building structure every six feet. Do not lay these cables over T-bar ceiling or drape them over HVAC ducts. All such runs shall be parallel or perpendicular to building walls.

- D. See relevant wiring system specifications to determine whether such wiring is permissible in this project.

1.11 CABLE IDENTIFICATION

- A. Non-ferrous identifying tags or pressure sensitive labels shall be securely fastened to all cables, feeders and power circuits in pull boxes and manholes. Tags or labels shall be stamped or printed to correspond with markings on drawings or marked so that feeder or cable may be readily identified.

END OF SECTION

**COMMUNICATION, PAGING, CLOCK SIGNAL CONTROL
SECTION 275300**

PART 1 - GENERAL

1.1 SCOPE

- A. This Section includes connecting to the existing voice intercommunications system with master control unit, speakers, public address system interface, and clock systems

1.2 SYSTEM DESCRIPTION

- A. Intercommunications system shall be a user-programmable, multichannel, microprocessor-switched, centrally controlled system.
- B. Clocks shall be system clocks tie into the master clock.

1.3 SUBMITTALS

- A. Contractor System submittals and Shop Drawings:
 - 1. Complete list of equipment and materials including catalog cuts, technical data, manufacture's Specifications and detail Drawings.
 - 2. Complete set of detailed scaled drawings including all racks and cabinets with designations, dimensions, color, operating controls, instrument wiring, and schematic diagrams of all circuits.
 - 3. Power loads calculated on a separate sheet for each system. Also include a dimensional Shop Drawing of the unit nameplate. The nameplate shall contain school name, firm address, acceptance data, and power load.
 - 4. Shop Drawings shall show interfaces to all equipment of the system identifying numbers of wires, termination requirements, voltages, and other pertinent details. Include front elevations, cabinet dimensions, types of mounting, door barriers, catalog numbers of locks and finishes of terminal cabinets.
- B. Report of tests and inspections.

1.4 QUALITY ASSURANCE:

- A. To qualify as a bidder, the manufacturer's representative shall hold a valid State of California C-7 or C-10 license, shall have completed at least ten projects of equal scope.

- B. all have been in business of furnishing and installing school communications systems of this type for at least ten years and shall be capable of being bonded to assure the District of performance and satisfactory service during the guarantee period.
- C. All mechanical, electrical and general information set forth on the respective data sheets for each specified item shall be considered part of these Specifications and binding herein. Any proposed equal items offered shall be substantiated fully to prove equality. The District reserves the right to require a complete sample of any proposed equal item and may, if necessary, request a sample tested by an independent testing laboratory to prove equality. The decision of the District regarding equality of proposed equal items will be final.
- D. All equipment and wiring shall be furnished and installed by the authorized factory distributor of the equipment. The manufacturer's representative shall provide a letter with submittals from the manufacturer of all major equipment stating that he is the representative and that the manufacturer will have a service representative assigned to this area for the life of the equipment.
- E. The Contractor shall furnish a letter from the manufacturer of the equipment, which certifies that the equipment has been installed according to factory recommended practices and that the system is operating satisfactorily. The Contractor shall also furnish a written unconditional guarantee, guaranteeing all parts and labor for a period of one year after final acceptance of the project by the District.
- F. The Contractor shall provide not less than eight hours of instruction of personnel in the operation and maintenance of the systems. This instruction time shall be divided as directed by the District.

1.5 WARRANTY

- A. The entire system shall be guaranteed free of mechanical or electrical defects for period of one year after final acceptance of the installations. Any material showing mechanical or electrical defects shall be replaced promptly at no expense to the District.
- B. The Contractor shall provide a one-year guarantee of the installed systems against defects in material and workmanship. All labor and materials shall be provided at no expense to the District. Guarantee period shall begin from the date of final acceptance by the District.

PART 2 - PRODUCTS

2.1 SCOPE

- A. Furnish and install, as shown on plans and as hereafter specified, complete systems including conduit, outlet boxes, wiring, speakers, etc., all fully operational. The intent

of these specifications is to provide a complete and satisfactorily operating system for the pick-up, amplification, and reproduction of voice and/or music. As only a complete operable system will be acceptable, all equipment required for this function, whether or not enumerated herein or shown on the plans, shall be supplied as part of the contract.

- B. All equipment described herein shall be standard product of a manufacturer of established reputation and experience, who shall have produced similar apparatus for a period of at least ten (10) years and who shall be able to refer to five (5) similar installations now rendering satisfactory service.
- C. All equipment to be supplied under this section and as hereinafter specified shall be 100% solid state in design. Tube type equipment of any type whatsoever shall not be acceptable.
- D. The equipment specified hereinafter, unless otherwise noted, is as manufactured by Bogen QUANTUM or approved equal. Any products as manufactured by Bogen or other approved manufacturer shall be functionally equivalent to the product as specified. Alternate and or equivalent equipment submitted must meet all functional and operational requirements as well as design specifications as hereinafter outlined, in order to be approved.
- E. The entire system shall be installed by the authorized manufacturer's representative with duly authorized local representation who can upon request give evidence satisfactory to the Engineer that he maintains a fully equipped service organization stocking the manufacturer's standard parts and capable of furnishing, in the sole judgement of the Engineer, adequate inspections and service to the system. All signal and communications equipment shall be supplied and installed by a licensed and bonded signal and communications contractor.
- F. Installation of all conduit, wire, cable rough-in boxes as well as standard wiring boxes indicated shall be installed under the direct supervision of equipment supplier. This contractor shall verify exact location and mounting heights with equipment supplier before rough-in. He shall consult with equipment supplier as to the proper methods of installation of wire and cable for proper system function. All wire and cable shall be that as recommended by equipment supplier. In terminal cabinets and outlet boxes cabling shall be of sufficient length for proper termination and hook-up of equipment. All wiring shall be neatly formed and laced or tywrapped in all terminal cabinet.
- G. All cables shall be identified. Barrier terminal strips shall be provided for all TN and THWN type wire, in terminal cabinets. Telephone type punch down blocks shall be provided for the termination of all communications cabling in terminal cabinets.

2.2 FUNCTION (Sound and Communications System)

- A. Loudspeakers

1. Classroom Speakers shall be Bogen:
 - a. WALL Mounted Speakers: Bogen analog 8" speaker
 - b. Lowell combination mounting box and cover plate (to match existing)
2. Outdoor/Cafeteria Speakers shall be Bogen:
 - a. Atlas soundeliev vandal resistant analog speaker.

2.3 CLOCKS

- A. Clocks shall be 12" bogen round system clocks tie into the campus master clock system.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. The installation, adjustment, testing, and final connection of all conduit, wiring, boxes, cabinets, etc., shall conform to local electrical requirements and shall be sized and installed in accordance with the manufacturer's approved shop drawings.
- B. Low-voltage wiring may be run exposed above ceiling areas where they are easily accessible.
- C. Tie-wrap speaker and telephone lines that run above ceiling and are not in the conduit to the ceiling joist with a maximum spacing of 8' between supports. No wires shall be laid on top of ceiling tile.
- D. Connect field cable to each speaker transformer using UL butt splices for 22 AWG wire.
- E. Terminate field wiring on the wall adjacent to the rack using Telco 66 type blocks. Provide neat cross connect system for wiring. Wiring is to be labeled to indicate final architectural room number that it services on the Telco block.
- F. Label the rack in numerical order with speaker/phone combinations first and speaker/outside horn combinations last. Labeling and order shall reflect final Architectural room numbers posted outside the rooms. Use three, four, five, or six digit dialing extensions.
- G. All outside speakers shall be on a separate page zone and time zone.
- H. All zones shall be laid out not to exceed 10 watts maximum per zone.

- I. All hallway speakers shall be tapped at 1 watt maximum.
- J. All outside horns shall be tapped at 3.75 watts maximum.
- K. All classroom speakers shall be tapped at ½ watt maximum.
- L. Large rooms, such as cafeterias, shall be tapped at 2 watts maximum.

3.2 GROUNDING

- A. Provide equipment grounding connections for the System as indicated. Tighten connections to comply with tightening torques specified in UL Standard 486A to ensure permanent and effective grounds.
- B. Ground equipment, conductor, and cable shields to eliminate shock hazard and to minimize the greatest extent possible ground loops, common mode returns, noise pickup, cross talk, and other impairments.
- C. Provide all necessary transient protection on the AC power feed and on all station lines leaving or entering the building.
- D. Note in the drawing, the type and locations of these protection devices as well as all wiring information.

3.3 ADJUSTMENT

- A. Adjust sound output level of adjustable signal devices to suit Owner's requirements.
- B. Occupancy Adjustments: When requested within one year of date of Completion, provide on-site assistance in adjusting sound levels, resetting matching transformer taps, adjusting controls, reprogramming and investigating possible need for any system revisions required to meet actual occupancy conditions. Provide up to 3 visits to the site for this purpose without additional cost.
- C. Prior to final acceptance, clean system components and protect from damage and deterioration.

3.4 DEMONSTRATION

- A. Demonstration: Obtain and pay for the services of a factory-authorized service representative to demonstrate the system in all operating modes and functions and to train Owner's maintenance personnel.
- B. Schedule training with Owner with at least 7 days' advance notice.

- C. Training: Conduct a minimum of 2 days' training of Owner's maintenance personnel in operating, programming, troubleshooting, servicing and preventive maintenance of the system as specified in Division 01 Section "Contract Closeout." Include both classroom training and hands-on experience.
- D. Training Aid: Use approved operation and maintenance manual material as an instructional aid. Refer to Division 01 Section "Contract Closeout." Provide copies of this material for use in the instruction.

END OF SECTION

**FIRE ALARM SYSTEM
SECTION 283100**

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Fire Alarm System.

1.2 RELATED SECTIONS

- A. Section 26 0500: Common Work Results for Electrical.
- B. Section 26 0519: Low Voltage Cables.
- C. Section 26 0533: Raceways & Boxes

1.3 QUALIFICATIONS

- A. See Section 26 0500.
- B. Fire Alarm System Subcontractor shall be established with 5 years in the area with a minimum of five years experience in Fire Alarm Systems.

1.4 REFERENCES/STANDARDS/CODES

- A. California Electrical Code 2022 Edition.
- B. California Building Code 2022 Edition.
- C. California Fire Code 2022 Edition.

PART 2 - PRODUCTS

2.1 GENERAL REQUIREMENTS: The Contractor shall provide a complete fully operational fire alarm system as specified herein and on the drawings for the new building in compliance with the current California Electrical Code and California Building Codes.

- A. The fire alarm system shall be an electrically supervised, battery standby, two wire Class B system, with fully addressable initiating devices.
- B. The fire alarm system shall be the product of one manufacturer, as specified on plans.

- C. The fire alarm equipment shall have been listed by the State Fire Marshal.
- D. The fire alarm system shall conform to CBC Sections 907.2.3 & CEC Article 760 and CFC Article 907.2.3. in the field of school fire alarm systems installation and service. The contractor must also have completed similar systems in the past five years.
- F. It is the contractor's responsibility to provide the Owner with a complete and working system that meets the intent of these specifications. Omissions in the written specifications and/or plans will not relieve the contractor of this responsibility.
- G. Contractor must be a factory authorized distributor for the equipment to be installed.
- H. Contractor shall supply the Owner with three copies of operation and maintenance manuals, and three sets of keys required to operate or maintain system. The manual shall be bound in a 3 ring binder with instructions necessary for proper operation and servicing of the system and as-built installation drawings. The binder shall have project name/address and name and address of the installing contractor; a copy of all warranties.
- I. The successful bidder must have a service facility within a 100-mile radius of the project. On-the-premises maintenance shall be provided for a period of twelve (12) months from date of completion of installation.

2.2 SUBMITTALS AND SUBSTITUTIONS:

- A. Submittals for DSA approval are not required for the system specified and shown on the plans as it has already been approved by DSA. Minimum submittals as noted below are required for the review and approval by the Architect/Engineer to confirm that the system to be installed is the same as the system specified. Such submittals shall have the following as a minimum:
 - 1. Index, including project title, DSA project number, scope of project and address and name of firm submitting the proposal.
 - 2. Copy of authorized distributor's valid California State Contractor's License, letter of factory authorization and guarantee of service and list of projects of equal scope.
 - 3. A statement by the installing contractor that the system to be provided is the components and devices.
- B. In the event the electrical contractor proposes to substitute the specified system he shall provide detailed submittals as noted below in paragraph "C" for approval by the engineer. Any change in the Fire Alarm System shall be as "An Approved Equal" by the electrical engineer of record. Upon approval the electrical engineer shall submit to DSA a No-Cost change order request for the substituted Fire Alarm System.

- C. Two (2) copies of submittals shall be provided for initial review by the Engineer. Each submittal shall contain the following, minimum, as applicable.
1. Index, including project title, scope of project and address and name of firm submitting the proposal.
 2. Copy of authorized distributor's valid California State Contractor's license, letters of factory authorization and guarantee of service and list of projects of equal scope.
 3. Engineering data sheets on each item of the proposed system, including State Fire Marshal listing numbers as applicable. Provide an itemized equipment list as well.
 4. Overall equipment location in the form of building floor plans, with all rooms identified, to the same scale as bid drawings. Point-to-point wiring diagram. Additionally, the drawings shall also include a complete legend, describing the equipment symbols and State Fire marshal listing numbers as applicable. Provide a cable schedule. Such drawings shall be limited to fire alarm equipment only. No other systems or wiring shall be shown on these drawings.
 5. Complete Single line riser diagram for the whole system.
 6. Battery capacity calculations.
 7. Voltage drop calculations for each signal circuit.
 8. California State Fire Marshal listing sheets showing expiration date of all components of the system.
 9. Proposed anchorage detail of the fire alarm control panel.
 10. A description of operation/events that would occur when the fire alarm system is activated. This description shall be noted on the submittal drawings. Upon successful review of the initial submittal the contractor shall provide to the engineer six (6) copies of complete submittals as noted above. The engineer will then submit a no-cost change order request to DSA.
- C. The system equipment shall be is as manufactured by EST, (EST – 3 District Standard) No other system is approved for this project.

2.3 EQUIPMENT/SCOPE OF WORK:

- A. Verify all existing conditions at the site prior to bid. System is to be installed while existing system is still in operation.
- B. Provide a fully automatic system with a Fire Alarm Control Panel, Strobes, Heat and Smoke Detectors, and related wiring.
- C. Provide cables as required for system operation. Provide pull boxes, conduits, raceways as required for this. Connect all devices and the Fire Alarm Control Panel to provide a complete and fully functional single fire alarm system.

- D. Equipment:
1. New Gamewell Fire alarm control panel. Provide all required accessories modules, power supplies and battery. Minimum alarm initiation and signal circuit zones shall be as noted on the plans.
 2. Fire alarm strobes-Candella as noted on plan.
 3. Fire alarm smoke and heat detectors.
 4. Carbon monoxide sensors.
- 2.4 Conduits, cables, pullboxes and all other accessories as required to provide a complete and fully functional system. All fire alarm system devices, which are to be surface mounted shall be provided with compatible, red, surface box. Regular outlet boxes are not acceptable for this use.

PART 3 – EXECUTION

3.1 **Installation and Testing of Fire Alarm System:**

- A. Review the total system point to point wiring layout to assure that the correct number and type of conductors and conduit sizes are installed.
- B. Final connections, testing and adjusting and calibrating shall be made under the direct supervision of factory-trained technician of the system supplier.
- C. The entire system shall be installed in conduit. Minimum size of conduit shall be 3/4" indoors. Minimum size of underground conduit shall be 3/4". Cables shall be copper conductors with THWN insulation. Minimum sizes shall be as noted on the plans. All conduits installed underground and on exterior surfaces of a building shall have watertight fittings.
- D. Program smoke detector and control relay for each smoke/fire damper such that only the damper associated with that smoke detector shuts down when the detector goes into alarm.
- E. Work and coordinate with the owner to provide off-site monitoring of the system. Owners to arrange for leased telephone lines and to provide necessary information to the Fire Alarm Subcontractor as required.
- F. Upon completion of the installation of the fire alarm system, a satisfactory test of the entire system shall be made in the presence of, and witnessed by, the IOR, Owner's Representative.
- G. Provide 3 copies of a certificate to the Architect that the fire alarm system components and system installed is in accordance with the approved plans and specifications. Provide a Certificate of Completion per NFPA.

H. See operation matrix on the plans.

END OF SECTION

**SITE CLEARING AND REMOVAL
SECTION 310505**

PART 1 - GENERAL

1.01 REQUIREMENTS

- A. All applicable portions of Division 1- General Requirements are to be considered as included with this section.

1.02 CODES

- A. The following are minimum requirements and shall govern, except that all local, state and/or federal codes and ordinances shall govern when their requirements are in excess hereof.

1.03 DESCRIPTION

- A. Furnish all materials, labor, equipment, services, etc., necessary and incidental for the completion of all site clearing and removal work as shown on the drawings and as specified herein.
- B. All onsite and offsite work included consists of but is not limited to the following:
 - 1. Removal of existing sidewalks, drives, curbs, pavements, etc. per plans. Trees, shrubs, irrigation. See Abatement Report.
 - 2. Removal and capping off or relocation of existing underground utilities, underground structures, etc. per plans.
 - 3. Removal from site and disposal of all waste, debris and unusable material.
 - 4. Backfill all open excavations created by the removal of underground utilities, underground structures, etc.

1.04 RELATED SECTIONS

- A. Related work specified elsewhere:
 - 1. Section 312300 – Excavation, Filling, and Grading.

1.05 QUALITY ASSURANCE

- A. Obtain and pay for any permits, bonds, licenses, etc., required for Site Clearing and Removal work.
- B. All clearing and removal work shall be accomplished in strict accordance with all local and state building codes, requirements and regulations including but not limited to noise abatement, dust control, classification of disposal materials, etc.

- C. Any work within street or highway right-of-way shall be done in accordance with the requirements of the governmental agencies having jurisdiction and shall not begin until these governing authorities have been notified.

1.06 JOB CONDITIONS

- A. An attempt has been made to show all existing structures, utilities, drives, pavements, curbs, walks, etc. in their approximate location on the survey and/or working drawings. However, others that are not shown may exist and may be found upon visiting the site or during the clearing and removal work. It will be the responsibility of this contractor to accurately locate all existing facilities and to determine their extent. If such facilities obstruct the progress of the work and are not indicated to be removed or relocated, they shall be removed or relocated only as directed by the Owner.
 - 1. Report any existing site element not shown on the working drawings to the Architect of Record so that the proper dispensation of that element may be made.
- B. Natural features, existing structures, existing landscaping, existing utilities, etc. which are indicated to remain on the drawings and specifications shall be protected and shall not be defaced or damaged in any manner.
- C. Restore to their present conditions any pavement in the public right-of-way that is disturbed by the work under this section. All pavement restoration work in public rights-of-way shall be performed to the full satisfaction of the governmental agencies having local jurisdiction.

1.07 ENVIRONMENTAL REQUIREMENTS

- A. Noise producing activities shall be held to a minimum. Internal combustion engines and compressors, etc., shall be equipped with mufflers to reduce noise to a minimum. Comply with all noise abatement ordinances.
- B. Keep all areas within the clearing and removal area sufficiently dampened to prevent dust from rising due to clearing or removal operations. Comply with all anti-pollution ordinances.
 - 1. This contractor shall see to it that trucks leaving the site shall do so in such a manner that debris, vegetation, mud and earth will not be deposited on adjacent street pavements. Any debris, vegetation, mud or earth deposited on street pavements shall be promptly removed by this contractor.
- C. All clearing and removal operations shall be performed in a manner such as to prevent any wash-off of soils from the site into streams and/or storm drainage systems. Appropriate sedimentation ponds, dikes, silt fences, collars, and filter media shall be employed to insure compliance with these requirements. Where a specific statute governs these procedures, such statute shall be complied with in its entirety.

1.08 PROTECTION AND SHORING

- A. Protect all existing structures, utilities and landscaping indicated to remain on the drawings.
 - 1. All trees, shrubs, and other items, indicated to remain shall be protected during the entire progress of the work. This includes protection of the root system. The trees shall be fenced if they are located in or near an area being used for material storage or subject to damage by traffic during construction. Low hanging branches and unsound or unsightly branches on trees or shrubs designated to remain shall be removed. All trimmings shall be done by skilled workmen and in accordance with good tree surgery practices.
- B. Any damage done by this contractor to existing structures, pipe lines, utilities, landscaping, etc. indicated to remain shall be repaired by him and at his expense in a manner acceptable to the Owner of the damaged property. This contractor shall report any existing damage prior to the beginning of this work.
- C. All temporary shoring, bracing, etc., and maintenance there to required for the completion of clearing and removal work shall be provided by the Contractor whose work requires protection.
 - 1. This contractor shall work in concert per local and state codes to insure the provisions of adequate bracing, shoring, temporary cross over for pedestrian and vehicular traffic including guard rails, lamps, warning signs and flags as required by agencies having jurisdiction as directed by the Owner. Remove same when necessity for protection ceases.

1.09 DRAINAGE MAINTENANCE

- A. During the entire course of clearing and removal operations, all existing drainage ways, both into and from the project area shall be rerouted as required and/or maintained in a functional condition.
- B. At all times during the clearing and removal operation, the exposed areas of subgrade shall be maintained in a condition compatible with positive drainage of the work area. Failure to maintain such drainage shall be considered adequate cause for the District Representative to order temporary suspension of the work.
- B. If it should become necessary to stop work for indefinite periods, take every precaution to prevent damage or deterioration of the work already performed. Provide suitable and functional drainage by installing ditches, filter drains, temporary cut-off lines, etc., and erect temporary protective structures where necessary. All embankments shall be back-bladed and suitably sealed to protect against adverse weather conditions.

PART 2 - PRODUCT

2.01 MATERIALS

- A. All materials used to backfill excavations, trenches, holes, pits, etc. caused by utility, underground structure or underground storage tank removal shall meet the requirements for fill material and compaction indicated in Section 02200 and 02210.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Visit the site so that a full understanding of the difficulties and restrictions attending complete clearing of the site and removal of underground tanks and utilities is obtained. Verify the location of all pertinent items.
- B. Verify with sewer department, water department, gas company, electric company, etc. that all existing utilities, services and overhead lines have been deactivated and abandoned prior to beginning removal work. Notify affected utility department or company prior to beginning removal work.
 - 1. Contact the local **Underground Service Alert (USA)** prior to beginning clearing and removal work.

3.02 PREPARATION

- A. Cut drainage swales and provide temporary grading to carry storm water away from clearing area. No storm water will be permitted to stand in open excavations.
- B. Provide, erect and maintain temporary barriers and security devices as required. Protect all existing landscaping, structures, utilities and site elements which are not to be demolished.
- C. Notify all affected utility companies and local authorities and agencies prior to beginning the work.
- D. Identify and tag all existing trees and other landscaping designated to remain.
- E. Identify and locate a permanent stockpile area for topsoil. Verify with District Representative and see plans for fill soil stockpile area. Coordinate with Landscape Contractor.
- F. Identify and locate a waste area for temporary storage of removed materials and a permanent topsoil stockpile area.
 - 1. No materials may be buried or burned on the site as a means of disposal.

3.03 PERFORMANCE

- A. This contractor shall be responsible for all clearing, grubbing, removing and disposing of trash and debris and for clearing and stockpiling all topsoil which are within the designated limits of the property, easements and roadway rights-of-way, unless otherwise indicated on the drawings.
- B. Prior to rough grading, storage of construction materials or the installation of any temporary construction facilities, strip areas per plans to be occupied by site improvements.
- C. This contractor shall be responsible for removal of sidewalks, pavements, curbs and gutters, exterior slabs and sidewalks indicated to be removed on plans.
- D. This contractor shall be responsible for removal of all underground utilities, underground structures, etc., according to plans.
- E. Protect any existing structures, utilities and all appurtenances to remain. Prevent movement or settling. Provide bracing and shoring as required.
 - 1. Cease cleaning and removal operations immediately if any existing structure or utility appears in danger. Notify the District Representative and Civil Engineer of Records. Do not resume operations until directed.
- F. All broken construction material, trash and debris, tree slash, sidewalks, curbs, etc. will be considered "waste" and shall be removed from the site.
- G. "Waste" material shall be removed from the site as soon as possible and shall not be allowed to accumulate. Short-term storage of removed material shall be restricted to previously designated "waste" areas or as directed by the District Representative.
 - 1. No burning or burying of "waste" material will be permitted.
- H. Continuously dampen all clearing and removal areas to prevent dust from rising during the operation. Provide hoses and/or water trucks as required.

3.04 FIELD QUALITY CONTROL

- A. The Owner shall retain an independent inspection firm or contact local officials and inspectors at locations where local building codes require special inspections.

3.05 CLEAN UP

- A. Material designated for removal shall become the property of this contractor, and any salvage value therefrom will accrue to this contractor.
- B. Remove from the site and make legal disposition of all waste and debris. No waste or debris shall be burned or buried on the site as a means of disposal.

END OF SECTION

**EXCAVATING, FILLING AND GRADING
SECTION 312300**

PART 1 - GENERAL

1.1 DESCRIPTION

- A. Work included: Excavating, filling, and grading for this work includes, but is not necessarily limited to:
1. Utility trenches.

1.2 JOB CONDITIONS

- A. Dust Control: use all means necessary to control dust on and near the Work and on and near all off-site borrow areas if such dust is caused by the Contractor's operations during performance of the Work or if resulting from the condition in which the Contractor leaves the site.
1. Thoroughly moisten all surfaces as required to prevent being a nuisance to the public, neighbors, and concurrent performance of other work on the site.
- A. Protection: Use all means necessary to protect all materials of this section before, during, and after installation and to protect all objects designed to remain.
1. In the event of damage, immediately make all repairs and replace necessary to the approval of the Architect and at no additional cost to the Owner.

PART 2 - PRODUCTS

2.1 OTHER MATERIALS

- A. Native Material: In general, shall be clean and free of debris (including asphalt) roots, wood, scrap material, vegetable matter, refuse, soft unsound particles, frozen, deleterious or other objectionable materials.
- B. All other materials, not specifically described but required for a complete and proper installation, shall be as selected by the Contractor subject to the approval of the Architect.

PART 3 - EXECUTION

3.1 GENERAL

- A. Familiarization: Prior to all work of this Section, become thoroughly familiar with the site, the site conditions, and all portions of the work falling within this Section.

3.2 COMPACTION

- A. Place backfill and fill materials in layers not more than 8" (200 mm) in loose depth for material compacted by heavy compaction equipment and not more than 4" (100 mm) in loose depth for material compacted by hand-operated tampers.
- B. Place backfill and fill materials evenly on all sides of structures to required elevations. Place backfill and fill uniformly along the full length of each structures.
- C. Percentage of Maximum Dry Density Requirements: Compact soil to not less than the following percentages of maximum dry density according to ASTM D 1557:
 - 1. Under structures, building slabs and pavements, compact the top 12" (300 mm) below subgrade and each layer of backfill or fill material at 90 percent maximum dry density.
 - 2. Under walkways, compact the top 6" (150 mm) below subgrade and each layer of backfill or fill material at 90 percent maximum dry density.
 - 3. Under lawn or unpaved areas, compact the top 6" (150 mm) below subgrade and each layer of backfill or fill material at 85 percent maximum dry density.

3.3 GRADING

- A. General: Except as otherwise directed by the Architect, perform all rough and finish grading required to attain the elevations shown on the drawings.
- B. Finish Elevations and Lines:
For setting and establishing finished elevations and lines, shoot all grades in accordance with current practice standards and set stakes to establish relative heights as shown on drawings

3.4 JOB CONDITIONS

- A. Dust Control: Use all means necessary to control dust on and near the Work and on and near all off-site borrow areas is such dust is caused by the Contractor's operations during performance of the Work or if resulting from the condition oin which the Contractor leaves the site.

1. Thoroughly moisten all surfaces as required to prevent being a nuisance to the public, neighbors and concurrent performance of other work on the site.
- B. Protection: Use all means necessary to protect all materials of this section before, during and after installation and to protect all object designed to remain.
1. In the event of damage, immediately make all repairs and replace necessary to the approval of the Architect and at no additional cost to the Owner.

END OF SECTION

TRENCHING AND BACKFILLING
SECTION 312333

PART 1 – GENERAL

1.01 INCLUSION OF OTHER CONTRACT DOCUMENTS

- A. The general conditions, supplementary conditions and Division 1 are fully applicable to this section as if repeated herein.

1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Division 22 – Mechanical
- B. Division 26 – Electrical
- C. Division 27 – Communications
- D. Division 28 – Fire Alarm System
- E. Division 31 – Earthwork
- F. Division 32 – Exterior Improvements

1.03 QUALITY ASSURANCE

- A. Use only new materials and products, unless existing materials or products are specifically shown otherwise on the Drawings to be salvaged and re-used.
- B. All materials, components, assemblies, workmanship and installation are to be observed by the Owner's Inspector of Record. Work not so inspected is subject to uncovering and replacement.
- C. Contractor / Installer shall have been in business for five (5) years providing/finishing similar size projects and complexity.

1.04 SUBMITTALS

- A. Refer to Division 1.
- B. Submit Manufacturers data and shop drawings.

1.05 WARRANTY

- A. Submit fully executed warranty for work and materials in this section per 01300.

1.06 REFERENCES AND STANDARDS

- A. California Building Code current edition.
- B. California Plumbing Code current edition.

1.07 DELIVERY, STORAGE AND HANDLING

- A. Transport, store and handle in strict accord with the local jurisdiction.
- B. Make delivery to job when notified by Contractor verifying that the job is ready to receive the work of this Section and that arrangements have been made to properly store, handle and protect such materials and work.

1.08 PROJECT CONDITIONS

- A. Contractor shall acquaint himself with all existing site conditions. If unknown active utilities are encountered during work, notify Architect promptly for instructions. Failure to notify will make Contractor liable for damage to these utilities arising from Contractor's operations subsequent to discovery of such unknown active utilities.
- B. Field verify that all components, backing, etc. by others are installed correctly to proceed with installation of products as herein specified.
- C. Trench dewatering may be necessary. Contractor shall provide any and all tools, equipment and labor necessary for trench dewatering no matter what the source. Dewatering shall be continuous until all site utilities are installed and backfilled.

1.09 PROTECTION

- A. Adequate protection measures shall be provided to protect workers and passers-by on and off the site. Adjacent property shall be fully protected throughout the operations. Blasting will not be permitted. Prevent damage to adjoining improvements and properties both above and below grade. Restore such improvements to original condition should damage occur. Replace trees and shrubs outside building area disturbed by operations. Repair all trenches in grass areas with new sod (seeding not permitted) and "stake-off" for protection.
- B. Contractor shall be solely and completely responsible for working conditions at the job site, including safety of all persons and property during performance of the work. This requirement shall apply continuously and shall not be limited to normal working hours.

- C. Any construction review of the Contractor's performance conducted by the Architect or Owner is not intended to include review of the adequacy of the Contractor's safety measures, in, on or near the construction site.
- D. Provide shoring, sheeting, sheet piles and or bracing to prevent caving, erosion or gulying of sides of excavation.
- E. Surface Drainage: Provide for surface drainage during period of construction in manner to avoid creating nuisance to adjacent areas. Keep all excavations free from water during entire progress of work, regardless of cause, source or nature of water.
- F. Adjacent streets and sidewalks shall be kept free of mud, dirt or similar nuisances resulting from earthwork operations.
- G. The site and adjacent influenced areas shall be watered as required to suppress dust nuisance.
- H. Trees: Carefully protect existing trees which are to remain.

1.10 TRENCH SAFETY PROVISIONS

- A. General Contractor shall be solely responsible for safety design, construction and coordination with agencies having jurisdiction. If such plan varies from shoring system standards established by Construction Safety Orders, plan shall be prepared by registered civil or structural engineer.
- B. Nothing herein shall be deemed to allow use of shoring, sloping or protective system less effective than that required by Construction Safety Orders of California State Division of Industrial Safety.
- C. When trenching through paved surface, provide steel trench plates to cover open trenches daily until trenches are backfilled.

1.11 SEASONAL LIMITS

- A. No backfill material shall be placed, spread or rolled during unfavorable weather conditions. When work is interrupted by heavy rains, full operations shall not be resumed until field tests indicate that moisture content and density of fill are satisfactory.
- B. Material above optimum moisture shall be processed per section 02200, 3.08, B.

1.12 TESTING

- A. General: Refer to Section 02200 – Quality Requirements.

PART 2 – PRODUCTS

2.01 MATERIALS

- A. Backfill materials: Pipeline and conduit trench backfill as shown on the plans and as specified below.
 - 1. ¾ inch crush rock.
 - 2. Native Materials: Soil native to Project Site, free of wood, organics, and other deleterious substances. Rocks shall not be greater than 2-inches.
 - 3. Sand: Fine granular material, free of organic matter, mica, loam or clay.
 - 4. Lean Mix Concrete: 3 sacks of cement per yard plus sand.
 - 5. Class 2 aggregate base, ¾” rock, per Caltrans section 26-1.02B
 - 6. Controlled Density Fill: 3 sack slurry backfill.
- B. Water: Furnish all required water for construction purposes, including compaction and dust control.
- D. Provide other bedding and backfill materials as described and specified in Section 02400, Section 02700 and Divisions 15 and 16.

PART 3 – EXECUTION

3.01 INSPECTION

- A. Verification of Conditions:
 - 1. Examine areas and conditions under which work is to be performed.
 - 2. Identify conditions detrimental to proper or timely completion of work and coordinate with General Contractor to rectify.

3.02 COORDINATION

- A. General Contractor shall coordinate work as herein specified, in accordance with drawings and as required to complete scope of work with all related trades.

3.03 INSTALLATION

- A. Perform work in accordance with pipe manufacturer’s recommendations, as herein specified and in accordance with drawings.

3.04 TRENCHING

- A. Make all trenches open vertical construction with sufficient width to provide free working space at both sides of trench around installed item as required for caulking, joining, and backfilling and compacting; not less than 12 inches wider than pipe or conduit diameter, unless otherwise noted.
- B. Carefully excavate around existing utilities to avoid unnecessary damage. The contractor shall anticipate and perform hand work near existing utilities as shown on the survey, without additional claims or cost.
- C. Trench straight and true to line and grade with bottom smooth and free of edges or rock points.
- D. Where depths are not shown on the plans, trench to sufficient depth to give minimum fill above top of installed item measured from finish grade above the utility as follows:
 - 1. Sewer pipe: depth to vary
 - 2. Storm drain pipe: depth to vary
 - 3. Water pipe - Fire Supply: 36 inches
 - 4. Water pipe – Domestic Supply: 30 inches

3.05 BACKFILL

- A. Pipe Trench Backfill is divided into three zones:
 - 1. Bedding: Layer of material directly under the pipe upon which the pipe is laid.
 - 2. Pipe Zone: Backfill from the top of the bedding to 6 inches (compacted) over the top of the pipe.
 - 3. Upper Zone: Backfill between top of Pipe Zone and to surface of subgrade.
- B. Bedding: Type of material and degree of compaction for bedding backfill shall be as defined in the Details and Specifications.
- C. Pipe Zone and Upper Zone Backfill:
 - 1. Type of material and degree of compaction Pipe Zone and Upper Zone Backfill shall be as required by Drawings, Details, & Specifications.
 - 2. Upper Zone Backfill shall not be placed until conformance of Bedding and Pipe Zone Backfill with specified compaction test requirements has been confirmed.
 - 3. Backfill shall be brought up at substantially the same rate on both sides of the pipe and care shall be taken so that the pipe is not floated or displaced. Material shall not be dropped directly on pipe.

D. Backfill Compaction:

1. Backfill shall be placed in layers which, when compacted shall not exceed 6 inches in thickness. Each layer shall be spread evenly and thoroughly mixed to insure uniformity. Do not backfill over, wet, frozen or soft subgrade surfaces. Employ a placement method that does not disturb or damage foundation walls, perimeter drainage, foundation, damp-proofing, waterproofing or protective cover.
2. When moisture content of fill material is below that required to achieve specified density, add water until proper moisture content is achieved. When moisture content is above that required, aerate by blading or other methods until specified moisture content is met, see section 02200, 3.08, B.
3. After each layer has been placed, mixed and spread evenly, it shall be thoroughly compacted to 90% of maximum dry density while at specified moisture content. Compact each layer over its entire area until desired density has been obtained.
4. Compaction: All backfill operations shall be observed by the Inspector of Record and/or Geotechnical Engineer. Field density tests shall be made to check compaction of fill material. If densities are not satisfactory, Contractor will be required to change equipment or procedure or both, as required to obtain specified densities. Notify Inspector and Architect at least 24 hours in advance of any operation.

E. Backfill in Areas Previously Lime or Cement Treated

1. Where trenching occurs in areas that have been lime or cement treated, class 2 aggregate bases or approved controlled density backfill material shall be used for the top 12-inches minimum of the trench or thickness shall match the depth of treated material.

3.06 TRENCH AND SITE RESTORATION

- A. Finished surface of trenches shall be restored to a condition equal to, or better than the condition as existed prior to excavation work.

3.07 PROTECTION

- A. Protect existing surfaces, structures, and utilities from damage. Protect work by others from damage. In the event of damage, immediately repair or replace to satisfaction of Owner.
- B. Repair existing landscaped areas to as new condition. Replant trees, shrubs or groundcover with existing materials if not damaged or with new materials if required. Replace damaged lawn areas with sod, no seeding will be permitted.

- C. Replace damaged pavement with new compatible matching materials. Concrete walks to be removed to nearest expansion joint and entire panel replaced. Asphalt to be cut neatly and replaced with new materials.
- D. Any existing materials removed or damaged due to trenching to be returned to new condition.

3.08 SURPLUS MATERIAL

- A. Remove excess excavated material, unused materials, damaged or unsuitable materials from site.

3.09 CLEANING

- A. Refer to Section 01700.
- B. Contractor will keep the work areas in a clean and safe condition so his rubbish, waste, and debris do not interfere with the work of others throughout the project and at the completion of work.
- C. After completion of work in this section, remove all equipment, materials, and debris. Leave entire area in a neat, clean, acceptable condition.

END OF SECTION

**PORTLAND CEMENT CONCRETE PAVING
SECTION 321313**

PART 1 - GENERAL

1.1 SUMMARY

- A. Work included: The work includes the furnishing and installing of all concrete walks as shown and noted on the drawings and as specified. The Conditions of the Contract and Division 1 apply to this section as fully as if repeated herein.

1.2 SUBMITTALS

- A. Provide mix designs break sample results and weighmaster certificates.

1.3 RELATED SECTION

- A. See Section 13 3423.14 - for Modular Building Foundation

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Portland cement: Type II and shall conform to the specifications for portland cement, ASTM C 150-81 and CBC Section 1903.
- B. Aggregates: Concrete aggregates shall conform to specifications for concrete aggregates ASTM C 33-81 except as modified by CBC Section 1903.3 grading to conform to CBC Table 19 A - J.
- C. Reinforcing Bars: New, deformed, billet steel bars, meeting the requirements of ASTM A 615-80, Grade 40. Deliver bars new and free from rust and mill scale in original bundles with mill tags intact.
- D. Welded Wire Fabric: New, welded steel wire fabric, meeting the requirements of ASTM A 185-79. Provide gauge and center-to-center spacing as indicated.
- E. Forms: Steel, wood, or other suitable material of size and strength to resist movement during concrete placement.
 - 1. Use flexible spring steel forms or laminated boards to form radius bends.
 - 2. Coat forms with a non-staining form release agent.

2.2 MIXING

- A. Provide mix designs for each class of concrete used. The exact proportions of the mix, including amounts of admixture (if any) and water, will be determined by the Testing Laboratory or Mill, based on cement and aggregate submitted by the Contractor. The Concrete Supplier may utilize an established mix design by supplying at least twenty (20) break sample results by testing lab and supplying weigh master certificate.
- B. Use ready-mixed concrete mixed and delivered in accordance with the requirements of ASTM C 94-81, and UBC Standard No. 19-3. In the event concrete is mixed at a central batching plant, arrange delivery so intervals between batches are kept at a minimum, and in any event not more than 30 minutes. Do not add water during transit or at the Project Site without the Architect's approval. Place concrete within 90 minutes after cement has been mixed with aggregate or 45 minutes after addition of water and admixtures.

2.3 PROPERTIES AND PROPORTIONS

- A. Proportion concrete to provide a minimum compressive strength at 28 days of 3,000 psi for all site work concrete.
- B. Slump: 4 inches maximum.
- C. Aggregate Size: Maximum 1 inch.

PART 3 - EXECUTION

3.1 INSTALLATION OF SIDEWALKS AND OTHER FLATWORK

- A. Placing: Place concrete in accordance with CBC Section 1905. Strike off and compact the fresh concrete until a layer of mortar has been brought to the surface. Float the surface to grade and cross section with a float not less than 10 feet in length and not less than 6 inches in width. Trowel surfaces to a uniform smooth texture free of trowel marks ready to receive final finish as specified below.
- B. Joints: Tool the surfaces of flatwork to provide weakened plane joints in accordance with patterns indicated. Where no pattern is shown, mark flatwork into rectangles - minimum 12 square feet, maximum 20 square feet. Use a scoring tool that will leave the corners rounded. Form expansion joints 1/4 inch wide at all returns and opposite expansion joints in curbs. Where curb is not adjacent, form expansion joints at intervals of 60 feet. Fill expansion joints with pre-molded expansion joint filler as specified.
- C. Tolerances: The surface of flatwork shall not vary more than 0.02 foot from a 10 foot straight edge except at grade changes.

- D. Finish: Concrete is to be medium broom finish, 0.6 coefficient of friction at typical locations. Provide heavy broom finish at locations where slopes are over 6%.

END OF SECTION

**PIPED UTILITIES
SECTION 331100**

PART 1 - GENERAL

1.01 INCLUSION OF OTHER CONTRACT DOCUMENTS

- A. The General Conditions, Supplementary Conditions and Division 1 are fully applicable to this Section, as if repeated herein.

1.02 SCOPE OF WORK

- A. The work includes, but is not necessarily limited to, the following:
 - 1. Domestic water piping system.
 - 2. Fire protection piping systems.
 - 3. Sewer piping system.
 - 4. Domestic water System Sterilization, including site modular building piping.
- B. Other items that may be specified or shown on the Drawings.

1.03 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 31 2300, Excavating, Filling, and Grading
- B. Section 31 2333, Trenching and Backfilling.

1.04 QUALITY ASSURANCE

- A. Use only new materials and products, unless existing materials or products are specifically shown otherwise on the Drawings to be salvaged and re-used.
 - 1. Sun damaged or discolored PVC pipe will be rejected.
- B. All materials, components, assemblies, workmanship and installation are to be observed by the Owner's Inspector of Record. Work not so inspected is subject to uncovering and replacement.
- C. The representatives of the Owner's testing lab will not act as supervisor of construction, nor will they direct construction operations. Neither the presence of the Owner's testing lab representatives nor the testing by the Owner's testing lab shall excuse the contractors or subcontractors for defects or deficiencies discovered in their work during or following completion of the project. Correcting inadequate compaction is the sole responsibility of the contractor.

- D. Contractor shall be solely responsible for all subgrades built. Any repairs resulting from inadequate compaction or incorrect grades will be is the responsibility of the contractor.
- E. Per 2016 NFPA 13, with California amendments, provide Contractor's material and test certificate to the Owner, Architect, Project Inspector and Local Fire Authority.

1.05 SUBMITTALS

- A. Refer to Section 013300.
- B. Manufacturer's Data: Submit list and complete descriptive data of all products proposed for use. Include manufacturer's specifications, published warranty or guarantee, installation instructions, and maintenance instructions.
- C. Provide sieve analysis from accredited testing lab on pipe bedding material. Analysis shall have a current date not older than project contract signing date.
- D. Substitution: Provide all data of proposed material being submitted as a substitution. Provide comparison with specified product data and identify all differences. Failure to provide comparison will be reason for rejection.

1.06 FEES, PERMITS, AND UTILITY SERVICES

- A. Obtain and pay for permits and service charges required for installation of Work. Arrange for required inspections and secure written approvals from authorities having jurisdiction.
- B. Upon completion of work within right-of-way, provide copies of written final approval to the Architect.

1.07 WARRANTY

- A. Refer to General Conditions and Section 01300.

1.08 REFERENCES AND STANDARDS

- A. ANSI/ASTM D698-00 - Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures, Using 5.5 lb (2.49 Kg) Rammer and 12 inch (304.8 mm) Drop.
- B. ANSI/ASTM D1556-00 - Test Method for Density of Soil in Place by the Sand-Cone Method.

- C. ANSI/ASTM D1557-02 - Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures Using 10 lb. (4.54 Kg) Rammer and 18 inch (457 mm) Drop.
- D. ANSI/ASTM D 3017-05 Test Methods for Moisture Content of Soils and Soil-Aggregate Mixture by Nuclear Methods (Shallow Depth).
- E. ANSI/ASTM D 422-63 Test Method for Particle Size Analysis of Soil.
- F. ANSI/ASTM D 4318-05 Test Method for Liquid Limit, Plastic Limit, and Plasticity Limit.
- G. CALTRANS Standard Specifications.
- H. CAL-OSHA, Title 8, Section 1590 (e).
- I. Any work within the street, highway or right-of-way shall be performed in accordance with the requirement of the governmental agencies having jurisdiction, and shall not begin until all of those governing authorities have been notified.
- J. NFPA 13, 24 and 25, latest editions.
- K. California State Health and Safety Code Section 116875, Lead Free Public Water Systems.
- L. California Plumbing Code, latest edition.

1.09 DELIVERY, STORAGE AND HANDLING

- A. Transport, store and handle in strict accord with the local jurisdiction.
- B. Make delivery to job when notified by Contractor verifying that the job is ready to receive the work of this Section and that arrangements have been made to properly store, handle and protect such materials and work.

1.10 PROJECT CONDITIONS

- A. Existing civil, mechanical and electrical improvements are shown on respective site plans to the extent known. Should the Contractor encounter any deviation between actual conditions and those shown, he is to immediately notify the Architect before continuing work.

1.11 EXISTING SITE CONDITIONS

- A. Contractor shall acquaint himself with all site conditions. If unknown active utilities are encountered during work, notify Architect promptly for instructions. Failure to notify will make Contractor liable for damage to these utilities arising from Contractor's operations subsequent to discovery of such unknown active utilities.

1.12 PROTECTION

- A. Adequate protection measures shall be provided to protect workmen and passers-by on and off the site. Adjacent property shall be fully protected throughout the operations. Blasting will not be permitted. Prevent damage to adjoining improvements and properties both above and below grade. Restore such improvements to original condition should damage occur. Replace trees and shrubs outside building area disturbed by operations.
- B. In accordance with generally accepted construction practices, the Contractor shall be solely and completely responsible for working conditions at the job site, including safety of all persons and property during performance of the work. This requirement shall apply continuously and shall not be limited to normal working hours.
- C. Any construction review of the Contractor's performance conducted by the Geotechnical Engineer is not intended to include review of the adequacy of the Contractor's safety measures, in, on, or near the construction site.
- D. Provide shoring, sheeting, sheet piles and or bracing to prevent caving, erosion or gulying of sides of excavation.
- E. Surface Drainage: Provide for surface drainage during period of construction in manner to avoid creating nuisance to adjacent areas. The contractor shall make a reasonable effort on a daily basis to provide pumps and all equipment necessary to keep all excavations and the site free from water during entire progress of work, regardless of cause, source, or nature of water.
- F. Adjacent streets and sidewalks shall be kept free of mud, dirt or similar nuisances resulting from earthwork operations.
- G. The site and adjacent influenced areas shall be watered as required to suppress dust nuisance. Dust control measures shall be in accordance with the local jurisdiction.
- H. Trees: Carefully protect existing trees that are to remain. Provide temporary irrigation as necessary to maintain health of trees.

1.13 SEASONAL LIMITS

- A. No fill material shall be placed, spread or rolled during unfavorable weather conditions. When work is interrupted by rains, fill operations shall not be resumed until field tests indicate that moisture content and density of fill are satisfactory.

1.14 RECORD DRAWINGS

- A. Keep a daily record of all pipe placed in ground, verified by Project Inspector.
- B. Upon completion of this Contract, furnish one tracing showing all outside utility lines, piping, etc., installed under this Contract. Locate and dimension all work with reference to permanent landmarks.
- C. All symbols and designations used in preparing Record Drawings shall match those used in Contract drawings.
- D. Properly identify on as-builts and provide dimensions for all stubs for future connections. Provide concrete markers 6" dia. 12" deep, flush with finish grade at the ends of all stubbed pipes.
- E. Provide record drawing per section 017700.

PART 2 - MATERIALS

2.01 GENERAL

- A. Provide each item listed herein or shown on drawings of quality noted or approved equal. All material shall be new, full weight, standard in all respects and in first-class condition. Insofar as possible, all materials used shall be of same brand or manufacture throughout for each class of material or equipment. Materials shall be of domestic manufacture and shall be tested within Continental United States.
- B. Grade or quality of materials desired is indicated by trade names or catalog numbers stated herein.
- C. Dimensions, sizes, and capacities shown are minimum and shall not be changed without permission of Architect.
- D. All materials in this section used for any public water system or domestic water for human consumption shall be lead free.
 - 1. For the purposes of this section, "lead free" means not more than 0.2 percent lead when used with respect to solder and flux and not more than 8

percent when used with respect to pipes and pipe fittings.

2. All pipe, pipe or plumbing fitting or fixtures, solder, or flux shall be certified by an independent American National Standards Institute (ANSI) accredited third party, including, but not limited to, NSF International, as being in compliance with this section.

E. All materials used for fire system piping shall be UL and FM approved.

2.02 VALVE BOXES

- A. Provide at each valve or cock in ground a Christy, Brooks, or equal to Christy G05CT, concrete valve box with cover marked for service, domestic water shall be marked "Water" and fire supply shall be marked "Fire". Furnish extension handles for each size square nut valve, and provide "fork" handle for each size of "wheel handle" valve as required. Do not locate valve boxes in walk, or covered passages, curbs, or curb & gutters, unless necessary. If valve location is within concrete or asphalt paved surface valve box shall be as detailed on plans for such condition. Provide valve box extensions as required to set bottom of valve box to bottom of piping in which valve is installed. Provide Owner with set of special wrenches and/or tools as required for operation of valves.

2.03 PIPES AND FITTINGS

- A. Sanitary Sewer: PVC sewer pipe and fittings with Ring-Tite joints, ASTM D224I SDR 26.
- B. Domestic water Lines 3 1/2" and smaller: PVC Schedule 40.
- C. Water lines 4" and larger: AWWA C-900 Class 235 with rubber gasket joints.
- D. Fire lines 4" and larger: AWWA C-900 Class 200/DR14 with rubber gasket joints.
- E. Solder: Lead Free. 95/5; 95% Tin / 5% Antimony.
- F. Ductile Iron Pipe; AWWA C151, Class 350 with polyethylene encasement in conformance with AWWA C105
- G. Ductile Iron Pipe Fittings; AWWA C110, C153, Ebba Iron, Mega-Lug if specified, or equal.
- H. PVC Mechanical Fittings; Ebba Iron, Mega-Lug, or equal.
- I. Mechanical Fitting Bolts; Bolts and nuts shall be carbon steel with a minimum

- J. 60,000 psi tensile strength conforming to ASTM A 307, Grade A. Bolts shall be standard ANSI B1.1 Class 2A course threads. Nuts shall conform to ASTM A 563 and be standard ANSI B1.1, Class 2A course thread. All bolts and nuts shall be zinc coated.
- K. Fasteners Anti-Rust Coatings; After assembly, coat all fasteners with an Asphaltic Bituminous coating conforming to 2007 NFPA 25, 10.3.5.2 and 10.8.3.5.
- L. Pipe Wrap; 8 mil polyethylene pipe wrap conforming to ANSI/AWWA C105/A21.5 standards.

2.04 CLEANOUTS

- A. Cleanouts of same diameter as pipe up to 8” in size shall be installed in all horizontal soil and waste lines where indicated and at all points of change in direction. Cleanouts shall be located not less than 18” from building so as to provide sufficient space for rodding. No horizontal run over 100 feet shall be without cleanout whether shown on drawings or not.
- B. All cleanout boxes shall be traffic rated with labeled lid, Christy G05CT or approved equal. Lid shall be vandal proof with stainless steel screws

2.05 UNIONS

- A. Furnish and install one union at each threaded or soldered connection to equipment and 2 unions, one on each side of valves on pipes ½” to 3”.
- B. Locate unions so that piping can be easily disconnected for removal of equipment or valve. Provide type specified in following schedule:

Type of Pipe Union

Steel Pipe:	150 lb. Screwed malleable ground joint, brass, brass-to-iron seat, black or galvanized to match pipe.
Copper tubing:	Brass ground joint with sweat connections.
PVC Sch 80 pipe:	PVC union, FIPT X FIPT

2.06 VALVES

- A. Provide valves as shown and other valves necessary to segregate branches or units. Furnish valves suitable for service intended. Valves shall be properly packed and lubricated. Valves shall be non-rising stem. Place unions adjacent to each threaded or sweat fitting valve. Install valves with bonnets vertical. All valves shall be lead free.

- B. Valves ½” thru 2” shall be made of bronze, full size of pipe and lead free. Nibco S-113-FL Series; American G-300 Series; Matco 511 FL Series; Apollo 102T-FL Series. Brass valves of brass parts within valves will not be accepted.

2.07 TAPPING SLEEVE

- A. Shall be used on pipe sizes 6” thru 12” and shall be made with stainless steel material including stainless steel bolts. Flanges shall be ductile iron or high carbon steel. Gaskets shall seal full circumference of pipe. Shall be manufactured for operating pressure of 200 psi, and shall pass test pressure of 300 psi. Romac SST series; Smithblair 662; Mueller H304; Ford “FAST” tapping sleeve.

2.08 TRACER WIRE

- A. No. 10 THW solid copper wire. Use waterproof wire connectors all joints.

PART 3 - EXECUTION

3.01 DRAWINGS AND COORDINATION

- A. General arrangement and location of piping, etc., are shown on Drawings or herein specified. Install work in accord therewith, except for minor changes that may be necessary on account of other work or existing conditions. Before excavation, carefully examine other work that may conflict with this work. Install this work in harmony with other craft and at proper time to avoid delay of work.
- B. Verify invert elevations at points of connection to existing systems prior to any excavation. If invert elevations differ from that shown on drawings, notify Architect immediately.
- C. In advance of construction, work out minor changes if conflicts occur with electrical or mechanical. Relocate services to suit actual conditions and work of other trades to avoid conflict therewith. Any adjustments or additional fittings to make adjustments shall not be cause for additional costs to the owner.
- D. Execute any work or apparatus shown on drawings and not mentioned in specifications, or vice versa. Omission from Drawings or Specifications of any minor details of construction, installation, materials, or essential specialties does not relieve Contractor of furnishing same in place complete.

- E. Graded pipes shall take precedence. If conflict should occur while placing the domestic water and fire service piping, the contractor shall provide any and all fittings necessary to route the water lines over such conflicting pipes at no additional costs to the owner.

3.02 ACCESS

- A. Continuously check for clearance and accessibility of equipment or materials specified herein to be placed. No allowance of any kind shall be made for negligence on part of Contractor to foresee means of installing his equipment or materials into proper position.

3.03 EXCAVATING AND BACKFILLING

- A. Excavation and Bedding:

1. General: Trench straight and true to line and grade with bottom smooth and free of irregularities or rock points. Trench width to be a minimum of 12" wider than outside diameter of pipe. Follow manufacturer's recommendations for use of each kind and type of pipe.
2. Bedding: Provide a bedding as noted on drawing details for the full length of the pipe. Bedding shall have a minimum thickness beneath the pipe of 4" or 1/8 the outside diameter of the pipe, which ever is greater. Provide bell holes and depressions for pipe joints only of size required to properly make joint.

- B. Laying of Pipe:

1. General: Inspect pipe prior to placing. Sun damaged pipe will be rejected. Set aside any defective or damaged material. Do not place pipe in water nor place pipe when trenches or weather are unsuitable. Lay pipe bell up grade, true to line and grade.
 - a. Sewer pipe shall be laid in strict conformity to the prescribed line and grade, with grade bars set and each pipe length checked to the grade line. Three consecutive points on the same rate of slope shall be used at all times to detect any variation from a straight grade. In any case of discrepancy, work shall be stopped and the discrepancy immediately reported to the Owner's Representatives. In addition, when requested by the Owner's Representative, a string line shall be used in the bottom of the trench to insure a straight alignment of the sewer pipe between manholes. The maximum deviation from grade shall not be in excess of 1/4 inch. In returning the pipe to grade, no more than 1/4" depression shall result.

- b. The Contractor shall expose the end of existing pipe to be extended, for verification of alignment and elevation, prior to trenching for any pipe which may be affected. All costs of such excavation and backfill shall be included in the price paid for the various items of work.
 - c. A temporary plug, mechanical type shall be installed on sewer pipe at the point of connection to existing facilities. If connecting to a public facility the plug shall conform to the requirements of the local jurisdiction. This plug shall remain in place until the completion of the balling and flushing operation.
- 2. Bell and Spigot Joints: Lubricate inside of bells and outside of spigots with soap solution. Wedge joints tight. Bell of bell and spigot pipe to be pointed upgrade.
- C. Backfilling:
- 1. General: Do not start backfill operations until required testing has been accomplished.
 - 2. Compaction and Grading: Remainder of backfill shall be in accordance with Section 02210 – TRENCHING AND BACKFILLING.
 - 3. If trenching in area previously lime or cement treated backfill top of trench section, same depth as lime or cement treatment with Class 2 Aggregate Base compacted to 95% minimum relative compaction.

3.04 INSTALLATION OF WATER PIPING

- A. Immediately cap or plug ends of, and opening in, pipe and fittings to exclude dirt until final connections made. Use reducing fittings where any change in pipe size occurs. Bushings shall not be used.
- B. General: Should existing conditions or other work prevent the running of pipes or the setting of equipment at the points indicated by drawings, changes as authorized by the Architect shall be made without additional cost to the Owner.
- C. All bolts used on mechanical fittings shall be thoroughly coated with an asphaltic bituminous coating conforming to latest edition NFPA 24.
- D. All buried metal shall be incased with 8 mil polyethylene wrap so that no soil is in contact with metal.
- E. Do not install water lines in same trench with non-metallic sewer lines unless bottom of water pipe at all points is at least 12" above top of sewer line and water line is placed on solid shelf excavated at one side of common trench with a minimum of 12 inch horizontal separation.

3.05 CLOSING IN OF UNINSPECTED WORK

- A. Do not allow or cause work installed to be covered up or enclosed before it has been inspected, tested, and approved. Should work be enclosed or covered up before it has been approved, uncover work at own expense. After it has been inspected, tested and approved, make repairs necessary to restore work of other contractors to condition in which it was found at time of cutting.

3.06 CARE AND CLEANING

- A. Repair or replace broken, damaged, or otherwise defective parts, materials, and work. Leave entire work in new condition satisfactory to Architect. At completion, carefully clean and adjust equipment, fixtures and trim that are installed as part of this work. Leave systems and equipment in satisfactory new operating condition.
- B. Drain and flush piping to remove grease and foreign matter.
- C. Sewer piping shall be balled and flushed, and air tested.
- D. Clean out and remove surplus materials and debris resulting from the work, including surplus excavated material.
- E. Flush fire service piping 3 times in the presence of the project inspector. Each flushing shall be 3 minutes minimum.

3.07 SEWER INTERNAL INSPECTIONS

- A. Upon completion of construction and prior to final inspection, the Contractor shall clean the entire new pipeline of all dirt and debris. Any dirt or debris in previously existing pipes or ditches in the area, which resulted from the new installation, shall also be removed. Pipes shall be cleaned by the controlled balling and flushing method. Temporary plugs shall be installed and maintained during cleaning operations at points of connection to existing facilities to prevent water, dirt, and debris from entering the existing facility.

3.08 TEST OF PIPING

- A. Test piping at completion of roughing-in, in accord with following schedule, and show no loss in pressure or visible leaks after minimum duration or four (4) hours at test pressures indicated.

TEST SCHEDULE

<u>System Tested</u>	<u>Test Pressure PSIG Test With</u>
Sanitary Sewer Piping:	Sewer system shall be air tested at 3.5 PSI for 5 minutes minimum.

- A. Testing equipment, materials, and labor shall be furnished by contractor.

3.09 WATER SYSTEM STERILIZATION

- A. Public Water Mains: Shall be flushed and disinfected per the local jurisdiction requirements
- B. Clean and disinfect all site water systems, including site and building piping connected to the domestic water systems in accordance with AWWA Standard C651 and as required by the local Building and Health Department Codes, and EPA.
1. Clean and disinfect industrial water system in addition to the domestic water system.
 2. Disinfect existing piping systems as required to provide continuous disinfection upstream to existing valves. At Contractors option, valves may be provided to isolate the existing piping system from the new piping system.
- C. Domestic water sterilization shall be performed by a licensed “qualified applicator” as required by CAL-EPA Pesticide Enforcement Branch for disinfecting and sterilizing drinking water.
- D. Disinfecting Agent: Chlorine product that is a registered product with Cal-EPA for use in California potable water lines, such as Bacticide, CAL-EPA Registration No. 37982-20001.
- E. Contractor to provide a 1” service valve connected to the system at a point within 2’-0” of its junction with the water supply line. After sterilization is complete Contractor to provide cap at valve.
- F. Sterilization Procedure to be as follows:
1. Flush pipe system by opening all outlets and letting water flow through the system until clear water flows from all outlets.
 2. Inject disinfecting agent to provide a minimum chlorine residual concentration of at least 50 parts per million (ppm) of free chlorine at each outlet.
 3. Provide sign at all outlets which reads “Water Sterilization in Progress – Do not operate”. Remove signs at conclusion of test.

4. Close all outlets and valves, including valve connecting to water supply line and 1" service valve. Retain treated water in pipe for a minimum of twenty-four hours. Should chlorine residual at pipe extremities be less than 50 PPM at this time, pipe shall be re-chlorinated. As an option, the water systems may be filled with a water-chlorine solution containing a minimum of 200 PPM of chlorine and allowed to stand for three hours.
 5. After chlorination, flush lines of chlorinated water and refill from domestic supply. Continue flushing until residual chlorine is less than or equal to 0.2 ppm, or a residual the same as that of the test water.
- G. Chemical and bacteriological tests shall be conducted by a state-certified laboratory and approved by the local authorities having jurisdiction.
- H. Submit written report to Health Department as required by State Regulations. Provide a copy of report to Architect prior to completion of project.
- I. The costs of sterilization and laboratory testing shall be paid for by the contractor.

3.10 CLEANING

- A. Upon completion of work of this Section promptly remove from the working area all scraps, debris and surplus material of this Section.

END OF SECTION

**SITE DRAINAGE
SECTION 334000**

PART 1 - GENERAL

1.01 INCLUSION OF OTHER CONTRACT DOCUMENTS

- A. The General Conditions, Supplementary Conditions and Division 1 are fully applicable to this Section, as if repeated herein.

1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 312333, Trenching and Backfilling.

1.03 QUALITY ASSURANCE

- A. Use only new materials and products, unless existing materials or products are specifically shown otherwise on the Drawings to be salvaged and re-used.
- B. All materials, components, assemblies, workmanship and installation are to be observed by the Owner's Inspector of Record. Work not so inspected is subject to uncovering and replacement.
- C. The representatives of the Owner's testing lab will not act as supervisor of construction, nor will they direct construction operations. Neither the presence of the Owner's testing lab representatives nor the testing by the Owner's testing lab shall excuse the contractors or subcontractors for defects discovered in their work during or following completion of the project. Correcting inadequate compaction is the sole responsibility of the contractor.
- D. Contractor shall be solely responsible for all subgrades built. Any repairs resulting from inadequate compaction is the responsibility of the contractor.

1.04 SUBMITTALS

- A. Refer to Section 013300.
- B. Manufacturer's Data: Submit list and complete descriptive data of all products proposed for use. Include manufacturer's specifications, published warranty or guarantee, installation instructions, and maintenance instructions.

1.05 WARRANTY

- A. Refer to General Conditions and Section 017833.

1.06 REFERENCES AND STANDARDS

- A. ANSI/ASTM D698-00 - Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures, Using 5.5 lb (2.49 Kg) Rammer and 12 inch (304.8 mm) Drop.
- B. ANSI/ASTM D1556-00 - Test Method for Density of Soil in Place by the Sand-Cone Method.
- C. ANSI/ASTM D1557-02 - Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures Using 10 lb. (4.54 Kg) Rammer and 18 inch (457 mm) Drop.
- D. ANSI/ASTM D 3017-05 Test Methods for Moisture Content of Soils and Soil-Aggregate Mixture by Nuclear Methods (Shallow Depth).
- E. ANSI/ASTM D 422-63 Test Method for Particle Size Analysis of Soil.
- F. ANSI/ASTM D 4318-05 Test Method for Liquid Limit, Plastic Limit, and Plasticity Limit.
- G. CALTRANS Standard Specifications.
- H. CAL-OSHA, Title 8, Section 1590 (e).
- I. Any work within the street, highway or right-of-way shall be performed in accordance with the requirement of the governmental agencies having jurisdiction, and shall not begin until all of those governing authorities have been notified.
- J. California Plumbing Code current edition.

1.07 DELIVERY, STORAGE AND HANDLING

- A. Transport, store and handle in strict accord with the local jurisdiction.
- B. Make delivery to job when notified by Contractor verifying that the job is ready to receive the work of this Section and that arrangements have been made to properly store, handle and protect such materials and work.

1.08 PROJECT CONDITIONS

- A. Existing civil, mechanical and electrical improvements are shown on respective site plans to the extent known. Should the Contractor encounter any deviation between actual conditions and those shown, he is to immediately notify the Architect before continuing work.

1.09 EXISTING SITE CONDITIONS

- A. Contractor shall acquaint himself with all site conditions. If unknown active utilities are encountered during work, notify Architect promptly for instructions. Failure to notify will make Contractor liable for damage to these utilities arising from Contractor's operations subsequent to discovery of such unknown active utilities.

1.10 PROTECTION

- A. Adequate protection measures shall be provided to protect workmen and passers-by on and off the site. Adjacent property shall be fully protected throughout the operations. Blasting will not be permitted. Prevent damage to adjoining improvements and properties both above and below grade. Restore such improvements to original condition should damage occur. Replace trees and shrubs outside building area disturbed by operations.
- B. In accordance with generally accepted construction practices, the Contractor shall be solely and completely responsible for working conditions at the job site, including safety of all persons and property during performance of the work. This requirement shall apply continuously and shall not be limited to normal working hours.
- C. Any construction review of the Contractor's performance conducted by the Geotechnical Engineer is not intended to include review of the adequacy of the Contractor's safety measures, in, on, or near the construction site.
- D. Provide shoring, sheeting, sheet piles and/or bracing to prevent caving, erosion or gulying of sides of excavation.
- E. Surface Drainage: Provide for surface drainage during period of construction in manner to avoid creating nuisance to adjacent areas. The contractor shall make a reasonable effort on a daily basis to keep all excavations and the site free from water during entire progress of work, regardless of cause, source, or nature of water.
- F. Adjacent streets and sidewalks shall be kept free of mud, dirt or similar nuisances resulting from earthwork operations.
- G. The site and adjacent influenced areas shall be watered as required to suppress dust nuisance. Dust control measures shall be in accordance with the local jurisdiction.
- H. Trees: Carefully protect existing trees that are to remain.

1.11 SEASONAL LIMITS

- A. No fill material shall be placed, spread or rolled during unfavorable weather conditions. When work is interrupted by rains, fill operations shall not be resumed until field tests indicate that moisture content and density of fill are satisfactory.

1.12 TESTING

- A. General: Refer to Section 014520 – TESTING LABORATORY SERVICES AND STRUCTURAL TESTS AND INSPECTIONS LIST, DSA-103.
- B. Geotechnical Engineer: Owner is retaining a Geotechnical Engineer to determine compliance of fill with Specifications, and to direct adjustments in fill operations. Costs of Geotechnical Engineer will be borne by Owner; except those costs incurred for re-tests or re-inspection will be paid by Owner and backcharged to Contractor.

1.13 RECORD DRAWINGS

- A. Keep a daily record of all pipe placed in ground, verified by Project Inspector.
- B. Upon completion of this Contract, furnish one Record Drawing showing all outside utility lines, piping, etc., installed under this Contract. Locate and dimension all work with reference to permanent landmarks.
- C. All symbols and designations used in preparing Record Drawing shall match those used in Contract drawings.
- D. Properly identify all stubs for future connections, as to location and use, by setting of concrete marker at finished grade in the manner suitable to Architect.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Pipe: Use one of the following, unless noted on the Drawings otherwise.
 - 1. Polyvinyl Chloride Pipe (PVC): SDR35 conforming to ASTM D3034 with elastomeric joints conforming to ASTM D3212 for pipe to 12". Sun damaged pipe will be rejected.
 - 2. High density polyethylene pipe (HDPE): The pipe shall be corrugated exterior/smooth interior pipe. 12" to 60" maximum diameter shall conform to AASHTO M294, water tight per ASTM D3212 with water tight gasket fittings.
- B. Perforated Pipe (for subdrains): Shall be ADS N12 pipe, 3 hole, ASTM F 405, AASHTO M 252; PCV ASTM D3034 SDR-35 storm drain pipe
- C. Manhole: Shall be as shown on the drawing details.
- D. Drop Inlet: Shall be as shown on the drawing details.
- E. Curb Inlet: Shall be as shown on the drawing details.

- F. Mortar: For pipe connections to concrete drainage structures, conform to ASTM C270 type N mortar. Place within one half hour after adding water.
- G. Crushed Rock: Imported washed crushed rock. Minimum 100% passing 3/4 inch sieve.
- H. Trench drain: Polycast, Polydrain or equal and as shown on drawings.
- I. Area Drains: Shall be as shown on the drawing details.
- J. Floor Drains: Shall be as shown on the drawing details.
- K. Clean-outs: Shall be as shown on the drawing details.
- L. Planter drains: Shall be as detailed on the drawing details.
- M. Filter Fabric: Mirafi 140N.

PART 3 - EXECUTION

3.01 INSPECTION LAYOUT AND PREPARATION

- A. Prior to installation of the work of this Section, carefully inspect and verify by field measurements that installed work of all other trades is complete to the point where this installation may properly commence
- B. Layout all work, establish grades, locate existing underground utilities, set markers and stakes, setup and maintain barricades and protection facilities; all prior to beginning actual earthwork operations. Layout and staking shall be done by a licensed Land Surveyor or Professional Civil Engineer.
- C. Verify that specified items may be installed in accordance with the approved design.
- D. In event of discrepancy, immediately notify Owner and the Architect. Do not proceed in discrepant areas until discrepancies have been fully resolved.

3.02 INSTALLATION

- A. General: Installation shall be in strict conformance with referenced standards, the manufacturer's written directions, as shown on the drawings and as herein specified.
- B. Verify invert elevations at points of connection to existing systems prior to any excavation. If invert elevations differ from that shown on drawings, notify Architect immediately.

C. Excavation and Bedding:

1. General: Trench straight and true to line and grade with bottom smooth and free of irregularities or rock points. Trench width in accordance with pipe manufacturer's recommendations and as per the drawings. Follow manufacturer's recommendations for use of each kind and type of pipe.
2. Bedding: Provide bedding as detailed on plans for the full length of the pipe. Bedding shall have a minimum thickness beneath the pipe of 4" or 1/8 the outside diameter of the pipe, whichever is greater. Provide bell holes and depressions for pipe joints only of size required to properly make joint.

D. Laying of Pipe:

1. General: Inspect pipe prior to placing. Set aside any defective or damaged material. Do not place pipe in water nor place pipe when trenches or weather are unsuitable. Lay pipe upgrade, true to line and grade.
2. Bell and Spigot Joints: Lubricate inside of bells and outside of spigots with soap solution or as recommended by manufacture. Wedge joints tight. Bell of bell and spigot pipe to be pointed upgrade.
3. Pipe shall be bedded uniformly throughout its length.
4. Pipe elevation shall be within 0.02 feet of design elevation as shown on plans.
5. Off Site Work: All work beyond the property lines shall be done in strict conformance with the requirements of the governing agency.

E. Backfilling:

1. General: Do not start backfill operations until required testing has been accomplished.
2. Trenches and Excavations: Backfill with material as detailed on plans, filling both sides of the pipe at the same time, carefully tamping to hold pipe in place without movement. Refer to Section 02210 – TRENCHING AND BACKFILLING for fill above this layer.

F. Grouting of Pipes: Grout pipes smooth and water tight at drop inlet, manholes, and curb inlets. Grout back side of hood at curb inlets all grouting shall be smooth and consistent.

G. Off Site Work: All work beyond the property lines shall be done in strict conformance with the requirements of the local agency.

H. Cutting and Patching: Remove and replace existing surface features per applicable specification section (i.e. asphaltic concrete or concrete paving) where pipe is installed in areas of existing improvements.

3.03 TOLERANCES

A. Storm Drain structure grates:

1. In landscape and lawn areas $\pm 0.05'$.
2. In sidewalk and asphalt pavement $\pm 0.025'$.
3. In curb and gutter application $\pm 0.0125'$.

B. Cleanout Boxes and Lids:

1. In landscape areas; 0.10 higher than surrounding finish grade, $\pm 0.05'$.
2. In sidewalks and asphalt pavement; Flush with surrounding finish grade, $\pm 0.025'$.

3.03 DEWATERING

- A. Contractor to provide trench dewatering as necessary, no matter what the source is, at no additional cost to the owner.

3.04 FLUSHING

- A. The Contractor shall thoroughly ball and flush the storm drain system to remove all dirt and debris. Discharge water to an approved location.

3.05 CLEANING

- A. Upon completion of work of this Section promptly remove from the working area all scraps, debris and surplus material of this Section.
- B. Clean the dirt, rocks, and debris from the drop inlets and storm drain manholes.

END OF SECTION